FACTORS INFLUENCING PROCUREMENT PRACTICES IN GOVERNMENT MINISTRIES IN KENYA

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ABSTRACT

The general objective of the study was to assess factors affecting procurement practices in the ministries in Kenya. This study concentrated on the above four indicated variables. This study utilized descriptive survey research design. It was notable that there existed strong positive relationship between the independent variables and dependent variable as shown by R value (0.787). The coefficient of determination was between zero and one (Ghozali, 2006). The data showed that the high R square was 0.619. It showed that the independent variables in the study were able to explain 61.90% variation in the procurement practices while the remaining 38.10% was explained by the variables or other aspects outside the model. The standard error was minimal with a value of 0.000 meaning the model used in the study had minimal effects of errors associated with it. The study findings implied that staff competency, ICT, quality management systems and top management support played a significant role on the procurement practices in the government ministries in Kenya. To enhance procurement practices in the government ministries, there is need to have sufficient and qualified procurement personnel with enough training assessment methods to enhance compliance with the rules and regulations. The government ministries should also employ professional trained procurement staff and continuously train the staff on emerging issues on public procurement practices. The government ministries should effectively integrate procurement functions with ICT based systems through application of e-procurement methods, use of automated procurement systems; implementation of supportive ICT infrastructure for encouraging adoption of ICT based procurement systems and training of procurement staff on ICT skills. In the light of the findings and conclusions, the following recommendations were hereby proposed: Efforts must be made to implement those TQM practices which are not being effectively practiced in the study area so as to help improve on procurement practices. The top management should ensure that it gives the public sector the sense of direction and this goes a long way in ascertaining efficiency in the procurement practices.

Key Words: Staff Competence, Information Communication Technology, Quality Management Systems, Top Management
INTRODUCTION

Procurement can be defined as the acquisition of goods and/or services at very good probable cost of ownership, in the acceptable right quality and also quantities, at the right time and the right place and again from the right source for the direct benefit or use of corporations, individuals or even Governments, and this generally occurs via contracts. Now Government procurement sometime called public tendering or public procurement is the procurement of the goods and services on behalf of public authority, such as the Government (Bappaditya, M., (2011). According to Wisner, et., al., (2009), Procuring Entities (PE) all over the world are faced with the challenge of reducing procurement costs as well as addressing issues of procurement malpractices with a view to getting value for money as well as quality goods. This explains why, according to World Bank (2010), PEs in both the developed and developing countries are pitting a lot of emphasis on reforms in the procurement function, revising procurement rules as well as coming up with legislation on the legal measures to be taken against those who make governments lose huge amounts of money through inflated bid prices.

In Kenya, public procurement includes the process of acquiring goods, works and services involving the use of public money to accomplish specified public purposes, beginning with the identification of a need and ending with completion of the contract. PPDA of 2005 and Regulation of 2006 were enacted to introduce procedures for efficient public procurement, with the objectives of maximizing economy and efficiency, promote competition, promote integrity and fairness of procurement procedures, to enhance transparency and accountability, to restore public confidence in procurement process and to facilitate the promotion of local industries and economic development (PPOA, 2007). This has had has tremendous impact on the economy, social, political and legal environment (Kagendo, 2012). Government ministries are the major purchasers of goods, works and services in a country hence influence the size, structure and performances of domestic industries. To this end, it is important for the government from time to time to review the effectiveness and efficiency of its procurement system. Knight, Harland, Telgen, Thai and Challender (2008) assert that if any weakness is identified, then reforms should be introduced to strengthen the procurement system in order to get value for money. According to Kagendo (2012) emergence of global economy, increased decentralization of government function, greater discretions power officials and weakness of the current procurement system have led to need of regulating procurement in new ways, hence need for reforms to solve these emerging challenges in the public procurement. Success of public procurement system reforms depends on a clear articulation and understanding of what the legal and regulatory framework seeks to achieve.

Efficient public procurement practices contribute towards the sound management of public expenditure (Agaba and Shipman, 2009) which in turn can contribute towards the effectiveness of public sector management, and promoting the private sector. Besides, the objective of public procurement is to provide quality goods and services through open and fair competition in the exact quantity and proper quality as specified, and has to be delivered at the time and place where needed (Basheka, 2010). The quality of goods, services, infrastructures, and the effectiveness of public services much depend on well-managed public procurement. However, these research studies have not revealed how improved efficiency enhances timeliness, empathy and responsiveness which are the variables which, to a great extent,
contribute to improved service delivery. Despite showing effectiveness of efficient procurement process on good practices reduce costs and produce timely results, and poor practices lead to waste and delays, the research studies have not revealed how such processes highly affects development issues such as service delivery, economic growth, private sector 2 development and decentralization. The studies have not revealed how inefficient procurement process adversely affects professionalism and international trade and investment. Accountability is a standard of public life, where holders of public office are accountable for their decisions and actions to the public and must submit themselves to whatever scrutiny is appropriate to their offices (Armstrong, 2005). Fighting corruption is not only an end in itself. It is of fundamental value in all government reform, which may require changes to legal and policy frameworks for the control and expenditure of public monies and improved procurement practices (Armstrong, 2005).

Accountability constitutes a central pillar of any public procurement system. Without transparent and accountable systems enabling governments and citizens to engage in a mutually responsive way, the vast resources channeled through public procurement systems run the danger of increased corruption and misuse of funds. Even in a system with low levels of corruption, public and civic oversight can help identify inefficiencies, thereby increasing procurement efficiency and effectiveness for the benefit of improved service delivery and ultimately citizens. According to Grierson and Needham, (2006) argue that demonstrated accountability and transparency reduces the likelihood of unethical behavior, reassures the community and instills confidence in all stakeholders concerning the integrity of decisions. A central theme of any procurement reform is the commitment to high standards for professional conduct of the public officers involved in procurement.

Public procurement has enormous importance as it accounts for substantial part of the economy globally. This is estimated to be 10 to 15 per cent of developed countries GDP and up to 20 per cent of the developing countries GDP, World Bank (2003). With this, it raises two implications; large scale buying which often decides the standards that get adapted in the economy. Therefore this makes the process of procurement to get extremely crucial, more importantly is the amounts of financial amounts that are involved with procurement automatically attract rent-seeking behavior. Therefore, it does not really shock that procurement processes are the most regulated in so many countries, and this is done both internally and internationally with some agents. The reasons for high level regulation is to prevent corruption, waste and fraud, Pidaparthy, V.R.S. (2006). This is done by making the process transparent, simple and efficient. The procurement procedure will require a procuring authority to issue public tenders if the value of the procurement exceeds a certain threshold, Mcafee, R. (2006). One of the most important areas of government procurement, especially in developing countries, is information-related infrastructure to help in e-governance, e-commerce, and E-banking.

South Africa being one of the economical giants in Africa has a high level of recognition of public procurement policies, and aware of Sustainable Public Procurement, preferential procurement legislation which deals with criteria of procurement and that it had developed and implemented environmental (or green ) procurement policies. Hanks et., al., (2008). This based on the prior experience of policies that enhance the efficiency of procurement withing public and corporate sectors. Closer within our borders is Rwanda which within
their wisdom also saw the importance of regulating procurement processes by coming up with Rwanda Public Procurement Authority (RPPA). This was to replace the National Tender Board during a reform process in Public Financial Management launched by the government of Rwanda, in which public procurement reform was one of the most important components. The Rwanda public procurement Authority (RPPA) is was created to replace the National Tender Board during a reform process in Public financial management launched by the Government of Rwanda, in which Public procurement reform was one of the most important components. Tom (2009) established that inappropriate procurement practices in learning institutions led to a loss of an average of Ksh 50 million annually while Daniel (2010) was of the view that proper procurement practices can lead to national development because saving emanating from procurement can be invested elsewhere.

Public procurement in Kenya is conducted in accordance with the Public Procurement and Disposal Act (PPDA) 2005, with subsequent amendments in 2013 and 2015 and Public Procurement and Disposal Regulations (2006). The PPDA 2005 came into force on 1st January 2007. The amendment of 2013 did away with Tender Committees and replaced that mandate with Technical and Financial ad hoc Evaluation committees that are appointed by the CEO of a PE on the advice of the head of procurement department. Upon the receipt of the evaluation report, the Head of procurement does a professional opinion on the report and forwards it to the CEO for approval so that goods, services and works can be procured.

The Kenyan Government is run by Ministries. The constitution limits the number of Ministries to a minimum of 14 and maximum of 22. The headings of the ministries are known as Cabinet Secretaries who are all nominated by the President. The President has power to assign and dismiss a Cabinet Secretary. A Cabinet Secretary cannot be an MP and their deputies are known as Principal Secretaries. All civil servants e.g. teachers in public schools or diplomats fall under one of the ministries in the Cabinet.

**Statement of the Problem**

Prudent procurement practices refer to the ability to avoid wasting materials, energy, efforts, money and time in executing the procurement function or in producing a desired result (Leenders, 2007). This is expected of the procurement professionals performing the procurement function. If the process is conducted in accordance with the Public Procurement and Asset Disposal Act 2015 (PPADA 2015) and Regulations 2006, Procuring Entities (PEs) will get goods and services in time, get value for money, have inspection and acceptance committees in place for ascertain quality of goods, have proper storage for goods and materials to minimize spoilage and deterioration and dispose of assets and surplus store in good time to realize meaningful residue value.

In Kenya, the government spends about Kshs. 500 billion per year on public procurement with loses attributable to malpractices amounting to Kshs. 300 billion per year (World Bank, 2010). On annual bases, the government losses close to Ksh. 121 billion about 17 per cent of the national budget due to inflated procurement quotations (KISM, 2010). The country is considered among the most corrupt in the world and was ranked number 136 out of 175 in the Transparency International Corruption Perceptions Index (TI, 2014). EACC (2015) conducted a research on an evaluation of corruption in procurement practices. The findings were that a lot needed to be done on the staff knowledge and adherence to the PPADA 2015, procurement plans
and public procurement practices. The Ethics and Anti-Corruption Commission has active investigations over procurement in various counties (Kenya National Integrity Alliance, 2016). Some county officials have been summoned for interrogation by the Ethics commission. From the reports there is a big challenge in how procurement practices in government institutions are being conducted. Some of which revolve around the key principles underpinning public procurement practices which are: value for money, ethical standards, competition, transparency and accountability.

Davis (2014) established that procurement practices influencing service delivery were procurement policies, procurement planning. Mokogi, et., al., (2015) established that procurement practices were influenced by buyer supplier relationships, supplier selection procedures, organizational capacity and procurement process management. Much as the researcher agrees with the variables that were investigated, there are links that were of important and were worth studying on. The study was therefore prompted to carry out a study on the influence of staff competences, adoption of ICT, quality management systems and top management support on the procurement practices in government ministries in Kenya.

Objectives of the study

The general objective of the study was to examine the factors influencing procurement practices in the ministries in Kenya. The specific objectives were:-

- To determine the influence of procurement staff competence on procurement practices in the Government ministries in Kenya.

- To establish the influence of Information Communication Technology (ICT) on Procurement practices in the Government ministries in Kenya.

- To determine examine the influence of total quality management systems on procurement practices in the Government ministries in Kenya.

- To examine the influence of top management support on procurement practices in the Government ministries in Kenya.

LITERATURE REVIEW

Theoretical Review

Strategic choice theory

Child (1972) traces the genesis of strategic choice theory in the works of researchers in US (Blau, Hage and Aiken, Hal, Lawrence, and Lorsch) and UK (Pugh and Woodward). This theory is concerned with the decision-making in business enterprises for attaining the defined goals. This theory seeks to provide answers to some the aspects of procurement such as (Ketchen and Hult, 2007). These include direct and indirect effects of procurement in decision-making on productivity and stock prices, adaptation of organizational supply chain strategies to organizational lifecycle (Miles et al., 1978) and procurement strategies that can address various organizational strategies. For example those proposed by Miles et al., Coleman (1978) (defenders, prospectors, analyzers and reactors), Porter (1980) (differentiation, cost leadership and focus), Walker, and Ruekert (1987) (prospectors, differentiated defenders and low cost defenders).

Agency theory

The agency theory –from either classical or neoclassical perspectives– provides contributions to accepting the role of the procurement function. Agency theory has been applied to various activities associated procurement including, outsourcing (Logan, 2000; Loebbecke & Huyskens, 2009),
sourcing (Shooket al., 2009), and supply chain collaboration (Kwon & Suh, 2004).

In procurement, the top management herein assumed to be the principal contracts the procurement process to the procuring entity herein referred to as the agent to carry out the process. The management of the process is the most critical part of this study hence the agency theory forms one of the best theories to analyze the whole concept of procurement in government ministries. From the earlier part of this study, Kenya has regulatory framework PPDA (2015) that are in charge of managing and regulating the whole procurement process. In this kind of arrangement the process has been separated from the government to the committee, and if keenly followed, the process was initially within the realms of tendering committees before the same being done away with. The relationship here between the agent and the principal will form the basis of this study.

Institutional theory

Institutionalization affects the behaviour of individuals who are members of the organization. In the example of the research seminar, the activity may affect individuals’ behaviour by creating a commitment to participate and contribute to the function. Being of some relatively shared values, norms, and understanding among the institutional members, the new institutional theory has been illustrated as an open system perspective in contrast to the rational system as described by Scott (2003). The open system view of procurement encourages the attention to the role of environment in the behaviour of organization, its components and its members. From the institution theory perspective, procurement should pursue two main goals namely monitoring the environment for collaborative opportunities and identifying the best practices in the industry and comparing the organizational operation with best practices, for continuous development (Scott, 2003; Movahedi et al., 2009).

According to the institutional theory, “external pressure” plays a major role in shaping organizational strategies associated with procurement.

Conceptual Framework

![Conceptual Framework](image)

Staff competences
- Educational qualifications
- Professional qualifications
- Ethical practices
- Registration with KISM

Information Communication Technology
- E-procurement
- IFMIS
- Upgraded ICT Infrastructure

Total Quality Management
- E-procurement
- IFMIS adoption
- ICT Infrastructure

Top Management support
- Declaration of conflict of interest
- Implementation of recommendations touching on procurement
- Disciplinary action on procurement mal practices

Independent Variable
Dependent variable

Figure 1: Conceptual Framework

Staff competence

According to Haberberg et al (2008), customers care whether their orders are met accurately and quickly. They do not necessarily care whether that is because the organization has a state of the art
computer system or an army of well trained, well-motivated employees—that is the firm’s problem. However, in trying to work out whether the firm will be around and profitable in five years’ time, analysts will care quite a lot about whether the firm has underlying competences in IT or in staff training. It can rightly be said that in future, the IT competence is likely to be more valuable because of the way the environment is going to change and more so given the fact that this is an era of e-commerce.

From the view advanced by Haberberg et al (2008), it can be argued out that in order for a firm to have a competitive advantage, the staff should have the required competencies in their professional training and also on IT since information and business is transacted electronically. It is worth noting that capabilities and competencies are both important. Without underlying general competencies, there can be no capabilities. Unless competencies can be translated into useful capabilities, they are of no advantage to the organization (Christopher 2005). Haberberg et al (2008) further states that some scholars would suggest that focusing exclusively on core competences which tend to concentrate expertise in a narrow field is a bad idea. Distributed competences are an important way in which an organization can retain a toehold in important areas that may become core in the future, or gain knowledge in order to apply the learning to other areas of its business—particularly important in innovation development. It is also an important way in which organizations can retain sufficient diversity to respond to uncertain environments. This is very much applicable in e-procurement whereby the PEs and bidders meet on the electronic platform hence the need for staff to have the necessary training in order to be effective in the performance of the procurement function.

According to Jenkins and Veronique with Nardine (2007), competences deal with organization’s resources such as skills, know—how, organizational knowledge, routines, competences and capabilities. It deals with their role in the organization and in generating competitive advantage. It also addresses issues such as the transferability and the immutability of resources. From the foregoing, it is important that the staffs are enabled to acquire the necessary skills and competencies in order to effectively deliver to the customers.

According to Cole (2011), the proliferation of personal computers and work stations in every type of office means that many employees now have ready access both to electronic mail (email) and use of the internet (via world wide web). It is in the interests of the employer as well as that of the staff that a clear policy on email and internet use should be available. It’s important to note that data security and any other breach of personal data is likely to lead to large fines being imposed on the data controllers concerned. Personnel staff needs to be especially watchful in this regard. Nonetheless, the general issues of email and internet abuse potentially affect all staff, and this is why it is important to establish proper disciplinary rules covering this aspect of working life. This ethical requirement is important for procurement staff since IT is the focal point of e-procurement hence the need to have the pre-requisite competences in both training and professional ethics in order to execute their procurement mandate effectively.

The staff ought to be equipped with the necessary skills for enhanced performance. If the staffs lack core competences professionally, they will not be able to address customer needs appropriately hence a low service level to the customers and procurement function will not be effective in
response to the needs of the stakeholders in the supply chain.

**Information Communication Technology**

Organizations exist to deliver goods and offer services to customers. The aim of every business entity is to serve customers efficiently. Theorists and practicing managers have come up with a number of ideas about how to manage their firm’s service level to customers (Haberberg et al. 2008). This is achieved through embracing ICT, creating data bases and integrating systems into the system for an enhance service delivery. According to Baily et al (2008), the resource requirements of the entire organization, with reference to those of its neighbours in the supply chain, can be taken into account in planning. Enterprise Resource Planning (ERP) is a multi-mode suite of software operating on a company wide basis which might be concerned with all aspects of the business including for example, procurement, inventories, production, sales, human resource management, marketing, engineering and cash flows. It’s important to note that all departments and stakeholders operate with the same data. This is a programme that recognizes the interaction of all business activities; what happens in one area has direct effects elsewhere and these effects are captured by the system which adjusts throughout each area. In all areas, the data is reduced to the common denominator of financial data which provide management with the information it needs to manage the business successfully; for example the values of inventories, status of work in progress and finished goods.

According to Christopher (2005), an outgrowth of the synchronization philosophy has emerged in the recent years under the banner of Quick Response (QR) Logistics. The basic idea behind QR is that in order to reap the advantages of time based competition, it is necessary to develop systems that are responsive and fact. Hence the QR is the umbrella term for the information and logistics systems that combine to provide ‘the right product in the right place at the right time’. This is what it takes to realize service delivery in the supply chain. What has made QR possible is the development of information technology and in particular the rise of internet enabled data exchange, bar coding, the use of electronic point of sale (EPOS) systems with laser scanners.

He continues to state that the logic behind QR is that demand is captured in as close to real time as possible and as close to the final consumer as possible. The logistics response is then made directly as a result of that information hence an enhanced service delivery. Efficient service delivery is pegged on organizations integration with other systems in the supply chain in the sense that the Procuring Entity (PE) can do the following activities online: e-tendering, e-award, e-debriefing, e-invoicing and e-payment (EFT). When the organization has embraced ICT and systems are integrated, service delivery is enhanced since needs are communicated electronically and information on the action being taken relayed through the same media (Christopher, 2005). If an organization has not embraced ICT, it will not be able to deliver services to the satisfaction of customers because in e-procurement, an entity can only do business with entities that are integrated with other systems in the supply chain.

**Quality Management System**

success by implementing quality management system designed to continuously improve performance, taking into account the most important expectations, those the customers, shareholders , suppliers and those of the community.

Part of the organizations management system, the quality management system aims at streamlining the organization processes, adding value, lowering costs and increasing adaptability to the needs of the customer. Lately, there has been a growing concern for the quality of the processes. The set of ISO 9000 standards support the model of a quality management system based on processes and their management in a systematic vision to increase efficiency and effectiveness in achieving the objectives of the organization.

The project of the International standards ISO /CD 9001:2013 (the new edition of the ISO 9001 standard that was published in 2015 further strengthened the process-oriented approach as the integrated management of processes is the future in management. Among the key processes of the quality management system, the process of procurement and management of material resources has a direct and decisive influence on product quality because the properties of the resources acquired are mostly traceable in the values of the main quality features of the final product. The control of the procurement and management of material resources is a mandatory requirement of ISO 9001:2008 standard according to requirement 7.14.1).

In quality management oriented approach, we can define the processes of procurement and management of material resources as a set of interdependent, logically linked and value added sub-processes which take place within the organization in order to ensure and manage the elements necessary to conduct business in an effective and efficient way. To achieve that, the researcher would like to point out that it’s necessary for a PE to define the purpose of the process, determine how to achieve that activity within each specific sub-process (issuing procedures) and identifying and assessing the benefit in the established activities.

From a systematic approach, the procurement process should ensure a balance between the needs and the material resources available so that the organization can operate effectively and efficiently. To attain the said objective, it’s worth pointing out that the procurement and management of material resources ought to ascertain that materials are according to specified supply requirements that they are in the right quantity, of the right quality, at competitive prices and received at the right time (Christopher2005). He further states that procurement and management of material resources must be carried out in accordance with the principles of the total quality concept. In order to meet the total quality requirements, the procurement process must be strategically and proactively oriented and must effectively participate in developing the general strategies of the organization. It can rightly be argued out that in order to achieve a competitive edge, procurement strategies must be an integral part of the overall strategies of the organization and must harmonize them. In order to realize the specific objectives, sub-processes are identified within the process of procurement and management of material resources and indicators and methods of performance control are established. Thus the procurement process can identify the user requirements, come up with specifications, identify, evaluate and select suppliers based on their capability to supply material resources in compliance with organizational requirements. In addition, the procurement department will establish, maintain, manage and develop relationships with suppliers and monitor, measure
and analyze the results in order to monitor the efficient of the procurement process.

**Top Management Support**

Baily et al (2008) asserts that top management are the highest ranking executives within an establishment. Depending on the on the organization in question, titles that are used include Chairperson, President, Executive Directors and Executive Vice President. They are responsible for the entire enterprise. They translate the policy (formulated by the Board of Directors) into goals, objectives, strategies and projects. They give an enterprise a shared vision of the future. It makes decisions that affect everyone in the organization and is held entirely responsible for the success or failure of the enterprise.

Baily (2008) further states that whatever system is used, in the evaluation of procurement effort, some kind of report indicating the scope of activity of the department, its objectives and its performance in meeting the requirements of the organization needs to be produced. It will include exception reports on the current and projected market conditions and other pertinent information for top management, for example data on new products, new materials, and processes, information on supply sources, and market intelligence on key materials together with pertinent recommendations for related company policy and strategy. The researcher can rightly argue out that for the procurement function to be efficient, the top management ought to look at the recommendations objectively and facilitate implementation so as to realize efficiency in the function.

The researcher concurs with the role that the top management plays in giving an organization the sense of direction and this goes a long way in ascertaining efficiency in the procurement function.

An efficient procurement function will require a trained work force that is competent, a system that has embraced ICT since that is the platform e-procurement and e-commerce is being conducted as well as a sound quality management system. There is reciprocity in procurement whereby a PE is also a supplier and or a provider of services hence the need for having competent staff, with the required competences in ICT, commitment to quality and a management team that will ensure that all the parameters are in place for an efficient procurement function.

**Procurement practices**

A study by Mugo (2011) on effective procurement practices in training institutions found out that the practices were affected by inability to comply with procurement regulations and the PPDA 2005, lack of transparency, quality of procured goods and services. A related study on effective procurement practices by Wanyama (2010) revealed that huge loses in procurement expenditure. Velnampy (2010) found out that procurement practices were affected by compliance with procurement regulations, degree of transparency and accountability. Another study by Muindi (2014) on effective procurement practices established that staff training, Technology, supplier management relations and the organizational structure influenced procurement practices. The researcher concurs with the findings in that procurement best practices require that staff have the required skills, (PPADA 2015) is adhered to, regulations are followed and that the procurement process is transparent, fair and accountable.

Sound public procurement policies and practices are among the essential elements of good governance (KIPPRA, 2006). According to Thai (2008), the basic principles of good procurement practice include accountability, where effective mechanisms must be in place in order to enable
procuring entities spend the limited resources carefully, taking cognizance that they are accountable to members of the public; competitive acquisition of goods and services, which requires procurement be carried out competitively so as to obtain quality goods and services, unless there are valid reasons for sourcing singly; and consistency, which emphasizes the equal treatment of all bidders irrespective of race, sex, creed, religion, or political affiliation.

World Bank (2010) indicated that an effective public procurement process should also uphold integrity by ensuring that there are no malpractices; informed decision-making, which requires public bodies to base decisions on accurate information and ensure that requirements are being met. Furthermore, procurement practices should be responsive to aspirations, expectations and needs of the target society. Finally, procurement practices should allow for transparency and accountability of funds disbursed in the county.

Empirical Review

Staff Competency

Under this, the study will discuss previous studies that have been conducted on the topic. Creswel (2014) asserts that empirical perspective draws from past studies that are relevant to the topic with a view to bringing understanding on the previous work done by scholars and form basis for the discussion of the topic at hand. Nderitu and Ngugi (2014) conducted a study on staff competencies, the effects of green procurement on organizational performance in the manufacturing sector. The target population was 600 staff and the study sampled 37 which was 30% of the population. The findings were that green procurement was influenced by the level of staff competence, application of ICT, green procurement policy and capital expenditure. A study by Odero and Ayub (2017) on the effect of procurement practices on procurement performance of the public sugar manufacturing firms in Western Kenya used a census and distributed 62 questionnaires. It had a response rate of 72%. The study revealed a high degree of correlation between staff training, procurement planning and procurement practices.

Information Communication & Technology

For ICT application, Chimwani, Iravo and Thiriba (2014) carried out a study on factors influencing procurement practices in the Kenyan Public sector. The variables under study were records management system, procurement procedures, and ICT and staff qualifications. From a sample of 600 Staff drawn from 7 departments, the study sampled 60 respondents which was 10% of the population. Random stratified sampling method was used. The analysis gave the importance of the variables in the following order: records management, procurement procedures, procurement staff qualifications and ICT respectively. It can rightly be argued out that factors influencing procurement practices as per the study were records management, procurement procedures, procurement staff qualifications and ICT. Ngugi and Mugo (2014) conducted a study on internal factors affecting procurement practices in the Public Sector, a survey of Kenya government ministries. The findings were that procurement practices were affected by accountability of procurement staff, ICT, operating procedures and procurement processes.

Total Quality Management Systems

Mwangangi and Asienyo (2014) carried out a study on factors influencing procurement practices and performance. In this part, Quality Management Systems were empirically tested. The study established that staff competences, organization structure, quality management system and
Application of ICT influenced procurement practices and performance. In a related study, Kibe and Wanjau (2014) carried out a study on the effect of Quality Management System on the procurement practices and performance of food processing firms in Kenya. The findings indicated a positive correlation between the independent variables (top management support, capacity enhancement, ICT quality management measures) and the dependent variable (procurement practices).

Top management support was looked into in a study on the effect of Quality Management System on the procurement practices and performance of food processing firms in Kenya. Kibe and Wanjau (2014) established that procurement practices were highly influenced by top management support, capacity enhancement, ICT and quality management measures. Wanyoike (2016) conducted a study on the effect on quality management practices on procurement performance among manufacturing firms in Kenya. The study used 60 manufacturing firms in the country and using census sampling technique, arrives at 120 respondents. The study established that procurement practices were affected by continuous improvement, customer focus, top management involvement, operating environment and organizational capability.

Total Management Support

Kilonzo (2014) carried out a study on procurement practices for enhance performance at the Cadburys Kenya limited. The study adopted a case study mode of research design and used stratified proportionate random sampling to arrive at a sample of 45. The study established that the company focused on performance through procurement best practices to achieve price variance, effective contract utilization, inspiration management, improve procurement staff skills, improved procurement cycle time and effective payment processing time. Procurement best practices are strategic procurement planning, performance measurement, performance metrics, use of cooperative contracts, transparency; risk management, ethical procurement, procurement policy manual, performance management and performance.

Mamiro (2010) in his findings underscores these facts and concludes that one of the major setbacks in public procurement is poor procurement planning and management of the procurement process which include needs that are not well identified and estimated, unrealistic budgets and inadequacy of skills of procurement staff responsible for procurement. Similarly, Kakwezi et al., (2010) argue that procurement performance is not usually measured in most procurement entities as compared with the human resource and finance functions. They conclude in their findings that failure to establish performance of the procurement function can lead to irregular and biased decisions that have costly consequences to any public procuring entity. Therefore, this study was conceived by the limited scientific literature documenting the relationship between procurement performance and factors such planning, resource allocations, staff competency and contract management more specifically at Ministry of Energy. Public procurement is generally conducted through competitive tendering, which occurs when suppliers make written quotations or bids to supply goods, services or works. Unlike single tendering, competitive tendering helps to avoid favoritism and to discourage the emergency of monopolies and cartels. Competitive tendering underpins contemporary procurement markets and differs substantially from pure competition found conventional demand – supply exchange situations. The latter aims to achieve the lowest bid price while the former aims to achieve the lowest cost of
ownership. This is accomplished through life cycle costing, a key contract award technique that balances price and quality considerations against all other costs to be incurred during an item’s life. This life cycle costing has become the basis of sustainable procurement and helps in realizing values for money (Kipchillat, 2006).

**METHODOLOGY**

The study adopted a descriptive research design. According to Sekeran (2003), descriptive research design is a type of design used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation. The study focused on head of procurements in administration, supply chain management, finance and accounts and human resource management in each of the 6 ministries (Ministry of Interior and Coordination, Ministry of Water and Irrigation, Ministry of Environment and Forestry, Ministry of Education, Ministry of Devolution and Planning, Ministry of Labour, Gender and Social Protection). Multiple regression analysis was used to establish the factors influencing procurement practices in government ministries in Kenya. The Regression model was as follows:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon \]

Where \( Y \) = Procurement Practices

\( \beta_0 \) = Constant

\( \beta_1, \beta_2, \beta_3 \) and \( \beta_4 \) = Coefficients of the independent variables

\( \epsilon \) = Error term

\( X_1 \) = Staff Competency

\( X_2 \) = ICT

\( X_3 \) = Total quality management

\( X_4 \) = Top Management Support

**FINDINGS AND DISCUSSIONS**

**Staff Competency**

The study sought to establish the influence of staff competency procurement practices in government ministries in Kenya. Respondents were thus asked to indicate the extent to which they agreed with various statements relating to staff competency and its influence on procurement practices in government ministries in Kenya. Responses were given on a five-point scale where: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree. The scores of ‘strongly disagree’ and ‘disagree’ have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of ‘Neutral’ has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of ‘agree’ and ‘strongly agree’ have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 1 below presents the findings. As tabulated, a majority of respondents were found to highly agree the workforce needs external guidance with regard to the implementation of procurement practices in the public sector (3.542); procurement teams are well acquitted with the procurement act 2015 (3.678); the procurement requirements are such that call for procurement tasks demand professionals with high level strategic , tactical as well as operational skills to improve order fulfillment (3.780); the organization staff has been trained on the concept of implementation of procurement practices in the public sector (3.886); there is need for additional skills and competencies on implementation of procurement practices in the public sector (3.890). The organization comprehensively and adequately train staff on implementation of procurement practices in the public sector (4.220); employees receive induction training on procurement processes (3.118); The
The organization has the capacity to enhance further training (regular update of skills) on implementation of procurement practices in the public sector (3.908); The staff have the skills to enforce implementation of procurement practices in the public sector (3.210); the organization has initiated and developed programs specifically for public universities to develop knowledge on implementation of procurement practices in the public sector (3.225). This finding supports Moncka (2012) who argues that in an effort to attain these demands, organizations constantly look for employees who have skills necessary to deal with the wide variety of tasks faced by purchasing professionals. Procurement professionals need a set of flexible skills due to changing local government contexts. No single skill can be adequate to manage the procurement portfolio of great complexity in local government systems. Procurement tasks demand professionals with high-level strategic, tactical as well as operational skills. These skills should potentially take a broader supply chain multi-disciplinary and integrative approach.

**Table 1: Staff Competency**

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>The workforce needs external guidance with regard to the implementation of procurement practices in the public sector</td>
<td>3.452</td>
<td>.226</td>
</tr>
<tr>
<td>Procurement teams are well acquainted with the procurement act 2015</td>
<td>3.678</td>
<td>.120</td>
</tr>
<tr>
<td>The procurement requirements are such that call for procurement tasks demand professionals with high level strategic, tactical as well as operational skills to improve order fulfillment</td>
<td>3.780</td>
<td>.569</td>
</tr>
<tr>
<td>The organization staff has been trained on the concept of implementation of procurement practices in the public sector</td>
<td>3.886</td>
<td>.902</td>
</tr>
<tr>
<td>There is need for additional skills and competencies on implementation of procurement practices in the public sector</td>
<td>3.890</td>
<td>.325</td>
</tr>
<tr>
<td>The organization comprehensively and adequately train staff on implementation of procurement practices in the public sector</td>
<td>4.220</td>
<td>.532</td>
</tr>
<tr>
<td>Employees receive induction training on procurement processes</td>
<td>3.118</td>
<td>.568</td>
</tr>
<tr>
<td>The organization has the capacity to enhance further training (regular update of skills) on implementation of procurement practices in the public sector</td>
<td>3.908</td>
<td>.008</td>
</tr>
<tr>
<td>The staff have the skills to enforce implementation of procurement practices in the public sector</td>
<td>3.210</td>
<td>.228</td>
</tr>
<tr>
<td></td>
<td>3.225</td>
<td>.528</td>
</tr>
</tbody>
</table>

**Information Communication & Technology**

The study sought to establish the influence of ICT on procurement practices in government ministries in Kenya. Respondents were thus asked to indicate the extent to which they agreed with various statements relating to ICT and its influence on procurement practices in government ministries 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 5 which implies that on average the respondents 0 to 20% of employees in the firm that are computer literate.

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 48.60% 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%, 37.1% 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%, 48.6% had over 50% " The modal class is of the respondents who had over 50% level. The mode 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%, 2.9% had 20-30%, 2.9% had 30-40%, 31.4% had 40-50% and 60% had over 50% " The modal class is of the respondents who had over 50%. The mode 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: Information Communication & Technology

<table>
<thead>
<tr>
<th>What percentage of employees in the firm is computer literate?</th>
<th>0%-20%</th>
<th>20%-30%</th>
<th>30%-40%</th>
<th>40%-50%</th>
<th>Over 50%</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the firm’s level of automation?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0% 2.90% 53.30% 2.90% 14.30% 8.70% 5.10% 2.90% 5.70% 31.70% 48.60% 4
What is the level of procurement systems usage?

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
</tr>
</tbody>
</table>

What is the level of ICT infrastructure?

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.90%</td>
</tr>
</tbody>
</table>

What is the firm’s level of embrace of E-procurement?

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
</tr>
</tbody>
</table>

**Total Quality Management Systems**

The study sought to establish the influence of total quality management systems on procurement practices in government ministries in Kenya. Respondents were thus asked to indicate the extent to which they agreed with various statements relating to total quality management systems and its influence on procurement practices in government ministries in Kenya. Responses were given on a five-point scale where: 1= Strongly Disagree; 2= Disagree; 3= Neutral; 4 = Agree; 5= Strongly Agree. The scores of ‘strongly disagree’ and ‘disagree’ have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of ‘Neutral’ has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of ‘agree’ and ‘strongly agree’ have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 3 below presents the findings. With a grand mean of 3.874, a majority of respondents can be said to have highly agreed with most statements posed as regards influence of training on procurement performance in the public sector. A majority particularly highly agreed that to a great extent, employees are actively involved in the Total Quality Management training programs (4.115); training received by employees of the organization equips them with understanding on TQM and their role in it (4.042); employees in Safaricom get timely training on Total Quality Management program (3.957); employees in the organization are frequently trained on total quality Management programs (3.923); all employees in the organization get training on total Quality Management programs (3.751); and that the management plans follow-up and booster sessions (3.713). It can be deduced from the foregoing that employee training is practiced in the study area to a considerably great extent, with a view to align employees to total quality management best practiced. It is particularly notable that in the study area, employees are regularly trained and are actively involved in the Total Quality Management training programs. Coupled with managerial follow-up and booster sessions, the training received by employees of the organization equips them with understanding on TQM and their role in it. The trainings received are further frequent and timely. This argument is supported by Watad & Ospina (2009) who opine that the purpose of training and development programs is to improve employees and organizational capabilities. When the organization invests in improving the knowledge and skills of the employees, the investment is returned in the form of more productive and effective employees. Training and development programs should be based on training of, and management needs identified by training need analysis so that the time and money invested in training and management development is linked to the core business or goals of the organization. Accordingly, Pekar (2005) asserts that continuous improvement cannot occur within an organization unless training is part of management’s agenda. Leaders in respective
departments should take the initiative to conduct an analysis of each employee’s ability to perform his or her job. This is often referred to as a needs assessment analysis. Brun (2011) adds that training programmes must be devised and implemented to help bridge the gap identified previously. The results of the training must be evaluated to ensure that effective improvement has been achieved and that employees are competent to use the skills acquired. Management must promote the need for continuous training.

**Table 3: Total Quality Management Systems**

<table>
<thead>
<tr>
<th>Top Management Support Statements</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>All employees in the organization get training on total Quality Management programs</td>
<td>3.751</td>
<td>.7579</td>
</tr>
<tr>
<td>Employees in the organization are frequently trained on total quality Management programs</td>
<td>3.923</td>
<td>.8888</td>
</tr>
<tr>
<td>Employees in the ministry get timely training on Total Quality Management program</td>
<td>3.957</td>
<td>.7424</td>
</tr>
<tr>
<td>Training received by employees of the organization equips them with understanding on TQM and their role in it</td>
<td>4.042</td>
<td>.7602</td>
</tr>
<tr>
<td>There is restoration of functioning through implementation of an action plan</td>
<td>3.619</td>
<td>.8913</td>
</tr>
<tr>
<td>Employees are actively involved in the Total Quality Management training programs</td>
<td>4.115</td>
<td>.5137</td>
</tr>
<tr>
<td>The management plans follow-up and booster sessions</td>
<td>3.713</td>
<td>.4976</td>
</tr>
</tbody>
</table>

**Composite mean** 3.874

The study sought to establish the influence of top management support on procurement practices in government ministries in Kenya. Respondents were thus asked to indicate the extent to which they agreed with various statements relating to top management support and its influence on procurement practices in government ministries in Kenya. Responses were given on a five-point scale where: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree. The scores of ‘strongly disagree’ and ‘disagree’ have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of ‘Neutral’ has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of ‘agree’ and ‘strongly agree’ have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 4 below presents the findings.

With a grand mean of 3.874, a majority of respondents can be said to have highly agreed with most statements posed as regards influence of top management support on procurement practices in the government ministries in Kenya. A majority particularly highly agreed that Top management are committed to staff development and career enhancement (4.115); Top management encourage collaborative relationships with supplier for or
innovative supply chain performance (4.042); Top level management train employees on the use of quality Statistical and control tools (3.957); employees in the organization are frequently trained on total quality Management programs (3.923); Top management are in the fore front to initiate a culture of quality in the organization processes (3.751); Top management make efforts to standardise the Supply chain processes that enhance quality in the organization. (3.713). Top management is willing to take accountability for inventory management and delivery time lines (2.898). Top management are committed to staff development and career enhancement (2.3680).

Table 4: Top Management Support

<table>
<thead>
<tr>
<th>Statements</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top management are committed to staff development and career enhancement.</td>
<td>3.672</td>
<td>.2386</td>
</tr>
<tr>
<td>Top management encourage collaborative relationships with supplier for or</td>
<td>2.908</td>
<td>.3282</td>
</tr>
<tr>
<td>innovative supply chain performance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top level management train employees on the use of quality Statistical and</td>
<td>3.245</td>
<td>.4520</td>
</tr>
<tr>
<td>control tools.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top management are in the fore front to initiate a culture of quality in the</td>
<td>2.898</td>
<td>.2219</td>
</tr>
<tr>
<td>organization processes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top management make efforts to standardise the Supply chain processes that</td>
<td>2.874</td>
<td>.4269</td>
</tr>
<tr>
<td>enhance quality in the organization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top management are willing to take accountability for inventory management</td>
<td>4.532</td>
<td>.3608</td>
</tr>
<tr>
<td>and delivery time lines.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top management are committed to staff development and career enhancement.</td>
<td>3.218</td>
<td>.2185</td>
</tr>
<tr>
<td><strong>Composite mean</strong></td>
<td>3.908</td>
<td></td>
</tr>
</tbody>
</table>

**Procurement Practices**

The study sought to determine procurement practices in the study area attributed to staff competency, ICT, Qua;ility management systems and top management support with all the four studied over a 5 year period, running from 2013 to 2017. Findings in Table 4.7 above reveal improved procurement performance across the 5 year period running from the year 2013 to 2017. Cost reduction recorded positive improvement with a majority affirming to growing from less than 10% (40%) in 2013, to more than 10%-30% in 2014 (36%), 2015 (40.4%) and 2017 (38%). Timely delivery also recorded positive improvement with a majority affirming to less than 10% in 2013 (38%) and 2014 (36%), to 10%-30% in 2015 (36%) and 2016(9%) then by more than 30% in 2017 (34%). It was also observed that there was improvement in complaints with a majority affirming to its decrease by less than 10% in 2013 (36%) and 2014(35%), to 10%-30% in 2015 (36%) and 2016 (36%) then by more than 30% in 2017 (37.3%). Complements also recorded a positive improvement with a majority affirming to less than 10% in 2013 (42%) and 2014 (38%), to 10% -30% in 2015 (36.1%) then more than
30% in 2016 (40%) and 2017 (37%). It can be deduced from the findings that key procurement practices indicators have considerably improved as influenced by among other factors attributes, the influence of staff competency, ICT, total quality management systems and top management support. Complements and Timely delivery have particularly improved by at least 10%-30% percent in the study area pointing to the significance of staff competency, ICT, total quality management systems and top management support in the procurement process.

Table 5: Procurement Practices

<table>
<thead>
<tr>
<th>Cost Reduction</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved by less than 10%</td>
<td>40</td>
<td>36</td>
<td>32</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>Improved by 10%-30%</td>
<td>32</td>
<td>34</td>
<td>30</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>Improved by more than 30%</td>
<td>28</td>
<td>30</td>
<td>38</td>
<td>40</td>
<td>37</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Timely Delivery</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved by less than 10%</td>
<td>38</td>
<td>36</td>
<td>30</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>Improved by 10%-30%</td>
<td>36</td>
<td>30</td>
<td>36</td>
<td>35</td>
<td>33</td>
</tr>
<tr>
<td>Improved by more than 30%</td>
<td>26</td>
<td>34</td>
<td>34</td>
<td>39</td>
<td>34</td>
</tr>
</tbody>
</table>

Customer Satisfaction

<table>
<thead>
<tr>
<th>Complaints</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreased by less than 10%</td>
<td>32</td>
<td>35</td>
<td>33</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>Decreased by 10%-30%</td>
<td>32</td>
<td>33</td>
<td>36</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Decreased by more than 30%</td>
<td>36</td>
<td>32</td>
<td>30</td>
<td>34</td>
<td>37</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Complements</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved by less than 10%</td>
<td>42</td>
<td>38</td>
<td>32</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Improved by 10%-30%</td>
<td>32</td>
<td>33</td>
<td>36</td>
<td>29</td>
<td>33</td>
</tr>
<tr>
<td>Improved by more than 30%</td>
<td>26</td>
<td>29</td>
<td>32</td>
<td>40</td>
<td>37</td>
</tr>
</tbody>
</table>

Overall Regression Analysis Model

Table 6: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.787</td>
<td>.619</td>
<td>.586</td>
<td>.000</td>
</tr>
</tbody>
</table>
Table 7: ANOVA Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10.345</td>
<td>4</td>
<td>2.58625</td>
<td>24.7275</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>8.890</td>
<td>85</td>
<td>.1046</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19.235</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NB: F-critical value = 13.762

Regression Coefficients

The study obtained regression coefficients from the multiple regression analysis obtained t value and significance level as indicated in Table 4.10 . The study conducted a multiple regression analysis so as to determine the relationship between the dependent variable and independent variables. With the aid of model \( Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e \); \( Y \) = Dependent variable (Procurement Practices); \( \alpha \) = Constant (The intercept of the model); \( \beta \) = Coefficient of the \( X \) variables (independent variables); \( X_1 \)= Staff Competency; \( X_2 \)= ICT; \( X_3 \)= Quality Management systems; \( X_4 \)= Top Management Support; \( e \) was the Error term. The general form of the equation was to predict procurement practices from \( X_1 \)= Staff Competency; \( X_2 \)= ICT; \( X_3 \)= Quality Management Systems; \( X_4 \)= Top Management Support is: \( Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e \) becomes: \( Y = 14.890 + 0.788X_1 + 0.742X_2 + 0.711X_3 + 0.699X_4 \). This indicates that Procurement Practices = 14.890 + 0.788*Staff Competency + 0.742*ICT + 0.711*Quality Management Systems + 0.699* Top Management Support.

Based at 5% level of significance, staff competency was found to have a calculated \( t = 5.455 \) (greater than the tabulated value of \( t > 1.96 \)) and a significance level of 0.000 thus the value of less than 0.05; ICT show a calculated \( t = 4.266 \) (greater than the tabulated value of \( t > 1.96 \)) and a significance level of 0.001 thus the value of less than 0.05, Quality Management systems was found to have a calculated \( t = 3.011 \) (greater than the tabulated value of \( t = 1.96 \)) and a significance level of 0.002 thus the value of less than 0.05, top management support was found to have a calculated \( t = 1.969 \) (greater than the tabulated value of \( t > 1.96 \)) and a significance level of 0.005 thus the value of less than 0.05 hence the most significant factor was staff competency.
Table 8: Coefficient Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>14.890</td>
<td>2.037</td>
<td>7.309</td>
</tr>
<tr>
<td></td>
<td>X1-SC</td>
<td>.788</td>
<td>.144</td>
<td>.602</td>
</tr>
<tr>
<td></td>
<td>X2-ICT</td>
<td>.742</td>
<td>.174</td>
<td>.655</td>
</tr>
<tr>
<td></td>
<td>X3-QMS</td>
<td>.711</td>
<td>.236</td>
<td>.505</td>
</tr>
<tr>
<td></td>
<td>X4-TMS</td>
<td>.699</td>
<td>.355</td>
<td>609</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Procurement Practices

CONCLUSION AND RECOMMENDATIONS

From the descriptive statistics the study established that and found to highly agree the workforce needs external guidance with regard to the implementation of procurement practices in the public sector. The procurement teams are well acquitted with the procurement act 2015. The procurement requirements are such that call for procurement tasks demand professionals. The organization staff has been trained on the concept of implementation of procurement practices in the public sector. There is need for additional skills and competencies on implementation of procurement practices in the public sector. The organization comprehensively and adequately trains staff on implementation of procurement practices in the public sector. The employees receive induction training on procurement processes. The organization the capacity to enhance further training. The organization has initiated and developed programs specifically for organization to develop knowledge on implementation of procurement practices in the public sector.

On the extent to which ICT affected the procurement practices and respondents were asked to indicate the extent to which ICT factors hindered procurement practicesin the ministries. 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 subjects all it’s procurement practices to manual procedures, the benefits of information technology are not experienced and a high level of inefficiency is experienced during execution of procurement procedures.
The study sought to establish the influence of total quality management systems on procurement practices in the government ministries in Kenya. The study established that majority of respondents can be said to have stated that most statements posed as regards influence of total quality management systems on procurement practices in the government ministries in Kenya. They particularly highly agreed that to a great extent, employees are actively involved in the Total Quality Management training programs and training received by employees of the organization equips them with understanding on TQM and their role in it. It was revealed that employees in the ministries get timely training on Total Quality Management program and they are frequently trained on total quality Management programs. Finally, all employees in the organization get training on total Quality Management programs and that the management plans follow-up and booster.

The study revealed that top management support affects the procurement practices in the government ministries to a great extent, top management encourage collaborative relationships with supplier for or innovative supply chain performance, top level management train employees on the use of quality statistical and control tools, top management are willing to take accountability for inventory management and delivery time lines, top management make efforts to standardise the supply chain processes that enhance quality in the organization, top management are in the fore front to initiate a culture of quality in the e organization processes, and that top management are committed to staff development and career enhancement., the study also established that the top managers must demonstrate their willingness to give energy and loyalty for supply chain to succeed, and that top management must communicate inventory management to the entire organization to create awareness, interest, desire and action.

**Conclusions of the Study**

It can be deduced from the findings that key procurement practices indicators have considerably improved as influenced by among other factors, the influence of staff competency, ICT, Quality management systems and top management support Complements and Timely delivery have particularly improved in the government ministries pointing to the significance of these factors in the procurement practices.

The study concludes that staff competency is the first important factor that affects procurement practices in the government ministries in Kenya. The regression coefficients of the study show that staff competency has a significant influence on procurement practices in the government ministries in Kenya. This implies that increasing levels of staff competency would increase the levels of procurement practices in the government ministries in Kenya. This shows that staff competency has a positive influence on procurement practices in the government ministries in Kenya.

The study concludes that ICT is the second important factor that affects procurement practices in the government ministries in Kenya. The regression coefficients of the study show that ICT has a significant influence on procurement practices in the government ministries in Kenya. This implies that increasing levels of ICT would increase the levels of procurement practices in the government ministries in Kenya. This shows that ICT has a positive influence on procurement practices in the government ministries in Kenya.

Further, the study concludes that quality management systems is the third important factor that affects procurement practices in the government ministries in Kenya. The regression coefficients of the study show that quality
management systems has a significant influence on procurement practices in the government ministries in Kenya. This implies that increasing levels of quality management systems would increase the levels of procurement practices in the government ministries in Kenya. This shows that quality management systems have a positive influence on procurement practices in the government ministries in Kenya.

The study concludes that top management support is the fourth important factor that affects procurement practices in the government ministries in Kenya. The regression coefficients of the study show that top management support has a significant influence on procurement practices in the government ministries in Kenya. This implies that increasing levels of top management support would increase the levels of procurement practices in the government ministries in Kenya. This shows that top management support has a positive influence on procurement practices in the government ministries in Kenya.

**Recommendations of the Study**

To enhance procurement practices in the government ministries, there is need to have sufficient and qualified procurement personnel with enough training assessment methods to enhance compliance with the rules and regulations. There should be adequate training and simulation for key stakeholders especially the procurement staff qualifications to promote reduction of procurement costs. Organization should offer professional skills related to procurement and employ staff with the professional skills to boost

The government ministries should also employ professional trained procurement staff and continuously train the staff on emerging issues on public procurement practices. The government ministries should effectively integrate procurement functions with ICT based systems through application of e-procurement methods, use of automated procurement systems; implementation of supportive ICT infrastructure for encouraging adoption of ICT based procurement systems and training of procurement staff on ICT skills.

In the light of the findings and conclusions, the following recommendations are hereby proposed: Efforts must be made to implement those TQM practices which are not being effectively practiced in the study area so as to help improve on procurement practices. There is the need to employ quality functional deployment. This will enable quality systems to be built on customer needs and wants and also exceed customer expectations. When this is done it will help in addressing the issues of poor customer relations as well as prevent loses of customers as a result of not meeting customers’ expectations in terms of price. It is recommended that the company subscribe to a quality award system.

The top management should ensure that it gives the public sector the sense of direction and this goes a long way in ascertaining efficiency in the procurement practices. An efficient procurement practices will require a trained work force that is competent, a system that has embraced ICT since that is the platform e-procurement and e-commerce is being conducted as well as a sound quality management system. There is reciprocity in procurement whereby a PE is also a supplier and or a provider of services hence the need for having competent staff, with the required competences in ICT, commitment to quality and a management team that will ensure that all the parameters are in place for an efficient procurement practices.

**Areas of Further Research**
The study was limited to influence of staff competency, ICT, Quality management systems and top management support. Further research can be done on other methods to explore the other variables which could be affecting procurement practices in the government ministries in other areas for the generalization of the findings of this study. The same research should be conducted in the same areas but more focus should be on qualitative measures of procurement practices. The study established that the available literature has shown that are scanty studies in relation to the study. The study has contributed to the body of knowledge by establishing that staff competency, ICT, Quality management systems and top management support affect procurement practices in the government ministries in Kenya. The study findings have revealed the need for further studies in other areas and dimensions not tackled in the study. Further research is needed that examines private actors’ and firms’ adaptation to the in procurement challenges pertaining to factors influencing implementations on of procurement practices. Further, it has emerged in this study that the decisions made also should be made informing the stakeholders to make certain that the processes are totally transparent and that the decision makers are accountable for their actions.

REFERENCES


