

**INFLUENCE OF INSTITUTIONAL FACTORS ON  
IMPLEMENTATION OF E-PROCUREMENT IN COUNTY  
GOVERNMENTS IN KENYA**

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## DECLARATION

This research project report is my own original work and has not been presented for award of a degree in any other University.

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## **DEDICATION**

I dedicate this project to my family members for their great support during the time of this study.

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## **ABBREVIATIONS AND ACRONYMS**

<b>B2B</b>	Business to Business
<b>E-GOVERNMENT</b>	Electronic Government
<b>E-PROCUREMENT</b>	Electronic Procurement
<b>ICT</b>	Information Communication Technology
<b>IFMIS</b>	Integrated Financial Management Information Systems
<b>IS</b>	Information Systems
<b>IT</b>	Information Technology
<b>MIS</b>	Management Information System
<b>PPOA</b>	Public Procurement Oversight Authority
<b>SCM</b>	Supply Chain Management
<b>SPSS</b>	Statistical Package for Social Science

## **DEFINITIONS OF TERMS**

### **County Governments**

Devolved system of governance in Kenya divided into forty seven (47) counties.

### **E-ordering**

The process of generating and approving purchase requisitions, placing orders as well as receiving goods and services by using a system based on internet technology.

### **E-tendering**

The processes of sending requests for quotations, invoices and purchases to suppliers and consequently receive the same from them through the internet.

### **E-procurement**

The use of internet based system to undertake some or all stages of procurement.

### **Implementation of e-procurement**

The effort commencing with the thought of developing a system and not ending until the project is concluded or abandoned.

### **Information Communication Technology (ICT)**

Technology that involves use of computers and internet connections infrastructure for supporting information processing and communication functions.

### **Institution**

An establishment, organization, society or foundation devoted to the promotion of a particular program or cause especially one of a charitable, public or educational.

### **Institutional Factors**

Factors that are within the control of an institution.

### **Procurement**

The process in which an organizations procures, services or supplies goods or services in order to fulfill various functions such as shelter, transport and infrastructures.

## ABSTRACT

Public procurement approaches and processes have been under review over many years with the aim of improving efficiency and cost savings. In Kenya, the Government introduced an electronic procurement system with the aim of promoting openness and accountability in the use of public money. Despite these efforts by the national government and the benefits of e-procurement, the system has not been fully implemented by the county governments. This study therefore, assessed the influence of institutional factors on the implementation of e-procurement by county governments in Kenya. The specific objectives were to determine the influence of employee competence, availability of ICT infrastructure and the influence of management support on the implementation of e-procurement in the selected county governments in Kenya. The study will be guided by diffusion of innovation theory, technology acceptance theory and human relations management theory. Descriptive research design was used and the target population was the 47 county governments in Kenya. A sample of 5 county governments was used in the study. The sample was selected using simple random sampling technique. A questionnaire was used to collect primary data from the sampled population. In order to determine the validity and reliability of the questionnaire, pretesting of the research instruments was conducted. To establish the validity of the research instrument, content validity was used while internal consistency method was used to determine the reliability. The data collected was analyzed using statistical package for social sciences. The data was analyzed through descriptive statistics and inferential statistics. Descriptive findings were presented through percentages, means, standard deviations and frequencies. Pearson's correlation, regression and ANOVA analysis were adopted in inferential statistics. The study found that the county governments have not fully implemented e-procurement. The study also found that institutional factors have a significant positive influence on the implementation of e-procurement in county governments. County governments should therefore train staff on the use of e-procurement tools in order to enhance the implementation of e-procurement. The institutions should also employ qualified staff and avail them with electronic procurement manual to guide on e-procurement processes and assist in the implementation of e-procurement. County governments should procure infrastructure such as high speed computers and internet services in order to facilitate e-procurement implementation. The organizations should also ensure that it integrates the e-procurement system to the financial management and establish an information and communication technology section with competent staff in order to provide technical support during the implementation of e-procurement. Management should institute a project management team to spear head the e-procurement system implementation. The management should also review the organization structure to suit the e-procurement environment and introduce policies and change management programs for the users that facilitate the implementation of e-procurement.

# CHAPTER ONE

## INTRODUCTION

### **1.1 Background of the Study**

Public procurement approaches and processes have been under review over many years with the aim of improving efficiency and cost savings. With the development of information and communication technology, institutions have been forced to move their operations from traditional systems to e-procurement in order to sustain themselves (Oporo, 2014). An increasing number of government agencies are embracing e-procurement solutions in order to reap the benefits that firms in the private sector have already achieved (Panayiotou, Gayialis & Tatsiopoulos, 2014). Therefore, e-procurement is no longer an afterthought but a necessity for any institution due to the dynamic and competitive business environment (Wangui, 2013).

E-procurement is the procurement and disposal of goods and services through information and networking systems such as enterprise resource planning and electronic data interchange or internet (Lee, 2009). It is the utilization of information technology to develop a procurement process that is responsive to changes in the environment (McCue & Roman, 2012). E-procurement can be used in conjunction with varied technologies of electronic commerce such as document imaging, workflow management, bulletin boards and e-mail to enable business process reengineering. With these combinations, e-procurement can give rise to a number of benefits to an institution and to the strategic position of a firm (Dong, Xu, & Zhu, 2009)

The benefits include process efficiency and costs associated with procurement activities (Walker & Harland, 2008). This results in profitability, control and simplicity in the process of corporate procurement, reduction in lead time and cost of procurement and enhanced transparency (Khanapuri, Nayak, Soni, Sharma, & Soni, 2011). The migration of procurement functions to the e-procurement has a profound impact on reducing the prevalent corruption in public procurements (Panda & Sahu, 2012). Other operational benefits of e-procurement to the firm includes improving financial control by making it easier to match orders, improve auditing and better security (Ordanini & Rubera, 2008).

E-procurement has gained popularity globally especially with the introduction of technology. In the United States of America, rapid development of e-procurement was reported in early 2000. All state functions maintained web presence in at least some stages of their procurement processes while some participated in online bidding (Reddick, 2004). New Zealand GoProcure e-procurement system became more complex to develop than expected, while the United Kingdom ministry of defense was yet to realize the benefits of its e-procurement service three years after it was launched (Vaidya, Sajeev & Callender, 2009). The State of South Carolina abandoned its e-procurement system in the year 2002 and pilot projects were shut down in Indiana, Michigan and Massachusetts during the same year. The auditor of Virginia state reported that only 1.5 percent of the businesses in the state was conducted through its state of the art \$USD14.9 million system (Garson, 2004).

The concept of e-procurement in Africa is just gaining popularity in the public sector. E-government initiatives in Sub-Saharan African countries seem to be far from reaching realization and attaining the purpose for which they are undertaken due to several challenges and stumbling blocks (Mutula, 2008). The implementation of e-government initiatives in Sub-Saharan African countries have in most cases been failures. Heeks (2006) observed that 35% of e-government projects in developing countries are total failures, 50% are partial failures, while the remaining 15% are successes.

Almarabeh and AbuAli (2010) observed that huge failures have been recorded for a large proportion of e-government initiatives as they have failed to achieve promised goals. ICT infrastructure particularly dominates the research on the challenges to the successful implementation of e-government initiatives in Sub Saharan Africa. This is followed by human resources, legal framework, internet access and connectivity, language, illiteracy, awareness and the digital divide amongst others. These challenges can be grouped based on their similarities which results to six different aspects such as infrastructural, financial, political, organizational, socio-economic, and human aspects (Nkohkwo & Islam, 2013).

In Kenya, the government made it compulsory for procurement of all public goods, works and services to be done through online platforms. Furthermore, a directive was issued to county governments to conduct all procurement and finance operations online (National Treasury, 2016). Integrated financial management information system (IFMIS) was introduced by the government and rolled out in all the 47 counties. The system was intended to enhance governance by offering real time financial information thus improving accountability and transparency (United States Agency of International Development, 2008). Despite the benefits of e-procurement such as quicker transaction times, lower costs and better supplier integration (Kheng & Al-Hawamdeh, 2006), its implementation in Kenya is still very low (Gunasekaran & Ngai, 2010).

### **1.1.1 Institutional factors influencing the implementation of e-procurement**

The implementation of e-procurement comes with a number of challenges which can be categorized into organizational and economic-legal challenges (United Nations, 2011). One of the institutional factors that affect the implementation of e-procurement is employee competence and capacity. As e-procurement includes changes in traditional procurement approaches and new technologies, the need to train staff in the use of e-procurement tools and procurement practices are critical to the success of an e-procurement initiative. End-users can realize the benefits of e-procurement system once they comprehend the operational functionalities (Hardy & Williams, 2011).

Another institutional factor identified by Eadie, Perera and Heaney, (2010) is top management support. Lack of leadership and a widely accepted solution is one of the greatest barriers implementation of e-procurement within the public sector (Davila, Gupta & Palmer, 2003). The management is responsible for setting the vision and goals, bringing about collective commitment for change in process and organizational structures, and formulating the policies and strategies necessary to put an e-procurement initiative in place (World Bank, 2013). Lack of IT infrastructure to undertake e-procurement which includes networking and equipment is another challenge (World Bank, 2013).

### **1.1.2 Implementation of Electronic Procurement System**

Successful implementation of e-procurement system enables an institution to enjoy the benefits the system can offer. Despite the great benefits of e-procurement technologies, their implementation is still at their early stages in many government institutions (Aboelmaged, 2010). Information Systems literature defines implementation as an effort beginning with the first thought of developing a system and not ending until the project is completed or abandoned (Vaidya et al., 2009). However, Chan and Ngai (2007) state that IS implementation is best described as a process of organizational change that extends over a considerable period of time.

Implementation of e-procurement is an elaborate process and requires transformation and restructuring of government procurement structures (Australia, 2005). The process requires electronic systems for demand estimation, budgets, sourcing, ordering and supply monitoring. Introduction of e-procurement in an organization is associated with increased efficiency, lower transactional costs, reduced corruption and enhanced control and monitoring of public procurement process (Hunja, 2011).

### **1.1.3 Institutional Factors and Implementation of E-procurement**

Implementation of e-procurement in public procurement requires resources and specialized skills. In addition, the process requires a well-coordinated change management systems and training program. It is also important to put into place practices, processes and systems for the implementation of e-procurement (Vaidya *et al.*, 2009). The development and implementation of electronic commerce models such as e-procurement portal in an institution is a challenge that goes beyond a mere technological functionality (Turban *et al.*, 2006). Implementing of a new technology needs skill and knowledge to operate. Organization whose employees have the necessary skills and technical knowledge are more likely to implement e-government applications (Lin, Lee & Lee, 2005). Unfortunately, many technology based products and services never reach their full potential, and some are simply rejected (Burton-Jones & Hubona, 2006). Failed investments in technology may not only cause financial losses, but also lead to dissatisfaction among employees (Venkatesh, 2000).



#### **1.1.4 E-procurement in County Governments**

The public sector organizations use e-procurement to achieve benefits that include efficiency, cost savings, improved transparency and reduce unethical practices like corruption in procurement services by eliminating interaction with suppliers (Archer, 2005). The public financial reform management strategy paper recommended automation as well as integration of key government functions in Kenya such as the human resources payroll, accounting, procurement and budgeting citing transparency, better financial management and easier reporting as some of the benefits (National Treasury, 2016).

In Kenya, integrated financial management information system (IFMIS) department within the national treasury is mandated to designing, spearheading and managing the integrated financial management information system all government agencies (National Treasury, 2016). IFMIS was developed in 1998 and its deployment to the counties began in 2012. The system is used for budgeting, accounting, auditing and reporting. The system also has e-procurement module that fully automates the procurement and payment process (National Treasury, 2016). Despite the deployment of the system to the counties, its full potential implementation has not been realized.

#### **1.2 Statement of the Problem**

In the recent times, there has been greater recognition of the need for public sector organizations to harness innovative technologies to enhance greater efficiency and cost savings throughout their organizations. In Kenya, the Government introduced an electronic procurement system e-procurement with the aim of promoting openness and accountability in the use of public money. The Launch of the system was followed by continuous sensitization and IFMIS Academy has also offered training to the users in order to enhance technical proficiency. Despite these efforts by the National Government and the benefits of E-procurement, the system has not been fully implemented by the County Governments. This has raised concerns in the national treasury as to why the County Governments have not implemented the system (National Treasury, 2016).

Studies have been conducted on e-procurement both locally and internationally. Benders, Batenburg and Van der Blonk (2006) conducted a study on e-procurement implementation by European firms. The study concluded that there exist country differences in e-procurement implementation. Locally, Orori (2011) studied factors that influence the introduction of e-procurement on retail industry in Kenya and found that there is a lot of resistance to change. Kangogo and Gakure (2013) found that private entities have successfully embraced the use of e-procurement technology. There is minimal studies done to establish the institutional factors influencing e-procurement implementation in county governments in Kenya and this forms the basis of this study. The study intended to establish the influence of institutional factors on the implementation of e-procurement by County Governments in Kenya.

### **1.3 General Objective**

The general objective of the study was to establish the influence of institutional factors on the implementation of e-procurement by County Governments in Kenya.

#### **1.3.1 Specific Objectives**

The study was guided by the following specific objectives:

- i. To determine the influence of employee competence on the implementation of e-procurement in the selected county governments in Kenya.
- ii. To establish the influence of availability of ICT infrastructure on the implementation of e-procurement in the selected county governments in Kenya.
- iii. To find out the influence of management support on the implementation of e-procurement in the selected county governments in Kenya.

#### **1.4 Research Questions**

- i. What is the influence of employee competence on the implementation of e-procurement in the selected county governments in Kenya?
- ii. To what extent does availability of ICT infrastructure influence the implementation of e-procurement in the selected county governments in Kenya?
- iii. What is the influence of management support on the implementation of e-procurement in the selected county governments in Kenya?

### **1.5 Hypothesis**

The study was guided by the following null hypothesis

H<sub>0</sub>: Institutional Factors have no significant influence on the implementation of e-procurement by the selected county governments in Kenya.

### **1.6 Scope of the study**

The study assessed the status of e-procurement implementation in selected county governments in Kenya. The research was conducted in a sample of five county governments selected by simple random sampling technique. The data was collected from the staff working in the selected county government's headquarters. The research focused on employee competence, availability of ICT infrastructure and management support. The study was guided by diffusion of innovation theory, technology acceptance theory and human relations management theory.

### **1.7 Significance of the Study**

This study will be beneficial to national government and county governments to determine the institutional factors that influence e-procurement implementation and possibly address the issues. The governments will also be better informed when formulating e-procurement related policies and regulations. The study will also add knowledge to the existing body of knowledge and open up areas for further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature relating to institutional factors affecting e-procurement implementation. It covers the theoretical review, empirical literature on institutional factors affecting e-procurement implementation summary and research gaps.

#### **2.2 Theoretical Review**

There are several theories that can explain the issues influencing the implementation of a new idea in an organization. The study will be guided by diffusion of innovation theory, technology acceptance theory and human relations management theory.

##### **2.2.1 Diffusion of Innovation Theory**

The theory was advanced by Rogers in 1962. It explains how, over time, an idea gains momentum and diffuses through a social system or specific population. The end result of this is that people adopt a new behavior, product or idea. This means that the person does some tasks differently than what they did previously. When promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation (Rogers, 2003). This study will seek to investigate how the counties involved the users in the innovation process. However, this theory cannot account for the all variables affecting the implementation of e- procurement

##### **2.2.2 Technology Acceptance Model**

This model was introduced by Davis in 1993. According to this theory, emerging technologies cannot improve organizational effectiveness and performance if the change has not been accepted by the users. Implementation of any innovation especially information technology requires investment in computer based tools to support decision making, planning and communication. It is therefore very critical that the systems are specified on organizational preference and logic. It is also necessary to understand that people may resist technological changes.

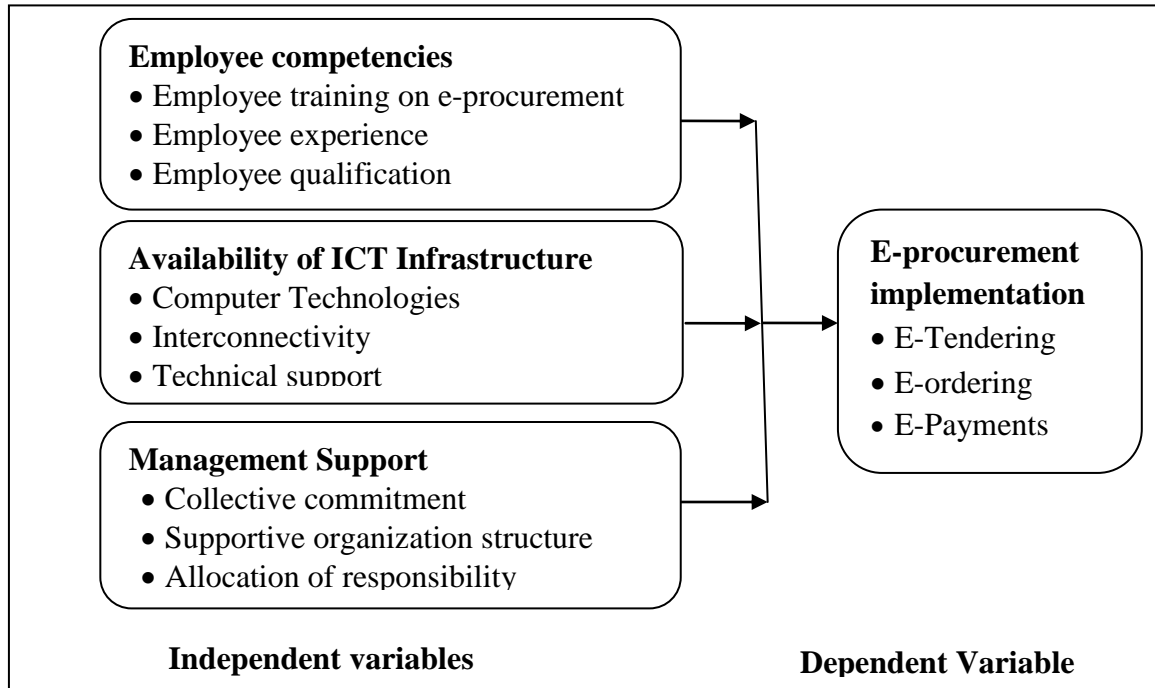
An institution should strive to understand why people resist changes and the possible ways through which such issues can be resolved. Everyone involved must therefore be informed on their roles and empowered to perform the respective roles (Kamel, 2014). However, this theory is a subjective measure and unreliable in measuring actual use of the system. This is because the time period between innovation and implementation could be full of uncertainties and other factors may arise during the process.

### **2.2.3 Human Relations Management Theory**

Human relations theory was introduced by Elton Mayo in 1920. The theory is a researched belief that people desire to be part of a supportive team that facilitates development and growth. Therefore, if employees receive special attention and are encouraged to participate, they perceive their work has significance, and they are motivated to be more productive, resulting in high quality work (Vaidya *et al.*, 2009). Management support, firms' size, skills and knowledge and organization policy are considered to be factors that influence firms' willingness to implement e-procurement. Jeyaraj *et al.*, (2006) found that management support is the best predictor of e-procurement implementation in an institution. However, the theory over emphasizes human needs at expense of the other needs.

### **2.3 Conceptual Framework**

In this study, the dependent variable will be implementation of e-procurement while independent variables are the institutional factors which are employee competency, availability of ICT infrastructure and Management Support as shown in Figure 2.1



**Figure 2.1** Moderating Variables on the influence of institutional factors on the implementation of e-procurement by county governments in Kenya

### 2.3.1 Employee Competency

End-user training and uptake is positively associated with successful implementation of an e-procurement initiative. As e-procurement entails new technologies, it is necessary for changes in how tasks are done in an institution from the traditional approaches to new procurement approaches. Staff should therefore be trained on the use of e-procurement tools and practices in order to implement e-procurement successfully. The users can achieve immediate benefits of e-procurement once they comprehend the operational functionalities (Hardy & Williams, 2011). The staffs of an organization need to acquire the necessary skills that can enable them to operate effectively and efficiently while using the new e-procurement system. Inadequately trained staff may not own the e-procurement system and thus contribute to failure. The success of e-procurement initiative depends on users making use of the new process and system (Mose, 2012). This study established the competence of the employees in county governments and its influence on e-procurement implementation.

### **2.3.2 Availability of Information Technology Infrastructure**

Technological infrastructure plays a key role in implementation of e-procurement without which integration of public procurement entities will not materialize. Availability of the required equipment influences not just the process of the strategy implementation but also the integrity and quality of information exchanged between purchaser and the supplier of goods and services. In the context of e-procurement success, web content should be personalized, complete, relevant, easy to understand, and secure if one expect buyers or supplier to initiate transactions via the Internet and to return to the site on regular basis (Gitahi, 2011). Arbin and Hultman (2008) noted in his research findings that, the biggest reason why companies implement an e-procurement system is the demand to reduce costs and increase compliance in choosing suppliers. It is found that many institutions have not been able to implement e-procurement because they lack the required infrastructure like internet, computers, and software's. This study will ascertain the availability of ICT infrastructure in the county governments and its effect on e-procurement implementation.

### **2.3.3 Management Support**

Senior management leadership is critical to the success of an e-procurement implementation due to the fact that the executive management team is responsible for setting the vision and goals, bringing about collective commitment for change in process and organizational structures, and formulating the policies and strategies necessary to put an e-procurement initiative in place (Hardy & Williams, 2011). Therefore, if the e-procurement system does not have the full support of the top management team, there is every reason for it to fail. It is important to make sure that the top management has given full support for the implementation of e-procurement. Senior managers should provide considerable attention, allocate responsibilities and support to ensure that the procurement reform has been well understood in the agency (Vaidya *et al.*, 2009). This study established the level of management support in the county governments and its influence in e-procurement implementation.

## **2.4 Empirical Review**

Vaidya *et al.*, (2009) conducted a study on critical factors that influence e-procurement implementation success in the public sector. The study conducted a literature survey of eight e-Procurement initiatives and five specialized research studies on e-Procurement which were located through a Google search. The study found that despite the efforts put by the governments through reforms towards adoption of e-procurement, adoption of e-procurement still remains a major challenge for many procurement functions.

Nah and Delgado (2006) conducted a study on critical success factors for enterprise resource planning implementation and upgrade. The study adopted case study methodology and administered semi-structured interviews to the respondents. The finding of the study revealed that implementation of enterprise resource planning requires critical factors such as change management, appropriate technical skill, top management commitment and leadership. A research conducted by United Nations (2011) on transparency and efficiency in public service delivery revealed that implementation of e-procurement itself is not a guarantee for success in the procurement operations. The study noted that a number of e-procurement programs fail because of lack of employee competency, poor technology infrastructure and lack of top management support thus affecting the implementation of e-procurement in the organization.

Lewis (2004) conducted a case study on essentials of e-sourcing. The study adopted correlational, cross sectional research design. The findings revealed that e-sourcing can be used as a tool to reduce process time, generate sourcing savings and to drive incremental revenues. The study further found that implementation of e-sourcing is affected by change management and training of the staff and other stakeholders where possible. A study by Aman and Kasimin (2011) on e-procurement implementation: a case study of Malaysia Government was carried out in order to understand the challenges of e-procurement implementation in the Government sector and the efforts taken to overcome the challenges.



The study found that challenges of e-procurement implementation in Government sector were not only related to software integration, data management and roll-out strategy, but also to information technology (IT) infrastructure, outsourcing contract and IT skills. Findings show the importance of creating an IT facilities Centre in rural areas and working closely with a third-party vendor for users' training and skills development.

Kangogo and Gakure (2013) conducted a study on factors affecting electronic procurement implementation in automobile industry in Kenya. The study used descriptive research design. The data was collected using open-ended questionnaires. The study found that private entities have successfully embraced the use of e-procurement technology. Orina (2013) did a study on e-procurement readiness factors in Kenya's public sector to determine the extent of e-procurement levels in public institutions in Kenya. The study used descriptive research design. The results indicated that resistance to change, lack of enthusiasm, staff skills, and procurement policies impacted the readiness of e-procurement in public institutions. The study also noted that the extent of procurement level in public procurement was low as there was no integration with other systems. Orori (2011) conducted a study on factors that influence the introduction of e-Procurement on retail industry a survey of retail chain supermarkets in Kenya and found out there is a lot of resistance to change

## **2.5 Summary of Literature Review**

Diffusion of innovation theory explains how an introduction of a new idea or product in an organization can be adopted. The key to adoption is that employees must perceive the idea, behavior, or product as new or innovative. Consequently, the adoption of the new idea or product does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. It is therefore important to understand the characteristics of the target population that will help or hinder adoption of the innovation. For the innovation to succeed proper communication channels, time, resources and social system should be considered.

Technology acceptance theory explains that emerging technologies cannot improve organizational effectiveness and performance if the change has not been accepted by the users. This is due to the fact that implementation of an information system requires investment in computer based tools to support decision making, planning communication. However, these systems may be risky. It is therefore very critical that the systems are specified on organizational preference and logic. In addition, appropriate organizational culture must be inculcated and everyone involved must be informed on their roles and empowered to perform the respective roles.

Human relations theory explains that management is the process of designing and maintaining an environment in which individuals, working together in groups efficiently accomplishes selected aims. If employees receive special attention and are encouraged to participate, they perceive their work has significance, and they are motivated to be more productive, resulting in high quality work. Top management support is critical for creating a supportive climate for the implementation of new technologies. Top management can stimulate change by communicating and reinforcing values through an articulated vision. The management should provide considerable attention by allocating resources, assigning responsibilities and support to staff to ensure that the procurement reform has been well understood in the agency. Therefore, if the e-procurement system does not have the full support of the top management team, there is every reason for it to fail.

## **2.6 Research Gaps**

The foregoing literature review indicates that there exist barriers to e-procurement implementation which include inadequate technical infrastructure, lack of skilled personnel and management support. For successful implementation of e-procurement system, ICT infrastructure should be put in place followed by change management and training of the staff and other stakeholders. The extent of procurement level in public procurement is also low as there was no integration with other systems and low use in electronic commerce. However, the literature review reveals that most studies done in e-procurement implementation have focused on the private and other public sectors.

Orori (2011) studied factors that influence the introduction of e-procurement on retail industry in Kenya and found that there is a lot of resistance to change. Kangogo and Gakure (2013) found that private entities have successfully embraced the use of e-procurement technology. There are minimal studies that have focused on the influence of institutional factors on the implementation of e-procurement in county governments in Kenya. Therefore the current study will seek to establish the influence of institutional factors on the implementation of e-procurement in the county governments in Kenya.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter covers the research design, target population, sampling technique and sample size, data collection and procedures, pilot study, data processing and analysis.

#### **3.2 Research Design**

This study adopted a cross-sectional descriptive research design to determine the influence of institutional factors on the implementation of e-procurement by county governments in Kenya. This design was used because it necessitates an economical way of data collection at one point in time which is fundamental for objective analysis owing to timing similarity as recommended by Polit and Beck, (2010).

#### **3.3 Target Population**

The target population for this study was the county governments in Kenya. These are the devolved system of governance in Kenya divided into forty seven (47) counties. A sample of five counties was selected for the study.

#### **3.4 Sampling Technique and Sample Size**

The study adopted two stage sampling technique to select the sample. In the first stage, simple random sampling technique was used to select five counties to be used in the study. This technique was chosen since each county would have equal chance of being selected. The sample was ten percent of the population which was appropriate since samples of about 10% of a population can give good reliability (Blumberg, Cooper, & Schindler, 2014). The sampling was also appropriate since it is not feasible to involve the entire population under study. Purposive random sampling was then used to select six respondents from each of the five counties who were the heads of procurement, finance, ICT, stores, human resource and head of audit department. The heads of these departments were chosen because the departments are involved in the implementation of e-procurement and thus they would provide the relevant information required for the study.

### **3.5 Data Collection Instruments**

The Primary data was collected by use of a self-administered questionnaire. The questionnaire was designed to have both open- ended and closed-ended questions. Open-ended questions provided the respondents a chance to give more information to supplement the closed-ended questions which were structured to have limited set of possible answers in Likert scale.

### **3.6 Data Collection Procedures**

A questionnaire was administered to respondents who were the heads of procurement, ICT, finance, stores, human resources and head of audit department in each county government. Six questionnaires were therefore administered in each county and a total of thirty questionnaires were administered to all the sampled counties. The questionnaires were delivered at the workstations of the respondents and given ample time to fill their response then picked after two weeks. The study also utilized research assistants who were trained before the exercise in order to assist in collecting the data.

### **3.7 Pretesting of Research Tools**

Pretesting was conducted to enable the determination of the validity and reliability of the research instruments. The pretest was conducted at Embu County by administering six questionnaires. The county was not among the sampled county.

#### **3.7.1 Reliability**

The study used the internal consistency technique by employing the Cronbach Alpha Coefficient test to test the research tools. The scores attained from different items in the questionnaire were correlated and Cronbach's Alpha Coefficient (Cronbach, 1951) was computed to determine the correlation between the items. The results gave Cronbach's alpha coefficients of between 0.723 to 0.867. The pilot study instruments met the threshold value of 0.7 and above thus they were reliable.

**Table 3.1: Cronbach Alpha for Reliability Assessments**

<b>Variables</b>	<b>Number of items</b>	<b>Cronbach Alpha Values</b>
<b>Management Support</b>	3	0.723
<b>Availability of ICT Infrastructure</b>	3	0.786
<b>Employee competencies</b>	3	0.867

**3.7.2 Validity**

To establish the validity of the research instrument, opinions of experts in the area of study were sought. Therefore, the instruments were given to supervisors of this study and a lecturer in the area of study in order to get their opinion. This enabled the necessary modification and revision of the research instrument to enhance the validity.

**3.8 Data Processing and Analysis**

The data collected was checked to avoid any errors or omissions and ensure they are consistent. The data was then coded into logical, descriptive, and meaningful categories to provide a framework for analysis. The coded data was then entered into the computer for analysis by use of SPSS. Quantitative data was analyzed through descriptive statistics and presented through percentages, means, standard deviations and frequencies. The information was presented by use of table and in prose-form. This was done by tallying up responses, computing percentages of variations in response as well as describing and interpreting the data in line with the study objectives and assumptions through use of SPSS.

Multiple linear regression model was used to establish the relationship between the influence of institutional factors and the implementation of e-procurement by county governments in Kenya. The overall significance of the model was tested using analysis of variance by use of F statistic at 95% confidence level while the coefficient of determination  $R^2$  was used to show the contribution of independent variables on the dependent variable. The following regression model was used in the study.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots \dots \dots \text{Equation 3.1}$$

Where;  $Y$  is the Implementation of e-procurement by county governments,  $\beta_0$  is the intercept constant,  $X_1$  is employee competence,  $X_2$  is the availability of ICT infrastructure,  $X_3$  is Management Support,  $\beta_1 - \beta_3$  is the corresponding Coefficients of independent variables and  $\varepsilon$  is the Error term

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents the findings of the study in form of response rate, background information of the respondents, descriptive statistics and regression analysis.

#### 4.2 Response Rate

The study targeted 30 sample respondents who were the heads of procurement, finance, ICT, stores, human resource and head of audit department in six counties. All the questionnaires administered to the respondents were filled and collected from the respondents which represents 100% response rate.

#### 4.3 Background Information of the Respondents

The study sought to establish the background information of the respondents in terms of gender, age, length of service, their level of education and if they have attended any change management program or e-procurement training.

##### 4.3.1 Gender Distribution of the Respondents.

The study sought to establish the gender distribution of the respondents. The results are presented in Table 4.1.

**Table 4.1: Gender Distribution of the Respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	23	78%
Female	6	22%
<b>Total</b>	<b>30</b>	<b>100%</b>

The findings shown in Table 4.1 indicate that 78% of the respondents were male and 22% were female. This shows that the findings represent the views of both genders. However, it is evident that most of the heads of procurement, finance, ICT, stores, human resource and audit departments in county governments were male. This indicates that the third gender rule provided in the Kenyan constitution has not been met by the county governments.



### 4.3.2 Age of the Respondents

The study sought to find out the distribution of the respondents by age bracket. The results are presented in Table 4.2.

**Table 4.2: Distribution of the Respondents by Age Brackets**

<b>Age Bracket</b>	<b>Frequency</b>	<b>Percentage</b>
Below 25 years	4	14%
26-35 Years	8	28%
36-45 years	11	36%
Above 45 years	7	22%
<b>Total</b>	<b>30</b>	<b>100%</b>

The findings in Table 4.2 indicates that 36% of the respondents were aged between 36-45 years, 28% between 26-35 years, 22% above 45 years while 14% were below 25 years. This shows that the respondents belong to different age categories and therefore represents the old and young.

### 4.3.4 Length of Service.

The study sought to establish the length of service of the respondents. The findings are presented in Table 4.3.

**Table 4.3: length of service of the respondents**

<b>Length of service</b>	<b>Frequency</b>	<b>Percentage</b>
0-5 years	11	36%
6-10 years	12	39%
11-15 years	5	17%
over 15 years	2	8%
<b>Total</b>	<b>30</b>	<b>100%</b>

The results in Table 4.3 indicate that 39% of the respondents had served for between 6-10 years, 36% for between 0-5 years, 17% between 11-15 years and 8% had served for over 15 years. This shows that most of the respondents had gained experience of over 6 years thus they are conversant with the information being sought by the study.

#### **4.3.5 Level of Education**

The study sought to investigate the level of education of the respondents. The respondents were therefore requested to indicate their level of education. The findings are presented are presented in Table 4.4.

**Table 4.4: Respondents' Level of Education**

<b>Level of Education</b>	<b>Frequency</b>	<b>Percentage</b>
Certificate	16	53%
Undergraduate	9	31%
Postgraduate	5	17%
<b>Total</b>	<b>30</b>	<b>100%</b>

The results in Table 4.4 indicate that 53% of the respondents had attained certificate level, 31% had attained undergraduate while 17% had attained post graduate level. This shows that the respondents had acquired knowledge to enable them discharge their roles and thus they could be able to provide the information sought by the study.

#### **4.4 E-procurement Implementation in County Government**

Analysis of dependent variable of the study was to assess the status of the implementation of e-procurement by county governments in Kenya. The study therefore sought to determine the extent to which the respondents agreed with various statements about the status of e-procurement implementation in county government. The results are depicted in Table 4.5.

**Table 4.5: Status of E-procurement Implementation in County Government**

<b>Statement on the status of E-procurement Implementation in County Government</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>		
	<b>strongly agree</b>	<b>Agree</b>	<b>Neither agree nor Disagree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Mean</b>	<b>Std. Dev</b>
E-tendering has been achieved due to proper implementation of e-procurement in the County government.	0.0%	20%	13%	67%	0.0%	2.53	0.819
E-ordering has been achieved due to proper implementation of e-procurement in the County government.	0.0%	20%	17%	53%	10%	2.47	0.937
E-payment has been achieved due to proper implementation of e-procurement.	46.7%	40%	3.3%	10%	0%	4.23	0.935

The results in Table 4.5 indicates that majority (67%) of the respondents disagreed with the statement that e-tendering has been achieved due to proper implementation of e-procurement in the County government (mean = 2.53, std = 0.819). It was also evident that majority (63.3%) of the respondents disagreed that e-ordering has been achieved due to proper implementation of e-procurement in the county (mean = 2.47, std = 0.937).However, majority (86.7%) of the respondents were in agreement with the statement that e-payments has been achieved due to proper implementation of e-procurement in the county government (mean = 4.27, std = 0.881). The findings imply that the county governments have not fully implemented e-procurement because the organizations have not fully enjoyed the benefits of e-procurement which include online procurement, disposal and payment processes.

#### 4.5 Influence of Employee Competencies on the implementation of e-procurement

The respondents were required to indicate the extent to which they agreed with various statements about the influence of employee competencies on the implementation of e-procurement. The results are depicted in Table 4.6.

**Table 4.6: Influence of Employee Competencies on the implementation of e-procurement**

Statement on Influence of Employee Competencies on the implementation of e-procurement	5	4	3	2	1	Mean	Std. Dev
	strongly agree	Agree	Neither agree nor Disagree	Disagree	Strongly Disagree		
Training of staff on the use of e-procurement tools enhances the implementation of e-procurement	52.8%	27.8%	2.8%	0%	16.7%	4.00	1.454
Employing qualified staff facilitates the implementation of e-procurement	52.8%	30.6%	5.6%	5.6%	5.6%	4.19	1.141
Electronic procurement manual within the organization to guide on e-procurement processes boosts its implementation	41.7%	44.4%	0.0%	2.8%	11.1%	4.13	1.253

The findings in Table 4.6 indicates that majority (80%) of the respondents concurred that training of staff on the use of e-procurement tools enhances the implementation of e-procurement (mean = 4.00, std = 1.454). Similarly, majority (83%) of the respondents agreed that employing qualified staff facilitates the implementation of e-procurement (mean = 4.19, std = 1.141). Most (86%) of the respondents also agreed that electronic procurement manual within the organization to guide on e-procurement processes boosts its implementation (mean = 4.13, std = 1.253).

The findings suggest that in order to implement e-procurement successfully, an organization needs to train its members of staff in order to acquire the necessary skills to operate and use the e-procurement system. The organization can also employ qualified staff for instance those with ICT and e-procurement knowledge and experience in e-procurement to supplement the existing staff and bring new knowledge and techniques that will be shared with others in order to enhance full implementation of the system. The organization can also develop an e-procurement manual to enable staff to refer in case of need as they carry on their operations to supplement the training.

#### **4.5.1 Change Management Program**

The study sought to find out if the respondents had undergone any change management program. The findings are presented in Table 4.7.

**Table 4.7: Change Management Program**

<b>Change Management Program</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	17	56%
No	13	44%
<b>Total</b>	<b>30</b>	<b>100%</b>

The results in Table 4.7 indicate that 56% of the respondents had attended change management program while 44% had not attended the program. This shows that most of the respondents have the knowledge of implementing new programs in an organization and thus they can provide the information required by the study.

#### **4.5.2 IFMIS E-procurement Training**

The study examined if the respondents had been trained on IFMIS e-procurement. The findings are presented in Table 4.8

**Table 4.8: IFMIS E-procurement Training**

<b>IFMIS E-procurement Training</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	20	67%
No	10	33%
<b>Total</b>	<b>30</b>	<b>100%</b>

The results in Table 4.8 indicate that 67% of the respondents had been trained while 33% had not been trained. This shows that majority of the respondents had been trained and thus they can provide relevant information on the implementation of e-procurement sought by the study. It also implies that the finding in the study represents the views of staff who have been trained on e-procurement.

#### **4.5.3 Correlation between Employee Competence and E-procurement Implementation in County Governments**

The study conducted correlation analysis in order to ascertain the relationship and the strength of associations between employee competence and e-procurement implementation in county governments. The findings are presented in Table 4.9.

**Table 4.9: Correlation between Employee Competence and E-procurement Implementation in County Governments**

		<b>E-procurement Implementation</b>
<b>Employee Competence</b>	Pearson Correlation	.606**
	Sig. (2-tailed)	.000
	N	30

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

The results in Table 4.9 shows that there was a positive significant linear relationship between employee competence and e-procurement implementation in county governments ( $r = 0.606$ ,  $p < 0.01$ ). This implies that having employees who have been trained on the use of e-procurement will enhance the implementation of e-procurement in county governments. These findings are in agreement with a study by Hardy and Williams (2011) which asserted that as e-procurement comprises of changes in procurement approaches and new technologies, the need to train staff in the use of e-procurement tools and procurement practices are critical to the success of an e-procurement initiative. Orina (2013) found out that resistance to change, lack of training, staff skills, and procurement policies impacted the readiness of e-procurement in public institutions .End-users can realize the benefits of e-procurement system once they comprehend the operational functionalities.

#### 4.6 Influence of ICT Infrastructure on the Implementation of E-procurement

The study required the respondents to indicate the extent to which they agreed with various statements about the influence of ICT infrastructure on the implementation of e-procurement. The results are depicted in Table 4.10.

**Table 4.10: Influence of ICT Infrastructure on the Implementation of E-procurement**

Statement on the Influence of ICT Infrastructure on the Implementation of E-procurement	5 strongly agree	4 Agree	3 Neither agree nor Disagree	2 Disagree	1 Strongly Disagree	Mean	Std. Dev
Availability of infrastructure such as high speed computers and internet services is ideal for e-procurement implementation	72.2%	19.4%	2.8%	5.6%	0.0%	4.58	0.806
A well-integrated system to link the e-procurement system to the financial management system facilities e-procurement implementation	50%	44.4%	5.6%	0%	%	4.38	0.766
A well-established ICT section with competent staff enables the implementation of e-procurement	44.4%	44.4%	5.6%	5.6%	0%	4.28	0.814

The findings in Table 4.10 reveals that majority (91.6%) of the respondents agreed with the statement that availability of infrastructure such as high speed computers and internet services is ideal for e-procurement implementation (mean = 4.58, std = 0.806). It was also evident that majority (94.4%) of the respondents agreed that a well-integrated system to link the e-procurement system to the financial management system facilities e-procurement implementation (mean = 4.38, std = 0.766). Similarly, majority (88%) of the respondents were in agreement with the statement that A well-established Information and Communication Technology section with competent staff enables the implementation of e-procurement (mean = 4.28, std = 0.814). The findings imply that an organization needs to ensure that proper resources are available to facilitate the implementation of e-procurement.

An organization therefore needs to acquire computers and networking facilities in order to establish interconnectivity within the organization and other organizations which include suppliers and banks through internet.

#### **4.6.1 Correlation between ICT Infrastructure and E-procurement Implementation in County Governments**

Correlation analysis was conducted in order to ascertain the relationship and strength of associations between ICT Infrastructure and e-procurement implementation in county governments. The findings are presented in Table 4.11.

**Table 4.11: Correlation between ICT Infrastructure and E-procurement Implementation in County Governments**

		<b>E-procurement Implementation</b>
<b>ICT Infrastructure</b>	Pearson Correlation	0.779**
	Sig. (2-tailed)	.005
	N	30

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

The findings in Table 4.11 indicate that a positive and significant relationship exists between ICT infrastructure and e-procurement implementation in county governments ( $r = 0.779$ ,  $p < 0.01$ ). This implies that for e-procurement to be successful, an organization should acquire the necessary ICT infrastructure which includes computers, software and networking. The study findings are consistent with a study by Arbin and Hultman (2008) which found that many institutions have not been able to implement e-procurement because they lack the required infrastructure like internet, computers, and software's. Dai and Kauffman (2008) asserted that e-procurement systems should be compatible to the maximum possible extent with the existing technologies to have a chance to be generally adopted in an organization.



#### 4.7 Influence of Management Support on the Implementation of e-procurement

The study sought to find out the extent to which the respondents agreed with various statements about the influence of management support on the implementation of e-procurement. The results are depicted in Table 4.12.

**Table 4.12: Influence of Management Support on the implementation of e-procurement**

Statement on the Influence of Management Support on the implementation of e-procurement	5 strongly agree	4 Agree	3 Neither agree nor Disagree	2 Disagree	1 Strongly Disagree	Mean	Std. Dev
Having a Project management team to spear head the e-procurement system is ideal for implementation of e-procurement.	44.4%	38.9%	8.3%	2.8%	5.6%	4.14	1.073
Reviewing of the organization structure to suit the e-procurement environment enables its implementation	27.8%	50%	13.9%	8.3%	0%	3.97	0.877
Introducing change management program for the users facilitates the implementation of e-procurement.	25%	47.2%	22.2%	5.6%	0%	3.92	0.840

The results in Table 4.12 show that majority (83.3%) of the respondents agreed with the statement that having a project management team to spear head the e-procurement system is ideal for implementation of e-procurement (mean = 4.14, std = 1.073). It was also apparent that majority (77%) of the respondents agreed that reviewing of the organization structure to suit the e-procurement environment enables its implementation (mean = 3.97, std = 0.877). Similarly, majority (72.2%) of the respondents were in agreement with the statement that introducing change management program for the users facilitates the implementation of e-procurement (mean = 3.92, std = 0.840).

The findings imply that if e-procurement system does not have the full support of the management, its implementation will not be successful. Management need to provide for resources and restructure the organization to facilitate the implementation.

#### **4.7.1 Correlation between Management Support and E-procurement Implementation in County Governments**

Correlation analysis was done in order to assess the relationship and the strength of associations between management support and e-procurement implementation in county governments. The results are presented in Table 4.13.

**Table 4.13: Correlation between Management Support and E-procurement Implementation in County Governments**

		<b>E-procurement Implementation</b>
<b>Management Support</b>	Pearson Correlation	0.707**
	Sig. (2-tailed)	.001
	N	30

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

The findings in Table 4.13 indicate that a positive significant relationship exists between management support and e-procurement implementation in county governments ( $r = 0.707$ ,  $p < 0.01$ ). This implies that the commitment of management in the implementation process and provision of the necessary resources was key to e-procurement implementation. The study findings are consistent with a study by Stenning and Associates (2003) which found that it is vital to make sure that the management has given full support for the implementation of e-procurement. Chatterjee (2006) asserted that management championship positively influences extent of organizational assimilation of web technologies in e-commerce strategies and activities. E-procurement implementation process requires a well-coordinated change management systems and training program (Garran, 2005). Hardy and Williams (2011) suggested that the top management is responsible for setting the vision and goals, bringing about collective commitment for change in process and organizational structures, and formulating the policies and strategies necessary to put an e-procurement initiative in place

#### 4.8 Multiple Regression Analysis

The study conducted regression analysis in order to determine whether there was a significant relationship between institutional factors and implementation of e-procurement in county governments. The study was guided by the following null hypothesis

H<sub>0</sub>: Institutional Factors have no significant influence on the implementation of e-procurement by the selected county governments in Kenya.

The null hypothesis was tested using the following linear regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots \dots \dots \text{Equation 4.1}$$

Where; Y is the Implementation of e-procurement by county governments,  $\beta_0$  is the intercept constant,  $X_1$  is employee competence,  $X_2$  is the availability of ICT infrastructure,  $X_3$  is Management Support,  $\beta_1 - \beta_3$  is the corresponding Coefficients of independent variables and  $\epsilon$  is the Error term

The results of coefficient of determination ( $R^2$ ) are presented in Table 4.14.

**Table 4.14: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
	.861 <sup>a</sup>	.742	.712	0.30284	24.933	.000

a. Predictors: (Constant), Employee Competence, Management Support, ICT Infrastructure

The results in Table 4.14 show that the coefficient of determination ( $R^2$ ) is 74.2% which means that the three independent variables explain 74.2% of the variations in the implementation of e-procurement in county governments. The F values were statistically significant ( $F = 24.933, p = 0.000 < .05$ ) suggesting that institutional factors significantly influence the implementation of e-procurement in county governments. Therefore, employee competence, management support and ICT infrastructure are statistically acceptable as useful in predicting the implementation of e-procurement in county governments. The study therefore rejects the null hypothesis that Institutional Factors have no significant influence on the implementation of e-procurement by the selected county governments in Kenya

#### 4.8.1 Regression Coefficients

The coefficients of the variables used in the study are presented in Table 4.15.

**Table 4.15 Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.281	0.369		3.473	.002
Employee Competence	0.278	0.091	0.351	3.041	.005
Management Support	0.225	0.088	0.376	2.567	.016
ICT Infrastructure	0.204	0.098	0.338	2.090	.046

a. Dependent Variable: E-procurement Implementation

The data in the Table 4.15 indicates that the established regression equation model was as shown in equation 4.1.

$$Y = 1.281 + 0.278X_1 + 0.225X_2 + 0.204X_3 \dots \dots \dots \text{Equation 4.2}$$

The regression equation reveals that holding all the independent variables to a constant zero, implementation of e-procurement in the county governments would be 1.281. The results also indicate that holding all other independent variables at zero, a unit increase in employee competence would lead to increase in e-procurement implementation in the county governments by a factor of 0.278, a unit increase in management support would lead to increase in e-procurement implementation in county governments by a factor of 0.225 and a unit increase in ICT infrastructure would lead to increase in e-procurement implementation in the county governments by a factor of 0.204. All the significance values were less than 0.05, hence employee competence, management support and ICT infrastructure significantly influencing e-procurement implementation in the county governments. The results are consistent with a study by Mambo (2015) which found that there was a positive relationship between e-procurement implementation and top management commitment, IT infrastructure and staff training

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The chapter covers the summary of the findings, conclusion, recommendations, limitations, and suggestions for further research.

#### **5.2 Summary of the Findings**

The findings reveal that the county governments have not fully implemented e-procurement because the organizations have not fully realized the benefits of e-procurement. Majority of the respondents disagreed with the statement that e-tendering has been achieved due to proper implementation of e-procurement in the county. It was also evident that majority of the respondents disagreed that e-ordering has been achieved due to proper implementation of e-procurement in the county. However, majority of the respondents were in agreement with the statement that e-payments has been achieved due to proper implementation of e-procurement in the county.

The findings also show that employee competence positively influenced the implementation of e-procurement. Majority of the respondents agreed that training of staff on the use of e-procurement tools enhances the implementation of e-procurement. Majority of the respondents also agreed that employing qualified staff facilitates the implementation of e-procurement. Similarly, majority of the respondents agreed that availing electronic procurement manual within the organization to guide on e-procurement processes will boost the implementation of e-procurement.

The findings also indicate that ICT infrastructure has a positive influence on the implementation of e-procurement. Majority of the respondents agreed that availability of infrastructure such as high speed computers and internet services is ideal for e-procurement implementation. Most of the respondents also agreed that a well-integrated system to link the e-procurement system to the financial management system facilitates e-procurement implementation. It was also evident that a well-established ICT section with competent staff enables the implementation of e-procurement.

The study found that management support has a positive influence the implementation of e-procurement. Majority of the respondents agreed that having a project management team to spear head the e-procurement system is ideal for implementation of e-procurement. Majority of the respondents also agreed that reviewing of the organization structure to suit the e-procurement environment enables its implementation. Similarly, majority of the respondents concurred that introducing change management program for the users facilitates the implementation of e-procurement.

### **5.3 Conclusions**

Training of staff on the use of e-procurement tools enhances the implementation of e-procurement. An organization therefore needs to train its members of staff in order to acquire the necessary skills to operate and use the e-procurement system. Similarly, Employing qualified staff and availing electronic procurement manual within the organization to guide them on e-procurement processes will boost the implementation of e procurement. E-procurement manual will enable staff to refer in case of need as they carry on their operations to supplement the training.

Availability of infrastructure such as high speed computers and internet services in an organization is ideal for e-procurement implementation. A well-integrated system to link the e-procurement system to the financial management system and an established ICT section with competent staff enables the implementation of e-procurement. Acquiring of computers and networking facilities enables an organization to establish interconnectivity within the organization and other organizations which include suppliers and banks through internet thus facilitating e-procurement.

Having a project management team to spear head the e-procurement system is ideal for implementation of e-procurement. Reviewing of the organization structure to suit the e-procurement environment and introducing change management program for the users facilitates the implementation of e-procurement. If e-procurement system does not have the full support of the management, its implementation will not be successful.

#### **5.4 Recommendations**

Based on the findings, the study recommends that county governments should train staff on the use of e-procurement tools in order to enhance the implementation of e-procurement. The institutions should also employ qualified staff and avail them with electronic procurement manual to guide on e-procurement processes and assist in the implementation of e procurement. In the same vain, county governments should procure infrastructure such as high speed computers and internet services in order to facilitate e-procurement implementation. The organizations should also ensure that it integrates the e-procurement system to the financial management system in order to facilitate e-procurement implementation. Similarly, the institution should also establish an information and communication technology section with competent staff in order to provide technical support during the implementation of e-procurement.

Management of an organization should institute a project management team to spear head the e-procurement system implementation. Management should also review the organization structure to suit the e-procurement environment and introduce change management program for the users in order to facilitate the implementation of e-procurement. An organization should ensure proper implementation of e-procurement in order to enjoy the benefits of e-procurement which include online procurement, disposal and payment processes. An organization should therefore ensure institutional factors which influence the implementation of e- procurement are managed properly to ensure full implementation of e-procurement.

#### **5.5 Limitation of the Study**

The objective of this study was to assess the influence of institutional factors on the implementation of e-procurement by County Governments in Kenya. The study was therefore conducted in county governments in Kenya and some of the respondents were not willing to provide the data because they feared being victimized due to government regulations. The respondents were therefore assured that the information required will be used for academic purposes only and the data collected will be confidential.

## **5.6 Suggestion for Further Study**

This study was limited to county governments in Kenya the influence of employee competence, management support and ICT infrastructure on the implementation of e-procurement. The study therefore suggests that there is need for further studies on the same area but covering other government institution and private firms in order to obtain the influence of employee competence, management support and ICT infrastructure on the implementation of e-procurement in other sectors. Other studies can also be conducted to determine the influence of factors that are not within the control of an institution for instance the influence of service providers like suppliers and banks.



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## APPENDICES

### APPENDIX I: QUESTIONNAIRES

Kindly answer the following questions by ticking in the appropriate box or filling the spaces provided. Information obtained will be used for academic purposes only and will therefore be handled with the highest level of confidentiality.

#### PART A: RESPONDENT DETAILS AND BIO-DATA

1. Please indicate your gender

Male  Female

2. Indicate your age bracket

Below 25 years  25-35 years   
36-45 years  Above 45 years

3. How long have you served in the current position?

0-5 yrs  5-10 yrs   
10-15  Over 15 yrs

4. To date, what has been your highest formal qualification?

Secondary School Level  Certificate/ Diploma   
Undergraduate  Post graduate level   
Other (Specify).....

**PART A: IMPLEMENTATION OF E-PROCUREMENT**

5. To what extent do you agree with following aspects of implementation of e-procurement? Use a scale of 1 to 5 where 1= Strongly Disagree, 2= Disagree, 3= Neither agree nor Disagree, 4= Agree and 5 is strongly agree

	<b>statement on the status of implementation of e-procurement in county governments</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>1</b>	E-tendering has been achieved due to proper implementation of e-procurement in the County government to have					
<b>2</b>	E-ordering has been achieved due to proper implementation of e-procurement in the County government to have					
<b>3</b>	E-payments has been achieved due to proper implementation of e-procurement.					



**PART B: EMPLOYEE COMPETENCIES**

6. To what extent do you agree with following aspects of Employee Competencies?  
 Use a scale of 1 to 5 where 1= Strongly Disagree, 2= Disagree, 3= Neither agree nor Disagree, 4= Agree and 5 is strongly agree.

	<b>Statement on the influence of employee competence on the implementation of e-procurement in county governments</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>1</b>	Training of staff on the use of e-procurement tools enhances the implementation of e-procurement					
<b>2</b>	Employing qualified staff facilitates the implementation of e-procurement					
<b>3</b>	Electronic procurement manual within the organization to guide on e-procurement processes boosts its implementation					

4. Have you ever attended any change management program?

Yes [ ] No [ ]

5. Have you ever attended IFMIS e-procurement training?

Yes [ ] No [ ]

**PART C: INFORMATION COMMUNICATION TECHNOLOGY  
INFRASTRUCTURE**

6. To what extent do you agree with following aspects of ICT infrastructure? Use a scale of 1 to 5 where 1= Strongly Disagree, 2= Disagree, 3= Neither agree nor Disagree, 4= Agree and 5 is strongly agree.

	<b>Statement on the influence of ICT infrastructure on the implementation of e-procurement in county governments</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>1</b>	Availability of infrastructure such as high speed computers and internet services is ideal for e-procurement implementation					
<b>2</b>	A well-integrated system to link the e-procurement system to the financial management system facilitates e-procurement implementation					
<b>3</b>	A well-established Information and Communication Technology section with competent staff enables the implementation of e-procurement					

**PART D: MANAGEMENT SUPPORT**

7. To what extent do you agree with following aspects of Management support?  
 Use a scale of 1 to 5 where 1= Strongly Disagree, 2= Disagree, 3= neither agree nor Disagree, 4= Agree and 5 is strongly agree.

	Statement on the influence of management support on the implementation of e-procurement in county governments	5	4	3	2	1
1	Having a Project management team to spear head the e-procurement system is ideal for implementation of e-procurement					
2	Reviewing of the organization structure to suit the e-procurement environment enables its implementation					
3	Introducing change management program for the users facilitates the implementation of e-procurement					

What would be your advice to County Governments regarding the implementation of e-procurement?

.....  
 .....  
 .....  
 .....  
 .....  
 .....

THANK YOU