

**E-PROCUREMENT IMPLEMENTATION AND PERFORMANCE OF COUNTY
GOVERNMENTS IN KENYA**

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DECLARATION

I declare that this is my original work and has not been submitted for an award of a degree or diploma in any University or college.

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

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

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DEDICATION

This project is dedicated to my family for their support their guidance and contribution in getting to where I am today and for their patience and support as I spent time and resources towards attaining my master's degree.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENT.....	iii
DEDICATION.....	iv
LIST OF FIGURES	viii
LIST OF TABLES	ix
ABBREVIATIONS AND ACRONYMS.....	x
ABSTRACT.....	xi
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study	1
1.1.1 E-Procurement Implementation.....	2
1.1.2 Organizational Performance	4
1.1.3 County Governments in Kenya	5
1.2 Research Problem.....	6
1.3 Research Objectives	9
1.4 Value of the Study	9
CHAPTER TWO: LITERATURE REVIEW.....	11
2.1 Introduction	11
2.2 Theoretical Literature Review	11
2.2.1 Technology Diffusion Theory	11
2.2.2 Theory of Planned Behaviour.....	12
2.2.3 Agency Theory	14

2.3 E-Procurement Implementation	15
2.4 Empirical Literature Review	18
2.5 Summary of Literature Review	24
CHAPTER THREE: RESEARCH METHODOLOGY	28
3.1 Introduction	28
3.2 Research Design	28
3.3 Population of Study	28
3.4 Data Collection.....	28
3.5 Data Analysis	29
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION	31
4.1 Introduction	31
4.2 Demographic Information of the Respondents	31
4.2.1 Response Rate	31
4.2.2 Gender of the Responses	32
4.2.3 Age of the Respondents.....	32
4.2.5 Highest Level of Education.....	34
4.3 Effect of E-Procurement Implementation on Performance.....	35
4.3.1 Effect of Application of E- Procurement In the Form of Need Analysis on	36
4.3.2 Effect of Application of E-Tendering on Performance	37
4.3.3 Effect of Application of E- Order Fulfillment on Performance	38
4.3.4 Effect of Application of E- Invoice Approval and Payment on Performance	39

Effect of Application of E- Invoice Approval and Payment on Performance	40
4.4 Extent of Application of Electronic Procurement in County Governments....	41
4.4.1 Challenges Facing E- Procurement in County Governments.....	42
4.5 Regression Analysis	44
4.6 Discussion of the Findings	47
 CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND	
RECOMMENDATIONS.....	50
5.1 Introduction	50
5.2 Summary of Findings	50
5.3 Conclusion.....	54
5.4 Recommendations from the study.....	55
5.5 Limitations of the Study	57
5.6 Suggestions for Further Research.....	58
 REFERENCES.....	59
 APPENDICES	62
APPENDIX I: Research Questionnaire.....	62
APPENDIX II: List of County Governments in Kenya.....	65

LIST OF FIGURES

Figure 2.1 Conceptual Model	27
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LIST OF TABLES

<u>Table 3.1: Summary of Data Collection and Data Analysis</u>	30
<u>Table 4.1. Representations of the responses</u>	31
<u>Table 4.2 Gender of the Respondents</u>	32
<u>Table 4.3 Age of the Respondents</u>	33
<u>Table 4.4 Age of the Respondents</u>	34
<u>Table 4.5 Highest level of education</u>	35
<u>Table 4.6 Effect of application of E- Procurement- need analysis on</u>	36
<u>Table 4.7 Effect of Application of E-Tendering on Performance</u>	37
<u>Table 4.8 Effect of Application of E-Procurement in the form of Order Fulfillment on Performance</u>	39
<u>Table 4.9 Effect of Application of E- Invoice Approval and Payment on Performance</u>	40
<u>Table 4.10 Extent of Application of Electronic Procurement</u>	41
<u>Table 4.11 Challenges Facing E- Procurement in County Governments</u>	42
<u>Table 4.12: Model Summary</u>	44
<u>Table 4.13 Summary of One-Way ANOVA</u>	45
<u>Table 4.14 Regression Coefficients results</u>	45

ABBREVIATIONS AND ACRONYMS

E-auction	Electronic Auction
E-MRO	Maintenance, Repairs and Operations
E-procurement	Electronic procurement
ERP	Enterprise Resource Planning
E-sourcing	Electronic Sourcing
E-tendering	Electronic Tendering
GoK	Government of Kenya
ICT	Information, Communication Technology
IFMIS	Integrated Financial Management Information Systems
IT	Information Technology
KCB	Kenya Commercial Bank
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
SMEs	Small Medium Enterprises
SPSS	Statistical Package for Social Science
TAM	Technology Acceptance Model

ABSTRACT

This research aimed at verifying the influence of E-procurement implementation on the performance of County Administrations in Kenya and the challenges faced by Kenyan County Governments in E-procurement implementation on the performance of County Governments in Kenya. This research employed a descriptive research design. The population of this research included procurement administrators in all the forty seven counties in Kenya. Given that the target population was not too large, a census study was done. Primary data was obtained via semi-structured questionnaires. Data analysis was by way of descriptive statistics, correlation as well as regression analysis. The study found out that E-procurement enhances the performance. The independent variables examined describe a considerable 79% of the change in performance of County Governments since the adoption of E-procurement while other aspects as well as random variations not explored comprise 21%. The study findings also indicate that E-procurement enhances organizational performance to a great extent. This implies that there existed a positive link between E-procurement and entity's performance. The research aimed to find out the link between E-procurement and County governments performance. Based on the findings in relation to specific objective, the study concludes that E-procurement positively enhances County government performance. The study recommends that E-procurement adoption should be supported with resources as well as specialized competencies. The study recommends that there should be proper coordination of change management apparatus and training plans. Organizations should also set up mechanisms, practices, and processes that support the execution of e-procurement. Digital procurement systems should ensure there is a workflow mechanism that's incorporated into an electronic procurement application to facilitate the requisition to payment as well as e-catalogue application that outlines a vendor's goods and service on sale and their prices on the web. The system should also incorporate key components such as participants in a transaction, harmonization, confidentiality and internet bandwidth and data integrity if tapping into the full benefits of electronic procurement is to be realized. It's essential that internal system users adhere to compliance for electronic procurement to produce cost and efficiency benefits, and as such, internal client satisfaction ought to be a major issue in the creation, usage as well as setting up of such a system. Compliance with e- procurement should be guided by the overall attitude of the county in general to either the procedure of digital redesign or the inclination toward reaping the supposed gains in electronic procurement. The study's limitations included limited time set aside for the research and the limited scope of study. Data collection was a challenge due to the respondent's busy schedules. The interviewees sought were unwilling to provide material being afraid of the fact that the material provided would be utilized to coerce them or publish a bad picture of them. The study suggests further survey on study E-procurement and performance in other industries.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The present-day enterprise setting is fast shifting due to factors such as globalization and web based technology. With development of web and data, correspondence innovation uses, enterprise elements are stressed to move their processes from conventional route to the computer-generated e-business, e-acquisition and e-store network theory (Roman, 2012). Authoritative execution is a measure of the actual returns of an entity as assessed against its anticipated returns that seem to be, its objectives and goals (Amin, 2012).

Performance in an establishment is influenced by numerous aspects entailing management, the organization's workforce, training and development, technology among others. A positive link exists between management and organizational performance. Management, especially of human resources, is an important aspect in organizational performance (Mustaffa, 2012). Management is responsible for implementing strategy which influences performance. An organization's workforce is also directly related to its performance.

Training and development that an organization offers to its employees affects organizational performance. Training improves an employee's skills and competence thus improving individual. Technology is an important aspect in organizational performance especially in this age of Information Communication Technology (ICT). An organization's ability to adapt to changes in technology directly influences its performance (Brun, Golini, & Fan, 2010). Technology in procurement provides for E-procurement. Procurement is an important function in any organization as they continually need to source and purchase products and services. E-procurement aids in cost decrease, higher profits, guaranteed supplies and enhancement in quality (Siricha

& Theuri, 2016). Procuring electronically gives an organization a cost benefit which in turn increases profits. Goods and services being procured can be thoroughly scrutinized for quality and procuring high quality products and services guarantees better quality products. All these are indicators of organizational performance therefore showing a positive link between E-procurement implementation and entity's performance.

County governments are charged with among other functions procurement on behalf of their respective counties. With all the scandals that have been discovered in procurement, there is a great need to explore E-procurement. County governments, being public entities, are subject to the Public Procurement and Disposal Act which demands that they carry out procurement in a fair, clear and transparent manner and ascertain the attainment of a value for money (Ndiiri, 2016). E-procurement implementation provides an opportunity for open and transparent procurement as required by the law. E-procurement provides this opportunity through reduced procurement costs. As a result this research seeks to verify the influence of E-procurement implementation on its performance.

1.1.1 E-Procurement Implementation

Procurement is a function of business management that sees to it that the external resources that that an entity requires to accomplish its strategic goals are determined sourced and accessed (Ndiiri, 2016). When this process of procurement is done by electronic means it is referred to as E-procurement. E-procurement is the utilization of integrated communication infrastructure that is usually based on the internet to carry out full or partial purchasing processes, which may encompass phases such as the initial requirement determination by a user, search, sourcing, bargaining, order placement, receipt as well as post-purchase feedback (Ndiiri, 2016). According to

Kagai (2013) electronic procurement is Used to portray the utilization of electronic strategies, regularly finished the web, to lead exchanges in a business to business condition. E-acquirement is additionally portrayed as the utilization of data innovation in the advancement of an obtainment procedure that is receptive to changes in the earth (Roman, 2012).

The segments of e-procurement incorporate Enterprise Resource Planning (ERP) which manages rising and favoring buy orders, requesting, receipt of conveyed products and enterprises through the web. It likewise incorporates Support, Repairs and Operations (E-MRO) which manages accepting administrations. Others are E-sourcing, E-offering and E-sell off. E-sourcing manages picking and enlisting the correct providers through the web. E-offering involves sending demands for value quotes of particular merchandise as well as administrations to providers expecting answers.

E-closeout is purchasing products from various existing and new providers by means of the web. From E-showcase destinations, purchasers can get to items and administrations of chose providers at that point add them to shopping baskets, raise demands and look for endorsements, raise orders, get the conveyed products and create electronic solicitations in view of money related frameworks that are coordinated to supply chains of purchasers and providers (Obat, 2016).

E-procurement implementation alludes to the exertion inputted from the purpose of start of an arrangement of E-obtainment the distance to its execution and finish or crumple (Obat, 2016). E-procurement implementation procedures ought to be lined up with the ranges administration, the association's standard practices and procedures, existing frameworks and propelled innovation. There are five phases of execution of

data innovation arrangements as recommended by Cooper and Zmund 1990; receive a basic layer of start, reception, acknowledgment, make a routine and from that point imbue. Implantation alludes to the phase where E-acquirement is completely actualized in the association and is at its most extreme potential. The variables that impact the achievement of e-acquisition in an association are the accessibility of administrative and specialized competency in the association, sufficiency of providers with IT arrangements and its accessibility foundation (Mahmood, 2010).

1.1.2 Organizational Performance

Performance is accumulated final products of an entity's work processes as well as undertakings (Kagai, 2013). Execution can along these lines be both monetary and non-money related. Hierarchical implementation contains the actual return or of an entity as evaluated against its projected returns that may be, its objectives and goals (Amin, 2012).

The essential objective of authoritative execution is to increment hierarchical viability and effectiveness which in turn improve the organization's ability to meet its goals in goods and/or service delivery. In relation to performance in procurement, embroil tactical as well as operational aspects of the procurement role. Under the operational aspect, procurement performance entails the costs of acquiring merchandise and/or quality of service, distribution as well as flexibility (Nair, Jayaram, & Das, 2015). On the tactical aspect, procurement performance considers novelty in the procuring procedure.

Performance provides a basis for an organization to evaluate its progress towards its predetermined goals. It helps the organization to pick out its strengths and weaknesses, and determine future projects all in a bid to trigger improvements in

performance. Performance is indicated by efficiency and effectiveness in processes of the organization (Ndiiri, 2016).

Efficiency refers to “doing things right” while effectiveness is “doing the right things”. Every organization needs to strike a balance between effectiveness and efficiency in order to acquire optimum performance. Effectiveness and efficiency in procurement result in optimum procurement performance. Gauging of an organization’s procurement function, in order to improve performance, benefits the organization through cost decrease, higher profits, guaranteed supplies, enhancement in quality and gives the organization a competitive advantage over rivals (Brun, Golini, & Fan, 2010).

1.1.3 County Governments in Kenya

The Constitution of Kenya (2010) created 47 county administrations. This figure depends on the outline of regulatory areas as made under the Regions as well as Districts act of 1992. The County Administration’s role is to implement development undertakings in partnership with the National Administration by way of annual budget apportionment. The county government constitutes the area get together and the district official. The region gathering is ordered with establishing laws at the province level, overseeing the district official and favoring plans and strategies for smooth operation and administration of assets and region foundations. The region official then again is accused of the duty of actualizing laws for organization of the district and in addition other official capacities at the province level (GoK, 2013).

County government aim at working towards sustainable development. According to the 2016 County Fiscal Strategy Paper, the county government was focused on five broad areas that it set out in 2015. These areas are: improving business

environment; Financial changes and effective spending usage, modernizing the key beneficial parts of domesticated animals and farming, putting resources into productive transport, water and vitality foundation, putting resources into proficient social administration conveyance and encouraging economic improvement through Environmental Change Adjustment System and calamity administration. Through implementation of programs under the five pillars, the county government aimed at raising efficiency and productivity in the economy and in turn accelerating and sustaining growth, creating opportunities for productive jobs, and secure livelihood of all citizens (GOK, 2013).

The aspect of performance in the county government is therefore of great importance so as to foster sustainable growth. Public sector entities spend huge budgets on procurement with up to 60 percent of public expenditure going to public procurement (Korir, 2009). Flawed public procurement processes have caused loss of huge amounts of taxpayers' money in Kenya in the past with the main reasons being low personal ethical standards by concerned parties and organizational culture and the environment (Ndiiri, 2016). Procurement performance can be seen to be of great importance in saving money in public entities, whether at the national or county government level.

1.2 Research Problem

For public institutions, creating effective techniques for setting up of technological developments that are crucial in enabling e-procurement for the management of their procurement functions. As such, the most effective strategy is developed with due consideration of technological development and taking into account the manner in which electronic procurement may be deployed to boost the supply chain management within an entity in a way that's vital to the general organizational

performance (Schmitz, 2013). Procurement performance within both the private and public sectors have had their own bottlenecks, but entities that have embraced e-procurement to improve performance have managed to register superior levels of accountability and transparency (Roman, 2012).

County governments, like all public entities, are tasked with procurement that is expected to be without favoritism. A large percentage of the county government budget is spent on procurement, and therefore the necessity for efficient and effective procurement. Proper administration of financial assets for the benefit of the public is also required of the county governments. The United Nations Conference on Trade and Development (2003) stated that efficient e-procurement execution when buying products as well as services in company's yields reserves equal to 30 percent and the decline of transaction expenses by equal to 25 percent.

In Kenya, procurement in county governments is executed in the dictates of the Public Procurement Oversight Authority (PPOA) within the provisions of the 2005 Public Procurement and Disposal Act (PPDA). By means of defective public procurement processes, large sums of tax payers' money have been lost in Kenya in the past; the main reasons being low personal ethical standards by concerned parties and organizational culture and the environment (Kangogo & Kiptoo, 2013). There are loopholes in old procurement methods that leave room for exploitation and misuse.

Several researches have been carried out to scrutinize the influence e-procurement implementation has on performance. Globally, Croom and Jones (2005) assessed e-procurement execution as well as operation in people in general division. The investigation established a positive relation between e-procurement and operations in

the government establishments. E-procurement execution, according to the study, serves to improve operations in the public sector and consequently the overall performance.

Agboyi and Ackah (2015) examined the impact of E-procurement on the performance of an establishment. From the research it was ascertained that E-procurement is essential in purchasing in supply chain management. E-procurement also eases purchasing processes, reduces total costs and improves quality. Amani (2015) verified the influence of e-procurement in increasing performance amongst Tanzanian private sector establishments. The research found that e-procurement positively influences the performance of organizations.

Locally, Amin (2012) evaluated electronic procurement and entity's performance amongst government establishments. The research concluded that electronic procurement had a positive effect on performance. According to the study, e-procurement had effects on performance which include: constant response to the customer as well as the marketplace; improves honesty as well as accountability; boosts information flow in the production system; allows business state partnerships in decreasing expenses and change in focused offering and sourcing. Kagai (2013) evaluated the impact of electronic procurement on the performance of private universities in Nairobi County. The research ascertained that indeed e-procurement had a positive influence on the performance of private universities. E-procurement according to the study resulted in efficiency and dematerialization, supplier management and transparency and customer satisfaction and effectiveness. Murathi (2016) in determining the success on user acceptance of e-procurement in Kenyan Government Ministries:

An instance of e-procurement module in the IFMIS notes a strong correlation between usage of e-procurement and performance. The research concluded that adoption of e-procurement in government ministries promoted better management of public finances and resources. Siricha and Theuri (2016) evaluated the influence of e-procurement on entity's performance at the Kenya Ports Authority (KPA). The study concluded that e-procurement improves organizational performance. According to the study e-procurement implementation relies on information systems available in the organization, procurement staff competencies, information technology and internal processes.

From the analysis of previous studies above, it can be noted that none has been undertaken on the influence of e-procurement on performance of county governments in Kenya. This research aimed to fill the knowledge gap by answering the research question; what is the influence of e-procurement on the performance of county governments in Kenya?

1.3 Research Objectives

1. To scrutinize the influence of E-procurement implementation on the performance of County Governments in Kenya.
2. To determine the challenges faced by County Governments in Kenya in E-procurement implementation on the performance of County Governments in Kenya.

1.4 Value of the Study

To county governments and other organizations in general, the findings of this study may be used to understand the effect of E-procurement on performance. This

understanding will aid in creating better practices in procurement so as to achieve maximum performance by the organizations.

Policy makers are guided by research findings that relate to their areas of concern. The outcomes of this investigation will therefore be useful to policy makers as they may be used to create policies in procurement that foster the performance of organizations.

To academicians, the outcomes of this investigation will be valuable to scholars as well as academicians in understanding the effect of e-procurement implementation on entity's performance. This investigation serves to expand the pool of knowledge available on the subject and establishes a groundon which impending studies could possibly be conducted and from where areas of further research may be identified.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This part will review literature regarding E-procurement to provide insight on what has already been undertaken by other researchers pertaining to the effects of e-procurement in organizational performance, the hypotheses pertinent to this topic of investigation. The part starts with hypothetical literature review, followed by e-procurement application, empirical literature review and challenges of e-procurement. The chapter concludes the chapter with a conceptual model.

2.2 Theoretical Literature Review

This part of theoretical review covers the Technology diffusion theory, theory of planned behavior and agency theory. These theories will provide further insight on E-procurement implementation and organizational performance.

2.2.1 Technology Diffusion Theory

Technology diffusion theory is the consistent main concept under which scholars contemplate the gaining as well as advancement of new perspectives. Diffusion is described fundamentally as the process through which advancement is embraced and gathers response by individuals from a group. The Diffusion concept considers an intricate number of sub-speculations that altogether think about the processes of appropriation. The highly recognized record of diffusion looked into by (Rogers, 2005) where the diffusion involves four aspects described as;

Development is a perception, processes or demonstration regarded as novel by users. Communication networks: suggests by development starts from one person or group to the other. Time: the non-spatial interim through which Diffusion incident occurs. The incidents entail: development dissemination procedure, comparative traverse of time

for the person or group to embrace the advancement and social framework: an arrangement of interconnected aspects that are occupied with combined critical thinking exercises to fulfill the objectives.

Rogers (1995) similarly established the apparent attributes concept that shoulders that novelty has features for instance: Comparative benefit: extent to which an benefit is seen as superior than the concept it surpasses, Compatibility: extent that a novelty is regarded as dependable with current standards, Complexity: the extent to which a novelty is regarded as hard or simple to comprehend as well as adopt, Trial capability: is the extent to which a novelty could be felt on a narrow basis whereas observability as the extent to which the outcomes of a novelty is considered noticeable by others. The simpler it is for people to observe the outcomes of a novelty, the more prospective they are to use it (Rogers, 1995).

Technology development has impinged on procuring; the facilitator transformation in procuring function ought to entail the goals of getting rid of paper dealings to obtain a framework that eases procurement to pay as a goal of a sound procurement which is considered improve procurement performance (Lysons & Farrington, 2012). This concept is essential in directing the enterprise to begin transformation and use novelty in procurement in the direction of sound procurement.

2.2.2 Theory of Planned Behaviour

The concept of planned behavior (Ajzen, 2011) is the broadening of the theory of reasoned action (TRA). Ajzen and Fishbein (1998) influenced vital by the last paradigm's incapacity to deal with processes over which individuals to have fragmented volitional control. At the core of TPB is the expectation by a person to undertake a particular activity for instance of ICT usage in procurement. For TPB,

state of mind toward the objective behavior and subjective principles regarding taking part in the conduct are believed to shape objective, and TPB embroils saw behavioral control over involving in the behavior as an influencing aspect of expectation.

TPB has been adopted as a part of a wide range of concentrates in the data frameworks writing (Mathieson, 1991; Taylor and Todd, 1995a, b; Harrison et al., 1997). TPB, notes that a person's implementation of a certain action is dictated by their goals of what they are undertaking. Aim is itself cultivated by perception toward the action, particular principles regarding taking part in the action, and considerations regarding whether the individual will be capable to participate effectively in the objective action. As per Azjen (2001), an approach towards an action is a positive or negative assessment of undertaking that action. Mentalities are cultivated by principles. Principles are cultivated by stereotyping principles as well as drive to stick to, and behavioral control is cultivated by principles regarding a person's control of the open doors and assets likely to become involved in the action (Azjen, 1991). Azjen looks at saw behavioral control to Bandura's paradigm of saw self-viability (Bandura, 1997).

TPB also embroils an undeviating association between saw behavioral control as well as behavioral success. If two persons having matching extent of belief to be involved an action, the one having more conviction in their abilities will possibly succeed compared to the individual with queries (Azjen, 1991). As a broad hypothesis, TPB doesn't stipulate principles not linked with a certain conduct, therefore determining those principles with the scholar. A fundamental commence of

the current research is that beliefs regarding security as well as dependability of the ICT stage illuminate mentalities toward Web acquiring.

TPB provides a vigorous theoretical basis to analyzing such a commence, alongside a system for analyzing whether dispositions are actually relating to purpose to participate in a certain action, which itself should relate to the actual action. As noted by the hypothesis, beliefs regarding how critical referent others perceive ICT choice in acquirement, as well as motivation to consent to the perceptions of essential others, should similarly create plan to make Web acquisitions. At long last, opinions regarding partaking the fundamental open doors as well as resources to draw in ICT in Acquirement undertaking ought to influence objective to acquire and directly guide acquisition.

2.2.3 Agency Theory

The agency concept was formally introduced in 1932 by two American economists namely Adolf Berle and Gardiner Mean (Mitnick, 2006). Berle and Means were talking about the cooperation between the operator (supervisors) and central (investors) in connection to corporate administration. Organization hypothesis clarifies the connection that exists amongst specialists and chief or troughs and investors in which the operator or executives are in a position to settle on choices in the interest of the investors or primary (Eisenhardt, 1989). The connection between the chief and the supervisors is regularly looked with situation of irreconcilable situation. The specialist are frequently looked with issue of acting to their greatest advantage which are conflicting to the enthusiasm of the principals.

Organization hypothesis speculation, issues emerge in the occasion two gatherings have diverse interests and the operator has more data to such an extent that the key

can't affirm with surety that the specialist is continually acting to their greatest advantage (Schmitz, 2013). The hypothesis is significant to the examination since it clarifies the connection between (specialist) district supervisors accountable for E-acquirement usage and government (central). It additionally endeavors to manage the office issue and accommodate the strife between the two elements or gatherings (Mitnick, 2006). The speculation is additionally looked with various impediments, for example, organization hypothesis is considered nature subjective, and its legitimacy can't be tried, theory should be tried so as to be real.

2.3 E-Procurement Implementation

According to Roma and McCue, (2012), e-procurement is the use of IT with a view to creating a procurement process which satisfies the dynamics within the environment. All counties will embrace the electronic procurement concept. Garran (2005) states that social, cultural, and political factors are the major drivers of e-procurement in government establishments. Within the county governments, the execution of procurement electronically has to be supported with resources as well as specialized competencies. The proper coordination of change management apparatus and training plans is also needed (Garran, 2005). It also makes perfect sense to set up mechanisms, practices, and processes that support the execution of e-procurement (Vaidya, Sajeew & Callender, 2006).

Koorn, Smith and Mueller (2001), referenced in Vaidya, Sajeew and Callender (2006), explains two kinds of digital procurement systems: the seller e-procurement approach and the buyer e-procurement systems. The execution of the two approaches needs a workflow mechanism that's incorporated into an electronic procurement application

to facilitate the requisition to payment as well as e-catalogue application that outlines a vendor's goods and service on sale and their prices on the web (Vaidya, Sajeew & Callender, 2006). Aberdeen Group (2001) asserts the objective of most e-procurement applications is to attend to one of the three core elements of procurement functions, for example, indirect/direct procurement as well as sourcing. The reasons why county governments embrace digital procurement processes are to improve the adaptability of operations and strategies.

In 2009, the PPOA listed issues such as participants in a transaction, harmonization, confidentiality, internet bandwidth, and data integrity as the main concerns that counties had to address prior to tapping into the full benefits of electronic procurement. Thus, e-procurement derives its benefits from the exploitation of technological modernization as opposed to paperwork-based procurement processes. According to Min & Galle (2003), e-procurement leverages E-Commerce to dictate possible supply options, buy goods or services, transmit the prices of products and to engage with suppliers. Considering the degree and importance of procurement expenses, and the bottom line effect of cutting down the cost of sourcing goods, it is little wonder that over the past 10 years, various Kenyan county governments have registered increased focus on procurement costs.

According to Croom and Johnston (2003), it's essential that internal system users adhere to compliance for electronic procurement to produce cost and efficiency benefits, and as such, internal client satisfaction ought to be a major issue in the creation, acceptance, and setting up of such a system. This implies that the extent of compliance with e-procurement is substantially controlled by the overall attitude of the county in general to either the procedure of digital redesign or the inclination

toward reaping the supposed gains in electronic procurement (Soeters, et al., 2014). Some of the typical forms of electronic procurement within the public sector are: electronic tendering, electronic request for quotations, electronic auctions, electronic catalogues, as well as electronic invoicing (Vaidya, Sajeev & Callender, 2006).

To build their core competencies, counties are embracing e-procurement as an essential strategy due to its ability to lower quality cost in which case, e-procurement ensures that selected vendors supply items or services which do not supersede thorough quality control. It's also feasible for e-Procurement to cut down quality expenses by ascertaining that the elements purchased do not result in grievances from the user department or the end product to the consumer. It also plays a positive role in the enhancement of product design and innovation, in that case, novelty in the sector emanates from suppliers or is the outcome of deep engagement between the user department and supplying vendors (Darin, 2007).

County government procurement is responsible for 20-30% of GDP, implying that the necessity to embrace electronic procurement cannot be overemphasized (Thai & Grimm, 2000), and conventionally, efforts to satisfy numerous social and political goals (Tether, 1977). County governments utilize a sophisticated contractual system that'd developed to guard their best interest with the view to protecting the accountability and transparency of services (Rasheed, 2004). By way of public Internet, purchasers have the chance to pinpoint possible providers through general purpose search engines or specialist exchange search engines. Price comparisons carried out online usually relied upon for specialist or low value buying (Soeters, et al., 2014).

2.4 Empirical Literature Review

Gunasekaran, McGaughey, Ngai and Rai (2009), on e-procurement appropriation in the South-Coast SMEs', notices that e-procurement is among the best adoptions in numerous little and medium undertakings enterprise processes as these SMEs look for improved quality enterprise forms. The study affirms that e-acquirement has immediately been embraced in light of the advantages that it bears an association. Several of these advantages incorporate efficient as the merchandise and enterprises are requested by means of a tick of a catch, this at that point saves time for the entrepreneurs and administrators to focus on different issues of the business. It spares costs since a business visionary can thoroughly analyze costs electronically and the best is picked much effectively with no bother. Another advantage is enhanced proficiency in the working spot managed by e-acquirement; these three are the facilitators of execution of e-obtainment in SMEs.

An examination by Aman and Kasimin (2011) on e-procurement execution: a contextual analysis of Malaysia Government was done with a specific end goal to comprehend the difficulties of e-procurement application in the Administration segment and the endeavors taken to beat the difficulties utilizing a Malaysia Administration case. Discoveries demonstrate that difficulties of e-acquisition execution in Government segment were not just identified with programming incorporation, information administration and take off methodology, yet additionally to lawful and organization systems, data innovation (IT) framework, outsourcing contract and IT abilities. Discoveries demonstrate the significance of making an IT offices focus in provincial regions and working intimately with an outsider seller for clients' preparation and aptitudes improvement.

Roma and McCue (2012) looked into e-procurement showed that e-procurement makes possible documentation of all bidding, in the end helping improve openness and accountability particularly in public procurement. Additionally, the study showed that electronic procurement is tied to enhanced efficiency and improvement in procurement activities. Additional benefits of e-procurement are such as: customers report higher satisfaction levels and increased professionalism in the procurement function, which encourages positive review of the procurement process by the public.

Doherty, McConnell & Ellis-Chadwick (2013) carried out a research on Institutional reactions to electronic acquirement in general society part with the point of recognizing those elements that influence the take-up and utilization of e-obtainment inside people in general division. Each of the contextual investigation associations was an expansive, profoundly modern, open division office, which constituted an adequately homogeneous gathering to enable important correlations and complexities to be made. From the examination of the aftereffects of this investigation, it is certain that the level of take-up was still some route from the levels expected and suggested. Be that as it may, general advance had been moderate. It likewise demonstrated that there was a great level of assentation regarding the particular aspects that had influenced this extent of selection, of every specific innovation.

Mose (2012) performed an examination on the effect of electronic acquisition on the processes of Kenya Business Bank (KCB). The examination noticed the basic aspects that had the best effect on e-acquisition. The investigation was undertaken in the saving money industry that is considered to have the budgetary capacity to boost

reserves for capital speculations like embracing and actualizing e-acquirement completely. There is a hole in linking its discoveries to the general population area that the aspects of executing e-acquisition are unique. People in general part is completely subsidized by the citizens' cash and financing a task like e-acquisition is gone before by long methods and convention.

A research undertaken by Kinoti (2013) on e-procurement use by government parastatals in Kenya: the provider viewpoint, tried to look at how the provider demeanors, limit, straightforwardness and honesty influence their penchant to embrace it. The outcomes showed that the model inspected in this examination was huge with a R2 of 95% and that two of the free factors had a huge relationship exclusively with affinity to embrace e-acquisition. The outcomes additionally demonstrated that there was a solid positive connection amongst limit and inclination to embrace. The examination inferred that state of mind and provider limit can prompt selection or non-appropriation of e-acquirement.

Orina (2013) did an investigation on e-obtainment availability factors in Kenya's Open area to decide the degree of e-acquisition levels out in the open establishments in Kenya. The aftereffects of the investigation demonstrate that protection from change, absence of eagerness, staff aptitudes, and to some degree acquisition approaches affected the status of e-obtainment in broad daylight organizations. With factor examination done on the reactions, the separated elements from the turned part factor grid noted from the investigation were innovation, association's fund, initiative and respectability, legitimate structure and specialized readiness, worldwide law and worker state of mind, obtainment strategy and national acquirement law, e-acquisition

reception and staff data innovation sufficiency and online commercial center and Government bolster. In this manner, innovation, legitimate structure and acquisition arrangements were factors that respondents consented to influence the availability of open acquirement organizations in Kenya. Additionally, the degree of obtainment level out in the open acquirement was low as there was no coordination with different frameworks and low use in electronic business.

Makali (2015) in the examination one-acquisition and acquirement execution of stores in Nairobi'. The investigation expressed that appropriation of e-acquisition remainssmall as this is another point of working together for general stores. In spite of the fact that in the brief time frame that e-obtainment stage have been set up, the organizations that had received it encountered improved cost productivity by way of the diminishment of wastefor instance use of paper and lessened procuring cost for providers. The examination likewise noticed that proficiency as well as adequacy of process at the effort put has been enhanced because of improved correspondence inside the association. The e-demanding, e-offering as well as e-sourcing has enhanced processes at the grocery stores. The examination suggests that those arrangement creators in the ICT part ought to support retail organizations in the nation to abuse data frameworks for development.

Ngeera (2016) conducted a study on E-procurement and operational performance of Pharmaceutical enterprises in Nairobi, Kenya. The research aim was; to verify the extent of e-procurement implementation by pharmaceutical firms in Nairobi, to analyze the link between e-procurement and firm performance of pharmaceutical firms in Nairobi, and to find out the challenges faced by pharmaceutical firms in Nairobi when implementing e-procurement. The results of the study revealed that E-

Communication and E-Tendering are implemented to a great extent while E-Sourcing, E-Order Processing and E- Auctioning are implemented to a moderate extent. The research similarly ascertained that a strong association exists between e-procurement and operational performance of pharmaceutical firms in Nairobi, Kenya.

2.5 Challenges in Implementation of E-Procurement

Managers backing and employee knowledge are main challenges of e-procurement implementation and use. According to Grover (1993), Lack of top management support may as well mean resistance and may result in failure of implementation (Grandon & Pearson, 2004). Studies such as Mose, Njihia and Magutu (2013) established that major challenges facing adoption of e-procurement include; employees' resisting change, company board not approving e-procurement practices and management not supporting the e-procurement practices.

There is increased risk of buyer's perception due to lack of previous experience or relationship with internet based supplier. Min and Galle (2003) assert that opinions about the costs, risks and value of e-procurement undertakings notably influence its application as well as use. The concept that e-commerce is valuable to businesses is discarded by several managers (Drew, 2003). Walczuch *et al.*, (2000) suggested that managers' and opinions that the Internet would not lead to more efficiency or lower costs are the main hurdles to implementation and use.

In a research study by Aman and Kasimin (2011) on e-procurement Usage: a contextual analysis of Malaysia Administration, legitimate and organization techniques were noted as the key difficulties in framework determination because of

various inheritance framework, distinctive information arrangements and complex procedures (Subramaniam and Shaw, 2002). Lawful, approach; financial establishments and long haul subsidizing were the primary hindrances in e-government venture as indicated by Scholl and Klischewski (2007). Tight legitimate and organization methods added to framework incongruence(Kassim & Hussin, 2010).

2.5 Summary of Literature Review

Researches have been conducted globally and locally on E-procurement implementation by public entities, SME's, banks and others. The table below gives a summary of literature review; it provides the authors studies, the major findings and the research gaps. criticized.

Table 2.1: Summary of Literature Review

Scholars	Stusy	Major Findings	Knowledge gaps
Gunasekaran, McGaughey, Ngai and Rai(2009)	E-procurement implementation in the South-Coast SMEs.	The study endorses that e-procurement has rapidly been acceptedowing to its benefits to the enterprise.	It considers more on what could possibly be undertakenboost the SMEs' success.
Aman and Kasimin (2011)	Issues in e- procurement application in the public establishments	Issues in e-procurement application in government entities were not merely linked to software combination, data controllingas well as roll-out strategy, but similarly to permissible and managementprocesses, IT infrastructure, outsourcing contract as well	It was restrictedto processes of central governmenttherefore not pertinent to other decentralizedregionsthat could behandlingeasierprocurementundertakings.

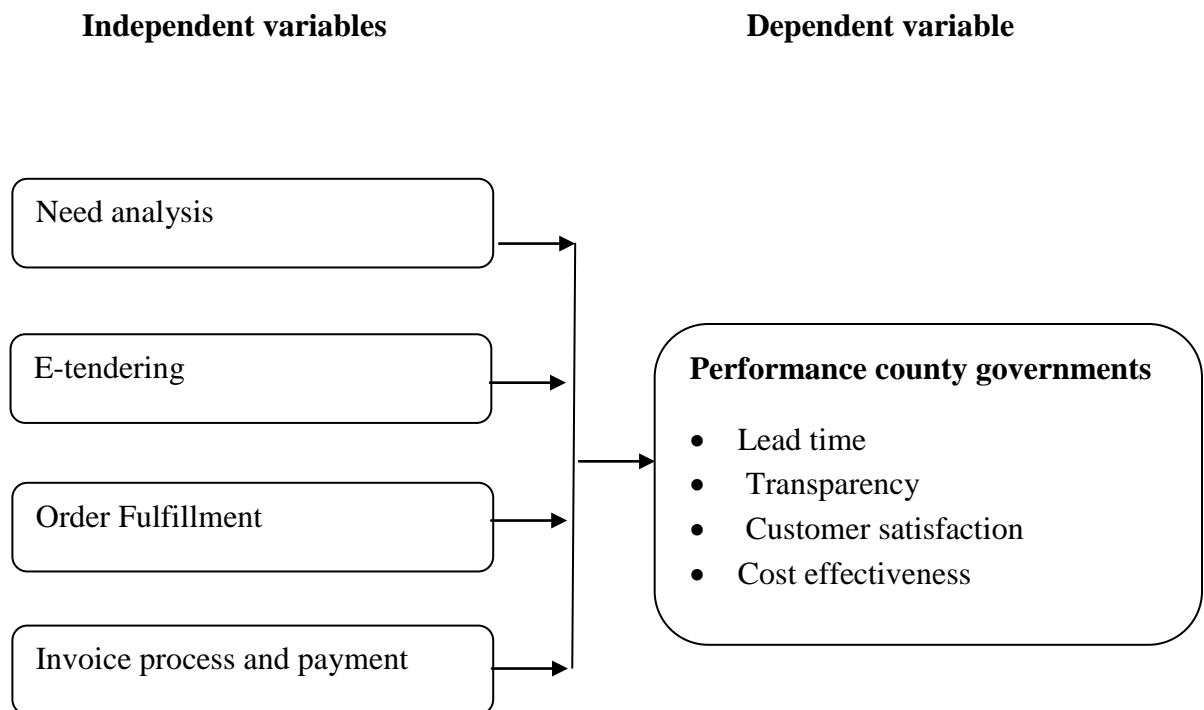
		as IT knowledge.	
Mose (2012)	Influence of electronic procurement on the processes of Kenya Commercial Bank(KCB)	The circumstance enterprise is considered to possess the financial capacity to amass resources for capital investments for instance for fully adopting as well as executing e-procurement.	A gap exists in linking its results to the public entities where the aspects of applying e-procurement are not the same.
Kinoti (2013)	E-procurement embracing by state-owned entities in Kenya.	The outcomes showed that the model tested in this research was substantial with an R2 of 95% and that two of the independent variables had a substantial link separately with tendency to embrace e-procurement.	It narrowed to state-owned establishments, emphasizing on supplier standpoint, capability, openness as well as reliability.
Makali (2015)	Procurement and performance of stores	The research noted that use of e-procurement remains small as it is a modern way of undertaking business for stores.	It failed to tackle employee capability, efficiency as well as effectiveness of operation at the organization.

	in Nairobi.		
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2.6 Conceptual Frame Work

In this research, the independent variable includes the need analysis, E-tendering, Procurement Staff competency and internal process, while the dependent variable is performance. The hypothesized relationship is depicted in figure 2.1 below.

Figure 2.1 Conceptual Model



Source: Author (2017)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section covered the research approach. The sub-sections of the research methodology included research design, population of the study, data collection technique and methods to be used to analyze data collected.

3.2 Research Design

This research employed a descriptive research. A descriptive research gained information on the effect of E-procurement implementation on the performance of county governments in Kenya. Descriptive research design involves the researcher asking the “why” question with a goal to establish, detail, characterize or identify what is (Fox & Bayat, 2007). The researcher was able to probe the various aspects in their natural state without influencing them in any way.

3.3 Population of Study

The target populations of this research were county governments in Kenya. Focus was on the county procurement departments in the forty seven counties (Appendix II). Given that the target population was not too large, a census study was done.

3.4 Data Collection

Primary data was sourced via a semi-structured questionnaire which was distributed to procurement manager or their equivalent because they are deemed to possess the relevant information for the study. The study settled on the mentioned as respondents as these are deemed to be key in influencing technology selection to invest in counties.

The questionnaire had three parts. Section (A) entailed information regarding broad aspects of the organization as well as the respondents; section (B) entailed information on management perception on the effect of E-procurement application on performance (C) Challenges facing E-Procurement implementation. The collected data was analyzed with a view to determine relationship as identified in the conceptual framework.

The questionnaires were self-administered by the researcher or research assistant by drop-and-pick later methods. The questionnaire was also disseminated by way of email and hand delivery due to the long distance of county offices to ensure a high response rate.

3.5 Data Analysis

Table 3.1 is a summary of data sourcing as well as analysis which presents how the collected data was analyzed. Data analysis on section A will be by way of descriptive statistics. Section B on the effect of E-Procurement implementation on County government performance will be analyzed through correlation and regression analysis. Section C on challenges of electronic procurement implementation on county government will be analyzed through descriptive statistics.

Performance of Counties was analyzed using regression analysis.

The following regression equation was used;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Whereby Y = Performance of County Governments in Kenya.; X_1 = Need analysis,

X_2 = E-tendering; X_3 = Order fulfillment; X_4 = Invoicing process and payment

ε = Error term β_0 is the intercept

Table 3.1: Summary of Data Collection and Data Analysis

Objective	Data Collection	Data Analysis
General/Demographic Information	Section A of the questionnaire	Descriptive Statistics
The effect of E-Procurement implementation on County government performance	Section B of the questionnaire	Correlation and regression analysis
Challenges of electronic procurement implementation on county government	Section C of the questionnaire	Descriptive statistics

Research Data (2017)

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This part examines the elucidation and introduction of the examination discoveries out of the exploration instrument by method for information investigation. This part introduces the examination and discoveries of the investigation as set out in the exploration approach. The exploration information was assembled solely through primary data.

4.2 Demographic Information of the Respondents

The demographic data obtained from individual respondents and their background is examined in this segment. Doing this enabled the researcher comprehend the respondents setting and their capability to provide useful data. The results are presented according to the demographics and the research questions.

4.2.1 Response Rate

The research targeted 47 individuals who constituted procurement managers in the 47 county governments in Kenya. Out of these, 41 respondents could be reached while the rest were not available hence the response rate of the study at 87%. (Mugenda and Mugenda, 2009) indicated that a response percentage of more than 70 is to be considered good enough for examination and reporting.

Table 4.1. Representations of the responses

Response Rate	F	Percentage
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Responses	41	87%
Failed Responses	6	13%
Total population	47	100%

Source: Research Data (2017)

4.2.2 Gender of the Responses

The Respondents were expected by the study to disclose their gender

Table 4.2 Gender of the Respondents

Gender	Frequency	Valid Percent
Male	35	88
Female	5	12
Total	40	100.0

Source: Research Data (2017)

The research outcomes determined that 88 % of the respondents constituted male, whereas 12% constituted female. Due to the significant disparity in gender performance of County Governments is likely to be biased in reflection of the gender disparities at the work place especially if there are gender disparities in regard to attitudes towards E-procurement adoption and its perceived influence on performance.

4.2.3 Age of the Respondents

The Respondents were required by the study to disclose their age bracket. This was necessary for purposes.

Table 4.3 Age of the Respondents

Age	Frequency	Percent
Below 30 yrs	12	28.9
30-39yrs	20	50.2
40-49yrs	7	19.0
50-59yrs	1	1.9
60-69 years	0	0
Total	40	100.0

Source: Research Data (2017)

The findings pointed out that 28.9% of the respondents were aged below 30 years while 50.2% were between the ages of 30-39years. The findings indicate that 19% were between the ages of 40-49years while 1.9% of the respondents were below the age of 50-59yrs. The study therefore concludes that the respondents comprised of a young and a vibrant population particularly since technology adoption and acceptance such as E-procurement adoption is correlated to a young population whose contributions significantly affect performance at the work place

4.2.4 Duration of Working with the County Government

The Respondents were required by the study to disclose Duration of working with the County Government . This was necessary to establish their relevance to this study.

Table 4.4 Age of the Respondents

Duration	Frequency	Percent
Below 1 year	0	0%
1-2yrs	0	0%
2-3yrs	7	18%
3-4yrs	9	23%
4-5yrs	24	60%
Total	40	100%

Source: Research Data (2017)

The findings pointed out that none among the respondents had been employed by the County Government for a period below a year and for a period of 1-2yrs. 18% of the respondents had been employed in the County Administration for a period of 2-3yrs while 23% of the respondents had been working with the County Government for a period of 3-4yrs. 60% of the respondents had been employed in the County Government for a period of 4-5yrs. The results suggested that the respondents had all been working at the station for a period of at least two years hence their responses can be relied upon in this study.

4.2.5 Highest Level of Education

The Respondents were expected to disclose their highest education level. This was necessary to establish their relevance to this study.

Table 4.5 Highest level of education

Education Level	Frequency	Percent
Secondary	0	0%
Tertiary College	0	0%
Undergraduate	23	58%
Postgraduate	17	43%
Total	40	100%

Source: Research Data (2017)

The results indicated that none of the respondent's educational qualification was limited to secondary or tertiary education level. 58% of the respondents had undergraduate degrees while 43% were holders of post graduate degrees. The results suggest that all of the respondents were well informed to make meaningful and reliable contributions to this study.

4.3 Effect of E-Procurement Implementation on Performance

This part the researcher aimed to verify the influence of application of Procurement the area of need analysis and how it impacts performance, the effect of usage of E-procurement in the form of E-tendering on performance, effect of usage of E-Procurement in the form of order fulfillment on performance and the effect of application of E-Procurement in Invoice approval and payment on performance. The researcher used Likert scale to measure responses where 1=Very great extent, 2=great extent, 3=moderate extent, 4= small extent, 5= very small extent. The findings are discussed in the below subsections.

4.3.1 Effect of Application of E- ProcurementIn the Form of Need Analysis onPerformance

This section the researcher aimed to explore the influence of application of E-Procurement in the form of need analysis on performance. The researcher used likert scale to measure responses where 1=Very great extent .2=great extent, 3= moderate extent, 4= small extent, 5= very small extent. The findings are indicated and in the table 4.7.

Table 4.6Effect of application of E- Procurement- need analysis onperformance

Effect of application of E-procurement in the form of need analysis on performance	Mean	Std. Deviation
Reduced costs	1.75	0.7
Increased transparency	1.52	0.84
Increased revenue	1.19	0.71
Increased customer satisfaction	1.6	0.9

Source: Research Data (2017)

The resultspoint out that the application of E-procurement in the form of need analysis has resulted inreduced costs to great extent as pointed out by the mean of 1.75as well as a standard deviation of 0.7. Theapplication of E-procurement in the form of need analysis has resulted inincreased transparency to great extent as indicated by the mean 1.52 and a standard deviation of 0.84. Theapplication of E-procurement in the form of need analysis has resulted inincreased revenue to very great extent as suggested by the mean 1.19 and a standard deviation of 0.71. Theapplication of E-procurement in the form of need analysis

has resulted in increased customer satisfaction to great extent as indicated by the mean 1.6 and a standard deviation of 0.9.

4.3.2 Effect of Application of E-Tendering on Performance

This section the researcher aimed to analyze the influence of application of E-tendering on performance. The researcher used likert scale to measure responses where 1=Very great extent, 2=great extent, 3= moderate extent, 4= small extent, 5= very small extent. The findings are indicated and in the table 4.8.

Table 4.7 Effect of Application of E-Tendering on Performance

Effect of application of E-tendering on performance	Mean	Std. Deviation
Reduce advertisement cost	1.5	0.71
Lessen paper track on tendering exercise	1.24	0.51
Cut costs of involvement for procurers as well as suppliers	1.17	0.53
Enhanced procurement expenditure material as well as analytical information access	1.14	0.46
Online call for requisitions has increased accountability.	1.13	0.48
Online call for requisition has increase speed	2.16	1.1
Online call for quotations has ensured effectiveness	1.76	0.85

Source : Research Data (2017)

The results point out that the application of E-tendering has resulted in reduced advertisement costs to a great extent as pointed out by the mean of 1.5 and a standard deviation of 0.71. The application of E-tendering has resulted in Minimize paper trail on tendering exercise to a very great extent as shown by the mean 1.24 and a standard deviation of 0.51. The application of E-tendering has resulted in Reduce costs of participation for purchasers and vendors to a very great extent as pointed out by the mean 1.17 and a standard deviation of 0.53. The application of E-tendering has resulted in Better access to procurement spending information and analytical reports to a very great extent as suggested by the mean 1.14 and a standard deviation of 0.46.

The application of E-tendering has resulted in online call for a requisition has increased accountability to a very great extent as pointed out by the mean 1.13 and a standard deviation of 0.48. Online call for requisition has increase speed to a very great extent as pointed out by the mean 2.16 and a standard deviation of 1.1. The application of E-tendering has resulted in Online call for quotations has ensured effectiveness to a very great extent as pointed out by the mean 1.76 and a standard deviation of 0.85.

4.3.3 Effect of Application of E- OrderFulfillment on Performance

This section the researcher aimed to analyzeeffect of application of e-procurement in the form of orderfulfillmenton performance. The researcher used Likert scale to measure responses where 1=Very great extent, 2=great extent, 3= moderate extent, 4= small extent, 5= very smallextent.The findings are indicated and in the table 4.8.

Table 4.8 Effect of Application of E-Procurement in the form of Order Fulfillment on Performance

Effect of application of E-Procurement in the form of Order fulfillment on performance		
	Mean	Std. Deviation
Reduced operational costs	1.76	0.78
Faster delivery	1.66	1.58
Improve customer service	1.65	0.77
Better communications between departments	1.48	0.83

Source: Research Data (2017)

The outcomes suggested that the application of E-Procurement in order fulfillment has resulted in reduced operational costs to a great extent as pointed out by the mean of 1.76 and a standard deviation of 0.78. The application of E-Procurement in order fulfillment has resulted in faster delivery a great extent as pointed out by the mean of 1.6 and a standard deviation of 1.58. The application of E-Procurement in order fulfillment has resulted in Improve customer service a great extent as pointed out by the mean of 1.65 and a standard deviation of 0.77. The application of E-Procurement in order fulfillment has resulted in better communications between departments to a very great extent as pointed out by the mean of 1.48 and a standard deviation of 0.83.

4.3.4 Effect of Application of E- Invoice Approval and Payment on Performance

This section the researcher sought to find out effect of application of E-procurement in invoice approval and payment on performance. The researcher used likert scale to measure responses where 1=Very great extent, 2=great extent, 3= moderate extent, 4= small extent, 5= very small extent. The findings are indicated and in the table 4.9.

Table 4.9 Effect of Application of E- Invoice Approval and Payment on Performance

Effect of Application of E- Invoice Approval and Payment on Performance	Mean	Std. Deviation
Shortened period for approval and payment	1.43	0.9
Detailed purchase history for efficient negotiation with vendors	1.4	0.78
Improved audit trail increasing integrity and transparency	1.3	0.7
Real time updating, eliminate obsolete information on payments	1.66	0.87
Improved reconciliation on debtors and creditors	1.57	0.85

Source: Research Data (2017)

The outcomes pointed out that the application of E- invoice approval and payment has resulted in a Shortened period for approval and payment to a very great extent as indicated by the mean of 1.43 and a standard deviation of 0.9. The application of E- invoice approval and payment has resulted in detailed purchase history for efficient negotiation with vendors to a very great extent as indicated by the mean of 1.4 and a standard deviation of 0.78. The application of E- invoice approval and payment has resulted in improved audit trail increasing integrity and transparency to a great extent as pointed out by the mean of 1.3 and a standard deviation of 0.7.

The application of E- invoice approval and payment has resulted in real time updating; eliminate obsolete information on payments to a great extent as indicated by the mean of 1.66 and a standard deviation of 0.87. The application of E- invoice approval and payment has resulted in improved reconciliation on debtors and creditors to a great extent as indicated by the mean of 1.57 and a standard deviation of 0.85.

4.4 Extent of Application of Electronic Procurement in County Governments

This section the researcher aimed to measure the extent to which electronic procurement is applied in County Governments. The researcher used likert scale to measure responses where 1=Very great extent, 2=great extent, 3= moderate extent, 4= small extent, 5= very small extent. The findings are indicated and in the table below.

Table 4.10 Extent of Application of Electronic Procurement

Application of electronic procurement	Mean	Std. Deviation
Tenders are advertised online	1.76	0.86
Tenders short-listing is performed by the e-procurement system	1.52	0.77
Stipulations for items procured are displayed on the entity's website	1.3	0.74
Calls for tender proposal are done on organizations electronic procurement platform	1.44	0.6

Source: Research Data (2017)

The findings indicate that tenders are advertised online to a great extent as pointed out by the mean of 1.76 and a standard deviation of 0.86. Tenders short-listing is performed by

the e-procurement processes to a great extent as pointed out by the mean of 1.52 and a standard deviation 0.77. Specifications for procured items are posted to company website to a very great extent as pointed out by the mean of 1.3 and a standard deviation 0.74. Calls for tender proposal are done on organizations electronic procurement to a very great extent as pointed out by the mean of platform 1.44 and a standard deviation 0.6.

4.4.1 Challenges Facing E- Procurement in County Governments

This section the researcher sought to ascertain the challenges encountered in E-Procurement in County Governments. The researcher used Likert scale to measure responses where 1=Very great extent, 2=great extent, 3= moderate extent, 4= small extent, 5= very small extent. The findings are indicated and in the table below.

Table 4.11 Challenges Facing E- Procurement in County Governments

Challenges of E-procurement	Mean	Std. Deviation
High costs of implementing e-procurement	2.66	0.87
High cost of training staff	1.57	0.85
Resistance to change by staff	1.06	0.78
Lack of adequate systems security	1.38	0.83
Inadequate technological infrastructure	1.57	0.85
Non supporting organizational culture	1.43	0.9
Lack of a sound change management program	1.4	0.78
Poor e-Procurement implementation strategy	1.3	0.7
Poor Communication Mechanisms	1.6	0.9

Source: Research Data (2017)

The results pointed out that high costs of implementing e-procurement is a challenge to effective E-procurement adoption to a moderate extent as pointed out by the mean of 2.66 and a standard deviation of 0.87. High cost of training staff is a challenge to effective E-procurement adoption to a great extent as pointed out by the mean of 1.57 and a standard deviation of 0.85. Resistance to change by staff is a challenge to effective E-procurement adoption to a very great extent as pointed out by the mean of 1.06 and a standard deviation of 0.78. Lack of adequate systems security is a challenge to effective E-procurement adoption to a very great extent as pointed out by the mean of 1.38 and a standard deviation of 0.83.

Inadequate technological infrastructure is a challenge to effective E-procurement adoption a great extent as pointed out by the mean of 1.57 and a standard deviation of 0.85. Non supporting organizational culture is a challenge to effective E-procurement adoption to a very great extent as indicated by the mean of 1.43 and a standard deviation of 0.9. Lack of a sound change management program is a challenge to effective E-procurement adoption to a very great extent as indicated by the mean of 1.4 and a standard deviation of 0.78. Poor e-Procurement implementation strategy is a challenge to effective E-procurement adoption to a very great extent as pointed out by the mean of 1.3 and a standard deviation of 0.7. Poor Communication Mechanisms is a challenge to effective E-procurement adoption a great extent as pointed out by the mean of 1.6 and a standard deviation of 0.9.

4.5 Regression Analysis

A regression model was employed to measure the link between the research variables. The dependent variable is the performance of County Governments whereas the independent variable is the application of E-procurement practices. The analytical model employed in evaluating the link between the variables. Coefficient of determination describes the extent to which variations in the dependent variable could possibly be explained by the variation in the independent variables. The analytical model used in analyzing the relationship between the dependent and independent variables is:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Whereby Y = Performance of County Governments in Kenya.; X_1 = Need analysis, X_2 = E-tendering; X_3 = Order fulfillment; X_4 = Invoicing process and payment
 ε = Error term β_0 is the intercept

Table 4.12: Model Summary

<i>Regression Statistics</i>	
Multiple R	0.799995
R Square	0.799999
Adjusted R Square	0.772212
Standard Error	0.033148
Observations	40

Source: Research Data (2017)

R-Square is the most utilized statistic to assess model fit. R-square is 1 minus the ratio of residual variability. The adjusted R^2 , similarly termed as the coefficient of determinations, is the proportion of change in the dependent described exclusively or both by the independent variables. 80 % of change in performance of County Governments as a result of E-procurement adoption may perhaps be because of the joint influence of the predictor variables.

Table 4.13 Summary of One-Way ANOVA

ANOVA

	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>Significance</i>	
				<i>F(pvalue)</i>	
Regression	4	3999.96	999.9901	910080.3	0.00029
Residual	36	0.039557	0.001099		
Total	40	4000			

Source: Research Data (2017)

The research employed One-way ANOVA to establish the significance of the regression model from which a probability value of 0.00029 was ascertained. This indicates that the regression link was greatly substantial in calculating how E-procurement impacts the performance of County government. The F determined at 5% significance level was 910080.3 as F exceeds the F critical; this suggests the entire model was substantial.

Table 4.14 Regression Coefficients results

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	2.456	0.056	1.880	0.013	-0.046	0.898
Need Analysis	0.084	0.055	5.535	0.013	-0.027	0.194
E-Tendering	1.841	0.150	12.274	0.000	1.537	2.146
Invoice Approval	6.241	0.220	28.330	0.000	5.794	6.688
Oder fulfillment	-0.084	0.045	-5.847	0.031	-0.176	0.008

Source : Research Data (2017)

The above regression equation determined that keeping every other aspect constant (no E-procurement) performance of County Governments would be at 2.456. A unit rise in in application of E-procurement in need analysis would bring about enhanced performance of County Governments by 0.084. A unit rise in in application of E-procurement in E-tendering would bring about a rise in performance of County Governments by 1.841. A unit increase in application of E-procurement in invoice approval would bring about a rise in performance of County Governments by 6.241. A unit increase in in application of E-procurement in order fulfillment would lead to a decrease in performance of County Governments by -0.084.

Significance testing using P-values was undertaken. The p values obtained for each independent variables undertaken in the research were below 0.05 indicating that the overall model was substantial in calculating how E-procurement substantial variance between population means as well as a postulated value. The higher the extent of T which is either positive or negative; the higher the evidence in contrast to the null hypothesis that a substantial difference does not exist. The more T is towards 0, the more possible there is no substantial variance. Since all the T statistic values are greater than 0 shows that there is indication of a substantial variance between population means and a theorized value indicating that the overall model was significant in predicting how E-procurement affects the performance of County government.

4.6 Discussion of the Findings

The researcher aimed to ascertain the influence of application of E- Procurement in the form of need analysis on performance. The outcomes indicate that the application of E-procurement in the form of need analysis has resulted in reduced costs to great extent. The use of E-procurement in the form of need analysis has resulted in increased transparency to great extent. The use of E-procurement in the form of need analysis has resulted in increased revenue to very great extent. The use of E-procurement in the form of need analysis has resulted in increased customer satisfaction to great extent (Siricha & Theuri, 2016).

From the regression model, it was determined that E-procurement enhances the performance. The independent variables explored determine a significant 80% of the change in performance of County Governments since the adoption of E-procurement while other aspects as well as random variations not explored constitute 20%.

The outcomes were congruent to those of Mwangi (2008) who studied the link between E-procurement and performance of independent oil enterprises in Kenya and Wairegi (2009) who studied the effect of E-procurement on performance of Kenyan manufacturing enterprises. Their findings indicate that of poor. The study findings also indicate that E-procurement enhances organizational performance to a great extent. This implies that there existed a positive association between E-procurement and enterprise performance. The findings concur with Pearce II and Zahra (1991) in a study involving 139 of 500 Fortune firms and where there was found to be a positive link between E-procurement and enterprise performance.

The results are in line with those of Ngai and Rai(2009) who studied E-procurement use in the South-Coast SMEs. The paper confirmed that e-procurement has rapidly been embraced owing to its value to an enterprise.

The researcher examined the effect of application of E-tendering on performance. The findings indicate that the application of E-tendering has resulted in reduced advertisement costs to a great extent. The use of E-tendering has resulted in Minimize paper trail on tendering exercise to a very great extent. The use of E-tendering has resulted in Reduce costs of participation for purchasers and vendors to a very great extent. The use of E-tendering has resulted in Better access to procurement spending information and analytical reports to a very great extent. The results are in line with those of Mose (2012) who studies the influence of E-procurement on the processes of Kenya Commercial Bank (KCB). The findings indicate that increases financial capability to amass resources for capital investments for instance full application as well as use of e-procurement.

The application of E-tendering has resulted in online call for a requisition has increased accountability to a very great extent Online call for requisition has increase speed to a very great extent The application of E-tendering has resulted in Online call for quotations has ensured effectiveness to a very great extent.

The researcher analysed the effect of application of e-procurement in the form of order fulfillment on performance. The outcomes point out that usage of E-Procurement in order fulfillment has resulted in reduced operational costs to a great extent. The use of E-Procurement in order fulfillment has resulted in faster delivery a great extent. The

application of E-Procurement in order fulfillment has resulted in improved customer service to a great extent. The use of E-Procurement in order fulfillment has resulted in better communications between departments to a very great extent.

The researcher sought to find out the effect of application of E-procurement in invoice approval and payment on performance. The results indicate that the use of E-invoice approval and payment has resulted in a shortened period for approval and payment to a very great extent. The use of E-invoice approval and payment has resulted in detailed purchase history for efficient negotiation with vendors to a very great extent. The use of E-invoice approval and payment has resulted in improved audit trail increasing integrity and transparency to a great extent.

The use of E-invoice approval and payment has resulted in real-time updating; eliminate obsolete information on payments to a great extent. The use of E-invoice approval and payment has resulted in improved reconciliation on debtors and creditors to a great extent.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This part illustrates the summary of findings, inferences as well as suggestions. The results are summarized consistent with the study objectives that was to establish the influence of E-procurement on performance of County Governments in Kenya. The findings have been discussed relative to the questionnaire aspects which were on; demographic data on the respondent, extent of adoption and challenges of E-procurement and the effect of E-procurement on performance of County Governments at the County Government.

5.2 Summary of Findings

The aim of this research was to determine the effect of E-procurement on performance of County Governments in Kenya. The study used a descriptive research design. Data was obtained by way of questionnaires given out to county procurement managers and analyzed using inferential and descriptive statistics. The study targeted a total of 47 respondents who constituted procurement managers in the 47 county governments in Kenya. Out of these, 40 respondents could be reached while the rest were not available hence the response rate of the study at 85%. (Mugenda & Mugenda, 2009) indicated that a response percentage of more than 70 is to be considered good enough for examination and reporting.

The respondents were required by the study to disclose their gender. The research established that 88 % of the respondents constituted male, whereas 12% of the

respondents constituted female. Due to the significant disparity in gender performance of County Governments is likely to be biased in reflection of the gender disparities at the work place. The Respondents were required by the study to disclose their age bracket. The findings indicate that 28.9% of the respondents were below the aged of 30 years whereas 50.2 percent were between 30-39 years. 19.0% of the respondents were between the age of 40-49 years while 1.9% of the respondents were aged below 50-59 years. The study therefore concludes that the respondents comprised of a young and a vibrant population whose contributions significantly affect performance at the work place.

The Respondents were required by the study to disclose Duration of working with the County Administration. This was necessary to establish their relevance to this research. The results indicted that none of the respondents had been working with the County Government for a period of less than a year and for a period of 1-2yrs. 18% of the respondents had been working with the County Government for a period of 2-3yrs while 23% of the respondents had been working with the County Government for a period of 3-4yrs. 60% of the respondents had been working with the County Government for a period of 4-5yrs. The results pointed out that all of the respondents had been working at the station for a period of at least two years hence their responses can be relied upon in this study.

The Respondents were required by the study to disclose their highest level of education. This was necessary to establish their relevance to this study. The findings indicted that

none of the respondent's educational qualification was limited to secondary or tertiary education level. 58% of the respondents had undergraduate degrees while 43% were holders of post graduate degrees. The results suggest that all of the respondents were well informed to make meaningful and reliable contributions to this study.

The researcher investigated the extent to which electronic procurement is applied in County Governments. The results indicate that tenders are advertised online to a great extent. Tenders short-listing is undertaken by the e-procurement process to a great extent. Stipulations for items procured are displayed on entity's website to a very great extent. Calls for tender proposal are done on organizations E-procurement to a very great extent.

The researcher measured the challenges facing E- Procurement in County Governments. The findings indicate that high costs of implementing e-procurement are a challenge to effective E-procurement adoption to a moderate extent. High cost of training staff is a challenge to effective E-procurement adoption to a great extent. Resistance to change by staff is a challenge to effective E-procurement adoption to a very great extent. Lack of adequate systems security is a challenge to effective E-procurement adoption to a very great extent.

Inadequate technological infrastructure is a challenge to effective E-procurement adoption a great extent. Non supporting organizational culture is a challenge to effective E-procurement adoption to a very great extent. Lack of a sound change management program is a challenge to effective E-procurement adoption to a very great extent. Poor e-Procurement implementation strategy is a challenge to effective E-procurement adoption

to a very great extent. Poor Communication Mechanisms is a challenge to effective E-procurement adoption a great extent.

The researcher evaluated the effect of application of E-Procurement in the form of need analysis on performance. The results indicate that the application of E-procurement in the form of need analysis has resulted in reduced costs to great extent. The use of E-procurement in the form of need analysis has resulted in increased transparency to great extent. The use of E-procurement in the form of need analysis has resulted in increased revenue to very great extent. The use of E-procurement in the form of need analysis has resulted in increased customer satisfaction to great extent.

The researcher verified of application of E-tendering on performance. The findings indicate that the use of E-tendering has resulted in reduced advertisement costs to a great extent. The use of E-tendering has resulted in Minimize paper trail on tendering exercise to a very great extent. The use of E-tendering has resulted in Reduce costs of participation for purchasers and vendors to a very great extent. The use of E-tendering has resulted in Better access to procurement spending information and analytical reports to a very great extent.

The application of E-tendering has resulted in online call for a requisition has increased accountability to a very great extent Online call for requisition has increase speed to a very great extent The application of E-tendering has resulted in Online call for quotations has ensured effectiveness to a very great extent.

The researcher analyzed effect of application of e-procurement in the form of order fulfillment on performance. The findings indicate that the use of E-Procurement in order fulfillment has resulted in reduced operational costs to a great extent. The use of E-Procurement in order fulfillment has resulted in faster delivery a great extent. The use of E-Procurement in order fulfillment has resulted in Improve customer service a great extent. The use of E-Procurement in order fulfillment has resulted in better communications between departments to a very great extent.

The researcher sought to find out effect of application of E-procurement in invoice approval and payment on performance. The findings indicate that the application of E-invoice approval and payment has resulted in a Shortened period for approval and payment to a very great extent. The use of E- invoice approval and payment has resulted in detailed purchase history for efficient negotiation with vendors to a very great extent. The application of E- invoice approval and payment has resulted in improved audit trail increasing integrity and transparency to a great extent.

The use of E- invoice approval and payment has resulted in real time updating; eliminate obsolete information on payments to a great extent. The use of E- invoice approval and payment has resulted in improved reconciliation on debtors and creditors to a great extent.

5.3 Conclusion

The study aimed to analyze the link between E-procurement and County governments performance. Based on the findings in relation to specific objective, the study concludes that E-procurement positively enhances County government performance. The study

concludes that that the application of E-procurement in the form of need analysis has resulted in reduced costs, increased transparency, increased revenue and increased customer satisfaction.

The study concludes that that the application of E-tendering has resulted in reduced advertisement costs .Minimal paper track on tendering exercise, reduced costs of involvement for procurersas well as suppliers and enhanced access to procurement expenditurematerial as well as analytical information . The application of E-tendering has resulted in online call for a requisition has increased accountability increased speed and ensured effectiveness.

The study concludes that that the application of E-Procurement in order fulfillment has resulted in reduced operational costs, faster delivery, improved customer service and better communications between departments.

The study concludes that that the application of E- invoice approval and payment has resulted in a Shortened period for approval and payment ,detailed purchase history for efficient negotiation with vendors andimproved audit trail increasing integrity and transparency,real time updating; eliminate obsolete information on payments and improved reconciliation on debtors and creditors .

5.4 Recommendationsfrom the study

The study recommends that E-procurement adoption should be supported with resources as well as specialized competencies. The study recommends that there should be proper coordination of change management apparatus and training plans. Organizations should

also set up mechanisms, practices, and processes that support the execution of e-procurement. Digital procurement systems should ensure there is a workflow mechanism that's incorporated into an electronic procurement application to facilitate the requisition to payment as well as e-catalogue application that outlines a vendor's goods and service on sale and their prices on the web.

The system should also incorporate key components such as participants in a transaction, harmonization, confidentiality and internet bandwidth and data integrity if tapping into the full benefits of electronic procurement is to be realized. It's essential that internal system users adhere to compliance for electronic procurement to produce cost and efficiency benefits, and as such, internal client satisfaction ought to be a major issue in the creation, implementation, and setting up of such a system. Compliance with e-procurement should be guided by the overall attitude of the county in general to either the procedure of digital redesign or the inclination toward reaping the supposed gains.

To build their core competencies, counties should adopt e-procurement as an essential strategy owing to its ability to lessen cost in which case, e-procurement ensures that selected vendors supply items or services which do not supersede thorough quality control. It's also feasible for e-Procurement to cut down quality expenses by ascertaining that the elements purchased do not result in grievances from the user department or the end product to the consumer. It also essential in the enhancement of product design as well as innovation, in which case, innovation in the sector emanates from suppliers or is the outcome of deep engagement between the user department and supplying vendors (Darin, 2007).

County government procurement is responsible for 20-30% of GDP, implying that the necessity to embrace electronic procurement cannot be overemphasized and conventionally, efforts to satisfy numerous social and political goals. County governments utilize a sophisticated contractual system that's developed to guard their best interest with the view to protecting the accountability and transparency of services via the public Internet, purchasers have the chance to pinpoint possible suppliers through general purpose search engines or specialist exchange search engines. Price comparisons carried out online usually relied upon for specialist or low value buying.

5.5 Limitations of the Study

The study's limitations included constrained time set aside for the research and the limited scope of study. It would have been interesting to research on E-procurement in several other industries and their impact on performance. Data collection was a challenge due to the employees' busy schedules and the limited stipulated time to carry out the research. To counter this, appointments had to be sought and scheduled, sometimes outside the official working hours.

The respondents sought unwilling to provide material being afraid that the material provided would be utilized to coerce them or publish a bad picture of them. As such researcher carried an introduction letter from the university and guaranteed them that the material they would give would be confidential and it was solely for academic reasons. The study's limitations included limited time set aside for the research and the limited scope of study.

5.6 Suggestions for Further Research

The research suggests further survey on study E-procurement and performance in other industries. This research should be replicated in other industries in order to establish whether there is consistency among them on E-procurement and business performance. The study will supplement the findings of this study by providing information on the strength and weaknesses experienced in of E-procurement b other sectors.

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APPENDICES

APPENDIX I: Research Questionnaire

The questionnaire will help to collect information on the effect of E-procurement implementation on the performance of County Governments in Kenya. Kindly answer the questions by writing a brief statement or ticking in the boxes provided as will be applicable. The information provided will be treated as strictly confidential and at no instance will your name be mentioned in this research. This research is intended for an academic purpose only.

SECTION A: DEMOGRAPHIC INFORMATION

1. Gender Male Female

2. Age below 30 years 30-39 years 40-49years 50-59 years 60-69 years

3. For how long have you work(ed) with this county?
 - a) Below 1 year
 - b) 1-2 years
 - c) 2-3 years
 - d) 3-4 years
 - e) 4-5 years

4. What is your highest level of education?
 - i. Secondary
 - ii. Tertiary College
 - iii. Undergraduate
 - iv. Postgraduate
 - v. Other (specify)

SECTION B: APPLICATION OF ELECTRONIC PROCUREMENT IN COUNTY GOVERNMENT

Tick as appropriate using the following Likert scale of 1-5 where: Very great extent [1] great extent [2] moderate extent [3] small extent [4] very Small extent [5]

Application of electronic procurement	1	2	3	4	5
Tenders are advertised online					
Short-Listing of tenders is done by the e-procurement system					
Specifications for procured items are posted to company website					
Calls for tender proposal are done on organizations electronic procurement platform					

EFFECT OF ELECTRONIC PROCUREMENT ON COUNTY GOVERNMENT PERFORMANCE

To what extent has the implementation of e-procurement led to the following statements? Tick as appropriately, where: Very great extent [1] great extent [2] moderate extent [3] small extent [4] very Small extent [5]

Implementation of need analysis	1	2	3	4	5
Reduced costs					
Increased transparency					
Increased revenue					
Increased customer satisfaction					
E-tendering					
Reduce advertisement cost					
Minimize paper trail on tendering exercise					
Reduce costs of participation for purchasers and vendors					
Better access to procurement spending information and analytical reports					
Online call for requisitions has increased accountability.					
Online call for requisition has increase speed					
Online call for requisition has increase speed					
Online call for quotations has ensured effectiveness					

Order Fulfilment					
Reduced operational costs					
Faster delivery					
Improve customer service					
Better communications between departments					
Invoice Approval and Payment					
Shortened period for approval and payment					
Detailed purchase history for efficient negotiation with vendors					
Improved audit trail increasing integrity and transparency					
Real time updating, eliminate obsolete information on payments					
Improved reconciliation on debtors and creditors					

SECTION C: CHALLENGES OF E-PROCUREMENT IMPLEMENTATION AMONG COUNTY GOVERNMENTS IN KENYA

To what extent do you agree with the statement? Tick as appropriately, where: Very great extent [1] great extent [2] moderate extent [3] small extent [4] very Small extent [5]

Challenges of E-procurement	1	2	3	4	5
High costs of implementing e-procurement					
High cost of training staff					
Resistance to change by staff					
Lack of adequate systems security					
Inadequate technological infrastructure					
Non supporting organizational culture					
Lack of a sound change management program					
Poor e-Procurement implementation strategy					
Poor Communication Mechanisms					

APPENDIX II: List of County Governments in Kenya

1. Baringo
2. Bomet
3. Bungoma
4. Busia
5. Elgeyo-Marakwet
6. Embu
7. Garissa
8. Homabay
9. Isiolo
10. Kajiado
11. Kakamega
12. Kericho
13. Kiambu
14. Kilifi
15. Kirinyaga
16. Kisii
17. Kisumu
18. Kitui
19. Kwale
20. Laikipia
21. Lamu
22. Machakos
23. Makueni
24. Mandera
25. Turkana
26. UasinGishu
27. Vihiga
28. Wajir
29. WestPokot
30. TransNzoia
31. TharakaNithi
32. TaitaTaveta
33. TanaRiver
34. Siaya
35. Samburu
36. Nyeri
37. Nyandarua
38. Nyamira
39. Narok
40. Nandi
41. Nakuru
42. Nairobi
43. Muranga
44. Mombasa
45. Migori
46. Meru
47. Marsabit

Source: (<https://softkenya.com/counties-in-kenya/>)