

**ORGANIZATIONAL ATTRIBUTES AND ADOPTION OF ELECTRONIC
PROCUREMENT IN LOCAL GOVERNMENTS:
A CASE STUDY OF TORORO DISTRICT LOCAL GOVERNMENT**

**BY
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DECLARATION

I Becholas Owere, do declare that this dissertation is my original work and has never been submitted to any other Institution for any award or publication.

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APPROVAL

This is to certify that this dissertation titled “Organizational attributes and adoption of electronic procurement in Tororo District Local Government” by Becholas Owere was done under our supervision. Its final report is now ready for submission to the Graduate School of Kyambogo University with our approval.

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DEDICATION

I dedicate this work to my beloved parents (RIP) Mr. and Mrs. Christopher and Susan Oketch of Magola, Tororo District who gave me the academic foundation upon which I continue to build. May your souls rest in Eternal peace. I extend the same to my wife, children and sisters. Your support inspired me to take up this research study.

Special dedication goes to my academic supervisors at Kyambogo University, Dr. Dan Ayebale and Dr. Peter W. Obanda for their time and knowledge. May you have the same spirit for others to come? My sincere gratitude goes to my course mates with whom we shared academic ideas. The interactions and discussions we had greatly contributed to compilation of this report.

May the Almighty God bless you all?

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LIST OF ABBREVIATIONS/ACRONYMS

ADB	-	African Development Bank
CEO	-	Chief Executive Officer
CTB	-	Central Tender Board
CVI	-	Content Validity Index
DLG	-	District Local Government
DOI	-	Diffusion of Innovation
EDI	-	Electronic Data Interchange
e-GP	-	Electronic Government Procurement
ERP	-	Enterprise Resource Planning
GCPC	-	Government Central Purchasing Corporation
GPP	-	Government Procurement Portal
ICT	-	Information Communication Technology
IFMS	-	Integrated Financial Management System
MDAs	-	Ministries, Departments and Agencies
NITA-U	-	National Information Technology Authority of Uganda
OECD	-	Organization for Economic Cooperation and Development
PDE	-	Procuring and Disposing Entity
PDU	-	Procurement and Disposal Unit
PPDA	-	Public Procurement and Disposal of Public Assets Authority
SPSS	-	Statistical Package for Social Scientists
TAM	-	Technology Acceptance Model

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ABSTRACT

The study examined the organizational attributes associated with the current status of e-government procurement adoption in Uganda's local government sector studying the case of Tororo district local government. The study set out to assess how managerial decision, ICT proficiency and employee and user competence influence adoption of e-government procurement. The technology acceptance model theory was adopted to conceptualize the variables and guide the overall conceptualization of the study. A case study research design was used adopting quantitative data collection method and instrument. A simple random sampling technique was used to select a sample of 80 respondents from a population of 90. Data was collected using questionnaires. Out of the 80 questionnaires administered, 78 were filled and returned constituting a response rate of 97%. Analysis of data was done at different levels beginning with descriptive statistics, followed by correlation analysis and then regression analysis. The findings of the study revealed that managerial decision was the strongest predictor of adoption of e-procurement in Tororo district local government. This was followed by ICT proficiency and lastly employee and user competence. In addition, the findings also revealed that managerial decision, ICT proficiency and employee and user competence had a strong statistically significant positive correlation with adoption of e-government procurement. The study recommends management to commit more resources to ensure higher level of e-procurement adoption.

Key words: Managerial decision, ICT proficiency, Employee and user competence and Adoption of e-procurement.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Public procurement like other public finance management functions has undergone a number of reforms resulting into the need for an electronic government procurement system with the objectives of improving governance through enhanced transparency and accountability; effectiveness through management information and efficient processes; and economic development through competitiveness and improved investment climate (Strategy & Roadmap for the implementation of e-Government Procurement in Uganda, 2014). The application of information communication technology (ICT) is believed to have a potential of revolutionizing government operations and consequently improve efficiency in government service delivery.

A survey by the National Information Technology Authority - Uganda (NITA-U) in 2012 and World Bank in 2013 revealed that there is significant interest in e-Procurement by businesses and Government Ministries, Departments and Agencies (MDAs). The government of Uganda adopted a national electronic government framework for the implementation of e- governance in various sectors of government including procurement. The E-procurement system when adopted reduces transaction costs for both government and the providers and streamlines the procurement processes. (Organization for Economic Cooperation and Development, 2017). The system also makes procurement for routine transactions more productive and expected to free procurement professionals to focus on the more strategic activities of the Procuring and Disposing Entities (PDEs).

The study examined the organizational attributes associated with e-government procurement adoption in Uganda's local governments studying the case of Tororo district local government. This introductory

chapter covered background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, conceptual framework, scope of the study and operational definition of terms and concepts.

1.1 Background of the study

This was built on four dimensions: historical, theoretical, conceptual and contextual backgrounds.

1.1.1 Historical background

The global procurement reforms in public institutions emerged as a recommendation of the World Bank in late 1990s (World Bank, 2003) and subsequently gained much attention in recent years in both developed and developing countries (Cowell, 2009). Public Procurement reforms came as both legal and regulatory reforms to bring about transparency in the procurement process. These were later enrolled as vital elements of procurement decentralization, procurement professionalization, procurement institutionalization, procurement litigation and procurement privatization in the World (Burton, 2005). In Swaziland for instance, the procurement reform programme called for the Kingdom to adopt decentralization of procurement system, develop procurement plans, and methods to ensure that service delivery becomes efficient and effective (Walker, 2003). In USA, public procurement reforms were adopted with the aim of controlling procurement corruption that had infiltrated the public sector organization (Cowell, 2009). Therefore, having decentralized procurement system, procurement plans, and methods emerged into the field of public procurement and service delivery (Hunja, 2003).

Before independence, public procurement in Uganda was being managed by Crown Agents - procurement agent for the British Overseas Colonies (Sunderland, 2007). Until 1990, the Central Tender Board (CTB) was the chief overseer of Public Procurement in Uganda. This derived its powers and Authority from the Central Tender Board regulations, 1977 established under the Public Finance Act. CAP 149. The CTB

was established to regulate and control the purchase and sale of government stores and equipment, and the award of government contracts for goods, services and works (Kabateraine, 2012). The CTB could not address the procurements in the local government set up as well as other specialized agencies mainly the security forces, the liberalization policies had placed much of the economic activities in the hands of private sector who were the main suppliers to the government (Mamdani, 1997).

Procurement processes were becoming complex and demanding due to global trends especially the information explosion and use of computer. This required unique knowledge and expert to manage the now complex procurement processes. This complexity had equally been increased by overseas buying of commodities that would not be sourced locally.

In 1997, the local government act was enacted and this provided for the establishment of the local government tender boards, which were to manage procurements at the local government levels. In 1997, the procurement reforms commenced with the National Public Procurement forum being held in Entebbe at the request of the Ministry of Finance and Economic Development. This was co-chaired by the CTB and Government Central Purchasing Corporation (GCPC). In attendance were also the representatives of government ministries, parastatal, and local government tender board members.

In 1998, there were two major reform issues namely the enactment of the 1998 local government financial and accounting regulations, which derived its powers from the 1997 local government Act. In the same year of 1998, and after the Entebbe forum, government appointed a 12 man task force, and this time the private sector was represented by Procurement and Logistics Management Association (PALMA), and the task force was to review the procurement legal and institutional set up and advice government on the next course of action. In its report, the task force noted major concerns namely, the lack of professionals in the procurement area and old procurement legal framework. In its 15th January, 1999 report, it

consequently recommended for the establishment of a procurement management structure. This was further reinforced by gains from the Abidjan conference of November/December 1998 by the African Development Bank (ADB) on public procurement reforms in Africa.

In 2000, the implementation of the reforms commenced with the cabinet endorsing the procurement reforms. The stepwise procedures were as follows; abolition of all existing procurement boards, establishment of one independent public procurement and disposal regulator - the PPDA, decentralization of procurement and disposal processes and approvals to respective PDEs, establishment of procurement and disposal units (PDUs) at each PDE staffed with professional trained personnel to manage procurement and disposal processes. The procurement entities taking full control of procurement processes through contracts committees whose membership is drawn from the staff of a PDE and accounting officers to take full procurement responsibilities except for security agencies, open and advertised systems of tendering, preparation and release of standardized bid documents for works, services, and supplies in three variants each for complex, medium and simple procurement activities, harmonized procurement in the local government with those of the central government and procurement to start and end within the PDE with policies from the Ministry of Finance (Kabateraine, 2012).

1.1.2 Theoretical background

The study was guided by technology acceptance model (TAM). The technology acceptance model theory was advanced by Liebenberg, Benadé and Ellis (2018). This theory forms a basis of tracing how variables that are external affect attitude, intention to use and belief. Technology acceptance model theory pose two beliefs which are cognitive: perceived usefulness and perceived ease of use. One's initial system of a technology use according to technology acceptance model is affected indirectly or directly by the behavioral intentions of the user, attitude, and the systems perceived ease of use. Technology acceptance

model theory also proposes that factors which are external play part with an intention to actualize the effects that are mediated on perceived ease of use and benefits (Davis, 1989).

Generally, variables which relate to the behavioral intention of using technology of information or to the initial utilization of technological information could be categorized into four groups: context of the individual, context of the system, social context and context of the organization. As social context means social influence on information technology use and personal acceptance, context of the organization puts more emphasis on information technology use and one`s support which has influence in the organization. Marangunic and Granic (2014) figured out accessibility, reliability and visibility as variables of context of a firm. They affirmed that the organizational context influences perceived ease of use and perceived benefits of an information communication technology. Wu and Wang (2005) reported that accessibility of information communication technology contributes to greater business returns with better technology of communication use in comparison with the manual operation.

This model informed the study through stating that before adoption of e-procurement, competence of the employees has to be assessed by managers across the new technology of information, so as to avoid waste of resources and implementation failure. A policy willing and process that is well designed may be pre-conditions that are crucial for the implementation of e-procurement.

1.1.3 Conceptual Background

In this study, the main concepts were organizational factors and electronic procurement adoption. Organizational factors that appear to impact on the likely adoption of e-procurement are size of the organization and type of operation (Toktaş-Palut, Baylav, Teoman, & Altunbey, 2014). According to Froehlich (2002), e-Procurement is more evident in bigger organizations than smaller ones. Electronic procurement refers to the use of Information Technology (IT), such as electronic mail, Electronic Data

Interchange (EDI) and electronic market place to automate and streamline the purchase and sale of goods, works and services in government entities, improving efficiency and transparency and thereby reducing costs of operation within and between government entities (Joyce & Chan, 2002). Thus, e-procurement is the application of electronic commerce in procurement.

Warkentin and Mutchler (2014) described adoption as the intention of nationals to engage in e-government to receive information and request services from the government. The adoption and usage of online government services has significant benefits to developing countries. Electronic procurement adoption refers to the ability of procurement entities to use the internet and internet technologies to support their procurement processes. These practices range from identification, evaluation, negotiation and configuration of optimal groupings of trading partners into a supply chain network which can then respond to changing market demands with greater efficiency (Hawkins & Wyld, 2003). Other benefits of e-procurement include: increased compliance with the law, for instance, Uganda's Public Procurement and Disposal of Assets Act (2003). The use of e-procurement technology is convenient, time saving, and cost effective for all users.

The success of online transaction is coupled with user's expertise defined as possession of all the knowledge and experience about using the computer systems and software products by the user (Ce`cille & L, 2008). This includes functionality and technical processes. An expert user knows all the underlying basic concepts and the majority of the generalized objects contained in the knowledge base for a particular system.

1.1.4 Contextual Background

Electronic procurement was launched in 2015 as one of the public procurement reforms undertaken by government in order to improve service delivery. The e-government procurement refers to the process of

purchase and sale of goods, works, and services through electronic methods primarily the internet (Public Procurement & Disposal of Public Assets Authority, 2015). The PPDA and Auditor General's annual audit reports have consistently identified and reported corruption in government procurement processes (Minsitry of Finance Report, 2015). The government through the Public Procurement and Disposal of Public Assets Authority (PPDA) rolled out the e-government procurement systems beginning with 10 government entities in July 2015 (Daily Monitor, March 10th, 2015). The system seeks to reduce corrupt practices in procurement process and reduce delays in implementation of government projects.

The Organization for Economic Cooperation and Development (OECD) estimates savings from implementation of e-government procurement to be in the range of 5-8% of the procurement value. Uganda spends approximately 65% (about UGX 7.754 trillion) annually of the government budget through procurement. (OECD, 2017). This implies that with e-procurement implementation, savings in the range of UGX 387 - 620 billion would be made per year. 60% of the government budget is expended through procurement. Despite some achievements, challenges still compromise the achievement of value for money and service delivery. The benefits of e-government procurement range from achievement of value for money, efficiency, accountability, transparency, governance to customer satisfaction. Given the real time integration with the programme, budgeting systems and integrated financial management system (IFMS), the late payments issue will be taken care of, tender information will be readily available to all bidders with internet access.

Electronic procurement is not well developed in public sector compared to the private sector in Uganda. Its growth has stagnated in the 10 piloting institutions. What can be seen as electronic in other government sectors is IFMS and government procurement portal (GPP) which is still lacking in almost all the sub counties of Uganda. The system is still at its infancy stage following its launch in 2015 and looks new to many Ugandans. They are not well versed with the operation of the system in electronic commerce.

1.2 Statement of the Problem

The government of Uganda continues to undertake reforms to enable more effective public sector management and improve service delivery. To improve efficiency in utilization of public resources, government sought to continue strengthening the public financial management systems thus adopt the electronic-government procurement (e-GP) to provide a platform for increased transparency in procurement procedures and practices; improve efficiency in the procurement process, improve confidentiality, integrity and authenticity of transactions and develop a common database and electronic trail of procurements. The government of Uganda launched a five year grand e-government adoption strategy running from 2015 through 2019 with the aim of adopting an e-government procurement system designed to empower public bodies to better manage public procurement (Public Procurement & Disposal of Public Assets Authority, 2015). Despite the public procurement reforms and regulatory framework supporting the adoption of e-procurement as well as the anticipated benefits of e-procurement adoption, the procurement compliance check undertaken on 25 procuring and disposing entities (PDE's) indicate that the level of e-procurement adoption in most PDEs is critically low and lacking in most cases (Public Procurement & Disposal of Public Assets Authority , 2018). Previous studies drew much attention on benefits derived from adoption of e-procurement, how to implement/adopt e-procurement, challenges of adoption of e-procurement. The study therefore examined the organizational attributes associated with the current status of e-government procurement adoption in Uganda's local government sector studying the case of Tororo district local government.

1.3 Purpose of the Study

The purpose of the study was to examine the organizational attributes that influence the current status of e-government procurement in Tororo district local government.

1.4 Objectives of the Study

- 1) To analyze the influence of managerial decision on adoption of e-government procurement at Tororo district local government.
- 2) To establish the influence of information communication technology (ICT) proficiency on adoption of e-government procurement at Tororo district local government.
- 3) To examine the influence of employee and user competence on adoption of e-government procurement at Tororo district local government.

1.5 Research Questions

- 1) What is the influence of managerial decision on adoption of e-government procurement at Tororo district local government?
- 1) What influence does information communication technology (ICT) proficiency have on adoption of e-government procurement at Tororo district local government?
- 2) What is the influence of employee and user competence on adoption of e-government procurement at Tororo district local government?

1.6 Conceptual Framework

Independent variable

Organizational attributes



Dependent variable

E-Procurement Adoption

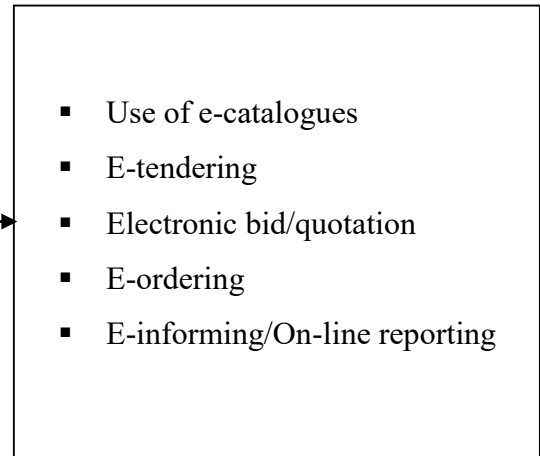


Figure 1: Conceptual Framework Showing the relationship between organizational attributes and e-procurement adoption.

Source: Adapted from Davis (1989); Wu and Wang (2005); Marangunic and Granic (2014).

The conceptual framework in figure 1 above, was built on the theoretical framework of the technology acceptance model advanced by Fred Davis in 1989. The framework shows organizational attributes as the independent variables and e-procurement adoption as the dependent variable. Organizational attributes was operationalized in terms of managerial decision, information communication technology proficiency and employee and user competence.

Managerial decision was conceptualized on the dimensions of top management commitment; planning and budgeting while information communication technology proficiency was conceptualized on the

dimensions of ICT infrastructure, internet accessibility, reliability and affordability of the system. Marangunic and Granic (2014) figured out accessibility, reliability and visibility as variables of context of a firm. They affirmed that the organizational context influences perceived ease of use and perceived benefits of an information communication technology. Wu & Wang (2007) reported that accessibility of information communication technology contributes to greater business returns.

Employee and user competence was conceptualized on the dimensions of employee skills and knowledge; and employee and user willingness to adopt the system. The study of the role of user's expertise was measured using the level of education, skills and experience. As users are willing to adopt the new system, they need to have the relevant skills and expertise in using the system. The technology acceptance model theory postulates that users' adoption of a new system is determined by their intention to use the system, which in turn is determined by their beliefs about the system (Wu & Wang, 2007).

Adoption of e-procurement as a dependent variable was conceptualized in terms of use of e-catalogues, e-tendering, electronic bid, e-ordering, and e-informing. E-procurement is a solution of technology which enhances corporate buying by use of the internet (Davis, 1989). Thus, the conceptual framework depicts a many to one relationship.

1.7 Scope of the study

1.7.1 Content Scope

The study focused on how organizational attributes influence adoption of e-government procurement in Tororo district local government. Organizational attributes was restricted to management decision, information and communication technology proficiency and employee and user competence looking at how they influence adoption of e-government procurement.

1.7.2 Geographical Scope

The study was conducted at Tororo district local government involving all the 23 sub counties and the general hospital. Tororo district is located 230 kilometers east of the capital Kampala and is bordered by Mbale district to the north, Manafwa district to the north-east, Kenya to the east, Busia district to the south, Bugiri district to the south-west, and Butaleja district to the north-west. The district was within the locality of the researcher and therefor accessible for information.

1.7.3 Time Scope

The study focused on a five year period from 2015 - 2019; the time the government of Uganda launched a five year grand e-government adoption strategy. Related literature concerning e-government procurement adoption were reviewed to support the data collected. The study scope took a period of five months from July - November 2020.

1.8 Significance of the Study

Prudent management of public procurement has been identified as very important to accelerate national development. For this reason, successive governments have reformed procurement laws as a justification for judicious use of the taxpayer's money. The introduction of the public procurement Act 2003 (PPDA Act, 2003) was thus perceived as a critical aspect of driving efficiency in public procurement. However, implementation of the Procurement Act is bedeviled with inefficiency, bureaucracy, lack of transparency, unfairness and discrimination in the selection and award of government contracts. This development has become a major source of worry that gradually erodes public and donor trust and confidence in the public procurement system.

It is therefore envisaged that the results of this study will determine the prospects and potential benefits of e-procurement and, the need to progressively move towards the adoption of e-procurement in public sector

procurement. The study is also significant in view of the fact that, automating procurement would help in tracking, monitoring and auditing public procurement.

The crucial role e-procurement plays in building public and donor trust and confidence made it important for this study to be undertaken to examine the factors that influence low adoption of electronic government procurement of the selected public procurement entity.

The study would add to the existing body of knowledge thus providing a basis for future research both by academicians and policy makers. Since the 2015 - 2019 e-procurement implementation strategy was not successful, the findings of this study will contribute to the success of the next implementation phase.

1.9 Operational definitions of terms and abbreviations

E-procurement. Refers to the process of purchase and sale of goods, works and services using internet technology.

PPDA. Public Procurement and Disposal of Public Assets Authority. An independent body established by an Act of parliament to regulate and govern public procurement in Uganda.

Procurement Planning. Refers to a process of determining the procurement needs of an entity and the timing of their acquisition and their funding such that the entities operations are met as required in an efficient way. (*PPDA Regs. 3-7*)

Information Communication Technology (ICT). A set of interrelated components that work in unison to collect, retrieve, process, store, and distribute information from one physical location to another to support decision making and control in an organization (Laudon & Laudon, 2013)

Management. Management comprises of leaders of the district who take decisions on behalf of others. They are divided into political and technical staff. The politicians approve programs and budgetary allocations and supervise implementation of government programmes.

DLG. District Local Government. An authority that is responsible for providing goods and services to the rural population with main funding from the central government.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter covered theoretical review, conceptual review, actual literature review and research gaps from previous studies on similar and related topics.

2.1 Theoretical Review

The Technological Acceptance Model theory was adopted.

The Technology Acceptance Model theory

The technology acceptance model theory was proposed by Fred Davis in 1989 to explain information system usage in organizations (Davis, 1989). Davis suggested that the willingness of a user to adopt or not to adopt a new technology is determined by his or her attitude towards using the innovation (Davis, 1989). Many studies have applied the technology acceptance model since its introduction to explain and predict user acceptance and usage of information technology. Technology acceptance model explains that users' adoption of a new information system is determined by his or her intention to use the system, which in turn is determined by the users' beliefs and attitudes about the system (Chuttur, 2009). Davis (1989) suggested that user's motivation can be explained by three factors of perceived ease of use, perceived usefulness and attitude towards using the system. Perceived usefulness is the degree to which a person believes that use of a particular system would enhance his/her job performance while perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort.

Technology acceptance model has been tested empirically in different parts of the world. This yields statistically reliable results and it has proved to be one of the most reliable and easy models of explaining user's intention of adoption of e-procurement (Moon, 2002). Technology acceptance model has been used by many researchers especially in information system to achieve a better understanding of information

technology adoption and its success in organization. Technology acceptance model has proven to be a strong and robust framework to clarify adoption patterns of information technology users (Horton et al., 2001). Several studies have utilized the technology acceptance model theory to explore organizational behaviors towards adoption of e-procurement technology. Quang-Dung & De-Chun (2014), assessed the determinants of e-procurement adoption in construction sector in developing countries context among 112 employees of different construction companies in Hanoi, Vietnam. In their study, the used technology acceptance model to evaluate the level of adoption of e-procurement in construction industries. Findings showed that perceived usefulness and ease of use were significant predictors of employees' intention to adopt e-procurement system.

The perception of the intended user towards information technology predicts the user's acceptance and intention to adopt the information technology. This is in line with the principles pronounced in the technology acceptance model theory. It further discusses the perceptions of the intended users of the technology and how their perceptions impact their adoption of the technology. The technology acceptance model theory was developed by Fred Davis in 1989 as a model that explains and predicts user acceptance of information (Thong et al., 2002). In line with the above, Ahimbisibwe. A., Tusiime Wilson, & Tumuhairwe Ronald. (2016), surveyed a sample of 177 central government procuring and disposing entities (PDEs) to examine the e-procurement practices for adoption, the willingness and readiness to adopt e-procurement and investigate the challenges to the adoption of e-procurement practices in Uganda's PDEs. In their study, they utilised the technology acceptance model theory to examine the level of adoption of e-procurement. It was concluded that perceived ease of use and perceived usefulness all relate to users' intention to adopt the system. In this study, the two major constructs of technology acceptance model was utilized to assess adoption of e-government procurement in Tororo district local government.

2.2 Conceptual Review

Procurement can be defined as the process of acquiring goods, services and works, including from third parties (Kakwesi and Nyeko, 2019). The process involves identification, appraisal and the critical “make or buy” decision, which may result in the provision of goods and services in appropriate circumstances.

Tukamuhabwa (2012) defines procurement as a “formal process by which many organizations obtain goods and services”. Her view of procurement was epitomized by Kidd (2006) as the business management function that ensures identification, sourcing, access and management of the external resources that an organization needs or may need to fulfill its strategic objectives. He further argued that procurement exists to explore supply market opportunities and to implement resourcing strategies that deliver the best possible supply outcome to the organization, its stakeholders and customers. The opinions espoused above undeniably underscore the importance of effective procurement function in every organization and the need to undertake strategic procurement to ensure effective and efficient utilization of available resources.

2.2.1 E-procurement

Electronic procurement or e-procurement is the use of various forms of Information Technology (IT), such as electronic mail, Electronic Data Interchange (EDI) and electronic market place to automate and streamline the procurement process in government entities, improving efficiency and transparency and thereby reducing costs of operation within and between government entities (Joyce & Chan, 2002). Thus electronic procurement is the application of electronic commerce in procurement. Electronic procurement adoption refers to the ability of procurement entities to use internet and internet technologies to support their procurement processes. It encompasses the willingness and the level of acceptance to use e-procurement. These practices range from identification, evaluation, negotiation and configuration of optimal groupings of trading partners into a supply chain network which can then respond to changing market demands with greater efficiency (Hawkins & Wyld, 2003). Other benefits include: increased

compliance with the law, for instance, Ugandan Public Procurement and Disposal of Assets-(PPDA) Act (2003); supply base rationalization, as e-procurement allows managing the supply base in a more efficient and effective way. E-procurement also provides higher transparency to both customers and suppliers on the overall purchasing process. The increasing losses in the procurement processes in the PDEs have been attributed to low adoption level of e-procurement as the ordinary procurement process has been blamed to be time consuming and has consistently scored low on achievement of value for money and transparency (National Procurement Baseline Survey, 2010). Thus, the adoption of e-procurement practices in Uganda's local governments needs to be treated as a matter of urgency in order to achieve reduction in purchasing process costs through maverick buying reduction.

2.2.2 Adoption of E-procurement

Any organization's success relies on sound financial management. Due to liquidity problems, public projects are either delayed or not implemented as anticipated. Business and people without internet access may not participate in the processes of e-procurement (Njihia, 2013). There have been challenges with e-procurement system malfunctioning to a case that National and County Governments cannot literally pay the suppliers bills, creating problems for the firms and in the process causing a confidence crisis. There are infrastructure issues too required to support electronic procurement. This is a pushback against the anti-corruption aspect of the system. E-procurement is a solution of technology which enhances corporate buying by use of the internet (Jain & Bandyopadhyay, 2018). Eadie, Perera, Heaney and Carlisle (2017) indicate that e-procurement symbolizes an effective and vital development in the e-business employment in chain management of supply, note that an organization which uses e-procurement benefits from reduction of price in tendering, reduction of time in sourcing of materials, lower costs of administration, procurement staff reduction as well as communication improvement. Adoption of e-procurement is constructed to include e-tendering e-sourcing, e-ordering and e-informing.

As a major strategy in the development of initiatives and different programs of electronic procurement, contributing additional opportunities for business industry, leading to an economy that is globally competitive and assisting in securing an economic growth that is sustained (Lou & Alshawi, 2009). Vaidya, Sajeez and Callender (2016) observe that the primary benefit government agencies pursue to obtain adopting e-tendering is to lower the price of business doing and service delivery which are a bit community efficient. Vaidya, Sajeez and Callender (2016) further indicate that the gains from introduction of system of e-tendering in government sector is to bring value for money of tax payers, high effectiveness and efficiency, practice of consistent tendering all over government, enhances general initiative of e-commerce; as well as environmentally as a result of chiefly 'paperless' process.

Use of internet in decision making strategies concerns where and how products and services are sourced (Farrington & Lysons, 2012). Barbara and Maxfield (2013) observed that, keeping pace with competition and delivering against strategic objectives procurement have to use state-of -the art technologies entailing e-sourcing. E-sourcing is a great and fast growing component where it requires various forms from sell-side and buy-side e-catalogs to post specifications and solicitation of bids whereby sellers as well as buyers come together to trade.

During the sourcing of items, many transactions that are of low value are performed, raising the effectiveness of the transactions of procurement to become valuable. Jahanshahi, Rezaei, Nawaser and Pitamber (2012), explains that the process of making and approving requisition of purchasing, placement of purchase orders and reception of services and goods that are ordered, by use of a system of software that is based on the technology of the internet improves greatly the performance of the supply chain. In e-ordering case, the services and goods which are ordered are indirect services and goods, that is, services and goods that are non-product related. Kim (2017), states that e-ordering improves greatly the performance of the supply chain because the placement of purchasing orders and reception of services and goods are ordered is enabled by using the technology of the internet.

Stone Braker (2006), observe that e-informing is a type of Enterprise Resource Planning (ERP) which is not associated directly with any stage in the process of purchasing such as ordering or contracting. E-informing means the gathering as well as the distribution process of the information of purchasing both to and from external and internal parties, by use of internet technology. Making sure that shared information quality has turned out to be an effective idea of the management of the supply chain. Croom and Johnston (2013), states that E-informing makes sure that quality together with accuracy, adequacy, criticality, timeliness and credibility improving performance of supply chain that is more noticeable.

2.2.3 Managerial Decision and Adoption of E-Procurement

Management is very vital and key in the running of the government institutions. Top management commitment have a major influence on the adoption of e-procurement as discussed by (Gori et al., 2017). Management readiness is an important driver for increasing e-procurement adoption and implementation in local governments.

Flynn and Davis (2016) indicates that e-procurement initiatives are driven by top management, however managers patronizing attitude towards employees may deter them from being innovative or adopt to a change idea such as shifting from manual procurement to e-procurement that could be beneficial to the whole organization. Like any other technological change, e-procurement brings change in an organization that requires organizational managers to adopt change management strategies towards making the transformation process success indicated by (Barahona et al., 2015). One way in which managers in organizations can reveal commitment to change is to have change management team structures that identifies who was doing the change management work as assessed by (Keramati et al., 2018). Most major e-procurement initiatives are driven by top management. The Chief Executive Officers (CEO) should be directly involved in the early stages of the process. Managerial commitment towards e-procurement

adoption has also been discussed by scholars concerning the style of leadership adopted by many managers. According to Dukić et al. (2017), almost all managers in the African Continent, emphasizes on bureaucratic practices with total reliance on rules and regulations that workers obey without questioning or offering constructive criticism. Managers patronizing attitude towards employees may hinder them from being innovative or adoptive to a change idea such as shifting from manual procurement to e-procurement that could be of benefit to the organizations (Sorte Junior,2016).

Wanjiru Muhia and Ofunya Afande (2015) assessed the determinants of e-procurement implementation in Kenyan state corporations within the ministry of finance. The study concluded that lack of employee competence hinders smooth adoption of e-procurement in the public sector and also, the inadequate legal framework was a challenge to e-procurement adoption. Chebii (2016) assessed the determinants of successful implementation of e-procurement in Kenya using the multiple regression technique.

Like any other technological change, e-procurement brings change in an organization that requires organizational managers to adopt change management strategies towards making the transformation process successful (Procurement Action Plan 2005). One way in which managers in organizations can reveal commitment to change is to have change management team structures that identifies who was doing the change management work (Hasan, 2014).

According to Wirtz and Daiser (2018), change management structures outline the relationship between the project team and the change management team. Wirtz and Daiser (2018), further adds that the most frequent team structures include: - change management being a responsibility assigned to one of the project team members or an external change management team supporting a project team. The key in developing the strategy is to be specific and make an informed decision when assigning the change management responsibility and resources Organization for Economic Cooperation and Development (2009). Managerial commitment towards e-procurement implementation has also been discussed by

scholars concerning the style of leadership adopted by many managers. According to Mayer and Louw (2011), almost all managers of African organizations, perhaps because of societal norms and expectations emphasize bureaucratic practices with total reliance on rules and regulations that workers obey without questioning or offering constructive criticism (Svärd, 2014).

A study by Ndongko (2005) on Cameroon public service institutions revealed that despite the culture which emphasizes on rigid hierarchical relationships, managers who were seen by workers to be democratic in their techniques of management and such exerted low control over them elicited higher levels of adopting new changes within the organization compared to authoritarian ones. Implementation of e-procurement which is at time associated with change might require managers to commit themselves in realizing the importance of their employees in making the adoption a success. A study by Howell (2005) on Liberian workers and that by Greenhouse (2007) showed a considerable similarity exist in the work goals of employees around the world and that national differences regarding job related objectives were not as great as people thought. The findings of these studies indicate that human needs are universal, for workers to be motivated in adopting new ideas in an organization, it is important that organizational managers show commitment to motivate the work force and improve quality of work life. This will ease implementation of new technologies such as e-procurement within the local governments in Uganda.

2.2.4 Information Communication Technology (ICT) Proficiency and E-Government

Procurement

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

et al (2018) claim that some governments have moved to use ICT in an effort to streamline the procurement process within the public sector. The key processes could range from identification of requirements, through payments to contract management.

Information communication technology provides for dynamism in operations and also allows customization to meet specific user needs and specifications. In procurement, ICT can play a critical role due to its ability to handle and analyze massive amount of data within a short period. The Kenya government strategy paper March (2004) stipulated a medium term initiative, e-procurement, which was envisaged to have been implemented by June 2007. The government through e-government aimed at enhancing efficiency and effectiveness in the delivery of services, promoting accountability by ensuring easier access to information and also allowing the citizens to participate in the delivery of services thus enhancing good governance, empowerment and transparency. All these could only be achieved through information communication technology.

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

2.2.5 The Role of Employee and User Competence in the E-Procurement Adoption

The development and implementation of electronic commerce models, such as procurement portal in organizations is a challenge that goes beyond mere technological functionality (Larsen et al., 2002). Top

management support, organizational adaptation, and training of employees are examples of critical issues for the successful implementation of any information technology system (Kawalek et al., 2003). For the implementation of e-procurement in the public sector, an extra set of factors is considered to be influential. These include knowledge of workers, risks of building the portal, and legislative issues (Oliveira and Amorim 2001). Oliveira and Amorim suggest that three types of models can be considered in order to meet the specific demands related to implementation of e-procurement: The public model where all tasks, including investment and risks of building the portal is run by the government; The private model where all tasks are run by private entities that bear the investment risks of the project; The mixed model (public-private partnership) where participants share investment risks and the benefits of the project.

In 2015, the government of Uganda adopted Government Procurement Portal (GPP) as a mechanism to improve the means through which the PPDA could gather data to periodically assess the effectiveness, efficiency and transparency of the public procurement and disposal system in Uganda. GPP brought together the features of the Procurement Performance Measurement System (PPMS), the Register of Providers (RoP) and the Tender Portal. In the FY 2016/17, GPP was rolled out to 70 PDEs bringing the total number of Entities on the system to 169 (47% national coverage). The Authority was able to assess performance of 138 PDEs which entered data on the Portal. The total number of contracts entered into the portal and analyzed in the FY 2016/17 was greater compared to FY 2015/16. There was however a slight drop in the total value of procurements in the system in FY 2015/16 and FY 2016/17 (PPDA Annual Report FY 2016/17). This drop was as a result of some Entities that previously posted large values such as UNRA, and KCCA posting significantly lower values in the year of reporting. This was due to failure to conclude some of their large procurements due to delays in the procurement process and large budget cuts.

2.3 Research Gaps

Studies have been done on e-procurement but majorly on adoption strategies, benefits and challenges. Ahimbisibwe, Tusime & Tumuhairwe (2016), conducted a study on Adoption of E-procurement Technology in Uganda: Migrating from the manual public procurement systems to the internet without looking at the factors conducive for e-procurement adoption. Organizations are facing different challenges associated with the advent and use of e-procurement. Overcoming such requires understanding of organizational attributes that vary from sector to sector although some are cross cutting. Mose, Njihia & Magutu (2013), contend that successful implementation of e-procurement requires employee and management commitment for successful adoption, reliability of information technology and supplier performance, monitoring the performance of e-procurement systems, user acceptance of e-procurement systems and top management support without reference to any organization hence presenting a content gap that this study covered. This study therefore focused on organizational attributes that affect electronic government procurement adoption at local government level and particularly Tororo district local government.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the operational framework within which the facts of the study was gathered and analyzed. It presents the research design, study population and sample size, sampling technique, data collection method and instrument, data collection procedure, measurement of variables, data quality control, data processing, analysis and presentation and how ethical issues underlying the study was addressed.

3.1 Research Design

A case study research design was adopted. This is because the research focused on one case. Saunders, Thornhill, & Lewis (2015), Bhattacharjee (2012), In this study quantitative data was collected using questionnaires (Demeke, 2018).

3.2 Study Population and Sample Size

Using Krejcie and Morgan (1970) table for sample size determination, a total of 80 respondents were selected from a population of 90 as shown in Table 1 below. These were preferred because they are directly involved in the procurement cycle (PPDA Act as amended, 2014).

Table 1: Study Population and Sample Size

Category	Population	Sample size
PDU staff	3	3
Accounting Officer	1	1
User departments	66	60
Vendors	20	16
Total	90	80

3.3 Sampling Technique

The study employed simple random sampling technique when selecting respondents. Simple random sampling gives equal and independent chance to all respondents in a population thus reducing on bias in data collection as well as increasing validity of the results (Saunders et al., 2015).

3.4 Data Collection Method and Instrument

The study adopted quantitative data collection method and instrument using questionnaire survey. The questionnaire was divided into five sections namely; background collecting demographic data of the respondents, section two addressed management decision, section three addressed information communication technology proficiency, section four addressed employee and user competence and section five addressed adoption of e-procurement. In each section, the respondents were given instructions on how to complete the questions.

3.5 Data Collection Procedure

After approval of the research proposal, the researcher obtained an introductory letter from the university as proof that the researcher is a student of Kyambogo University. This was presented to the respondents before administering the questionnaire. The researcher assured the respondents of utmost confidentiality in the entire process of the research study.

3.6 Measurement of Variables

The data on variables were measured at three levels; bivariate, univariate and multivariate. The bivariate considers two variables using presentation modes like cross tabulation. The univariate level considers measurement and analysis of data at individual variable basis where the researcher uses measures of the mean, mode and frequencies. At the multivariate level, the researcher considers a combination of more

than two variables at the same time and this is mainly used at higher level analysis to compute variable aggregates as well as the regression coefficient.

Sections B, C, D and E of the questionnaire was prepared using a five point Likert scale which has; (5-Strongly Agree, 4-Agree, 3-Not Sure, 2-Disagree and 1-Strongly Disagree). The Likert scale measured attitudes, behaviors and values of individuals in regards to a given aspect. Therefore, the choice of this measurement was that each point on the scale carries a numerical score which was used in the study of social attitude.

3.7 Data Quality Control

The study accounted for both validity and reliability so as to assure and maintain quality.

3.7.1 Validity of Research Instruments

According to Amin (2005) validity of a research instrument is when a tool contains questions that are in line with both theoretical and conceptual aspects of the study variables. All research instruments were validated by experienced scholars in procurement and postgraduate research studies whose input were considered before the instruments were administered to their study sample. The experts were researcher's supervisors and selected lecturers. Through measuring content validity indices, experts were asked to rate each item on the questionnaire, interview guide, and documentary checklist as Relevant (R) or Irrelevant (IR) whose averages yielded computations of Content Validity Index (CVI) that was above 0.7 threshold as illustrated by formula below.

$$\text{CVI} = \frac{n}{N} \quad \text{Where } n = \text{Number of items rated as relevant, and } N = \text{Total no. of items in the instrument.}$$

Then content validity index (CVI) was computed by dividing the number of items declared valid by total number of items/questions in the data collection instrument.

Table 2: Content Validity Index (CVI) of the Research Instrument

Variables	Total items	Valid items	CVI
Management decision and adoption of e-procurement	12	10	0.83
ICT proficiency and adoption of e-procurement	10	6	0.6
Employee and user skills & competence	12	10	0.83
Adoption of e-procurement	10	10	1.0
Total			3.26
Average			0.82

CVI =0.82 (82%).

From Table 2 above, CVI was 0.82 (82%). According to Waner (2005), if the CVI is greater than 0.7, then the instrument is said to have a high content validity.

3.7.2 Reliability of Research Instruments

Reliability of a research instrument as defined by Kothari (2011), is the extent to which research findings can be replicated if another study was undertaken using the same research tools. This was attained after piloting the questionnaires at the district from where data was collected from 80 respondents that were captured in Statistical Package for Social Scientists (SPSS) and tested for Cronbach’s reliability test to determine the levels of reliability that ought to be equal or above threshold of 0.7 as suggested by Amin (2005) for the instrument to be administered.

Formula for reliability is

$$\alpha = \frac{K}{K-1} \left(\frac{\epsilon SD^2 I}{SD^2 t} \right)$$

Where α = Alpha reliability co-efficiency.

K=Number of items included in the questionnaire

$\epsilon SD^2 I$ = Sum of variance of individual items

SD^2t = Variance of all items in the instrument.

The coefficient ranges between $\alpha=0.00$ for no reliability, $\alpha=1.00$ for perfect reliability. The closer alpha gets to 1.0 the better. If the study findings result to Cronbach's Alpha of 0.7 and above, this signifies that research instrument is good enough for the study. According to Amin (2005), all the measurements in the instrument that show adequate levels of internal consistency of Cronbach's alpha of 0.77 and above are accepted as reliable.

$\alpha=0.00$

Table 3: Shows Reliability of Research Instruments

Variables	Number of Items	Alpha
Management decision and adoption of e-procurement	10	.840
ICT proficiency and adoption of e-procurement	6	.673
Employee and user skills & competence	10	.840
Adoption of e-procurement	10	.840

Source: Primary SPSS data

3.8 Data Processing, Analysis, and Presentation

Having collected quantitative data using questionnaires, this numeric data was organized and entered into SPSS according to the sequence on the questionnaire and research objectives. It was presented in form of descriptive statistics using mean and standard deviation for each of the variables used in the study, correlation and regression analyses were run. The correlation technique included Pearson's coefficient to show the direction of the relationship between the variable and significance tested at 99% and 95% confidence level based on two tailed correlation and significant more than or equals to 0.05. A positive correlation indicates a statistically significant positive relationship between the variables while a negative correlation indicates an inverse, negative relationship between the two variables. Regression analysis statistics of beta, T-values and significant values were used to determine the magnitude of the influence

of independent variables on dependent variable and to test guiding research hypotheses for rejection/acceptance (Amin, 2005).

3.9 Ethical Considerations

The ethical considerations was taken into account throughout data collection. First, each selected respondent was informed that his or her response is voluntary and those who will provide verbal and written consent will be taken part in the study.

Secondly, a clear introduction and elaboration of the objectives of the study was given to every respondent before engaging him or her in the field work. Thirdly all research tools had an introduction and participants identities will be kept anonymous, to avoid any harm to respondents. Furthermore, the study abided by the ethics of social research ranging from professional ethics to those concerning researcher to respondent relationship. In addition, all those who assisted the researcher in one way or the other were given due respect. Acknowledgement of other scholar's works was maintained throughout the research process.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter presents and analyses the study findings on organizational attributes and adoption of electronic procurement in local governments: a case of Tororo District Local Government. The first section presents the response rate followed by a presentation of the background information about the respondents, descriptive statistics, correlation and regression analyses of the findings objective by objective.

4.1 Response Rate

This is as shown in Table 4.1 below.

Table 4: Response Rate

Questionnaires	Frequency	Percentage
Questionnaires issued	80	100
Questionnaires returned	78	97

Source: Primary data, 2020

According to the data in the table above, 80 questionnaires were issued, out of which 78 were returned when fully answered representing 97% response rate which was far above the acceptable questionnaire return rate of 70%

4.2 Socio-Demographic Characteristics of the Respondents

Table 5: Gender of Respondents

Gender of respondents				
Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	48	61.5	61.5	61.5
Female	30	38.5	38.5	100.0
Total	78	100.0	100.0	

Source: Primary data, 2020

Table 5 above shows that majority (61.5%) of the respondents were male while 38.5% of the respondents were female. This implied that the sample of the study was not gender biased.

Table 6: Age of Respondents in Years

Age group	Frequency	Percent	Valid Percent	Cumulative Percent
30 years and below	6	7.7	7.7	7.7
31-40 years	16	20.5	20.5	28.2
41-50 years	42	53.8	53.8	82.1
51 and above	14	17.9	17.9	100.0
Total	78	100.0	100.0	

Source: Primary data, 2020

The data in Table 6 above indicates that majority of the respondents were in the age brackets of 41-50 years (53.8 %.). The data also reveal that only 7.7% of the respondents were in the age brackets of 30 years and below. In addition, the ages of the respondents were relevant to the study since views from people of different age groups were obtained. The data further indicates that majority of the respondents were mature enough to be in position to give an informed view of their understanding of the study topic.

Table 7: Education Level of Respondents

Education level of respondents				
	Frequency	Percent	Valid Percent	Cumulative Percent
Certificate	0	0	0	0
Diploma	18	23.1	23.1	23.1
Bachelor's degree	20	25.6	25.6	48.7
Post graduate	22	28.2	28.2	76.9
Master's degree and above	18	23.1	23.1	100.0
Total	78	100.0	100.0	

Source: Primary data, 2020

The data in Table 7 above, indicate that majority (28%) of the respondents were post graduate degree holders, while only 23.1% were masters and diploma holders. None of the respondents was a certificate holder. This indicates that all the respondents were well educated and therefore could easily understand the topic under investigation.

Table 8: Respondents' Work Experience

Period you have worked with Tororo district local government				
	Frequency	Percent	Valid Percent	Cumulative Percent
0-1 year	0	0	0	0
1-5 years	14	17.9	17.9	17.9
6-10 years	16	20.5	20.5	38.5
More than 10 years	48	61.5	61.5	100.0
Total	78	100.0	100.0	

Source: Primary data, 2020

The data in Table 8 above, shows that majority (61.5%) of the respondents have worked at Tororo district local government for more than 10 years while 20.5% were in between 6-10 years and the remaining 17.9% have worked for 1-5 years. None of the respondents have worked for less than a year. This shows that majority of the respondents are aware of the technological transition that takes place at the district and were in position to answer the questions asked about the topic under investigation.

4.3 Descriptive Statistics

This consists of the variables under study. The variables of the study whose descriptive statistics were computed included adoption of e-procurement, managerial decision, information communication technology proficiency, and employee & user competence. The variables were measured using different constructs scored on a five point Likert scale of 5-Strongly Agree (SA), 4-Agree (A), 3-Not Sure (NS), 2-Disagree (D) and 1-Strongly Disagree (SD).

4.3.1 Adoption of E-Procurement

Adoption of e-procurement was the dependent variable. The variable was measured using 10 items and the findings are as shown in Table 9 below.

Table 9: Descriptive Statistics of the Level of E-Procurement Adoption

Statement	SA	A	NS	D	SD	Mean	Std. Deviation
Tenders are advertised online	2 (2.6%)	2 (2.6%)	10 (12.8%)	48 (61.5%)	16 (20.5%)	2.05	.820
Prospective suppliers submit proposals online	0 (0%)	2 (2.6%)	12 (15.4%)	44 (55.4%)	20 (25.6%)	1.95	.719
Shortlisting of tenders is done by the e-procurement system	0 (0%)	12 (15.4%)	26 (33.3)	24 (30.8%)	16 (20.5%)	2.44	.988
There is a functioning website to facilitate e-procurement system	0 (0%)	4 (5.1%)	20 (25.6%)	38 (48.7%)	16 (20.5%)	2.15	.807
Specifications for procured items are posted on PDE website	0 (0%)	8 (10.8%)	16 (20.5%)	42 (53.8%)	12 (15.4%)	2.26	.844
PDE staff make requisition online	2 (2.6%)	8 (10.3%)	14 (17.9%)	35 (46.2%)	18 (23.1%)	2.23	1.005
Call for proposals is done through the PDE website	12 (15.4%)	28 (35.9%)	14 (17.9%)	10 (12.8%)	14 (17.9%)	3.18	1.346
Electronic processing leads to a reduced tender cycle time	16 (20.5%)	24 (30.8%)	14 (17.9%)	20 (25.6%)	4 (5.1%)	3.36	1.216
Electronic processing leads to a more efficient procurement process	0 (0%)	0 (0%)	18 (23.1%)	40 (51.3%)	20 (25.6%)	1.97	.702
Debriefing of vendors is done online	0 (0%)	0 (0%)	18 (23.1%)	40 (51.3%)	20 (25.6%)	1.97	.702
Grand Mean						2.36	

Source: Primary data, 2020

According to the data in the table above, 24 (30.8%) of the respondents agreed that electronic processing leads to a reduced tender cycle time scoring the highest mean value of 3.36 and Std D of 1.216. This was followed by 28 (35.9%) of the respondents who revealed that call for proposals is done through the PDE

website represented by a mean value of 3.18 and Std D of 1.346. However, 26 (33.3) of the respondents were not sure whether shortlisting of tenders is done by the e-procurement system with a mean value of 2.44 and Std D of 0.988. All the above mean values are higher than the grand mean of 2.36.

As indicated in Table 9 above, it can be seen that 42 (53.8%) of the respondents disagreed with the statement that specifications for procured items are posted on PDE website with a low mean value of 2.26 and Std D 0.844. The data further shows that 35 (46.2%) of the respondents disagreed that PDE staff make requisition online with a low mean value of 2.23 and Std D 1.005. This is an indication that the PDE has not yet embraced the grand e-government procurement adoption strategy.

On the other dimensions, the data revealed that 38 (48.7%) of the respondents disagreed that there is a functioning website to facilitate e-procurement system with a low a mean value of 2.15 and Std D of 0.807 while 48 (61.5%) of the respondents disagreed that tenders are advertised online represented by a low mean value of 2.05 and Std D of 0.820. The statement whether electronic processing leads to a more efficient procurement process, the data revealed that 40 (51.3%) of the respondents disagreed with a mean value of 1.97 and Std D of 0.702 and whether debriefing of vendors is done online, the data revealed that 40 (51.3%) of the respondents disagreed, equally scoring a low mean value of 1.97 and Std D of 0.702. Lastly, the item of prospective suppliers submitting proposals online, the data shows that (55.4%) of the respondents disagreed scoring the least mean value of 1.95 and Std D of 0.820.

4.3.2 Managerial Decision and Adoption of E-Government Procurement in Tororo DLG

The first objective of the study was to analyze the influence of managerial decision on adoption of electronic government procurement in Tororo DLG. Managerial decision was conceptualized in terms of top management decision and procurement planning & budgeting. Descriptive statistics relating to managerial decision was measured using 10 items and the findings are as shown in Table 10 below.

Table 10: Descriptive Statistics of the Level of Managerial Decision

	SA	A	NS	D	SD	Mean	Std. Deviation
There is a strategy in place for adoption of electronic government procurement	12 (15.4%)	32 (41%)	22 (28.2%)	10 (12.8%)	2 (2.6%)	3.54	.989
There is a budget allocation for adoption of new technologies	8 (10.3%)	14 (17.9%)	32 (41%)	18 (23.1%)	6 (7.7%)	3.00	1.069
Management considers computer competencies and skills as prerequisite in recruitment of staff	8 (10.3)	16 (20.5%)	18 (23.1)	30 (38.5%)	6 (7.7%)	2.87	1.144
The district has invested resources in trying to adopt e-government procurement	2 (2.6%)	18 (23.1%)	20 (25.6%)	28 (35.9%)	10 (12.8%)	2.67	1.053
Procuring and Disposing Entity (PDE) has acquired new technology that enables all stakeholders to participate in the procurement process online	2 (2.6%)	12 (15.4%)	24 (30.5%)	28 (35.9%)	12 (15.4%)	2.54	1.015
PDE has a functional training program in place for development of employee skills	0	16 (20.5%)	36 (46.2%)	24 (30.8%)	2 (2.6%)	2.85	.774
Existing PDE policy favors e-procurement adoption	0	18 (23.1%)	24 (30.8%)	36 (38.5)	6 (7.7%)	2.69	.916
PDE has a web portal where procurement requirements are processed and managed	0	14 (17.9%)	18 (23.1%)	32 (41%)	14 (17.9%)	2.41	.986
PDE involves all stakeholders in planning and budgeting for adoption of e-procurement	0	8 (10.3%)	20 (25.6%)	42 (53.8%)	8 (10.3)	2.36	.805
PDE benchmarks its e-procurement adoption progress with other entities	2 (2.6%)	18 (23.1%)	16 (20.5%)	28 (35.9%)	14 (17.9%)	2.56	1.112
Grand Mean						2.75	

Source: primary data, 2020

The data in Table 10 above, shows that majority 32 (41%) of the respondents who participated in the study revealed that there is a strategy in place for adoption of e-government procurement in Tororo district with a mean value of 3.54 and standard deviation (Std D) of 0.989. This implies that Tororo DLG is gearing

towards adopting e-government procurement. The data in the table also revealed that majority 32 (41%) of the respondents were not sure if there is a budget allocation for adoption of new technologies with a mean value of 3.00 and Std D of 1.069.

On the other dimensions, the table reveals that 30 (38.5%) of the respondents disagreed that management considers computer competencies and skills as prerequisite in recruitment of staff, this was further indicated by the mean value of 2.87 and Std D of 1.144. The outcome in the table show that 28 (35.9%) of the respondents disagreed with the statement that the district has invested resources in trying to adopt e-government procurement. This is evidence that most employees are not aware of top management plans and budgets

The outcome of the response from the table indicate that 36 (46.2%) of the respondents disagreed that the PDE has a functional training program in place for development of employee skills with a mean value of 2.85 and Std D of 0.774 while 36 (38.5) of the respondents disagreed that the existing PDE policy favors e-procurement adoption with a low mean value of 2.69 which is below the grand mean of 2.75 and Std D of 0.916.

Further on the same variable, the data in the table indicates that 32 (41%) of the respondents disagreed that the PDE has a portal where procurement requirements are processed and managed. This was further indicated by the low mean value of 2.41 and Std D of 0.986 which is below the grand mean of 2.75. This is an indication that the PDE manages its procurement requisitions manually.

Lastly, the data in the table shows that majority of the respondents 42 (53.8%) disagreed that PDE involves all stakeholders in planning and budgeting for adoption of e-procurement. This view was also represented by the low mean value of 2.36 and Std D of 0.805. This is evident that management does not involve all stakeholders in planning and budgeting for adoption of e-procurement. The data also shows that 28 (35.9%) of the respondents disagreed that PDE benchmarks its e-procurement adoption progress with other entities with a mean value of 2.56 and Std D of 1.112. This is an indication that the PDE has not embarked on adopting e-government procurement compared to other government entities.

Table 11: Correlation Analysis of Managerial Decision and Adoption of E-Procurement

		Adoption	Managerial Decision
Adoption	Pearson Correlation	1	.556**
	Sig. (2-tailed)		.000
	N	78	78
Managerial Decision	Pearson Correlation	.556**	1
	Sig. (2-tailed)	.000	
	N	78	78

** . Correlation is significant at the 0.01 level (2-tailed).

Table 11 above indicate that the Pearson Correlation =0.556** meaning there is a strong positive correlation between managerial decision and adoption of e-government procurement at Tororo district local government. The table further show that the P-Value of =0.000<0.001 meaning that the relationship is significant.

Table 12: Regression Analysis of Managerial Decision**Coefficients^a**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	8.333	2.328		3.580	.001
Managerial Decision	.482	.083	.556	5.831	.000

a. Dependent Variable: Adoption

Source: Primary data, 2020

H₀: Managerial decision does not influence adoption of e-government procurement at Tororo DLG

H_a: Managerial decision influences adoption of e-government procurement at Tororo DLG

According to the data in Table 12 above, P-Value =0.000 meaning that managerial decision making influences adoption of e-government procurement. We therefore reject the H₀ and accept the H_a that managerial decision making influences adoption of e-government procurement at Tororo district local government since the P-Value<0.005.

4.3.3 ICT Proficiency and Adoption of E-Government Procurement

The second objective of the study was to establish the influence of information communication technology proficiency on adoption of e-government procurement at Tororo district local government. This variable was conceptualized in terms of ICT infrastructure, Internet accessibility and reliability and affordability. Descriptive statistics relating to ICT proficiency was measured using 6 items and the findings are as shown in Table 13 below.

Table 13: Descriptive Statistics of the Level of ICT Proficiency

Statement	SA	A	NS	D	SD	Mean	Std. Deviation
E-procurement is part of a grand goal by the PDE to integrate ICT in daily work	14 (17.9%)	34 43.6%)	20 (25.8%)	10 (12.8%)	0	3.67	.921
There is adequate ICT infrastructure that supports adoption of e-procurement technologies	0	16 (20.5%)	16 (20.5%)	40 (51.3%)	6 (7.7%)	2.54	.907
Requirements by the district are posted on the website to inform vendors	0	18 (23.1%)	20 (25.6%)	28 (35.9%)	12 (15.4%)	2.56	1.014
Vendors compete against each other to get contracts via online bidding	0	6 (7.7%)	4 (5.1%)	54 (69.2%)	14 (17.9%)	2.03	.738
It is easy to integrate e-procurement systems with financial and other systems with in the PDE	8 (10.8%)	24 (30.8%)	10 (12.8%)	26 (33.3%)	10 (12.8%)	2.92	1.256
There is reliable and affordable internet services that support adoption of e-procurement	6 (7.7%)	28 (35.9%)	8 (10.3%)	30 (38.5%)	6 (7.7%)	2.97	1.173
Grand Mean						2.78	

Source: Primary data, 2020

From the findings in Table 13 above, majority 34 (43.6%) of the respondents are in agreement that e-procurement is part of a grand goal by the PDE to integrate ICT in its daily work represented with the highest mean value of 3.67 and Std D 0.921. On the other dimensions that followed, it revealed that majority 40 (51.3%) of the respondents disagreed that there is adequate ICT infrastructure that supports

adoption of e-procurement technologies scoring a mean value of 2.54 and Std D of 0.907. This was followed by disagreement that requirements of the district are posted on the PDE website to inform vendors with a low mean value of 2.56 and Std D 1.014 which is below the Grand mean of 2.78.

On the extent to which vendors compete against each other to get contracts via online bidding, majority, 54 (69.2%) of the respondents disagreed with a mean value of 2.03 and Std D 0.738, 26 (33.3%) of the respondents disagreed with the statement that it is easy to integrate e-procurement systems with financial and other systems within the PDE scoring a mean value of 2.92 and Std D of 1.256. Only 8 (10.8%) of the respondents strongly agreed while 10 (12.8%) strongly disagreed. It is therefore evident that it is not easy to integrate e-procurement systems with financial and other systems within the PDE.

Lastly, the data shows that majority 30 (38.5%) of the respondents disagreed that there is a reliable and affordable internet services that support adoption of e-procurement in Tororo DLG represented with a mean value of 2.97 and Std D of 1.173 suggesting there is no reliable internet service to support adoption of e-procurement in Tororo DLG.

Table 14: Correlation Analysis between ICT Proficiency and Adoption of E-Government Procurement at Tororo DLG

		Adoption	ICT proficiency
Adoption	Pearson Correlation	1	.685**
	Sig. (2-tailed)		.000
	N	78	78
ICT proficiency	Pearson Correlation	.685**	1
	Sig. (2-tailed)	.000	
	N	78	78
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data, 2020

According to the data in Table 14 above, the Pearson Correlation =0.685** meaning that there is a very strong positive significant relationship between ICT proficiency and Adoption of e-government procurement at Tororo DLG. Since the P-Value=0.000<0.01, this indicates that ICT proficiency influences adoption of e-government procurement at Tororo DLG.

Table 15: Regression Analysis of ICT Proficiency and Adoption of E-Government Procurement

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.672	1.990		2.850	.006
	ICT	.849	.104	.685	8.200	.000

a. Dependent Variable: Adoption

Source: Primary data, 2020

H₀: ICT proficiency does not influence adoption of e-procurement at Tororo DLG

H_a: ICT proficiency influences adoption of e-procurement at Tororo DLG

The outcome of the analysis show that the P-Value=0.000. This means that ICT proficiency influences adoption of e-procurement. Therefore we reject the H₀ and accept the H_a since the P-Value<0.005 meaning ICT proficiency influences adoption of e-government procurement at Tororo DLG.

4.3.4 Employee and User Competence

The third and last objective of the study was to examine the influence of employee and user competence on adoption of e-government procurement in Tororo district local government. This variable was conceptualized in terms of employee skills and knowledge; and employee and user willingness to adapt the system. Descriptive statistics relating to employee and user competence was measured using 10 items and the findings are as shown in Table 16 below.

Table 16: Descriptive Statistics of Level of Employee & User Competence

Statement	SA	A	NS	D	SD	Mean	Std. Deviation
I am competent in computer applications and internet know how and usage	20 (25.6%)	38 (48.7%)	12 (15.4%)	6 (7.7%)	2 (2.6%)	3.87	.972
There is common use of computers and internet platform at the district	16 (20.5%)	32 (41%)	16 (20.5%)	12 (15.4%)	2 (2.6%)	3.62	1.060
Internet roll out across the district favors adoption of e-procurement	4 (5.1%)	22 (28.2%)	10 (12.8%)	32 (41%)	10 (12.8%)	2.72	1.161
The need for e-procurement adoption by the PDE is recognized by all staff	2 (2.6%)	10 (12.8%)	32 (41%)	22 (28.2%)	12 (15.4%)	2.59	.986
PDE vendors have the capacity to implement e-procurement technologies	2 (2.6%)	12 (15.4%)	18 (23.1%)	40 (51.3%)	6 (7.7%)	2.54	.935
PDE vendors have not integrated e-procurement technologies in their business practices	6 (7.7%)	26 (33.3%)	18 (23.1%)	14 (17.9%)	14 (17.9%)	2.95	1.247
PDE has capacity to support its vendors in adopting e-procurement technologies	0	24 (30.8%)	22 (28.2%)	26 (33.3%)	6 (7.7%)	2.82	.964
PDE uses e-procurement systems in acquiring goods and services	38 (48.7%)	14 (17.9%)	14 (17.9%)	38 (48.7%)	10 (12.8%)	2.49	1.016
We understand e-procurement laws and regulations in Uganda	6 (7.7%)	22 (28.2%)	14 (17.9%)	24 (30.8%)	12 (15.4%)	2.82	1.225
There is willingness to adapt to new technology of e-procurement by staff and vendors	2 (2.6%)	18 (23.1%)	10 (12.8%)	14 (17.9%)	8 (10.3%)	2.85	1.178
Grand Mean						2.93	

Source: Primary data, 2020

According to the findings in Table 16 above, majority 38 (48.7%) of the respondents agreed that they are competent in computer applications and internet know how and usage represented by a mean value of 3.87 and Std D of 0.972 which is far above the grand mean of 2.93. On another dimension, 32 (41%) of the respondents agreed with the fact that there is common use of computers and internet platform at the

district represented by a mean value of 3.62 and Std D of 1.060 while on the other hand, 32 (41%) of the respondents disagreed that internet roll out across the district favors adoption of e-procurement represented by a mean value of 2.72 and Std D of 1.161 which is below the grand mean of 2.93.

The extent to which the need for e-procurement adoption is recognized by all staff in the PDE was disagreed with by 22 (28.2%) of the respondents scoring a low mean value of 2.59 and Std D of 0.986 while 32 (41%) of the respondents were not sure. The data revealed that the respondents, 40 (51.3%) disagreed with the statement that PDE vendors have got capacity to implement e-procurement technologies with a mean value of 2.54 and Std D of 0.935, whereas 26 (33.3%) of the respondents agreed that PDE vendors have not integrated e-procurement technologies in their business practices with a mean value of 2.95 and Std D of 1.247.

The data further revealed that 26 (33.3%) of the respondents disagreed that PDE has capacity to support its vendors in adopting e-procurement technologies represented by a mean value of 2.82 and Std D of 0.964. The data in the table above further show 38 (48.7%) of the respondents disagreeing that the PDE uses e-procurement systems in acquiring goods and services, represented by a mean value of 2.49 and Std D of 1.016. The data also revealed that 24 (30.8%) of the respondents disagreed with the statement that they understand e-procurement laws and regulation in Uganda with a mean value of 2.82 and Std D of 1.225. Lastly, 18 (23.1%) of the respondents revealed that staff and vendors are willing to adapt to new technology of e-procurement with a mean value of 2.85 and Std D of 1.178.

Table 17: Correlation Analysis of Employee & User Competence and Adoption of E-Procurement

		Adoption	Employee and User Competence
Adoption	Pearson Correlation	1	.737**
	Sig. (2-tailed)		.000
	N	78	78
Employee and User competence	Pearson Correlation	.737**	1
	Sig. (2-tailed)	.000	
	N	78	78
**. Correlation is significant at the 0.01 level (2-tailed).			

The data from the table above indicates the Pearson Correlation of 0.737** showing that there is a strong correlation between employee and user competence and adoption of e-government procurement. This is also significant since the P-Value =0.00. From the above analysis, it is therefore evident that before an organization adopts new technology, the competence of employees and users is very important to enable them manage the system.

Table 18: Regression Analysis of Employee and User Competence on Adoption of E-procurement

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.775	1.815		2.631	.010
	Employee competence	.578	.061	.737	9.506	.000
a. Dependent Variable: Adoption						

H₀: Employee and user competence does not influence adoption of e-procurement at Tororo DLG

H_a: Employee and user competence influences adoption of e-procurement at Tororo DLG

The outcome from Table 18 above, shows that employee and user competence influences adoption of e-procurement. Since the P-Value<0.005, we therefore reject the H₀ and accept H_a which states that employee and user competence influences adoption of e-procurement at Tororo DLG.

4.4 Summary of the Study Results

The main objective of the study was to examine the organizational attributes that influence the current status of e-government procurement in Tororo district local government. Organizational attributes had indicators of managerial decision, ICT proficiency and employee and user competence. The Pearson Correlation results revealed that, there is a strong significant relationship between managerial decision;

ICT proficiency; and employee and user competence and adoption of e-government procurement in Tororo DLG represented by P-Value=0.000<0.005 level of significance. The regression analysis results recommends rejection of H_0 and acceptance of the H_a .

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter presents summary of the study findings, discussion of the study findings, conclusion, recommendations, limitations of the study and areas for further research. The first section presents a summary of the study findings. This is followed by a discussion, conclusion, and recommendations and limitations of the study in relation to objectives of the study.

5.1 Summary of the Study Findings

This section summarizes the major findings of the study, it outlines the summary of the findings in line with the objectives of the study.

5.1.1 The Extent to which Managerial Decision Influenced Adoption of E-Government

Procurement in Tororo District Local Government

The study result revealed that there is a strategy in place for adoption of e-government procurement in Tororo DLG implying that the PDE is moving towards implementation of grand e-government strategy. On the other hand however, it was revealed that there is no budget allocation for adoption of e-procurement and that management does not involve all stakeholders in planning and budgeting for adoption of e-procurement. In addition, the study found out that computer knowledge and skills is not a prerequisite for joining Tororo DLG service and that the PDE does not have a functional staff development program in place to enhance employee skills and knowledge. The study further revealed that the PDE does not have a website for management of its procurement processes. Lastly, the study revealed that the PDE does not benchmark its e-procurement adoption progress with other entities already implementing e-government

procurement. The Pearson Correlation result revealed that, there is a positive significant relationship between managerial decision and adoption of e-procurement.

5.1.2 The Extent to which ICT Proficiency Affects Adoption of E-Government Procurement at Tororo District Local Government

The study revealed that e-procurement is part of a grand goal by the PDE to integrate ICT in its daily work. This was evidenced by presence of computers in some district departments. However, on the contrary, the study revealed that there is inadequate ICT infrastructure to support adoption of e-procurement technologies as some district departments lack computers and internet connection. This limits the PDE from posting its requirements on a website to inform prospective vendors and thus cannot compete via online bidding. In addition, the study also revealed that it is not easy to integrate e-procurement systems with financial and other systems within the PDE as there is no reliable and affordable internet services at the district. The Pearson Correlation analysis between ICT proficiency and adoption of e-government procurement revealed that there is a very strong positive significant relationship between ICT proficiency and adoption of e-government procurement at Tororo DLG.

5.1.3 The Extent to which Employee and User Competence Influenced Adoption of E-Government Procurement in Tororo District Local Government

The findings revealed that most district employees are competent in computer applications and this makes it easy for them to adapt to any new system. Since the PDE recruits employees who have received formal education, it is the reason they have computer knowledge and skills that favors usage of computers and internet platform across the district. However, on the contrary, the study revealed that the need for adoption of e-procurement is not recognized by all staff and that the PDE vendors do not have sufficient capacity to implement e-procurement technologies in their business practices since the PDE does not support them in adopting e-procurement. This is an indication that some employees and users do not

recognize the benefits of e-procurement. The study further revealed that, the PDE does not use e-systems in acquiring goods and services; tenders are managed manually. Lastly, the study revealed that some employees and users do not understand e-procurement laws and regulations in Uganda despite the fact that they are willing to adapt to the new technology of e-procurement. This explains why some procurements were found conducted outside the PPDA law. The Pearson Correlation result revealed that there is a strong positive relationship between employee and user competence and adoption of e-government procurement in Tororo DLG.

5.2 Discussion of the Study Findings

This sub-section presents a discussion of the findings in relation to literature review.

5.2.1 Managerial Decision and Adoption of E-Government Procurement

The first objective of the study was to assess how managerial decision influence adoption of e-government procurement in Tororo district local government. A correlation analysis was applied to determine this influence and it was found out that there is a strong positive correlation between managerial decision and adoption of e-government procurement at Tororo district local government.

This is in line with Gori et al (2017) who states that management is very vital and key in the running of government institutions. Top management commitment has influence on the adoption of e-procurement. He further states that management readiness is an important driver for increasing e-procurement adoption and implementation in local governments. Accordingly, top management is defined not only as the president and or CEO, but also as those who have authority to establish and enforce policies and guidelines (Toktaş-Palut et al, 2014). Top management support is one of the important and critical success factor for e-procurement adoption. Top management needs to publicly and explicitly identify the project as a top priority (Akmam Syed Zakaria et al, 2018). Senior management must be committed with its own involvement and willingness to allocate valuable resources to the implementation effort (Huang et al,

2016). This involves providing the needed people for the implementation and giving an appropriate amount of resources to get the job done (Tarhini et al, 2018). Top management support is needed for e-government initiatives. There are many political decisions from top management during the e-government developing period. Governments need to define objectives in realizing their e-government system. The result shows that a high degree of top management support plays a significant role on e-government adoption. Leadership is one of the important factors for the e-government success hinges. A critical precondition in e-government adoption is a strong leadership with vision (Ibem et al, 2016). (Kiprop Chelagat & Kwasira, 2015) state that strong leadership with vision is a crucial factor for e-government success.

5.2.2 ICT Proficiency and Adoption of E-Government Procurement

The second objective of the study was to establish how information communication technology proficiency affects adoption of e-government procurement at Tororo district local government. A correlation analysis was applied to determine this effect and it was found out that there is a very strong positive significant relationship between ICT proficiency and adoption of e-government procurement at Tororo DLG since the P-Value=0.000<0.01.

The findings are in line with Svidronova and Mikus (2015) who stated that, it is an obvious fact that prior to adopting and implementing any new technologies, putting into practice any initiatives or making any new changes, organizations figure out reasons for using and implementing initiatives or changes. When it comes to adopting e-procurement systems or electronic solutions, first, companies will consider requirements of the company and reasons for adopting e-procurement. They make sure that new technologies are compatible with the existing companies' technologies and ensure that new technologies will pave way for more benefits and value creation. Gurakar and Tas (2016) report that public e-procurement adoption by small organisations in Turkey did not deliver the intended results of increased competition and lower procurement prices as a result of the lack of critical success factors (e.g. size of the organisation, human resources, and technological infrastructure) and the existence of barriers. Huang

et al. (2016) posed that, in a developing country context, “the role of government has an extremely significant influence on a decision of initial adoption of e-procurement through government leadership, legal and regulatory infrastructure, information and technology infrastructure (ITI), and socio-economic and knowledge infrastructure”.

5.2.3 Employee and User Competence and Adoption of E-Government Procurement

The third and last objective of the study was to examine how employee and user competence influence adoption of e-government procurement in Tororo district local government. A correlation analysis was applied to determine this influence and it was found out that there is a strong correlation between employee competence and adoption of e-government procurement.

This finding is in line with Joyce (2016) who suggested that skills and knowledge of employees influence the future adoption of a new technology. Implementing a new technology needs skills and knowledge to operate in organizations and most organizations do not implement because organizational employees are not familiar with new technology. Implementing e-procurement necessitates knowledgeable and skilled employees, such reasons may cause delay in e-procurement implementation. Lack of appropriate abilities and skills can limit workers’ productivity. Competence based theorists frequently suggest that firms’ abilities to acquire, assimilate and exploit new technological knowledge is directly related to their portfolio of human resources (Abas Azmi & Abdul Rahman, 2015). Lack of IT skills makes it difficult to implement supplier relationships. This is more so where the supplier has adopted e-procurement while the buyer employs the traditional approaches.

Training and education are being given the importance that they deserve throughout industry and business. If people cannot use the new technologies, they cannot take responsibility for their own quality. Training is important and necessary, but it is also costly (Brandon-Jones & Kauppi, 2018). Bhuasiri et al (2016), suggests that training can be viewed either as a cost or as an investment. Priority human capacities for e-

systems are combined; those who have knowledge about technology, business and information in governance. Public sector managers need to be knowledgeable towards a broader skill set that includes an understanding of information systems and ICTs (Rehman Khan & Yu, 2019). Training is adequate to meet and maintain e-government skills (Rotchanakitumnuai, 2013). Also, the re-engineering of work processes needs to be managed well, as well as retraining and educating the relevant staff members (Abas Azmi & Abdul Rahman, 2015). The importance of training, hands-on support, and a proactive stance towards adjusting the technology to work have been identified as important both by practitioners (Chang et al, 2013) and researchers. Therefore, skills and competence is hypothesized to have a direct impact on e-procurement adoption.

5.3 Conclusion

The study sought to examine the organizational attributes associated with the current status of electronic government procurement in Uganda's local government sector studying the case of Tororo district local government. The study examined three dimensions of managerial decision, ICT proficiency and employee and user competence on how they influence adoption of e-government procurement. The study adopted a case study research design to address issues in the study. Data was collected from respondents using structured questionnaires.

Data was analyzed at different levels, first with descriptive statistics, followed by correlation and then regression analysis. All the relationship tested were found to be significant and positive. Regression analysis revealed that managerial decision, ICT proficiency and employee and user competence were all strong predictors of e-procurement adoption. The hypotheses were tested and the results revealed that the H_0 were rejected and H_a accepted since their P-Values=0.000<0.005 level of significance. Therefore managerial decision, ICT proficiency and employee and user competence have significant influence on adoption of e-government procurement at Tororo DLG.

5.4 Recommendations

This sub section presents the recommendations of the study in relation to dimensions of organizational attributes of managerial decision, ICT proficiency and employee and user competence.

5.4.1 Managerial Decision and Adoption of E-Government Procurement

The study recommends management to commit more resources to ensure higher levels of e-procurement adoption. The implementation of e-procurement in Uganda is still at its infancy stage, even though some private organizations are already using it. Therefore with support and motivation of management, e-procurement will find a bright future in Tororo district local government. Management needs to understand that their involvement in adoption of e-procurement is important and therefore need to champion the process of re-engineering organizational change towards adoption of e-procurement.

5.4.2 ICT Proficiency and Adoption of E-Government Procurement

The study recommends management to commit more resources to ensure higher levels of e-procurement adoption by building a system of incentives for employees and vendors to participate in e-procurement. It is clear from the discussions above that e-procurement embraces many aspects of businesses including selection of suitable suppliers, ordering, payments, accuracy, and timely exchange. A lot of issues need to be considered and put in place for the successful implementation of e-procurement in Tororo district local government including building suitable ICT infrastructure to support integration of activities in daily work.

5.4.3 Employee and User Competence and Adoption of E-Government Procurement

The study recommends management to commit more resources to ensure higher levels of e-procurement adoption by training officers and users on application of current technologies in procurement management. This will equip them with the necessary skills for effective management of e-procurement. Government

should also sensitize its citizens on current procurement legislation and institute regulatory mechanisms on e-procurement adoption. Once the above is done, e-procurement is likely to be adopted in a short run.

5.5 Limitations of the Study

The study was carried out during a time when the world is faced with the corona virus pandemic. The “stay home, stay safe” measure affected movement of the researcher and respondents to collect and provide data relevant for this study in time. However, the researcher observed the Ministry of Health guidelines of “social distancing, use of face masks and sanitizing”

The sample was restricted to population of Tororo district local government and yet many local governments equally have low adoption of e-procurement. Therefore the findings was limited to only one local government institutions and yet the e-procurement is national wide government project. The researcher expanded the area of study to Tororo Municipal Council, an independent local government within Tororo district to have in-depth understanding of the problem.

5.6 Areas for Further Research

This study was restricted to Tororo DLG, thus the extent to which these findings can be generalized to all the local governments in Uganda is not clear. Therefore there is need to conduct further research in other local governments.

The study focused on analyzing the influence of managerial decision, ICT proficiency, and employee and user competence on adoption of e-government procurement. According to the Public Procurement and Disposal of Public Assets Authority (PPDA), government is rolling out e-procurement in all public sectors. Therefore, the study recommends further studies on other factors that may have influence on adoption of e-procurement in Uganda’s public institutions.

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APPENDIX I

Table 19: Krejcie and Morgan Table

Table for Determining Sample Size from a Given Population					
N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Key: N - Population size

S -Sample size.

APPENDIX II: QUESTIONNAIRE

KYAMBOGO UNIVERSITY

Masters Research Project

Dear Respondent,

I am a student of **Kyambugo University** pursuing a master's degree in Business Administration. You have been selected to participate in the study about "organizational attributes and adoption of electronic procurement in local governments; a case of Tororo district local government". The study is purely for academic purpose and the results will not be used for any other purposes. The researcher would like to assure you that your responses will strictly remain confidential and that under no circumstances will the responses be personalized. You are thus kindly requested to read the questionnaire and complete it as honestly as possible. Your participation is very crucial and your responses will be highly appreciated and valued.

Thank you in advance.

BECHOLAS OWERE (18/U/GMBA/19365/PD)

Researcher.

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

(Please tick as appropriate in the space provided)

1. Gender of Respondent

(a) Male []

(b) Female []

2. Age Group

(a) 30 years and below []

(b) 31-40 years []

(c) 41-50 years []

(d) 51 and above []

3. Level of Formal Education

- (a) Certificate []
- (b) Diploma []
- (c) Bachelors' degree []
- (d) Post Graduate []
- (e) Master's degree and above []

4. Period you have worked with Tororo District Local Government

- (a) 0-1 year []
- (b) 1-5 years []
- (c) 6-10 years []
- (d) More than 10 years []

In the subsequent sections, use scales provided to tick a number that describes your opinion on each statement.

SECTION B: MANAGEMENT DECISION

Please tick in the box that corresponds to your opinion according to a scale of 5= Strongly Agree, 4= Agree, 3= Not Sure, 2= Disagree and 1= Strongly Disagree

No.	Statements	Strongly Agree (5)	Agree (4)	Not Sure (3)	Disagree (2)	Strongly Disagree (1)
M1	There is a strategy in place for adoption of electronic government procurement					
M2	There is a budget allocation for adoption of new technologies					
M3	Management considers computer competencies and skills as prerequisite in recruitment of staff					
M4	The district has invested resources in trying to adopt e-government procurement					
M5	Procuring and Disposing Entity (PDE) has acquired new technology that enables all stakeholders to participate in the procurement process online					
M6	PDE has a functional training programme in place for development of employee skills					

M7	Existing PDE policy favours e-procurement adoption					
M8	PDE has a web portal where procurement requirements are processed and managed					
M9	PDE involves all stakeholders in planning and budgeting for adoption of e-procurement					
M10	PDE benchmarks its e-procurement adoption progress with other entities					

SECTION C: ICT PROFICIENCY

In a scale of 1-5, indicate the level of agreement regarding the following statement on how information communication technology proficiency affects adoption of e-government procurement at Tororo district local government.

Key 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree and 1= Strongly Disagreed

No.	Statements	Strongly Agree (5)	Agree (4)	Not Sure (3)	Disagree (2)	Strongly Disagree (1)
ICT1	E-procurement is part of a grand goal by the PDE to integrate ICT in the daily work					
ICT2	There is adequate ICT infrastructure that supports adoption of e-procurement technologies					
ICT3	Requirements by the district are posted on the website to inform vendors					
ICT4	Vendors compete against each other to get contracts via online bidding					
ICT5	It is easy to integrate e-procurement systems with financial and other systems within the PDE					
ICT6	There is reliable and affordable internet services that support adoption of e-procurement					

SECTION D: EMPLOYEE AND USER SKILLS & COMPETENCE

In a scale of 1-5, indicate the level of agreement regarding the following statement on how employee and user competence influence adoption of e-government procurement in Tororo district local government?

Key 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree and 1= Strongly Disagreed

No.	Statements	Strongly Agree (5)	Agree (4)	Not Sure (3)	Disagree (2)	Strongly Disagree (1)
SC1	I am competent in computer applications and internet know how and usage					
SC2	There is common use of computers and internet platform at the district					
SC3	Internet rollout across the district favors adoption of e-procurement					
SC4	The need for e-procurement adoption by the PDE is recognized by all staff					
SC5	PDE vendors have the capacity to implement e-procurement technologies					
SC6	PDE vendors have not integrated e-procurement technologies in their business practices					
SC7	PDE has capacity to support its vendors in adopting e-procurement technologies					
SC8	PDE uses e-procurement systems in acquiring goods and services					
SC9	We understand e-procurement laws and regulations in Uganda					
SC10	There is willingness to adapt to new technology of e-procurement by staff and vendors					

SECTION E: ADOPTION OF E-PROCUREMENT

In a scale of 1-5, indicate the level of agreement regarding the following statement on adoption of e-procurement at Tororo district local government?

Key 5= Strongly Agree, 4= Agree, 3= Undecided, 2= Disagree and 1= Strongly Disagreed

No.	Statements	Strongly Agree (5)	Agree (4)	Not Sure (3)	Disagree (2)	Strongly Disagree (1)
AEP1	Tenders are advertised online					
AEP2	Prospective suppliers submit proposals online					
AEP3	Short listing of tenders is done by the e-procurement system					
AEP4	There is a functioning website to facilitate e-procurement					

AEP5	Specifications for procured items are posted on PDE website					
AEP6	PDE staff make requisitions online					
AEP7	Call for proposals is done through the PDE website					
AEP8	Electronic tendering leads to a reduced tender cycle time					
AEP9	Electronic processing leads to a more efficient procurement process					
AEP10	Debriefing of vendors is done online					