EFFECT OF E-PROCUREMENT ON ORGANISATIONAL PERFORMANCE: A CASE OF UGANDA CIVIL AVIATION AUTHORITY (UCAA)

SHEILA AKANKUNDA

KS21M40/002

A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN PROCUREMENT & SUPPLY CHAIN MANAGEMENT OF UGANDA CHRISTIAN UNIVERSITY

September, 2025

UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

DECLARATION

I SHEILA AKANKUNDA, declare that the Dissertation titled: **"**Effect of E-procurement on Organisational Performance: a case of Uganda Civil Aviation Authority (UCAA)**"** is my original work and to the best of knowledge, it has never been submitted by anyone to any institution for academic award. As much as possible, I have acknowledged the academic materials which I have used in the development, discussion and presentation of this work. Do not bold your title. And use lower case.

Signature… 

Date:15th SEPT, 2025.

AKANKUNDA SHEILA

REG NO: KS21M40/002

APPROVAL

This is to certify that this Dissertation titled: "Effect of E-procurement on Organisational Performance: a case of Uganda Civil Aviation Authority (UCAA)" 'has been developed under my supervision and is hereby submitted for examination with my approval.

Signature 

Date…1st May 2025

Supervisor

Kabanda Martin

DEDICATION

I dedicate my dissertation to my parents, family, relatives and friends for their financial, parental moral support rendered to me during my entire period of study.

ACKNOWLEDGEMENTS

I thank God for the gift of life and provision. By his mighty grace, I have endured a lot to attain this accomplishment during my academic career. I will forever glorify the name of Jesus.

My gratitude also goes to my supervisor - Mr. Kabanda Martin, for the professional guidance and constructive criticisms, which have helped me complete this book successfully. Without your support, it would not have been possible for me to complete this study within the stipulated time.

I also take this valuable opportunity to thank the respondents of this study from UCAA, who provided honest feedback in the questionnaires and interview guides. Thank you for being so kind and resourceful to me.

I am also grateful for the opportunity availed to me by my family members, who provided me with financial support. I also thank my brothers, sisters and friends for their moral support.

To the Kololo sss staff especially my bosses Mr. Kanoonya Edward, Mrs. Kabananukye Adrine, Ms.Seelah Doreen and the entire accounts team for the great emotional, financial and moral support rendered to me to accomplish and attain this degree, I am forever grateful and humbled.

TABLE OF CONTENTS

LIST F TABLES

ABSTRACT

This study examined the influence of e-procurement on organizational performance at the Uganda Civil Aviation Authority (UCAA). Specifically, it addressed three objectives: to assess the effect of e-invoicing, evaluate the impact of e-bidding, and examine the influence of e-sourcing on organizational performance. A cross-sectional survey design was adopted, utilizing both qualitative and quantitative approaches. Data were collected from 162 respondents 155 survey participants selected through simple random sampling and 7 key informants selected purposively. Data collection methods included questionnaires, interview guides, and documentary reviews. Quantitative data were analyzed using SPSS, with descriptive statistics and Pearson's correlation analysis applied to determine relationships between variables. Qualitative data were analyzed narratively through paraphrasing and direct quotations. The results indicated that all three e-procurement components had statistically significant positive relationships with organizational performance: e-invoicing ($r = .796^{**}$, $p < 0.001$), e-bidding ($r = .670^{**}$, $p < 0.001$), and e-sourcing ($r = .261^{**}$, $p = 0.001$). These findings underscore the substantial contribution of e-procurement practices to improved performance at UCAA. The study concludes by recommending the continued enhancement and adoption of advanced, efficient e-invoicing, e-bidding, and e-sourcing systems to further elevate performance outcomes.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter lays the foundation for a study that examines the impact of e-procurement on organizational performance, specifically in the context of the Uganda Civil Aviation Authority (UCAA). In today's rapidly evolving technological and societal landscape, understanding the complexities of e-procurement's impact on organizational success is critical. This chapter explores the background, objectives, and significance of this relationship by delving into the historical, theoretical, conceptual, and contextual dimensions that shape the landscape of e-procurement within a public sector organization such as UCAA. By examining these factors, the study aims to shed light on the complex dynamics that influence e-procurement adoption and its subsequent impact on organizational performance.

1.2.1 Historical Background

Over the years, all organisations have sought to either improve or maintain their optimal performance by employing various strategies. In the corporate world, both the public and private sectors have seen a massive change in the management of businesses; from organizations replying more on specialized in-house service functions, conventional purpose service functions to outsourced (Rutembesa, 2024). From the late 1990s a raft of new e- commerce technologies emerged, assisted by the emergency of strong information technology (IT) systems which have revolutionized operational efficiencies and working practices (Rutembesa, 2024).

E-Government procurement is a tool that plays a significant role in the procurement process; it is in this context that many countries in the World have decided to shift from using traditional procurement practices to using e-procurement practices to improve efficiency in the procurement process (Vaidya et al, 2022). Its benefits have been reported from different perspectives such as simplification of preparing annual procurement plans, bidding documents, increased visibility, and cost reduction (OECD, 2022).

The global procurement reforms in public institutions emerged as a recommendation of the World Bank in late 1990s (World Bank, 2023) and subsequently gained much attention among countries (Cowell, 2023). In the USA for instance, public procurement reforms came as both legal and regulatory reforms to bring about transparency in the procurement process. In Swaziland, 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, 2023).

In Ireland, adversarial type relationships influence E-Government Procurement systems around the sourcing phases (background review, information gathering, negotiation and supplier contact) demonstrated that collaborative relationships tend to affect the fulfillment and consumption phases more than other procurement activities (Nagle et al. (2022). Palma dos Reis and Soares Aguiar (2022) found that the factors leading to the adoption of electronic procurement systems in Portugal include: technological capabilities (technological context), trading partner readiness

(environmental context) and firm size (organizational context). Countries like Britain, Germany and France who have employed e- procurement Mechanism are at liberty operation and have been pivotal in the management of their organizations and these has enhanced performance of the organizations. The Asian countries like China, Malaysia, Singapore and India that are progressively using E- Procurement fiber are registering improvements in performance traits necessary for enhancing business generation for performance. In Africa, despite significant recent increases in internet sales in many countries, total business-to-customer internet commerce is still low (Muffato and Payaro, 2024).

Even in Africa and Uganda today's world, E-business has become part and parcel of everyday life in many business circles as a large number of organizations are involved in one form of e-business or another, such as e-procurement. The effect of e-business and in particular e-procurement on internal customer service is being addressed in this study because e-business and internal customer service are all important issues in today's globalised world which is characterized by stiff competition among organizations. Lei, Thresh, Madan, Devika and Gang (2023) suggest that e-business activities bring three types of benefits to the organization: value benefits (perceived by both buyers and sellers as a result of reduced search and costs), revenue benefits (allowing the organization to exploit new opportunities such as disintermediation, free service, etc.), and logistics benefits (finding the proper position in a supply chain (Pires and Stanton, 2025).

1.2.2 Theoretical Background

The study is hinged on Technology Acceptance Model (TAM) by Davis (1989) as cited in Luhamya *et al*. (2020). The Technology Acceptance Model (TAM) suggests that when users are presented with a new technology, the attitudes towards its adoption, applicability and usefulness, and related factors such as their competences in the technology and its application, influences their decision about how and when they will use it. This is especially perceived in terms of its competencies, usefulness, reliability, ease of use, relative advantage and triability of the system and how and to what extent it may enhance performance (Davis 1989), as cited in Luhamya *et al*. (2020). According to Denning (2003), the Technology Acceptance Model (TAM) places more emphasis on psychological predispositions and social influences. Thus, 'beliefs, attitudes and intentions are important factors in the adoption of computer technologies.' TAM is expected to help the researcher to understand how staff at UCCA come to embrace certain ICTs to enhance organisation performance because it is expected that the staff choose based on availability of the technology or not, knowledge of use, relative advantage, perceived learning outcomes, and ease of adoption among others, and these considerations are all important in answering the research questions. TAM is also preferred because of its close relation and emphasis to preparedness, attitude and adoption of innovations (Lei, et al., 2023).

1.2.3 Conceptual background

Electronic procurement, popularly referred to as e-Procurement is one of the recognized procurement best practices. 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, 2025). Second is organisational performance which according to Richard, Yip & Johnson (2023), encompasses three specific areas of firm outcomes, these are, market performance (sales, market share); Shareholder return (total shareholder return, economic value added) and financial performance (profits, return on assets, return on investment) as well as customer satisfaction (Snider & Rendon, 2024).

1.2.4 Contextual background

The Uganda National Civil Aviation Authority (UCAA) According to the Ministry of Finance Report (2025), 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 2025 (Daily Monitor, March 10th, 2025). The system seeks to reduce corrupt practices in procurement process and reduce delays in implementation of government projects. However, Ministry of Finance Report (2025) reported that many government institutions face procurement implementation challenges, including untimely deliveries on projects, which has caused loss of funds totaling to 3.7 billion in the financial year 2022/20 (due to lack of transparency, proper accountability, and delays in procurement which would rather be eliminated if e-procurement was fully functional. According to the entity's procurement reports, major hindrances to effective procurement process include but aren't limited to: inadequate strategic sourcing, and ineffective supplier relationship management (Davila & Palmer, 2020; Owere, 2021). UCAA is one of the government agencies implementing government e-procurement system. However, of recent, reports have emerged indicating decimal and questionable performance of the agency,

illustrated by operating in financial losses since the revitalization of the Uganda Airlines in 2020, failure to monitor and supervise new air fields in the country, water leakages through the roofs of the National Airport causing high public outrage and low customer satisfaction, slow response and rescue services in case of air accidents and bribery and influence peddling tendencies during tendering and procurement process (Auditor General Report, 2024). This background warranted an immediate research on this issue through this study.

1.2 Statement of problem

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, 2020). This implies that with e-procurement implementation, savings in the range of UGX 387 - 620 billion would be made per year, of which 60% of the government budget is expended through e-procurement. However, Uganda Civil Aviation Authority (UCAA) like other public agencies still faces challenges to realize high and consistent organizational performance due to several glitches in its procurement processes as denoted by: lack of transparency, proper accountability, inadequate strategic sourcing, and ineffective supplier relationship management. Reports have also emerged indicating decimal and questionable performance of the agency, illustrated by operating in financial losses since the revitalization of the Uganda Airlines in 2020, failure to monitor and supervise new air fields in the country, water leakages through the roofs of the National Airport which caused public outrage, anger and low

customer ratings, slow response and rescue services in case of air accidents and bribery and influence peddling tendencies during tendering and procurement process (Auditor General Report, 2024; Rutembesa, 2024). Ministry of Finance Report (2025) also reported that many UCAA faces from unsatisfactory performance, evidenced by untimely deliveries on projects, which has caused loss of funds totaling to 3.7 billion in the financial year 2022/20). Previous studies carried out on E-Government Procurement influence on organization performance in Uganda (Ahimbisibwe, Tusiime & Tumuhairw, 2016; PPDA, 2024; Kakwezi & Nyeko, 2022; Owere, 2021) mainly focused on the private sector agencies which left a literature gap on the side of public sector which could have a lot of variation and differences in policy making, administration, management and operations. These studies also hadn't put focus on the concepts of e-invoicing, e-bidding and e-sourcing, thus leaving a research gap which this study had to fill. Therefore this study explored the impact of e-invoicing, e-bidding and e-sourcing on organizational performance at UCCA.

1.3 Purpose of the study

To investigate the effect of e-procurement on organisational performance in UCAA.

1.3.1 Specific objectives of the study

The study had the following specific objectives;

i. To assess the effect of e-invoicing on organizational performance

ii. To assess the effect of e-Bidding on the organizational performance

iii. To assess the effect of e-sourcing on organisational performance

1.4 Research questions

The study answered the following research questions;

i. What is the effect of e-invoicing on organizational performance?

ii. What is the effect of e-bidding on the organizational performance

iii. What is the effect of e-sourcing on organisational performance

1.3.3 Research Hypotheses

The study tested the following research hypotheses;

i) E-invoicing negatively affects organizational performance

iv. E-Bidding negatively affects organizational performance

v. E-sourcing negatively affects organisational performance

1.6 Scope of the study

1.6.1 Content scope

The study investigated Effect of e-procurement on organisational performance in UCAA. The study concentrated on: assessing the effect of e-invoicing on organizational performance; the effect of e-bidding on the organizational performance and the effect of e-sourcing on organisational performance in UCAA.

1.6.2 Geographical scope

The research was carried out at Uganda Civil Aviation Authority Uganda. The headquarters of UCAA are located at Entebbe in Wakiso District. UCAA is under the general supervision of the Ministry of Works and Transport.

1.6.3 Time scope

The study focused on the period starting from 2022 to present day. This is the time when electronic government procurement gained popularity and largely integrated in the organizational projects and programs by UCAA. And besides, this is the time when the performance of UCAA had come under public disrepute and spotlight (Auditor General's Report, 2024).

1.7 Significance of the study

To management

This study would be of importance to various stakeholders among them being the management of Public Corporations, procurement professionals, policy makers in both private and public sector and also scholars.

To Policy makers

The findings of this study would inform policy makers on the areas and aspects of procurement that require policy interventions for the purpose of improving procurement efficiency. The study findings could provide mechanism that the country can establishing in regulating the procurement and management operations in the country.

To Academia and partners

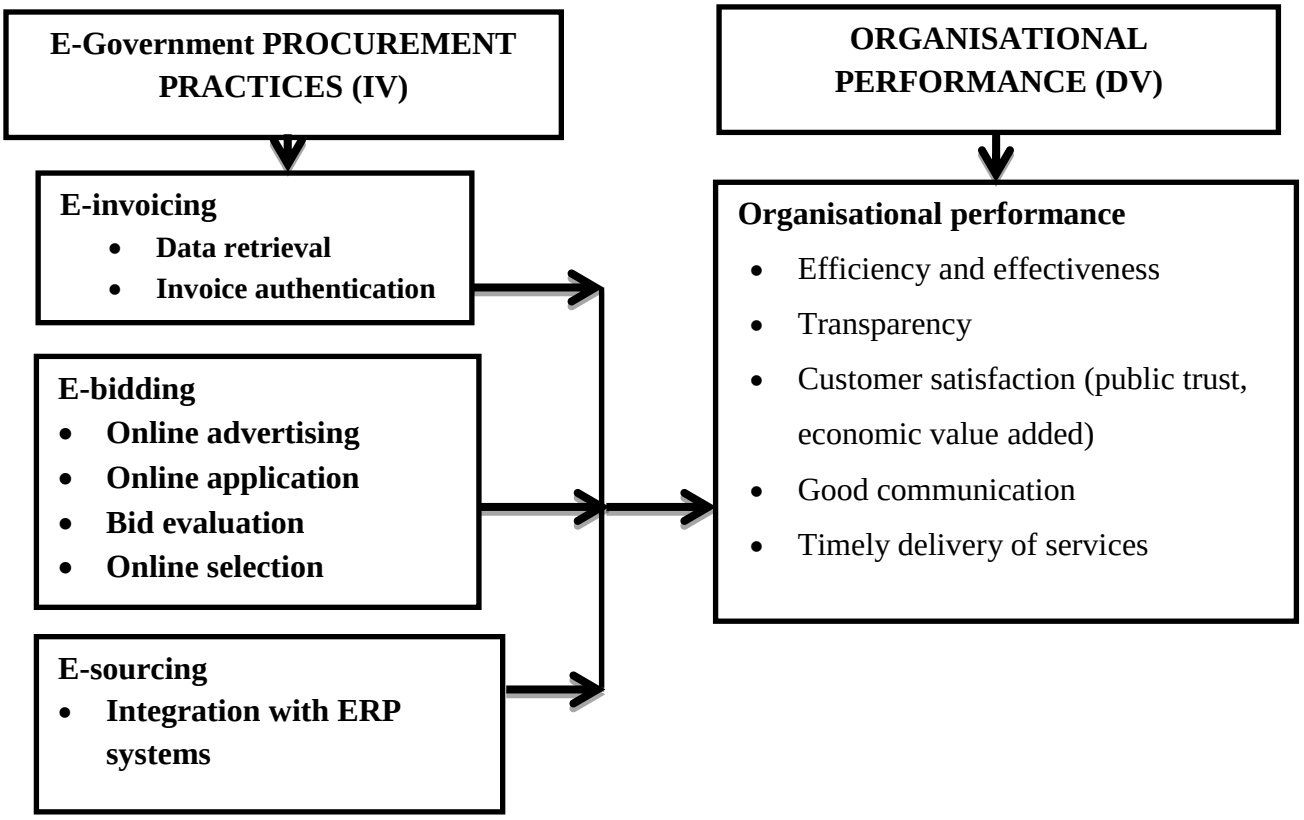
This study is scholarly in nature and hence would be of value to researchers and scholars both in academia and industry. The study identified gaps that can be advanced in the interest of further scholarly discourse in the area of procurement measurement.

The study also added literature review to the already established information about the variables hence acting as a source of literature review on E-Government Procurement and organisational performance.

1.8 Conceptual framework

The conceptual framework depicts relationship between the study variables.

Figure 1: Conceptual framework



Source: adapted from* Schapper (2024), *and modified by the Researcher 2024

Narrative / Explanation

According to the conceptual framework above, the independent variable is E-Government Procurement and it is denoted by indicators like e-invoicing, e-bidding and e-sourcing. The independent variable is conceptualized into Efficiency and

effectiveness, Transparency, Customer satisfaction (public trust, economic value added) , Good communication, and Timely delivery of services. This study therefore hypothesized that organisational performance in UCAA is determined by the effectiveness of the e-procurement process, leaving other factors constant.

1.8 Operational definitions of key terms

E-government procurement

This is a web-based tool used to carry out procurement and disposal and it involves planning, initiation, bidding, evaluation, award, contract management, invoicing, and payment and reporting of public supplies, works and services. In this study e-government procurement included;

E-invoicing

This is where the system processes invoices online which are subsequently sent electronically to the buyer as a notification to make payment to the supplier after delivery of goods and services.

E-bidding - An electronic bidding system is an electronic bidding event (without awarding commitment) according to defined negotiation rules (e-Agreement). A buyer and two or more suppliers take part in this online event.

E – Sourcing

E-Sourcing as a practice in procurement enables purchasers to select goods and services from suppliers. E-sourcing enables purchasers to evaluate potential suppliers for a particular product or service by providing information on what and where to buy.

Organisational performance: Organisational performance is the actual output produced from an asset or input with a specific period of time; the ratio between the input to run the business and the output gained from the business. It is the ability to highly achieve the set Organisational objectives with minimal resource inputs in the shortest time possible. In this study, organisational performance will include; Financial performance (profits, return on assets, return on investment); Market performance (sales, market share, Customer satisfaction (public trust, economic value added) and Timely delivery of services.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

According to Kothari (2020), literature review involves the systematic identification, location and analysis of documents containing information related to the research problem. This chapter gives the literature of the most relevant research and documentations on the topic. It chronologically follows the specific objectives of the study which include; effect of e-invoicing, e-bidding and e-sourcing on organisational performance.

2.1.1 E-Government Procurement

According to Chartered Institute of Purchasing and Supply (CIPS), e procurement is the use of internet to operate the transactional aspects of requisitioning, authorizing, ordering, receiving and payment processes for the acquired services and products. It also points out that e procurement is the focus of local business administration and covers the following areas of the buying processes: Requisition against agreed contracts, Authorization, order, Receipts and Payment.

Bharati and Chaudhury (2024) defined -procurement as the purchasing of goods and services for the day today operation of a business online and the automating of the whole procedure with the underlying aim of saving money. Branders, (1997) states that there are many potential areas of application of Electronic systems in the procurement cycle. A 1995 survey by the national institution of purchasing management that 91.2% cite the facsimile machine is the most important tool in their everyday purchasing operations followed by the computer (87.8%), electronic mail 935.65), modem 24.06% and electronic data interchange 9 22.8%). Driven by the

increasing trend toward purchasing inputs and other raw materials from outside the organization, implementing electronic procurement (E-Government Procurement) has become a significant tactic in most companies' e-business strategies (Deloitte Consulting, 2021).

In Uganda, the adoption of Electronic Government Procurement (e-GP) is one of the most significant reforms in Public Procurement that is being undertaken by the government of Uganda to revolutionize government operations and consequently improve efficiency in the procurement function. As part of the reforms in public Procurement and Disposal management, PPDA in partnership with Ministry of Finance, Planning and Economic Development (MoFPED) and the National Information Technology Authority of Uganda (NITAU) and the Uganda Civil Aviation Authority– UCAA, with funding from the World Bank are spearheading plans to harness the potential of new technology through the implementation of the Electronic Government Procurement (eGP). Electronic government procurement is to be envisaged to promote both Transparency and Efficiency in the Public procurement and Disposal transactions.

EGP interfaces with the providers, suppliers, contractors, individual suppliers of government so that instead of having adverts on the daily newspapers they will be able to get an email on the system about available bids and successful bidders. Instead of buying the bidding document the parties will be able to get them for free and use money for other activities (Rutembsa, 2024).

Organisational performance is the actual output produced from an asset or input with a specific period of time. It also refers to the ratio between the input to run the business and the output gained from the business (Vladmir, 2024). Inputs would actually be money, people, time and effort while the outputs would be revenue, productivity, innovation, quality, speed, and any new opportunities. It is the ability to highly achieve the set Organisational objectives with minimal resource inputs in the shortest time possible.

2.2 Review of empirical literature

2.2.1 Effect of e-invoicing on organisational performance

E-invoicing is a process through which a business sends and receives invoices through electronic means (Brun, 2024). According to Hernandez-Ortega (2021), an e-invoice enables a business to gather information pertaining to transactions and to transmit it through a network. The e-invoices enable the business to maintain business information throughout the supply chain and to enhance the authentication and non-repudiation of origin and receipt, confidentiality and privacy.

E-invoicing includes the process of creating and approving purchasing requisitions, placing purchase orders and receiving goods and services by using a software system based on internet technology. The goods and services ordered are MRO (Maintenance, Repair and Operation) or NPR (Non-Product Related). The software systems contains of an ordering catalogue system preferably used by all employees of an organization.

First of all, e-invoicing provides what is termed as transactional benefits (Kumar & Ganguly, 2021). This feature makes transactions more flexible thereby enhancing speed, efficiency, and effectiveness in the transaction process. Through e-procurement, most of the wastes are eliminated in transactions. Also, e-procurement leads to compliance (Adeniyi et al., 2020). The e-invoicing process helps to tackle most of the compliance challenges in procurement process and it reliefs most organizations from such hurdles because it has been a major issue they battle with. Additionally, e-procurement systems help to beat price down to the lowest level because it improves on the ability to negotiate due to increased confidence of clients in the system (Harelimana, 2024).

Adding to the above, e-invoicing cover three major procurement areas: procurement transactions, procurement management and market-making. It also impacts four major operative procurement activities, which are: searching of products or services, order processing, monitoring and control, and coordination of relevant information. On the buyer side the e-procurement solution is usually connected to other existing information systems, such as ERP. This allows companies to leverage critical enterprise data present on these systems. On the supplier side, the solution is mostly connected to the suppliers order fulfillment system or product catalogs on the website of the supplier (Narang, 2020).

The research by Davila et al. (2024) also identifies that companies using e-invoicing gain additional control over maverick spending and can reduce the headcount supporting purchasing transactions. To support this, Croom and Johnston (2023)

found that e-bidding can have a major impact on compliance on many different levels of the procurement process: it supports managerial budgetary control; reduces data entering failures; offers greater transparency and accessibility to corporate wide spending; improves system reliability; and improves the access to managerial information, thus impacting positively on overall financial performance of an organisation.

In Nigeria for instance, according to Alarcon and Mourgues (2022), businesses have to some extent integrated e-invoicing in order to maximize its benefits during the purchasing of goods and also services, in management of inventory as well as improving communication between the businesses and the suppliers and the consumers. This has helped to enhance the performance of the businesses. In South Africa, Sithole (2020) observed that the SMEs in South Africa are increasingly utilizing e-procurement technologies to enhance their operations. One of the most commonly used technological strategies adopted include e- invoicing. These technologies have largely revolutionized the procurement operations and to boost the performance of the businesses. It must however be noted that the current study was be carried out in a national corporation rather that a private business as he case was in the above cited studies, and as such, the need to find out and fill the methodological and contextual gaps formed the intentions of this current study.

In a study by Mutunga and Makhamara (2020), companies implementing e-invoicing need to clearly understand the purpose of launching such a system. It involves careful analysis about how e-procurement will affect a company and its strategy and in which

area it will obtain financial and non-financial benefits. The drivers and problem factors behind adopting e-invoicing technologies vary between companies. However, the current was carried out in a large scale government agency – the Uganda CAA, unlike that previous study which was carried out in an SME in Kenya and elsewhere, thus leaving a contextual research gap which the current study intended had to bridge.

2.2.2 Impact of e-bidding on organisational performance

Nevill et al (2022) found that organizational performance is an indicator of how well the company's products are succeeding in the market place. In general, the higher the number, the better, although, the right amount of inventory turnover depends on industry the company serves and its profits margins. Teresa, Saunders and Show (2024) argue that every time one sells an amount of a product, product line, or other group of items equal to the average amount of money one has invested in those items they are "turning" their inventory. It is therefore the researcher's opinion that if inventory does not turn rapidly, there is too much money being tied up in unproductive or obsolete inventory. To put this in the context of e-biding, the process ensures a faster completion of the procurement cycle, thereby enabling the faster disposal of old stock, call for new bids, supplies and stock, thus increasing company sales and profits (Alarcon & Mourgues, 2022).

Bowen (2022) found that one of the greatest adaptations that have revolutionalised business today is through e-bidding. A research by Alarcon and Mourgues (2022), proposes that e-bidding technologies affect positively to company's procurement practices and procurement performance. Positive impact on procurement practices facilitates the development of operational tasks in the procurement function, which

leads to continuous improving. As the operational tasks are performed more effectively the procurement performance is enhanced (Bowen, 2022).

Alarcon and Mourgues (2022) guided that the e-bidding process used should also determine the degree of involvement and relationship between the mother entity calling for bids and their potential clients, designers and other project participants in every stage of project process. The importance of selection of a procurement method has been pointed out by Mahdi (2022) who found the procurement methods influence the time performance of construction projects. Time would be affected by the flow of project that is driven by different type of procurement method. Similarly, Naoum (2021) stated that the major factor affecting cost and time overruns were the e-bidding system adopted. Bowen et al. (2022) supported the view that one of the reasons contributing to the poor performance of the construction industry principally is the inappropriateness of selection of procurement method. This indicates the effect of using different types of procurement methods in project delivery. However, this finding related to e-bidding in construction industries, and yet the current study was in the aviation industry, thus creating a research gap which this study intended to fill.

E-bidding or contractor pre-qualification and bid evaluation procedures are currently used in many countries, and involve the development and consideration of a wide range of necessary and sufficient decision criteria to evaluate the overall suitability of contractors. Research by Mahdi (2022) identified five main elements as common factors in the contractor selection process for all types of procurement arrangements. These are project packaging, invitation, prequalification, short listing and bid

evaluation. Mahdi (2022) defined pre-qualification as a pre-tender process used to investigate and assess the capabilities of contractors, hence providing the client with a list of potential contractors to invite to tender. E-bid evaluation involves similar process it is different in two aspects; it occurs at the post tender stage and it considers both bid amount and the contractors' capabilities. Given the fact that e-bidding takes into consideration the factors of time and accuracy, this study intends to find whether e-bidding in UCAA has led to timely delivery of services, elimination of influence peddling through bribery or price inflation, as well improving on sales and profits of the organisation which are all key attributes of good organisational performance.

Hatush (2024) noted that successful companies using e-procurement solutions report savings of 42 percent in purchasing transactions costs. Another research by Croom and Johnston (2023) found that e-bidding implementation can have up to 75 % cost reduction in procurement process costs and 16 – 18 % reduction in purchasing price for indirect purchases. According to Hatush (2024), complying with existing contracts is an important mechanism for realizing lower prices and discounts. The savings that come out from automating the process derive from eliminating paperwork and human intervention, reducing transaction costs and cycle time and also from streamlining and automating the audit trail and approval process. While the cost savings can be significant, Karim and Marosszeky (2023) argue that the total volume of purchases needs to be high, as well as the amount of internal customers, in order to reach savings as high as mentioned above.

Good past performance and experience of a bidder are both good evidence of successful projects, which in turn, results in strong financial capability. Resources and financial capability may be positively correlated (Rutembesa, 2024). Tender price may be negatively related to other criteria. Therefore, this study anticipated that efficient e-bidding systems are able to improve the prioritization of contractor and bidder selection criteria for the Civil Aviation Authority, as this study intended to find out.

2.2.3 The effect of e-sourcing on organisational performance

E-sourcing includes the process of identifying new suppliers for a specific category of purchasing requirements using internet technology. It can lead to identification of new suppliers, which can lead to increased competitiveness in the tendering process. It is also a way of decreasing the supply risk associated with a purchasing category (Ratnatunga & Lorenzo, 2024).

The procurement process encompasses several activities such as identification of service providers and solicitation of suppliers through e-sourcing (Karim & Marosszeky, 2023). To this end, according to Aberdeen Group (2020) by using e-sourcing, an organization can realize faster and more performance and procurement processes due to the fact that the system enables the buyer (requester) to search for and select products directly in electronic catalogues. In this case, the use of an e-sourcing system automates these activities which enable better operations of procurement activities in an efficient manner.

Research by Lorenzo (2020) also identifies that companies using e-sourcing gain additional control over maverick spending and can reduce the headcount supporting purchasing transactions. To support this Croom and Johnston (2023) found that e-sourcing can have a major impact on compliance on many different levels of the procurement process: it supports managerial budgetary control; reduces data entering failures; offers greater transparency and accessibility to corporate wide spending; improves system reliability; and improves the access to managerial information. The performance of suppliers substantially impacts on the efficiency and effectiveness of the buying firm and is of great importance (Fredriksson, 2021).

For example, Slack et al. (2021) argue that e-sourcing solutions also need to be able to cooperate with suppliers IT-infrastructure. For e-sourcing solution to be successful suppliers must be accessible through the Internet and provide catalogs to satisfy the needs of their customers. In some cases suppliers might lack the resources to meet the demands of customers in catalog developing and updating. Companies also need to develop mechanisms that provide the buyers with assurance that new suppliers meet the expectations and standards relating to supplier quality, service and delivery capabilities (Fredriksson, 2021). Recommendations stemming from the study included developing and integrating standardized e-sourcing process in the full e-procurement system. Unfortunately, the study relied on secondary data and was carried out in Ireland in a mixture of sectors; however, the current study was in Uganda with particular focus on UCAA-a public sector entity.

However, according to Kalakota and Robinson (2021) before the implementation of e-sourcing procurement system, a company must first clearly define the business problems. Furthermore, before an e-souring system can be deployed, a company must undergo thorough procurement process reengineering. Automating an existing sourcing process will only make matters worse (Kalakota & Robinson, 2021). Another common procurement issue is the timing of purchase. Just-in-time is a system of timing the purchases of consumables so as to keep inventory costs low. Just -in-time is commonly used by Japanese companies but widely adopted by many global manufacturers from the 1990s onwards. Typically a frame work agreement setting terms and price is created between a suppler and purchase, and specific orders are then called-off as required to e-invoicing, e-bidding and e-sourcing (Xiao & Proverbs, 2022).

Lewis and Roerich (2022) add that poor identification of needs and suppliers may lead to incorrect goods or services being sought or offered, resulting in additional time, effort and cost. This is true in line with the challenges faced at need identification stage of e-sourcing and disposal process in many public entities, which typically is characterized by lack preparation of estimates, defining purchasing needs in such a ways that can be met only by specific providers and sometimes estimates can be prepared after solicitation are requested. However, this phenomenon can be alleviated by undertaking extensive online research to identify potential suppliers through e-sourcing, identify or agree to the outcome and determine best purchasing option in terms of policy requirements, risk, cost and other management issues, preliminary cost-benefit analysis, (Benslimane, 2025). Batenburg (2023) compliments

that failure to identify needs through the process may lead to procurements that do not fully meet the need of the agency, potentially incurring wasted time, effort and cost or inefficiencies and sub-optimal assets being procured .

The proper description of the e-sourcing requirement is essential to beginning the procurement process. If done correctly, it avoids disappointments and waste of resources resulting from purchasing goods and services that fail to fulfill the purpose intended because of improperly prepared technical specifications or terms of reference (Lynch, 2024).

Lewis and Roerich (2023) add that poor identification of needs and suppliers may lead to incorrect goods or services being sought or offered, resulting in additional time, effort and cost. This is true in line with the challenges faced at need identification stage of procurement and disposal process of government services which typically is characterized by lack preparation of estimates, defining purchasing needs in such a way that can be met only by specific providers and sometimes estimates can be prepared after solicitation are requested (Xiao & Proverbs, 2022). However, this phenomenon can be alleviated by undertaking research to identify potential suppliers, identify or agree to the outcome and determine best purchasing option in terms of policy requirements, risk, cost and other management issues, preliminary cost-benefit analysis, (Benslimane, 2005). Batenburg (2022) compliments that failure to identify needs through the process may lead to procurements that do not fully meet the need of the agency, potentially incurring wasted time, effort and cost or inefficiencies and sub-optimal assets being procured.

Ratnatunga and Lorenzo (2020) found that decision making is an essential part of almost all human life. Both administrators and others must make real life decisions. Socio-economic, political, cultural and psychological factors should be taken into account in the solution of many decision problems.

In addition, (Xiao & Proverbs, 2022) stated that decision making is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. Making a decision implies that there are alternative choices to be considered, and in such a case we want not only to identify as many of these alternatives as possible but to choose the one that best fits with our goals, objectives, desires, values, and so on (Harris, 2020). Good decision making means that we are informed and that we have relevant and appropriate information on which to base our choices. The decision making process is directly related to information processing: how to collect information and analyze the gathered information.

According to Nordmeyer (2022), while selecting bidder selection on government agencies, e-procurement is a clearly recommended method as enshrined in the country's public procurement legislations. In south Africa, e-procurement is not only a method applied in government agencies to reach logical decisions in decision making but has been adapted by many multinational companies in the country (Nordmeyer, 2022).

While CAA is a government parastatal expected to conform to the requirements of the Public Procurement and Disposal regulations in bidder selection and decision making,

the results prove otherwise, the CAA as the agency seems not to be adhering to the provisions of effective decision making to obtain appropriate decision bidders.

Decision making is an everyday activity (Mahdi, Riley, Fereig & Alex, 2022). Decision-making involves gathering, interpreting and assessing information, formulating and judging alternatives and choosing a course of action that will fulfill a certain objective as closely as possible. Of course, decision-making is not solely an individual activity, but also occurs at group level. Mahdi et al. (2022) collaborative Decision Making (CDM) is about multiple parties working together as a team, about distributing tasks, reconciling conflicting goals, sharing resources and negotiating behaviours between parties.

According to Eddie, Cheng and Heng (2024), the term "evaluation" describes the procedure for the assessment of tender bids submitted by prequalified contractors. The procedures broadly follow the concepts outlined in guidance notes of The Institution of Civil Engineers, which are concerned with the justification of the lowest priced bid (Zulus & Chileshe, 2020). Several clients however also emphasize the significance of timely completion in the selection of the successful tenderer.

Eddie et al. (2024) suggests preparing a suitable bid list jointly between the engineer and the client. This should include contractors who have previously prequalified. A review of such prequalification records should satisfy both the engineer and the client in that each bidder should have: the financial strength to sustain the cash.

2.3 Chapter Summary and Research Gaps

This review highlighted the important contribution of e-procurement on organisational performance in organisations. However, the review depicted several glaring research gaps. For instance, some of the previous studies were carried out in other countries and contexts rather than Uganda and not at UCAA; also, other previous studies used either qualitative or quantitative methods yet the current study intends to use mixed research methods and approaches. Additionally, some previous studies relied on secondary data and yet the current study intended to rely on primary data but to also observe the trend of the secondary data at UCAA. Furthermore, the population samples, research designs and content in previous study clearly differ from the ones in the current study which include a cross sectional research design with UCAA as a case study, focusing on e-invoicing, e-biding and e-sourcing. Therefore due to such theoretical gaps and other methodological, contextual and theoretical research gaps warranted this current study in order to contribute more to the body of knowledge in terms of methodology, literature and findings in the current study.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

A research methodology refers to 'procedures that are applied in the process of implementing a research plan to resolve a research problem' (Baxter, Susan Jack & Jack, 2024:428). This chapter presented the research design, area of study, the population, sample size, sampling techniques, data collection methods, quality control, procedure of data collection, data analysis and management, and ethical concerns.

3.1 Study Design

Kumar (2021:94) defines a research design as 'a procedural plan adopted by the researcher to answer questions vividly, objectively, accurately, and economically'. A research design provides a blueprint for the operationalization of a study. It sets the precondition for effective data collection, analysis, interpretation and presentation (Kauda, 2022). A research design or approach spans the entire process of conceptualization of a study problem, the development of research questions, data collection, analysis, writing the research report, and dissemination of the research findings (Creswell, 2024:31). A research design is also the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2020).

The study adopted a cross sectional research design incorporating both quantitative and qualitative approaches in data collection, analysis and presentation from a single case – UCAA. With a mixed methods approach, qualitative and quantitative methods of data collection allows for triangulation (Nsubuga & Katamba, 2013). The design

was preferred considering that the study involved collection of data from respondents at a single point in time to reduce on time and costs of the researcher (Amin, 2005). Qualitative approaches describe the situation as it exists in the field based on field responses which are reported in a narrative manner, for instance, paraphrasing and direct quotation of responses. Qualitative methods were used in interviewing the key informants-administrators at UCAA. On the other hand, quantitative approaches incorporated the use of quantitative parameters like correlations, standard deviations, regression analysis, frequency counts, means and percentages to describe the situation/data in the field (Mugenda, 2013).

For this study, the researcher was able to obtain the respondents attitudes, opinions and knowledge on the Impact of E-Government Procurement on organisational performance of UCAA. Under qualitative methods, the researcher used the interviews schedules to conduct face to face interviews with top level managers who served as key informants. Whereas under quantitative methods, the researcher used self-administered questionnaires (SAQs) with close-ended questions to collect data from the primary respondents.

3.2 Study area

The study was carried out at the UCAA offices located at Entebbe in Wakiso District. This is because of the geographical accessibility to the place for the researcher. This study site was selected because it's an operational area in public corporations and the introduction of E-Government Procurement in financial year of 2025/16 and phasing out of the manual procurement process to ease procurement activities thereby promoting efficiency and effectiveness of the department and the organization at

large. Besides, UCAA is one of the government agencies where the effective use of e-procurement mechanisms to realize organisational performance has come under critical public scrutiny, thus the area is expected to provide the relevant information by the study.

3.3 Information sources

According to Sekaran, and Bougie (2016), data source is the location where data that is being used come from and the data sources are either primary or secondary. For this study, both primary and secondary data sources were utilized for acquiring information relating to E-Government Procurement on organisational performance.

3.3.1 Primary data

Sekaran, and Bougie (2016) define primary data as information that gets gathered by the investigator employing tools like interviews, reviews or experiments bringing into existence new information. Primary data sources in this study included data from interviews, questionnaire and personal observations by the researcher.

3.3.2 Secondary data

Sekaran and Bougie (2016) defined secondary data as data which was previously brought into existence and published for example organizational records, data in government resource centers as well as any other data out there. Much of the secondary literature has contributed to the writing of chapters one and two, extracted from text books, journals, online articles, among other sources. However, more secondary data was obtained from already the existing information at UCAA from the procurement department reports, circulars, resolutions of meetings, newsletters,

brochure and compiled data to enrich this research. Secondary data complemented study findings gathered from primary data.

3.4 Population and sampling techniques

3.4.1 Population

Population is the entire group of people, events, or things that a researcher wishes to investigate (Creswell, 2024). To select a target population, one must operationalize the unit of interest features based on the research variables or qualitative experience, so that the study's conclusions may be appropriately inferred or transmitted back to the population of interest (Ackerman et al., 2022). This prompted the researcher to recognize each participant's eligibility for the study.

For collection of qualitative and quantitative data, the study targeted a population of 167 from which a sample size was drawn, including the following: administration (15); technical and engineering (45); field supervision (10); M&E (13); accounts and finance (15); upcountry airfields (20); Inventory (09); commercial and customer care (15); support staff (25) at UCAA.

Table 3.1: Population size for the study

	Category	**Population**
1	Administration	15
2	Technical and engineering	45
3	Accounts and finance	15
4	Field supervision	10
5	M&E	13
6	Upcountry air fields	20
7	Inventory	09
8	Commercial and customer care	15
9	Support staff	25
	Total	**167**

Source: Secondary Data 2024

3.4.2 Sample size sample selection

Sample size refers to a number of respondents selected to participate in the study by providing information (Sekaran, 2016). The study involved a sample size of 155 respondents in all. The study's participants were selected from a certain set of units including names of people, departments, job positions, organizational lists, and geographic units (Kollin et al., 2022). The nature of the sampling size was closely tied to the sampling technique. The study sample size was determined using Krejcie and Morgan (1970) sampling guidelines (Appendix A). The summary of the sample size selected from the study population is presented in table below.

Table 3.2: Sample size and sampling techniques

	Category	**Population**	**Sample size**	**Sampling technique**
1	Administration	15	14	Purposive sampling
2	Technical and engineering	45	40	Simple random sampling
3	Accounts and finance	15	14	Simple random sampling
4	Field supervision	10	10	Simple random sampling
5	M&E	13	12	Simple random sampling
6	Upcountry air fields	20	18	Simple random sampling
7	Inventory	09	09	Simple random sampling
8	Commercial and customer care	15	14	Simple random sampling
9	Support staff	25	24	Simple random sampling
	Total	**167**	**155**	**-**

3.4.3 Sampling Techniques and Procedures

A sampling technique is the procedure a researcher uses to gather people, places or things to study (Neuman, 2022). For this particular study, the researcher used both probability and non-probability random sampling techniques as explained hereunder:

Non-Probability sampling

This is where a researcher deliberately chooses elements that will or will not participate in the study. This implies that all elements of the population do not have equal chances of being selected to participate. Under this, the researcher used purposive sampling. Purposive Sampling is a kind of selection made by distinctiveness of a population and the main motives of the research and it's discriminating, or biased in nature (Creswell, 2016). This was employed to select the respondents from the administrators. Since these are charged with procurement policy development and implementation, technical reporting, supervision and human resource management, they have the perfect information about E-Government Procurement practices in the corporation.

Probability sampling

The researcher used simple random sampling on all the other categories which include: technical and engineering; field supervision; M&E; accounts and finance; Upcountry airfields; Inventory; commercial and customer care; support staff. These were selected randomly on basis of availability and willingness to participate in the study. The technique was considered because of its accuracy representation and time saving of when dealing with a relatively large population size as suggested by (Starman, 2013).

Sampling procedure

To arrive at the desired number of the quantitative sample size, the researcher applied non-probabilistic sampling technique. The researcher relied on the list of staff provided by the Director. The researcher placed pieces of paper in a pool of a basket, with the words *Participate* and *Not participate.* Employees were asked to pick a piece of paper from the basket at random, and a staff member who picked out a paper with the words *participate* were automatically and randomly included in the study sample, until the desired sample size was reached. Meanwhile, those who picked out the piece of paper with the words *not participate* were excluded from the study.

3.5 Variables and Indicators

There are different classifications of variables for example; these may be a dependent variable (DV) or an independent variable (IV). Creswell, (2024), asserts that a variable is a measurable characteristic that assumes different values among the subjects. The study already has the independent variable which is 'E-Government Procurement' as indicated by: E-Invoicing [Data retrieval, invoice authentication], E-Bidding [Online advertising, and e-sourcing]. On the other hand, 'Organisational performance is the dependent variable and it is broadly represented by: market share, financial performance and customer satisfaction. These variables with the respective indicators were provided for in the data collection tools.

3.6 Measurement levels

Measurement variables are, as the name implies, things you can measure. Nominal and ordinal types of measurements were used to measure the variables for this study. A four interval Likert Scale was used to measure the questionnaires specifically for

respondents. Data on key variables in the questionnaire was measured on ordinal and interval scales of 5 levels on the Likert Scale (strongly agree, agree, not decided, disagree, and strongly disagree). Categorization of the elements being measured and ranking them into the same order shall be done using ordinal scale.

Amin (2005) concludes that the numbers in the ordinal scale represent relative position or order among the variables. The application of nominal scale of measurement shall be on cases which have some common characteristics such as sex, marital status, and age among others. Number codes were assigned only for the purpose of identification but shall not be used for comparison of variables to be measured. For qualitative data, narrative techniques of direct quotation and paraphrasing of responses were used to facilitate comparison across different themes. Some of the reported statements by key informants were quoted verbatim and indented.

3.7 Data Collection Instruments / Tools

3.7.1 Structured Interview schedule

The Interviews schedules aided data collection through face to face interviews with the administrators and the researcher took notes during the sessions. The researcher opted for interviews because they are cheaper and allow for probing. In keeping with the qualitative approach, the interview guides were made up of open-ended questions.

3.7.2 Self-Administered Questionnaires

Walliman (2024) describes a questionnaire as a method in which a number of either written open or close ended questions utilized to gather information with help of questionnaire forms as an information gathering tool. These had sets of related

questions designed to collect data from respondents. According to Nsubuga, (2013), questionnaires offer a lot of confidentiality to the respondents and they save time since they are all about just answering questions with short answers. The self – administered questionnaires were used to collect quantitative data from the: M&E; accounts and finance; up county air fields; Inventory; commercial and customer care; support staff.

3.8 Quality/ Error Control

3.8.1 Validity

Validity was tested to find out whether the questions are capable of capturing the intended data (Vogt, 2020). The study supervisors as experts in research reviewed and rated the questions to see whether they are capable of capturing the intended response. A Content Validity Index (CVI) was calculated in order to establish the validity of the research instrument (Saunders, et al, 2023). The researcher used the following formula to establish validity of the research instruments as seen below;

$$\text{Content validity Index (CVI)} = \frac{\text{Relevant items by all judges as suitable}}{\text{Total number of items judged.}}$$

$$51/52 = 0.98$$

Since the CVI was equal to 0.98, greater than the recommended 0.70, (Kent, 2021), this implied that the questionnaire is valid for data collection.

3.8.2 Reliability of Instruments

Reliability of the questionnaire instrument was assessed using Cronbach's coefficient alpha (Sekaran & Bougie, 2020). A pilot study was carried out on employees of similar capacity in another organization to determine the reliability of the research

tools. The reliability results were computed using the Statistical Package for the Social Sciences (SPSS). Since the coefficient is equal to 0.913, above the recommended. 70 (Amin, 2005), it implies that the questionnaire was suitable for data collection to produce reliable findings.

Reliability Statistics

Cronbach's Alpha	N of Items
.913	52

3.9 Data Collection Procedure

Upon the approval of the research proposal and the research instruments by an interdisciplinary panel of supervisors and peers from the university and the Research Ethics Committee (REC), in case deemed necessary, the University issued an introductory letter to the student which was used to approach the respective authorities including to allow for data collection.

Once given a go ahead by such authority, the researcher recruited and trained team of research assistants (3) who are familiar with English, Luganda and any other applicable language to help her with sensitization of the respondents (the purpose of the study, its significance and the instructions on how to answer the tools) as well as issuance of the questionnaires and retrieval.

The Researcher in person met with the: relevant office of administration at UCAA to identify herself, ask for permission, sensitize the authorities about the study, locate

and approach respondents who participated in the study for purposes of seeking their consent and setting schedules for the interviews. On the appointed dates of interview sessions, the researcher ensured to meet the interviewees at the agreed time and place, during the interviews, the researcher took notes which provided qualitative data.

3.10 Strategy for data processing, Analysis and Interpretation.

A number of closely related operations which are performed with the purpose of summarizing the collected data and organizing these in such a manner that they answer researcher questions (Saunders, 2020) data were analyzed using both qualitative and quantitative techniques.

3.10.1 Quantitative Data Analysis

Analysis of quantitative data involved use of the statistical package for social scientists (SPSS), which is a statistical tool for analyzing quantitative data. Each objective and its findings were analyzed to show percentages of acceptance on each objective in the questionnaire in form of strongly agree, agree, disagree, and strongly disagree. Pearson correlation was used to test the relationships between the variables. Regression analysis was also carried out to understand and determine which factor (among the independent variables, and background characteristics of the respondent) contributes to a change (if any), in the dependent variable. The findings were presented in form of summary tables, frequency distributions, standard deviations, and percentages where necessary (Kombo & Tromp, 2022). This helped the researcher to derive meaningful description and distribution of scores. For purposes of establishing the relationship between variables, the Pearson correlation co-efficient was used for example: Correlation analyses was done to establish the relationship

between E-Government Procurement practices on Organisational Performance of UCAA. Regression analysis was used to determine which factor of the independent variable contributes more or less to any change/s in the dependent variable.

3.10.2 Qualitative data

For qualitative data analysis, the thematic content analysis technique was used. This involved grouping common themes together, naming themes, and transcribing from voices to words (Sekaran, 2021). Since qualitative data analysis was intended to expose or disclose developing themes, understanding, concepts and patterns, the regular methods of qualitative data analysis consisted of and inductive thematic synthesis (Hawkins, 2024). In this way, code identification of themes into the data was used (Strudsholm et al, 2016). Qualitative data analysis also involved thematic and content analysis based on how the findings are related to the research objectives **(**Kumar, 2021). Thematic analysis was used to organize data into themes. After data collection, information of the same category was assembled, and their similarity with the quantitative data was created, after which a report was written. Qualitative data was interpreted by composing explanations or descriptions from the information. The qualitative data was illustrated, substantiated and presented through direct quotation/verbatim, paraphrasing and narrative description of findings. Research findings from the interviews were interpreted; conclusions and recommendations were made guided by the objectives.

3.11 Methodological constraints

UCAA being a busy place, the personnel may not have enough time to answer all the questions thus the questionnaires were made short and precise and the interviews were made to the point.

Difficulty in acquiring inadequate information from respondents; this was as a result of the respondents not being conversant with the questions that were administered. However, the researcher went through administered questionnaires before finally picking them and checked completeness so as to get adequate information.

3.12 Ethical considerations

a) Ethical consideration

Ethical clearance was sought from UCU Ethical Review Committee and REC. The researcher also sought and obtained permission from the respective authorities as indicated under the 'data collection procedure' section of this document.

b) Informed consent

Verbal consent was sought from the respondents seeking their participation in the study whereas oral consent was sought from the key informants of the study. Additionally, the respondents and participants were also informed that participation in the study is voluntary and they had a right to accept or decline to participate or withdraw from the study anytime.

c) Protecting participant confidentiality

Each respondent record was given a unique ID number. Data identifying individuals' subjects was restricted to those involved in the study. Names and other identifying

information from subjects were obtained for quality assurances purposes only and no individual was identified by and study report.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND ANALYSIS OF FINDINGS

4.0 Introduction

This chapter presents the findings of the study, interpretation and analysis and it was done in line with the research objectives. The study aimed at investigating the effect of E-procurement on organisational performance in UCAA. The study findings were presented in line with the following research questions;

i) To assess the effect of e-invoicing on organizational performance.

ii) To assess the effect of e-Bidding on the organizational performance.

iii) To assess the effect of e-sourcing on organisational performance

Response rate

Response rates show participants that were involved in the study. These included technical and engineering employees, field supervisors, M&E workers, accounts and finance workers, upcountry airfields workers, Inventory workers commercial and customer care workers and support staff workers at UCAA who were particularly given questionnaires and administrative workers who were interviewed as explained and shown in the table below. According to Sekaran (2021), poor response rates reduce sample size and consequently precision. This is a potential source of bias lessening the confidence with which findings can be accepted and generalized. Therefore, the response rates are presented in the study below.

Table 4.1 Response rate

Category	Population	Sample size	Response rate	Percentage of Response rate
Administration	15	14	14	100
Technical and engineering	45	40	40	100
Accounts and finance	15	14	14	100
Field supervision	10	10	10	100
M&E	13	12	12	100
Upcountry air fields	20	18	18	100
Inventory	09	09	09	100
Commercial and customer care	15	14	14	100
Support staff	25	24	24	100
Total	**167**	**155**	**155**	**-**

In this study, the total population of all respondents who participated in the study included; technical and engineering workers, field supervisors, M&E workers, accounts and finance workers, upcountry airfields workers, Inventory workers, commercial customer care workers, support staff workers and administrative workers. This helped to determine the sample size of each category of respondents. In this regard all 100% of the respondents participated in the study because they believed that their information would be treated with utmost confidentiality hence participating courageously. In addition, 100% of the administrative workers were involved in an interview.

4.1 Demographic characteristics of respondents

Section A of the questionnaire sought for data on the respondents' background. This was intended to gauge whether data collected was authentic. Data collected included the quantified demographic characteristics of respondents such as; Age, Gender, level

of education, marital status, position of respondents, Department of the respondents and length of service were measured in term of majority.

4.1.1 Respondents by Age

Respondents were requested to indicate their ages. This was aimed at enabling the researcher to describe the age of the respondents which could also affect their performance in Uganda Civil Aviation Authority. In this study, age of respondents was categorized into four categorizes namely; 18-30 years, 31-40 years, 41-50 years and 51 and above.

Table 4.2: Respondents by age

Age	**Frequency**	**Percent**
18-30 years	22	14.2
31- 40 years	71	45.8
41 -50 years	53	34.2
51 years and above	9	5.8
Total	**155**	**100**

Source: Primary data 2025

In the Table 4.2 above, the majority of the respondents indicated the age bracket of 31- 40 years with frequencies scoring 45.8%, followed by those respondents in age bracket of 41 -50 years with frequencies scoring 34.2%, 18-30 years got 14.2% and these of age bracket 51 years plus were 5.8%. The implications of these findings are that more staff members are still in their prime years and would mean that they are able to work hard for their organization. Being in productive years, it also meant that they were able to grasp and adapt to the trend of e-procurement and be able to positively impact on organisation performance at UCAA.

4.1.2 Gender of respondents

Respondents were asked to indicate their gender. This was intended to ensure proportionate representation of both male and the female members. Data collected was thus presented in Table below:

Table 4.3: Distribution of respondents according to gender

Gender	Frequency	Percentage
Male	87	56.1
Female	68	43.9
Total	**155**	**100.0**

Source: Primary data 2025

Table 4.3 indicates that male respondents formed the majority (87 or 56.1%) of the respondents while the female were only 68 (43.9%). The fact that the majority (87 or 56.1%) of the respondents were male, is in line with UBOS (2020) the national employment structure that shows that there are more males than females in formal employment sectors such as UCAA. However, all respondents provided relevant information regardless of gender. Besides, it also implied that they could easily adapt to the use of e-procurement to positively influence organisation performance because the trend is that more than females are becoming technology savvy than females in Uganda, due to several social-economic factors.

4.1.3 Respondents according to academic qualification

Respondents were asked to indicate their highest level of academic qualification. The academic qualifications of members were deemed important in the study as there is a significant relationship between academic qualifications and organisational performance in an organization. Respondents were therefore asked to indicate their

education levels in the questionnaire given to them during the field work and results were summarized in table below.

Table 4.4: Respondents according to academic qualification

Qualification	Frequency	Percent
Diploma	23	14.8
Degree holder	125	80.6
Masters	5	3.2
Other	2	1.3
Total	**155**	**100.0**

Source: Primary data 2025

Table 4.4 revealed that the majority of the respondents who participated in the study, 80.6% of the respondents with 125 frequencies were degree holders. Also 14.8% of the respondents with 23 frequencies were diploma holders, 3.2% of the respondents with 5 frequencies were Masters Holders while 1.3% were of other qualifications. This implies that most members are qualified employees since the survey under taken indicated that in order to work as an employee of the UCAA you must possesses at least a certificate in the respective field. Therefore, this is in consonance with what is prevailing in Uganda today were the minimum qualification of any employee in an organization like a UCAA is a certificate. Since e-procurement is more associated with those who understand modern technology, these findings implied that most of the respondents could properly understand the intricacies demanded in e-procurement processes, such as being technologically trained in order to work and impact positively on organisation performance at UCCA.

4.1.4 Respondents by marital status

The respondents were requested to indicate their marital status. This was aimed at enabling the researcher describe the employees' marital states which could also affect their performance in UCAA. It was presented as single, married and others. Data on the marital status was presented in Table 4.5.

Table 4.5: Respondents by marital status

marital status	Frequency	Percentage
Single	21	13.5
Married	115	74.2
Other	19	12.3
Total	**155**	**100.0**

Source: Primary data 2025

Table 4.5 indicates that married UCAA members formed the majority (115 or 74.2%) of the respondents, followed by singles who were 21(13.5%) while 19(12.3%) were of other categories of marital status such as windowed and divorced. Since the majorities (115 or 74.2%) of the respondents were married, implies that they do get fewer interruptions at the work place and this explains the reasons as to why they are more committed than their other counterparts. This implied that most of the respondents were mature and responsible enough to traverse the intricacies of e-procurement processes, and thus be able to contribute positively to organisation performance at UCAA.

4.1.5 Respondents according to working experience

The respondents were requested to indicate their years of working experience. This was aimed at helping the researcher to describe the experience of the UCAA members

which could affect their performance. It was presented as 1-3 years, 4-6 years, 7-9 years and 10 years plus. Data collected was thus presented in Table 4.6.

Table 4.6: Respondents according to working experience

Length of service	Frequency	Percentage
1-3 years	22	14.2
4-6 years	48	31.0
7-9 years	71	45.8
10 year and above	14	9.0
Total	**155**	**100.0**

Source: Primary data 2025

Table 4.6 indicates that the respondents with 1-3 years working experience were 22(14.2%), the respondents in the category of 4-6 years of working experience were 48 (31.0 %), respondents in the category of 7-9 years were 71(45.8 %) and in the category of 10 years plus were 14 (9.0 %) of the total respondents. This implies that the majority of the respondents were between the categories of 7-9 years. However, according to the data obtained, the majority of the staff had been working for over four years indicates that they have enough experience which placed them in a better position to provide reliable findings on e-procurement and organisation performance at UCAA.

Having obtained the background information about respondents, the study proceeded to ask and obtain information on specific objectives, which findings were recorded, summarized and presented as follow.

4.2 Research Objective One: To assess the effect of e-invoicing on organizational performance

The first objective of the study was to assess how e-invoicing affect organizational performance. It deals with the analysis of the data. Specifically, the data analysis was in line with specific objectives of e-invoicing where patterns were investigated, interpreted and implications drawn on them. This represents the empirical findings and results of the application of the variables using descriptive, qualitative and quantitative research designs.

Table 4.7: Findings on E-invoicing

Item of e-invoicing	Rating	F	P (%)	Cum Perc (%)	Mean	Std. Deviation
e-Invoicing has improved the efficiency of invoice processing in our organization.	**SD**	2	1.3	5.8	4.3806	.86243
	D	7	4.5			
	NS	6	3.9	3.9		
	A	55	35.5			
	SA	85	54.8	90.3		
e-invoicing has reduced the time required for invoice approval and payment.	**SD**	3	1.9	12.5	4.4903	.80878
	D	4	2.6			
	NS	1	.6	0.6		
	A	53	34.2			
	SA	94	60.6	94.8		
e-invoicing has increased the accuracy of invoice data entry and reduced errors.	**SD**	8	5.2	20.7	3.8000	1.19196
	D	24	15.5			
	NS	8	5.2	5.2		
	A	66	42.6			
	SA	49	31.6	74.2		
e-invoicing has improved the	**SD**	18	11.6	27.7	3.5290	1.34023

overall financial performance of our organization.	**D** **NS** **A** **SA**	25 9 63 40	16.1 5.8 40.6 25.8	 5.8 66.4		
e-invoicing has enhanced the transparency and visibility of invoice-related information.	**SD** **D** **NS** **A** **SA**	4 11 6 77 57	2.6 7.1 3.9 49.7 36.8	9.7 3.9 86.5	4.1097	.95732
e-invoicing has positively impacted our organization's relationships with suppliers.	**SD** **D** **NS** **A** **SA**	5 9 5 75 61	3.2 5.8 3.2 48.4 39.4	9.0 3.2 87.8	4.1484	.96560
e-invoicing has increased the speed of invoice dispute resolution.	**SD** **D** **NS** **A** **SA**	8 11 8 69 59	5.2 7.1 5.2 44.5 38.1	12.3 5.2 82.6	4.0323	1.08962
e-invoicing has improved the availability of real-time financial data for decision-making.	**SD** **D** **NS** **A** **SA**	16 18 8 60 53	10.3 11.6 5.2 38.7 34.2	21.9 5.2 72.9	3.7484	1.31719
e-invoicing has reduced the costs associated with invoice processing and management.	**SD** **D** **NS** **A** **SA**	5 16 3 75 56	3.2 10.3 1.9 48.4 36.1	13.5 1.9 84.5	4.0387	1.04374
e-invoicing has improved the	**SD**	9	5.8	18.1	3.8968	1.19073

overall satisfaction of employees involved in invoice processing	**D**	19	12.3			
	NS	7	4.5	4.5		
	A	64	41.3			
	SA	56	36.1	77.4		

Source: Primary data 2025

Table 4.7 above shows that when respondents were asked to state whether e-invoicing has improved the efficiency of invoice processing in their organization, the finding indicated that there was low level of standard deviation of 0.86243 which was below 2 that led to high level of mean of 4.3806 which was above 4 indicating appositive result. This implied that e-invoicing has improved the efficiency of invoice processing in their organization.

On whether e-invoicing has reduced the time required for invoice approval and payment, the finding revealed low level of standard deviation of 0.80878 which was below 2 that led to high level of mean of 4.4903 which was above 4 indicating appositive result. This implied that e-invoicing has reduced the time required for invoice approval and payment.

This resonates well with qualitative information obtained through interviews with key informants, where it was gathered that decisions made in e-invoicing systems and procedure differ substantially from those made by individuals, and this is why UCAA introduced e-procurement. What was less clear, however, was how decision quality differ e-procurement and manual procurement processes groups and individuals at UCAA. But judging from the findings in quantitative data, one official stated that procurement systems guarantee accuracy in decision making, certainty of selection

criteria and decision outcomes. This meant that the adoption of e-procurement in UCAA could positively impact on the overall efficiency in decision making and selection procedures.

On whether e-invoicing has increased the accuracy of invoice data entry and reduced errors, the finding indicated low level of standard deviation of 1.19196 which was below 2 that led to high level of mean of 3.8000 which was below 4 indicating a relatively positive result. This implied that e-invoicing has increased the accuracy of invoice data entry and reduced errors.

On whether e-invoicing has improved the overall financial performance of their organization, the finding revealed low level of standard deviation of 1.34023 which was below 2 that led to high level of mean of 3.5290 which was below 4 indicating a relatively positive result. This implies that e-invoicing has improved the overall financial performance of their organization.

This compares well with qualitative data obtained from key informants, where one of them said that, the presence of a well-developed group e-invoicing systems, often achieved through healthy levels of selection criteria, typically results in preferable outcomes, while groupthink can lead to harmonizing and premature consensus.

On whether e-invoicing has enhanced the transparency and visibility of invoice-related information, the finding indicated low level of standard deviation of 0.95732 which was below 2 that led to high level of mean of 4.1097 which was above 4

indicating a positive result. This implies that e-invoicing has enhanced the transparency and visibility of invoice-related information.

To improve transparency, qualitative data obtained during interviews revealed that there is need to sensitize and popularize the e-invoicing structure: maintaining a diversity of interesting and challenging tasks, suitable group size (the larger the group, the harder it usually is to manage group dynamics), the presence of sufficient talent amongst group members, and authentic norms governing group behavior.

Another manager noted that where these organizations supportive contexts involve reward systems that reward performance and cooperation (e.g. group-based rewards linked to group performance), a development framework that enhances group member skills, and adequate resources in terms of data and information on the various bidders to reach a logical decision in selection of the best bidder for UCAA.

On whether e-invoicing has positively impacted their organization's relationships with suppliers, the finding indicated low level of standard deviation of 0.96560 which was below 2 that led to high level of mean of 4.1484 which was above 4 indicating a positive result. This implies that e-invoicing has positively impacted their organization's relationships with suppliers.

Good relationships with suppliers are a key ingredient of organisational performance in e-procurement. For instance, delegating key decision making to groups, teams, or committees occurs often within UCAA was unanimously agreed upon by almost all the key informants during interviews. Decisions made in groups will differ

substantively, often dramatically, then decisions rendered by individuals. But this is about the extent to which researchers agree on comparative decision outcomes between individuals and groups.

When respondents were asked to state whether e-invoicing has increased the speed of invoice dispute resolution, the finding indicated low level of standard deviation of 1.08962 which was below 2 that led to high level of mean of 4.0323 which was above 4 indicating a positive result. This implies that e-invoicing has increased the speed of invoice dispute resolution.

On whether e-invoicing has improved the availability of real-time financial data for decision-making, the finding revealed low level of standard deviation of 1.31719 which was below 2 that led to high level of mean of 3.7484 which was below 4 indicating a relatively positive result. This implies that e-invoicing has improved the availability of real-time financial data for decision-making.

This was in line with the qualitative findings during interviews with administrative staff who acknowledged that, e-invoicing play a large role in determining the overall effectiveness of decision making. However there are opportunities for group dynamics to both positively and/or negatively influence group decision outcomes. The social nature of groups and the process of sharing information lead to synergies, such that group performance exceeds the potential performance of its most able member. Synergy prompts groups to quickly identify areas of disagreement among group members and encourages dissent. Encouraging dissent might seem like a

negative consequence of the group process, however it is can be constructive and tends to create conditions where more robust and complex decisions are made.

On whether e-invoicing has reduced the costs associated with invoice processing and management, the finding indicated low level of standard deviation of 1.04374 which was below 2 that led to high level of mean of 4.0387 which was above 4 indicating a positive result. This implied that e-invoicing has reduced the costs associated with invoice processing and management.

On whether e-invoicing has improved the overall satisfaction of employees involved in invoice processing, the finding revealed low level of standard deviation of 1.19073 which was below 2 that led to high level of mean of 3.8968 which was below 4 indicating a relatively positive result. This implies that e-invoicing has improved the overall satisfaction of employees involved in invoice processing.

One manager acknowledged during interview, that the presence of a well-developed group synergy, often achieved through healthy levels of dissent, typically results in preferable outcomes, while groupthink can lead to harmonizing and premature consensus. However, dissent also as a major preventative measure in combating groupthink, certainly one of the largest threats posed by group dynamics. Unlike dissent, groupthink is borne out of group's desire to harmonize. Harmony leads to premature consensus within the group and normally forces decision making without a thorough and logical examination of alternatives that might otherwise be raised in an environment of controlled dissent.

Testing Hypothesis One: E-invoicing negatively affects organizational performance

Table 4.8: showing relationship between e-invoicing and performance in the organisation

Correlations

		Performance	E-invoicing
Performance	Pearson Correlation	1	.796**
	Sig. (2-tailed)		.000
	N	155	155
E-invoicing	Pearson Correlation	.796**	1
	Sig. (2-tailed)	.000	
	N	155	155

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

Table 4.8 above indicated that Pearson's correlation co-efficient for e-invoicing and organisational performance in UCAA was found to be r .796**. This indicated a significant positive correlation. The significant value (P = 0.000) which is less that the alpha value 0.05 suggests that e-invoicing was positively related to organisational performance in UCAA at the 5% level of significance. By implication therefore, there was high contribution of **e**-invoicing towards organisational performance in UCAA.

Regression model between -invoicing and organisational performance in UCAA

A regression analysis was conducted to measure the extent to which e-invoicing relate with organisational performance in UCAA using the standardized beta values, t-values and significance measures at 0.05 level. The results of tabulation are presented in tables.

Table 4.9: showing regression model between e-invoicing and organisational performance in UCAA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.247	2.788		5.110	.000
	e-invoicing	1.114	.068	.796	16.285	.000

a. Dependent Variable: organisational performance

The regression model in table above shows that e-invoicing had (Sig=.000), less than 0.05, hence indicating that it is statistically a significant result. For e-invoicing it means that putting effort in applying e-invoicing through different ways could increase the organisational performance in UCAA. However, since the Beta coefficient is high (.796), it means that e-invoicing is the most significant factor in determining the organisational performance in UCAA. The results also show that e-invoicing were among the factors contributing to the organisational performance in UCAA (Sig=.000).

Table above further show that the co-efficient for Beta show that contribution for e-invoicing was positive (.796) indicating that for each 1-unit increase in applying e-invoicing will lead .796 units increase in organisational performance in UCAA.

The B (1.114) Coefficients implies that a 1.114 unit increase in applying of e-invoicing will lead to 1.114 unit increase in the organisational performance in UCAA.

The t- value which is 16.285 with a sig. value of .000 less than the alpha value 0.05 indicates that the means between e-invoicing and organisational performance in UCAA are statistically significantly different. This implies that a statistically

significant difference was found between e-invoicing and organisational performance in UCAA. However, the difference is not large enough to be practically significant implying that the e-invoicing among the selected strategies can be treated normal.

The B= 1.114, t = 16.285 and significance 0.000 suggested that e-invoicing is a strong significant predictor of increasing the organisational performance in UCAA. However, a sig. value of .000 indicates a significant relationship which is not strong. This implies that e-invoicing is not the only factor determining the organisational performance in UCAA.

4.3 Objective Two: To assess the effect of e-Bidding on the organizational performance

The second objective of the study was to assess the effect of e-Bidding on the organizational performance. it dealt with the analysis of the data. Specifically, the data analysis was in line with specific objectives of effect of e-Bidding where patterns were investigated, interpreted and implications drawn on them. This represented the empirical findings and results of the application of the variables using descriptive, qualitative and quantitative research designs.

Table 4.10: Findings on effect of e-Bidding on organisation performance

Item of effect of e-Bidding	Rating	F	P (%)	Cum Perc (%)	Mean	Std. Deviation
e-bidding has enhanced the efficiency of our organization's procurement process.	**SD** **D** **NS** **A**	7 16 6 77	4.5 10.3 3.9 49.7	14.8 3.9 	3.9355	1.08519

	SA	49	31.6	81.3		
e-bidding has improved the transparency of procurement activities within our organization.	**SD** **D** **NS** **A** **SA**	24 41 8 43 39	15.5 26.5 5.2 27.7 25.2	42.0 5.2 52.9	3.2065	1.46250
e-bidding has increased the competitiveness of our organization in the marketplace.	**SD** **D** **NS** **A** **SA**	21 38 10 49 37	13.5 24.5 6.5 31.6 23.9	38.0 6.5 55.5	3.2774	1.41208
e-bidding has improved the accuracy of bid evaluations and vendor selection.	**SD** **D** **NS** **A** **SA**	13 31 4 47 60	8.4 20.0 2.6 30.3 38.7	28.4 2.6 69.0	3.7097	1.37684
e-bidding has reduced the overall procurement costs for our organization.	**SD** **D** **NS** **A** **SA**	17 28 5 52 53	11.0 18.1 3.2 33.5 34.2	29.1 3.2 67.7	3.6194	1.39699
e-bidding has facilitated better communication and collaboration between our organization and suppliers.	**SD** **D** **NS** **A** **SA**	19 28 4 65 39	12.3 18.1 2.6 41.9 25.2	30.4 2.6 67.1	3.4968	1.36455
e-bidding has improved the speed of procurement decision-making within our organization.	**SD** **D** **NS** **A**	12 24 6 68	7.7 15.5 3.9 43.9	23.2 3.9	3.7097	1.25340

	SA	45	29.0	72.9		
e-bidding has increased the accessibility of procurement opportunities for a wider range of suppliers.	**SD** **D** **NS** **A** **SA**	14 15 1 30 95	9.0 9.7 0.6 19.4 61.3	18.7 0.6 80.7	4.1419	1.34569
e-bidding has positively influenced our organization's overall financial performance.	**SD** **D** **NS** **A** **SA**	16 7 1 31 100	10.3 4.5 0.6 20.0 64.5	14.8 0.6 84.5	4.2387	1.30972
e-bidding has improved the quality and reliability of goods and services procured by our organization.	**SD** **D** **NS** **A** **SA**	22 29 4 54 46	14.2 18.7 2.6 34.8 29.7	32.9 2.6 64.5	3.4710	1.44289

Source: Primary data 2025

Table 4.10 above shows that when respondents were asked to state whether e-bidding has enhanced the efficiency of their organization's procurement process, the finding indicated low level of standard deviation of 1.08519 which was below 2 that led to high level of mean of 3.9355 which was below 4 indicating a relatively positive result. This implies that e-bidding has enhanced the efficiency of their organization's procurement process.

This concurred with qualitative findings obtained during interviews, it was found that, when forming a consideration for decision making on a bidder selection at ACAA, technical feature, technology, competence, experience and financial capacity were significant attributes to affect the decision on bidder selection. In making further

preferred choices from the consideration set after a test, however, quality, the attribute added, and technical feature played significant roles in affecting the decision. No significant difference in the quality of a consideration set, which was evaluated by the number of quality services within a consideration set.

On whether e-bidding has improved the transparency of procurement activities within their organization, the finding revealed low level of standard deviation of 1.46250 which was below 2 that led to high level of mean of 3.2065 which was below 4 indicating a relatively positive result. This implies that e-bidding has improved the transparency of procurement activities within their organization.

On whether e-bidding has increased the competitiveness of their organization in the marketplace, the finding revealed low level of standard deviation of 1.41208 which was below 2 that led to high level of mean of 3.2774 which was below 4 indicating a relatively positive result. This implies that e-bidding has increased the competitiveness of their organization in the marketplace.

On whether e-bidding has improved the accuracy of bid evaluations and vendor selection, the finding revealed low level of standard deviation of 1.37684 which was below 2 that led to high level of mean of 3.7097 which was below 4 indicating a relatively positive result. This implies that e-bidding has improved the accuracy of bid evaluations and vendor selection.

One manager stated during interviews that, the available information and information quality will positively influence accuracy and quality of service provided by a selected bidder in that the selection panel is able to evaluate the various bidders

against individual information and reach a logical conclusion on the most appropriate bidder.

On whether e-bidding has reduced the overall procurement costs for their organization, the finding indicated low level of standard deviation of 1.39699 which was below 2 that led to high level of mean of 3.6194 which was below 4 indicating a relatively positive result. This implies that e-bidding has reduced the overall procurement costs for their organization.

On whether e-bidding has facilitated better communication and collaboration between their organization and suppliers, the finding revealed low level of standard deviation of 1.36455 which was below 2 that led to high level of mean of 3.4968 which was below 4 indicating a relatively positive result. This implies that e-bidding has facilitated better communication and collaboration between their organization and suppliers.

On whether e-bidding has improved the speed of procurement decision-making within their organization, the finding revealed low level of standard deviation of 1.25340 which was below 2 that led to high level of mean of 3.7097 which was below 4 indicating a relatively positive result. This implies that e-bidding has improved the speed of procurement decision-making within their organization.

On whether e-bidding has increased the accessibility of procurement opportunities for a wider range of suppliers, the finding revealed low level of standard deviation of 1.34569 which was below 2 that led to high level of mean of 4.1419 which was above

4 indicating a positive result. This implies that e-bidding has increased the accessibility of procurement opportunities for a wider range of suppliers.

On whether e-bidding has positively influenced their organization's overall financial performance, the finding revealed low level of standard deviation of 1.30972 which was below 2 that led to high level of mean of 4.2387 which was above 4 indicating a positive result. This implies that e-bidding has positively influenced their organization's overall financial performance.

On whether e-bidding has improved the quality and reliability of goods and services procured by their organization, the finding revealed low level of standard deviation of 1.44289 which was below 2 that led to high level of mean of 3.4710 which was below 4 indicating a relatively positive result. This implies that e-bidding has improved the quality and reliability of goods and services procured by their organization.

This resonates well with qualitative data obtained during interviews, that, technology used during e-bidding processes influences negatively on competitiveness, in such a way that the less advanced in technology the bidder is, the less competitiveness he is and quality of service, but positively on responsiveness, which will positively influence stakeholder’s satisfaction.

Testing Hypothesis Two: E-Bidding negatively affects organizational performance

Correlation analysis between e-invoicing and performance in the organisation

Correlation analysis between e-bidding and performance in the organisation

Table 4.11: showing relationship between e-bidding and performance in the organisation

Correlations

		Performance	E-bidding
Performance	Pearson Correlation	1	.670**
	Sig. (2-tailed)		.000
	N	155	155
E-bidding	Pearson Correlation	.670**	1
	Sig. (2-tailed)	.000	
	N	155	155

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

Table 4.11 above indicated that Pearson's correlation co-efficient for e-bidding and organisational performance in UCAA was found to be r .670**. This indicated a significant positive correlation positive correlation. The significant value (P = 0.000) which is less that the alpha value 0.05 suggests that e-bidding was positively related to organisational performance in UCAA at the 5% level of significance. By implication therefore, there was high contribution of e-bidding towards organisational performance in UCAA.

Regression model between e-bidding and organisational performance in UCAA

A regression analysis was conducted to measure the extent to which e-bidding relate with organisational performance in UCAA using the standardized beta values, t-values and significance measures at 0.05 level. The results of tabulation are presented in tables.

Table 4.12: showing regression model between e-bidding and organisational performance in UCAA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29.295	2.720		10.768	.000
	e-bidding	.807	.072	.670	11.173	.000

a. Dependent Variable: organisational performance

The regression model in table above shows that e-bidding had (Sig=.000), less than 0.05, hence indicating that it is statistically a significant result. For e-bidding it means that putting effort in applying e-bidding through different ways could increase the organisational performance in UCAA. However, since the Beta coefficient is high (.670), it means that e-bidding is the most significant factor in determining the organisational performance in UCAA. The results also show that e-bidding were among the factors contributing to the organisational performance in UCAA (Sig=.000).

Table above further show that the co-efficient for Beta show that contribution for e-bidding was positive (.670) indicating that for each 1-unit increase in applying e-bidding will lead .670 units increase in organisational performance in UCAA.

The B (.807) Coefficients implies that a .807 unit increase in applying of e-bidding will lead to .807unit increase in the organisational performance in UCAA.

The t- value which is 11.173 with a sig. value of .000 less than the alpha value 0.05 indicates that the means between e-bidding and organisational performance in UCAA are statistically significantly different. This implies that a statistically significant

difference was found between e-bidding and organisational performance in UCAA. However, the difference is not large enough to be practically significant implying that the e-bidding among the selected strategies can be treated normal.

The B= .807, t = 11.173 and significance 0.000 suggested that e-bidding is a strong significant predictor of increasing the organisational performance in UCAA. However, a sig. value of .000 indicates a significant relationship which is not strong. This implies that ee-bidding is not the only factor determining the organisational performance in UCAA.

4.4 Research objective Three: To assess the effect of e-sourcing on organisational performance

The third objective of the study was to assess the effect of e-sourcing on organisational performance. It dealt with the analysis of the data. Specifically, the data analysis was in line with specific objectives of e-sourcing where patterns were investigated, interpreted and implications drawn on them. This represented the empirical findings and results of the application of the variables using descriptive, qualitative and quantitative research designs.

Table 4.13: Findings on effect of e-sourcing

Item of effect of e-sourcing	Rating	F	P (%)	Cum Perc (%)	Mean	Std. Deviation
e-sourcing has enhanced the efficiency of our organization's procurement process.	**SD**	5	3.2	10.9	4.4774	1.06500
	D	12	7.7			
	NS	2	1.3	1.3		
	A	21	13.5			
	SA	115	74.2	87.7		

e-sourcing has improved the transparency of procurement activities within our organization.	**SD** **D** **NS** **A** **SA**	6 20 7 80 42	3.9 12.9 4.5 51.6 27.1	16.8 4.5 78.7	3.8516	1.07988
e-sourcing has increased the competitiveness of our organization in the marketplace.	**SD** **D** **NS** **A** **SA**	8 36 10 52 49	5.2 23.2 6.5 33.5 31.6	28.4 6.5 65.1	3.6323	1.28437
e-sourcing has improved the accuracy of bid evaluations and vendor selection.	**SD** **D** **NS** **A** **SA**	19 35 7 40 54	12.3 22.6 4.5 25.8 34.8	34.9 4.5 60.6	3.4839	1.46542
e-sourcing has reduced the overall procurement costs for our organization.	**SD** **D** **NS** **A** **SA**	5 14 7 69 60	3.2 9.0 4.5 44.5 38.7	12.2 4.5 75.2	4.0645	1.04246
e-sourcing has facilitated better communication and collaboration between our organization and suppliers.	**SD** **D** **NS** **A** **SA**	7 21 6 72 49	4.5 13.5 3.9 46.5 31.6	12.8 3.9 78.1	3.8710	1.13795
e-sourcing has improved the speed of procurement decision-making within our organization.	**SD** **D** **NS** **A** **SA**	16 28 4 65 42	10.3 18.1 2.6 41.9 27.1	28.4 2.6 69.0	3.5742	1.33362

e-sourcing has increased the accessibility of procurement opportunities for a wider range of suppliers.	**SD** **D** **NS** **A** **SA**	4 12 2 56 81	2.6 7.7 1.3 36.1 52.3	10.3 1.3 88.4	4.2774	1.00347
e-sourcing has positively influenced our organization's overall financial performance.	**SD** **D** **NS** **A** **SA**	14 10 2 12 117	9.0 6.5 1.3 7.7 75.5	14.5 1.3 83.2	4.3419	1.31642
e-sourcing has improved the quality and reliability of goods and services procured by our organization.	**SD** **D** **NS** **A** **SA**	6 14 6 29 100	3.9 9.0 3.9 18.7 64.5	12.9 3.9 83.2	4.3097	1.14284

Source: Primary data 2025

The findings in table above show that when respondents were asked to state whether e-sourcing has enhanced the efficiency of their organization's procurement process, the finding indicated low level of standard deviation of 1.06500 which was below 2 that led to high level of mean of 4.4774 which was above 4 indicating a positive result. This implies that e-sourcing has enhanced the efficiency of their organization's procurement process.

One manager was quoted during interviews, stating that;

> *e-sourcing not only worked to improve the speed with which suppliers are sourced and contracted … time used to be a major complaint among stakeholders… e-sourcing is trying to silence those critics …*

This implies that indeed, e-sourcing is impacting positively by reducing time lags during procurement processes and service delivery, thus improving efficiency.

On whether e-sourcing has improved the transparency of procurement activities within their organization, the finding revealed low level of standard deviation of 1.07988 which was below 2 that led to high level of mean of 3.8516 which was below 4 indicating a relatively positive result. This implies that e-sourcing has improved the transparency of procurement activities within their organization.

On whether e-sourcing has increased the competitiveness of their organization in the marketplace, the finding revealed low level of standard deviation of 1.28437 which was below 2 that led to high level of mean of 3.6323 which was below 4 indicating a relatively positive result. This implies that e-sourcing has increased the competitiveness of their organization in the marketplace.

On whether e-sourcing has improved the accuracy of bid evaluations and vendor selection, the finding revealed low level of standard deviation of 1.46542 which was below 2 that led to high level of mean of 3.4839 which was below 4 indicating a relatively positive result. This implies that e-sourcing has improved the accuracy of bid evaluations and vendor selection.

On whether e-sourcing has reduced the overall procurement costs for their organization, the finding revealed low level of standard deviation of 1.04246 which was below 2 that led to high level of mean of 4.0645 which was above 4 indicating a

relatively positive result. This implies that e-sourcing has reduced the overall procurement costs for their organization.

One official expressed his satisfaction thus;

> *Unlike physical bidding processes that demand furnishing a lot of physical stationary like papers, forms and many documents, e-sourcing has eliminated such costs. With a data base where such online submissions are kept, costs on physical, physical storage facilities, approval meetings and the logistical support required thereto, are all minimized…*

This implies that e-sourcing has helped to eliminate certain costs that come with physical bidding, thus being an effective alternative which helps to save financial and material costs.

On whether e-sourcing has facilitated better communication and collaboration between their organization and suppliers, the finding revealed low level of standard deviation of 1.13795 which was below 2 that led to high level of mean of 3.8710 which was below 4 indicating a relatively positive result. This implies that e-sourcing has facilitated better communication and collaboration between their organization and suppliers.

On whether e-sourcing has improved the speed of procurement decision-making within their organization, the finding revealed low level of standard deviation of 1.33362 which was below 2 that led to high level of mean of 3.5742 which was below 4 indicating a relatively positive result. This implies that e-sourcing has improved the speed of procurement decision-making within their organization.

On whether e-sourcing has increased the accessibility of procurement opportunities for a wider range of suppliers, the finding revealed low level of standard deviation of 1.00347 which was below 2 that led to high level of mean of 4.2774 which was above 4 indicating a positive result. This implies that e-sourcing has increased the accessibility of procurement opportunities for a wider range of suppliers.

On whether e-sourcing has positively influenced their organization's overall financial performance, the finding indicated low level of standard deviation of 1.31642 which was below 2 that led to high level of mean of 4.3419 which was above 4 indicating a positive result. This gave the implication that e-sourcing has positively influenced their organization's overall financial performance.

On whether the e-sourcing has improved the quality and reliability of goods and services procured by their organization, the finding indicated low level of standard deviation of 1.14284 which was below 2 that led to high level of mean of 4.3097 which was above 4 indicating a positive result. This implied that e-sourcing has improved the quality and reliability of goods and services procured by their organization.

Another manger stated thus;

> *e-sourcing comes with time saving, costs saving and unbiased bidder selection guarantees… there is improved satisfaction among us and the clients we engage with as well as the general public whom we serve… despite a few technological glitches and shortcomings here and there, there can be no*

backtracking on this key technological innovation in modern service delivery ...

This implies that e-sourcing has led to improved service delivery as well as wider stakeholder satisfaction. However, it also highlights the need for improvement which can be done through benchmarking, as suggested in the recommendations section of the next chapter.

Testing Hypothesis Three: E-sourcing negatively affects organisational performance

Correlation analysis between e-sourcing and performance in the organisation

Table 4.14: showing relationship between e-sourcing and performance in the organisation

Correlations

		Performance	**e-sourcing**
Performance	Pearson Correlation	1	.261**
	Sig. (2-tailed)		.001
	N	155	155
e-sourcing	Pearson Correlation	.261**	1
	Sig. (2-tailed)	.001	
	N	155	155

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

Table 4.14 above indicated that Pearson's correlation co-efficient for e-sourcing and organisational performance in UCAA was found to be r .261**. This indicated a weak though positive correlation. The significant value (P = 0.001) which is less that the alpha value 0.05 suggests that e-sourcing was positively related to organisational performance in UCAA at the 5% level of significance.

By implication therefore, there was high contribution of e-sourcing towards organisational performance in UCAA.

Regression model between e-sourcing and organisational performance in UCAA

A regression analysis was conducted to measure the extent to which e-sourcing relate with organisational performance in UCAA using the standardized beta values, t-values and significance measures at 0.05 level. The results of tabulation are presented in tables.

Table 4.15: showing regression model between e-sourcing and organisational performance in UCAA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	41.799	5.190		8.053	.000
	e-sourcing	.431	.129	.261	3.347	.001

a. Dependent Variable: organisational performance

The regression model in table above shows that e-sourcing had (Sig=.001), less than 0.05, hence indicating that it is statistically a significant result. For e-sourcing it means that putting effort in applying e-sourcing through different ways could increase the organisational performance in UCAA. However, since the Beta coefficient is low (.261), it means that e-sourcing is the least significant factor contributing to organisational performance in UCAA. The results also show that e-sourcing were among the factors positively contributing to the organisational performance in UCAA (Sig=.001, indicating that for each 1-unit increase in applying e-sourcing will lead .261 units increase in organisational performance in UCAA.

The B (.431) Coefficients implies that a .431 unit increase in applying of e-sourcing will lead to .431 unit increase in the organisational performance in UCAA.

The t- value which is 3.347 with a sig. value of .001 less than the alpha value 0.05 indicates that the means between e-sourcing and organisational performance in UCAA are statistically significantly different. This implies that a statistically significant difference was found between e-sourcing and organisational performance in UCAA. However, the difference is not large enough to be practically significant implying that the e-sourcing among the selected strategies can be treated normal.

The B= .431, t = 3.347 and significance 0.001 suggested that e-sourcing is a strong significant predictor of increasing the organisational performance in UCAA. However, a sig. value of .001 indicates a significant relationship which is not strong. This implies that e-sourcing is not the only factor determining the organisational performance in UCAA.

4.4 Organizational performance

Organizational performance was the dependent variable of the study. The elements that measured organizational performance were: attendance, participation and interest in work. This also dealt with the analysis of the data. Specifically, the data analysis was in line with specific objectives of workers' performance where patterns were investigated, interpreted and implications drawn on them. This represented the empirical findings and results of the application of the variables using descriptive, qualitative and quantitative research designs.

Table 4.16: Organizational performance

Item of organizational performance	Rating	F	P (%)	Cum Perc (%)	Mean	Std. Deviation
There is optimal efficiency and effectiveness within our organization	**SD**	6	3.9	13.6	4.1161	1.10462
	D	15	9.7			
	NS	5	3.2	3.2		
	A	58	37.4			
	SA	71	45.8	83.2		
There is transparency of procurement activities within our organization	**SD**	6	3.9	9.7	4.1290	1.00460
	D	9	5.8			
	NS	6	3.9	3.9		
	A	72	46.5			
	SA	62	40.0	86.5		
There is high competitiveness of our organization in the marketplace	**SD**	10	6.5	13.0	4.0903	1.12451
	D	10	6.5			
	NS	1	0.6	0.6		
	A	69	44.5			
	SA	65	41.9	86.4		
There is accuracy of bid evaluations and vendor selection	**SD**	3	1.9	7.7	4.2323	.90324
	D	9	5.8			
	NS	4	2.6	2.6		
	A	72	46.5			
	SA	67	43.2	89.7		
There is a reduction in the overall operational costs for our organization	**SD**	10	6.5	17.5	3.9290	1.18491
	D	17	11.0			
	NS	3	1.9	1.9		
	A	69	44.5			
	SA	56	36.1	80.6		
There is better	**SD**	8	5.2	14.2	3.8710	1.15494

communication and collaboration between our organization and suppliers	**D**	14	9.0			
	NS	24	15.5	15.5		
	A	53	34.2			
	SA	56	36.1	70.3		
There is optimal speed of service delivery within our organisation	**SD**	9	5.8	11.6	4.0452	1.07112
	D	9	5.8			
	NS	4	2.6	2.6		
	A	77	49.7			
	SA	56	36.1	85.8		
There is easy accessibility of procurement opportunities for a wider range of suppliers	**SD**	1	0.6	9.0	4.2968	.96143
	D	13	8.4			
	NS	10	6.5	6.5		
	A	46	29.7			
	SA	85	54.8	84.5		
There is an optimal financial performance within our organisation	**SD**	9	5.8	19.3	3.8258	1.17412
	D	21	13.5			
	NS	5	3.2	3.2		
	A	73	47.1			
	SA	47	30.3	77.4		
There is quality and reliability of goods and services procured by our organization	**SD**	29	18.7	47.1	3.0903	1.49618
	D	44	28.4			
	NS	1	0.6	0.6		
	A	46	29.7			
	SA	35	22.6	52.3		
There is better decision-making within our organization.	**SD**	14	9.0	18.0	3.8194	1.20858
	D	14	9.0			
	NS	3	1.9	1.9		
	A	79	51.0			
	SA	45	29.0	80.0		
There is high public trust	**SD**	27	17.4	36.8	3.2581	1.44527

within our organisation	**D**	30	19.4			
	NS	9	5.8	5.8		
	A	54	34.8			
	SA	35	22.6	57.4		
There is less tendencies of influence peddling within our organisation	**SD**	14	9.0	16.1	3.8903	1.23566
	D	11	7.1			
	NS	10	6.5	6.5		
	A	63	40.6			
	SA	57	36.8	77.4		
our organisation observes the highest standards of integrity	**SD**	6	3.9	9.1	4.2968	1.02040
	D	8	5.2			
	NS	4	2.6	12.6		
	A	53	34.2			
	SA	84	54.2	88.4		
There is high prospects for expansion of our organisation	**SD**	7	4.5	13.5	4.0968	1.10356
	D	14	9.0			
	NS	3	1.9	1.9		
	A	64	41.3			
	SA	67	43.2	84.5		

Source: Primary data 2025

Table 4.16 above shows that when the respondents were asked to state whether there is optimal efficiency and effectiveness within their organization, the finding indicated low level of standard deviation of 1.10462 which was below 2 that led to high level of mean of 4.1161 which was above 4 indicating a positive result. This implies that there is optimal efficiency and effectiveness within their organization.

On whether there is transparency of procurement activities within their organization, the finding revealed low level of standard deviation of 1.00460 which was below 2

that led to high level of mean of 4.1290 which was above 4 indicating a positive result. This implies that there is transparency of procurement activities within their organization.

On whether there is high competitiveness of their organization in the marketplace, the finding indicated low level of standard deviation of 1.12451 which was below 2 that led to high level of mean of 4.0903 which was above 4 indicating a positive result. This implied there is high competitiveness of their organization in the marketplace.

On whether there is accuracy of bid evaluations and vendor selection, the finding revealed low level of standard deviation of 0.90324 which was below 2 that led to high level of mean of 4.2323 which was above 4 indicating a positive result. This implies that there is accuracy of bid evaluations and vendor selection.

On whether there is a reduction in the overall operational costs for their organization, the finding indicated low level of standard deviation of 1.18491 which was below 2 that led to high level of mean of 3.9290 which was below 4 indicating a relatively positive result. This implies that there is a reduction in the overall operational costs for their organization.

On whether there is better communication and collaboration between their organization and suppliers, the finding indicated low level of standard deviation of 1.15494 which was below 2 that led to high level of mean of 3.8710 which was below 4 indicating a relatively positive result. This implies that there is better communication and collaboration between their organization and suppliers.

When respondents were asked to state whether there is optimal speed of service delivery within their organisation, the finding revealed low level of standard deviation of 1.07112 which was below 2 that led to high level of mean of 4.0452 which was above 4 indicating a positive result. This implies that there is optimal speed of service delivery within their organisation.

On whether there is easy accessibility of procurement opportunities for a wider range of suppliers, the finding revealed low level of standard deviation of 0.96143 which was below 2 that led to high level of mean of 4.2968 which was above 4 indicating a positive result. This implies that there is easy accessibility of procurement opportunities for a wider range of suppliers.

On whether there is an optimal financial performance within their organisation, the finding indicated low level of standard deviation of 1.17412 which was below 2 that led to high level of mean of 3.8258 which was below 4 indicating a relatively positive result. This implied that there is moderately an optimal financial performance within their organisation.

On whether there is quality and reliability of goods and services procured by their organization, the finding revealed low level of standard deviation of 1.49618 which was below 2 that led to high level of mean of 3.0903 which was below 4 indicating a relatively positive result. This implies that there is moderate quality and reliability of goods and services procured by their organization.

On whether there is better decision-making within their organization, the finding indicated low level of standard deviation of 1.20858 which was below 2 that led to high level of mean of 3.8194 which was below 4 indicating a relatively positive result This implies that there is good decision-making within their organization.

On whether there is high public trust within their organisation, the finding indicated low level of standard deviation of 1.44527 which was below 2 that led to high level of mean of 3.2581 which was below 4 indicating a relatively positive result. This implies that there is moderate public trust within their organisation.

On whether there are less tendencies of influence peddling within their organisation, the finding indicated low level of standard deviation of 1.23566 which was below 2 that led to high level of mean of 3.8903 which was below 4 indicating a relatively positive result. This implies that to a large extent there are tendencies of influence peddling within their organisation.

When respondents were asked to state whether their organisation observes the highest standards of integrity, the finding revealed low level of standard deviation of 1.02040 which was below 2 that led to high level of mean of 4.2968 which was above 4 indicating a positive result. This implies that their organisation observes the highest standards of integrity.

On whether there is high prospect for expansion of their organisation, the finding indicated low level of standard deviation of 1.10356 which was below 2 that led to high level of mean of 4.0968 which was above 4 indicating a positive result. This implies that there is high prospect for expansion of their organization.

During interviews, one official was quoted stating that;

> *e-procumbent has come with several benefits, such as time saving, costs saving and unbiased bidder selection guarantees… there is improved satisfaction among us and the clients we engage with as well as the general public whom we serve… despite a few technological glitches and shortcomings here and there, we cannot backtrack on this key technological innovation in modern service delivery …*

This suggests that e-sourcing has led to improved service delivery as well as wider stakeholder satisfaction. However, it also highlights the need for improvement which can be done through benchmarking, as suggested in the recommendations section. This implies that there are high prospects for expansion of their organisation, thus calling for strategic reforms, as presented in the recommendations chapter next hereto.

CHAPTER FIVE
DISCUSSION OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presented the discussion of major findings of the study, conclusions and the necessary recommendations. The study sought to investigate the effect of E-procurement on organisational performance in UCAA. The summary is done in line with the research questions and objectives of the study based on the output of the descriptive and inferential statistical analyses guided to test the research hypothesis of the study. Each recommendation traces directly to each conclusion

5.1 Discussion of the Findings

The discussion of findings was presented in line with the study objectives.

5.1.1 To assess the effect of e-invoicing on organizational performance

The study found that the significance value (P = 0.000) which is less than the alpha value 0.05 suggested that e-invoicing was related to organisational performance at the 5% level of significance. This means that there was good use of e-invoicing that could influence performance positively.

These findings concur with Hernandez-Ortega (2021) who found that an e-invoice enables a business to gather information pertaining to transactions and to transmit it through a network. The e-invoices enable the business to maintain business information throughout the supply chain and to enhance the authentication and non-repudiation of origin and receipt, confidentiality and privacy.

The findings are also in line with Croom and Johnston (2023) who found that e-bidding can have a major impact on compliance on many different levels of the

procurement process: it supports managerial budgetary control; reduces data entering failures; offers greater transparency and accessibility to corporate wide spending; improves system reliability; and improves the access to managerial information, thus impacting positively on overall financial performance of an organisation

These findings further agree with Mutunga and Makhamara (2020) who found that companies implementing e-invoicing need to clearly understand the purpose of launching such a system. It involves careful analysis about how e-procurement will affect a company and its strategy and in which area it will obtain financial and non-financial benefits. The drivers and problem factors behind adopting e-invoicing technologies vary between companies.

The findings concur with those of Presutti (2023), who found that e-procurement solutions cover three major procurement areas: procurement transactions, procurement management and market-making. Given the highly competitive environment due to factors such as globalization and technological advancements, it has become inevitable for companies to implement systems of doing things in a much more efficient, effective, easier and faster way. E-procurement is certainly a way of using the internet to achieve these objectives and its effect on the procurement department would be a good indicator of how other departments are being affected.

This was in agreement with Schapper (2024) view that the product must be environmentally harmonious, in the sense that its manufacture, use, or disposal will not negatively impact on the environment in line with the existing government law,

for example the use of energy should be moderate (-use of energy saving lighting systems).

This concurs with Yougsik (2021), who found that the relationship of the number of quality within a consideration set was significant with the consistency, but with the effectiveness and satisfaction of customers.

The study found that people often have a difficulty in selecting the best bidders because of many alternatives and multiple criteria that can cause conflicts in evaluating alternatives. This agrees with Zulus and Chileshe (2024) who found that the decision effectiveness in the consideration set, the AHP method, as well as the relationship between the consideration set and the AHP method, were investigated.

These findings resonate with Ratnatunga and Lorenzo (2020) who found that decision making is an essential part of almost all human life. Both administrators and others must make real life decisions. Socio-economic, political, cultural and psychological factors should be taken into account in the solution of many decision problems. In addition, (Xiao & Proverbs, 2022) stated that decision making is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. Making a decision implies that there are alternative choices to be considered, and in such a case we want not only to identify as many of these alternatives as possible but to choose the one that best fits with our goals, objectives, desires, values, and so on (Harris, 2020). Good decision making means that we are informed and that we have relevant and appropriate information on which to base our

choices. The decision making process is directly related to information processing: how to collect information and analyze the gathered information.

These findings confirm the position by the Ministry of Finance, Panning and Economi Developing (MFPED, 2024), that the adoption of Electronic Government Procurement (e-GP) is one of the most significant reforms in Public Procurement that is being undertaken by the government of Uganda to revolutionize government operations and consequently improve efficiency in the procurement function. As part of the reforms in public Procurement and Disposal management, PPDA in partnership with Ministry of Finance, Planning and Economic Development (MoFPED) and the National Information Technology Authority of Uganda (NITAU) and the Uganda Civil Aviation Authority– UCAA.

5.1.2 To assess the effect of e-bidding on the organizational performance

The study found that the significance value (P = 0.000) which is less than the alpha value 0.05 suggested that e-bidding was related to organisational performance at the 5% level of significance. This means that there was good use of e-bidding that could influence performance positively.

These findings concur with Hatush (2024) who found that successful companies using e-procurement solutions report savings of 42 percent in purchasing transactions costs. Another research by Croom and Johnston (2023) found that e-bidding implementation can have up to 75 % cost reduction in procurement process costs and 16 – 18 % reduction in purchasing price for indirect purchases.

The findings also resonate with Chan (2016) who found that the e-bidding process used should also determine the degree of involvement and relationship between the mother entity calling for bids and their potential clients, designers and other project participants in every stage of project process.

This finding also tallys with that of Quesada et al. (2010) who found that e-bidding technologies affect positively to company's procurement practices and procurement performance. Positive impact on procurement practices facilitates the development of operational tasks in the procurement function, which leads to continuous improving. As the operational tasks are performed more effectively the procurement performance is enhanced.

This concurs with Yougsik (2021), who found that the relationship of the number of quality within a consideration set was significant with the consistency, but with the effectiveness and satisfaction of customers.

Strategic Payment Services establishes policy regarding sales and use taxes and ensures their collection and remittance and Procurement Systems as the relationship between government laws and public. This was in line with Kpundeh (2024) strategic payment Services establishes policy regarding sales and use taxes and ensures their collection and remittance and Procurement Systems which is an interface between the government law and public procurement.

This was in agreement with Schapper (2024) view that the product must be environmentally harmonious, in the sense that its manufacture, use, or disposal will not negatively impact on the environment in line with the existing government law,

for example the use of energy should be moderate (-use of energy saving lighting systems).

This was in contention with Lysons and Gillingham (2023) view an efficient and effective public procurement system also ensures accountability through good record keeping, auditing, and transparent review procedures, among others due to the government law and public procurement.

This in agreement with Kpundeh (2024) who noted that it is a social purchasing actions have social implications, and public procurement can be used to drive the above social improvements- in addition to working conditions for publicly contracted construction workers, disabled access in public buildings, employment opportunities for marginalised groups due to the government law and public procurement.

This was in agreement with Hinson & McCue (2024) view argues that appropriate use of social clauses fits well with good procurement practice offering: consistency and transparency: the opportunity for the purchaser to identify need and convert this into a specification that each bidder has to deliver.

This was in line with Mahdi et al. (2022) who stated that decision making is an everyday activity, gathering, interpreting and assessing information, formulating and judging alternatives and choosing a course of action that will fulfill a certain objective as closely as possible. Of course, decision-making is not solely an individual activity, but also occurs at group level. Mahdi et al. (2022) collaborative Decision Making (CDM) is about multiple parties working together as a team, about distributing tasks,

reconciling conflicting goals, sharing resources and negotiating behaviours between parties.

According to Eddie, Cheng and Heng (2024), the term "evaluation" describes the procedure for the assessment of tender bids submitted by prequalified contractors. The procedures broadly follow the concepts outlined in guidance notes of The Institution of Civil Engineers, which are concerned with the justification of the lowest priced bid. Several clients however also emphasize the significance of timely completion in the selection of the successful tenderer. Eddie et al. (2024) suggests preparing a suitable bid list jointly between the engineer and the client. This should include contractors who have previously prequalified. A review of such prequalification records should satisfy both the engineer and the client in that each bidder should have: the financial strength to sustain the cash.

Indeed, as Branders (1997) found out, there are many potential areas of application of Electronic systems in the procurement cycle. The Asian countries like China, Malaysia, Singapore and India that are progressively using E- Procurement fiber are registering improvements in performance traits necessary for enhancing business generation for performance. However, the findings confirm those of Muffato and Payaro, 2024) who observed that in Uganda, despite significant recent increases in internet sales in many countries, total business-to-customer internet commerce is still low. Therefore, the adoption of electronic procurement systems in UCAA and Uganda in general must harness and be premised on technological capabilities (technological context), trading partner readiness (environmental context) and firm

size (organizational context). E- procurement mechanisms, processes and systems have been pivotal in the management of their organizations and these has enhanced performance of the organizations, thus calling for UCAA and other government agencies in Uganda to follow.

5.1.3. To assess the effect of e-sourcing on organisational performance

The study found that the significance value (P = 0.001) which is less than the alpha value 0.05 suggested that e-sourcing was related to organisational performance at the 5% level of significance. This means that there was good use of e-sourcing that could influence performance positively.

This finding is in line with Aberdeen Group (2020) who noted that by using e-sourcing, an organization can realize faster and more performance and procurement processes due to the fact that the system enables the buyer (requester) to search for and select products directly in electronic catalogues. In this case, the use of an e-sourcing system automates these activities which enable better operations of procurement activities in an efficient manner.

This finding resonates well with research by Lorenzo (2020) which also identified that companies using e-sourcing gain additional control over maverick spending and can reduce the headcount supporting purchasing transactions. To support this Croom and Johnston (2023) found that e-sourcing can have a major impact on compliance on many different levels of the procurement process: it supports managerial budgetary control; reduces data entering failures; offers greater transparency and accessibility to corporate wide spending; improves system reliability; and improves the access to

managerial information. The performance of suppliers substantially impacts on the efficiency and effectiveness of the buying firm and is of great importance.

This is total agreement with Kalakota and Robinson (2021) who guided that, before the implementation of e-sourcing procurement system, a company must first clearly define the business problems. Furthermore, before an e-souring system can be deployed, a company must undergo thorough procurement process reengineering.

Lewis and Roerich (2023) add that poor identification of needs and suppliers may lead to incorrect goods or services being sought or offered, resulting in additional time, effort and cost. This is true in line with the challenges faced at need identification stage of procurement and disposal process of Uganda Local Government service which typically is characterized by lack preparation of estimates, defining purchasing needs in such a way that can be met only by specific providers and sometimes estimates can be prepared after solicitation are requested.

The findings showed that standardization of documents as a benefit of government laws on public procurement whereby 80% of the respondents strongly agreed to it. This was in line with Arrowsmith (2023) finding, that standardization reduces the time and effort that vendors must spend in order to do business with a government activity. Some public procurement activities have developed standardized templates and documents that provide the public with easier access to information as well as making it simpler for vendors to do business with them.

This concurs with Hinson and McCue (2024) view that it is for an activity to generate complete information to the public, the less transparent that activity is. The use of

electronic data and word processing makes the maintenance of information integrity much easier.

These findings further concur with Larkin (2024) who found that equal access and opportunity. There should be no “insiders” when it comes to accessing public procurement information or the opportunity to do business with government. Competitive acquisitions should be “fair and open,” an expression that has long been a standard axiom for procurement professionals.

This was in line with World Bank (2023) that those who use the Act are not properly trained in procurement and disposal; and Information Communication Technology (ICT). Some are out rightly incompetent and therefore prone to procedural blunders that compromise the Act which leads to favoritism of some bidders.

This was in agreement with World Bank (2024) the local bidders do Shoddy and substandard work and Lack of adequate funds to cater for all budgeted activities that is Unpredictable cash releases;

Corruption of the participants especially the government officials whereby most of the respondents strongly agreed in table nine that it is a challenge of government law on public procurement thus it was in agreement with Hunja (2023). Corruption is brought about as a result of resistance to adhere to the procurement reforms by some stakeholders; uncertain economic changes that affect the implementation of some legal provisions.

This was in line with Hunja 2023) that some professionals are not doing a professional job and cannot be disciplined due to the weak government laws such as

the PPDA does not have the mandate to discipline these professionals other than recommending for disciplinary action by the appointing Authorities.

The findings agree with Rutembesa (2024) who found that the procurement method selection of public sector clients, are more stringent and well defined to eliminate any imprudent inclusion, or unlawful rejection of contractors. On the other hand private clients have greater flexibility in determining their qualification criteria than their public counterparts.

These findings concur with Xiao & Proverbs (2022) who identified three factors that affect the evaluation process. These factors are: (1) the level of experience, (2) the effort made by the decision-maker and (3) the quality of information, which may vary from one situation to another. Contractors should not be selected according to the lowest price, but it should be attributed to the highest weight.

According to Nordmeyer (2022), while selecting bidder selection on government agencies, e-procurement is a clearly recommended method as enshrined in the country's public procurement legislations. In south Africa, e-procurement is not only a method applied in government agencies to reach logical decisions in decision making but has been adapted by many multinational companies in the country (Nordmeyer, 2022).

While CAA is a government parastatal expected to conform to the requirements of the Public Procurement and Disposal regulations in bidder selection and decision making, the results prove otherwise, the CAA as the agency seems not to be adhering to the provisions of effective decision making to obtain appropriate decision bidders.

5.2 Conclusion of the findings

The conclusions of findings were presented in line with the study objectives.

The study concluded that there is a positive and significant relationship between e-invoicing and organisational performance where (r = .796**; sig. value .000<0.05) which indicates that the relationship is weak hence low contribution of e-invoicing to organisational performance in UCAA

The study concluded that there is a positive and significant relationship between e-bidding and organisational performance where (r = .670**; sig. value .000<0.05) which indicates that the relationship is weak hence low contribution of e-bidding to organisational performance in UCAA.

The study concluded that there is a positive and significant relationship between **e-**sourcing and organisational performance where (r = .261**; sig. value .001<0.05) which indicates that the relationship is weak hence low contribution of e-sourcing to organisational performance in UCAA.

5.3 Recommendations

This section provided the recommendation on the conclusions of the study based on the specific objectives.

The study recommends that there is a need to apply advanced, efficient and effective e-invoicing methods. The study recommended that there should be extensive and timely procurement policy planning in order to ensure that contract discharge period is adequate for proper completion of the contract, and that the bidding period provides for adequate preparation of the bids. UCAA should develop a good buyer – suppliers'

relationship, and to conduct due diligence taste to ensure the capacity of the supplier to bid is up to date. This shall ensure that procurement performance and project execution is with in the interest of both CAA and intended beneficiaries of the projects.

The study recommends that there is need to apply advanced, efficient and effective e-bidding methods. UCAA should carry out good budget planning and execution, for instance through preparing annual procurement plan based on approved budget, and supplementing revenue from central government with locally raised revenue from local service tax, license fees, fines, and user charge fees. This shall ensure effective and timely execution of projects and achieve high procurement performance.

The study recommends that there is need to apply advanced, efficient and effective e-sourcing methods, for example, by leveraging n modern ICT knowledge in procurement processes; thus is in line with the requirements of the TAM theoretical model which demands that users must first obtain prior knowledge in a technology, discern the relative advantage and accessibility of use before utilizing such a technology. All members of procurement committees should have specialized knowledge, skills and training to enable them undertake appropriate planning for the specific projects, most especially in ICT knowledge and skills to handle e-procurement processes; however, members of respective planning committees should for instance be professionals or knowledgeable in the respective procurement areas, e.g. medical professionals on the medical procurement committee, Engineers on construction and building procurement committees, and the like.

5.4 Areas for Further Research

To find lasting way out to ineffective e-procurement processes, the following topics are suggested for further research;

i) Relationship between government laws and performance of the organization.

ii) Effect of user-friendly technology on the organizational performance.

iii) Technology innovation training on performance of the organization.

5.5 New knowledge generated

The study established that besides e-procurement alone, a number of other factors were responsible for decision making though they were outside the scope of the study. These areas include quality control, training, motivation factors, competition and location. In an effort to determine the general effectiveness of methods of decision making in bidder selection, these areas form the basis for further research.

Further research may also be conducted on use of other methods such as Multi-Criteria Decision-Making (MCDM), Multi-Attribute Analysis (MAA), multi-attribute utility theory (MAUT), multiple regression (MR), cluster analysis (CA) in decision making on bidder selection. These methods require that users be trained in the relevant technology, in order to comply with the requirements of the TAM theoretical model which demands that users must first obtain prior knowledge in a technology, discern the relative advantage and accessibility of use before utilizing such a technology.

References

Agaba, E. and Shipman, N. (2020). *Public Procurement Reform in Developing Countries: The Kenyan Experience*. Boca Raton, FL: Academics Press.

Agyedu, G.O., Donkor, F. and Obeng, S. (2024). *Teach Yourself Research Methods*, University press, KNUST, Kumasi, Ghana, pp.95-103.

Alarcon, L.F. and Mourgues, C. (2022). Performance modeling for contractor selection. *Journal of Management in Engineering*, 18(2), 52–60.

Amin, M.E. (2005). *Social Science Research; Conception, Methodology and Analysis;* Makerere University, Kampala. (Eds.), Emotions at work: Theory, research and applications for management.

Anaya, R. (2024). *Mexico: Lessons Learned in Promoting Transparency. Published in: OECD (2024) Fighting Corruption and Promoting Integrity in Public Procurement.* Organisation for Economic Co-operation and Development, OECD Publishing.

Arrowsmith, S. (2023). *Government Procurement in the WTO*. The Haque/ London/New York: Kluver Law International.

Arrowsmith, S. and Kunzlik, P. (2022). *Social and Environmental Policies in EC Procurement Law*. Cambridge: Cambridge University Press.

Audet, D. (2021). Government Procurement: A Synthesis Report. *Organization of Economic Cooperation and Development Journal of Budgeting, 2 (3): 150.*

Auditor General's Report (2022). *Value for Money Report: Annual Year Report.* Volume 5, VFM, OAG, Kampala: Uganda.

Auditor General's Report (2024). *A report about to the Parliament of Uganda about the UCAA 2024-2024.* Auditor General, Kampala.

Barthelme and Advist (2023). *Critical Factors in Outsourcing of Accounting Functions in Malaysian Small Medium-Sized Enterprises* (SMEs). Kajian Malaysia, Vol. 28, No. 2, 2020.

Basheka, B. (2024). *Procurement Planning and Local Governance in Kenya: A Factor Analysis Approach.* Organisation: Kenya Management institute.

Bharati, P., & Chaudhury, A. (2024). An empirical investigation of decision-making satisfaction in web-based decision support systems. *Decision Support Systems, 37* (2), 187-197.

Bowen, P.A., Pearl, R.G. & Edwards, P.J. (2022). Client briefing process and procurement method selection: a South African study. *Journal of Engineering, Construction and Architectural Management, Vol.6, No.2, pp. 91-104.*

Brooks, J.S. and Normore, A.H. (2025). Qualitative research and educational leadership: Essential dynamics to consider when designing and conducting studies. *International Journal of Educational Management. 29(7):798–806.*

Budi, J. (2024). *Challenges in the management of procurement process within Kenya Rural Roads,* Unpublished MBA project, Nairobi: University of Nairobi.

Caridi, M., Cavalieri, S., Pirovano, C., & Diazzi, G. (2024). Assessing the impact of e-Procurement strategies through the use of business process modelling and simulation techniques. *Production Planning & Control*, *15*(7), 647-661.

Chartered Institute of Management Accountants, (CIMA, 2024). *Annual Report.* CIMA, Johannesburg, South Africa.

Civil Aviation Authority (CAA, 2010). Organisational Profile: Milestones and Future Prospects. CAA, Kampala: Uganda.

Cock and Slack (2006). Making management decisions. 5th edition. New Delhi: India.

Corina, P.S.2022). *Methods and techniques for controlling the performance of the NPR purchasing process.* North University of Baia Mare pg.124.

David Rae (2024). Procurement News. Procurement versus purchasing. *http://blog.procurement leaders.com.*

Davila, A. and Palmer, R. (2020). Moving Procurement Systems to the Internet: The Adoption and Use of E-Government Procurement Technology Models, *European Management Journal, and Vol. 21, pp. 11-23.*

Dedrick, J., Xin Xu, S., & Xiaogou Zhu, K (2024). *How does information technology shape procurement processes and performance in organisations*? Public Sector Management Reforms in Africa. Addis Ababa, Ethiopia.

Economic Commission of Africa (2023). *Public Sector Management Reforms in Africa.* Addis Ababa, Ethiopia.

Eddie, W. L. Cheng and Heng, L. (2024). Contractor selection using the analytic network process. *Journal of Construction Management and Economics* (December 2024) 22, 1021–1032. *The Hong Kong Polytechnic University, Hunghom, Kowloon, Hong Kong.*

Eisenhardt, K. M. (2022). Agency Theory: An Assessment and Review. *Academy of Management Review, 14(1), 57-74.*

Elliott, F. J. (2024). Procurement Reform in Sierra Leone: A Public Choice Model of Analysis. *Paper presented at the International Public procurement Conference, October 21-23, Fort Lauderdale, Florida, U.S.A.*

Gaventa, J. (2021). Introduction: Exploring Citizenship, Participation and Accountability. Institute of Development Studies. *IDS Bulletin Vol 33 No 2 2021*.

Hamner, M. and Qazi, R. (2022). Expanding the Technology Acceptance Model to Examine Personal Computing Technology Utilization in Government Agencies in Developing Countries, *Government Information Quarterly*, Vol. 26, pp. 128-136.

Harsh, J. (2020). Self-concept: The construct validity of interpretations based upon SDQ. *Journal of personality and social psychology. Volume 45*, (7) PP. 111-121.

Hinson, C., & McCue, C. P. (2024). *Planning, Scheduling & Requirement Analysis.* Herndon, VA: National Institute of Governmental Purchasing, Inc.

Hunja, R. (2023). Obstacles to Public Procurement Reforms in Developing Countries. Washington: World Bank Publication. *Independent Review Kenya (2024), Nairobi.*

Johnson, M. and Whang, S. (2024). E-Business and Supply Chain Management: An Overview and Framework. *Production and Operations Management*, Vol. 11 No. 4, pp. 413-23.

Kakinda, M.F. (2000). *Introduction to social research,* Kampala, Uganda: Makerere University.

Karim, K. and Marosszeky, M. (2023). Process monitoring for process re-engineering using key performance indicators. *International Conference on Construction Process Re-engineering CPR.09,* Sydney 12-13 July.

Kauda, J. (2022*).* Research Design. *In Research Methodology:* Project Guide for University students. Nairobi: University of Nairobi Press.

Kayode, F. (2025). *Management accounting*. Lagos: FB Ventures.

Knight, J. and Pollard, M. (2023). *E-commerce Survey of business: Information and Communication Technologies (ICT) adoption and usage*.

Kombo, D. K. and Trmp, D. L. (2016). *Proposal and thesis writing: An introduction*; Nairobi; Paulines publications Africa.

Koontz, H. & Keinz, W. (1998). *Management (11th ed.).* Singapore: McGraw-Hill Inc.

Kothari, C. (2020). *Research methodology.* Methods and techniques. New Delhi: New age international (p) limited publishers.

Kpundeh, S. (2024). *Process Interventions Versus Structural Reforms: Institutionalizing Anticorruption Reforms in Africa.* In: Levy, B. & Kpundeh, S. (Eds.) (2024). Building State Capacity in Africa. WBI Development Studies, World Bank Institute, Washington, USA.

Kremi, A. Oya, I. T. and Walter, O. R. (2024). *Outsourcing decision support: a survey of benefits, risks, and decision factors.* Operations Management Department, College of Business Administration, Cleveland State University, Cleveland, Ohio, USA.

Kumar, R. (2021). *Research methodology: A step-by-step guide for beginners.* 3rd ed. ed. Sage: New Delhi.

Laedre, O., Austeng, K., Haugen, T. & Klakegg, O. (2022). Procurement Routes in Public Building and Construction Projects. *Journal of Construction Engineering and Management, 132 (7), 689-696.*

Larkin, J. (2024). Dogfight Over Seoul. Far Eastern Economic Review. *[On-line]. Available: www.feer.com.*

Laws, S., Harper, C., and Marcus, R. (2021). *Research for Development: A Practical Guide.* Sage Publications: London.

Lei, Xu. D. Thresh K., K. Madan S., Devika, K., Gang, C. (2023). *Analyzing criteria and sub-criteria for the corporate social responsibility-based supplier selection process using AHP* . Palgrave, London, UK.

Lewis, M.A. and Roehrich, J.K. (2022). *Contracts, relationships and integration: Towards a model of the procurement of complex performance*. International Journal of Procurement Management, 2(2):125-142.

Lorenzo, G. (2020). E. Government procurement: the way to go for optimal performance among government agencies. *African Journal of Business Management (2020). Vol. 4(7), pp. 1274-1280, 4 July, 2020. Available online at http://www.academicjournals.org/ajbm. Academic Journals.*

Lysons, K. and Gillingham (2023). *Purchasing and Supply Chain Management*. (6th ed.). London: Pearson Education Limited.

Mahdi, A. (2022). *Decision Support and Executive Information Systems*. Prentice Hall Publishers, London: UK.

Mathonsi, M.D. and Thwala, W.D. (2022), Factors Influencing the Selection of Procurement Systems in the South African Construction Industry. Africa *Journal of Business Management, 6(10), 3583- 3594.*

Migai, A. (2024). *National and International Accountability Mechanism for Global Regulatory Governance*. Nairobi.

Muffato, M., and Payaro, A. (2024). Implementation of E-Government Procurement and fulfillment processes: A comparison of cases in the motorcycle industry. *International Journal of Production Economics, 89, 339-351.*

Mugenda and Mugenda (2024).Research Methods, Qualitative and Quantitative Approaches.

Mugenda, *O.M. and* Mugenda, *A.G. (*1999). Research Methods Quantitative and Qualitative Approaches. Acts Press, Nairobi.

Murray, J.G. (2023). *Strategic public Procurement in UK: The Role of Elected Members. Budapest: 12th International IPSERA Conference.*

Mutindi, M., Namusonge, S. and Obwogi, J. (2013). Effects of Strategic Management Drivers on Organizational Performance: A Survey of the Hotel Industry in Kenyan Coast. *International Journal of Arts and Commerce* Vol. 2 No. 11 December. Nairobi, Kenya: Applied Research and Training Services. ACTS Press.

Mutunga, J. M., and Makhamara, F. H. (2020). E-Invoicing and the Performance of Small and Medium Enterprises in Nairobi City County, Kenya. *Journal of Management, Vol. 7, Iss. 3, pp 1404 – 1415.*

Nagle, T., Finnegan, P. and Hayes, J. (2022). The Effects of Business-To-Business Relationships on Electronic Procurement Systems: An Exploratory Study, *Proceedings of the European Conference on Information System* (ECIS 2020), 7-9 June, St. Gallen.

Nakamura, D. (2024). *Untrained Staffers Blamed for Costing City Thousands.* Washington Post: p. B01.

National Service Delivery Survey Report 2024, Kithathi W. (2021*). Effect of strategic procurement in project implementation in world vision,* Unpublished MBA project, Nairobi: University of Nairobi.

Nordmeyer, J. (2022). Key performance indicators and assessment methods for infrastructure sustainability a South African. *Construction Industry Perspective Building and Environment* 42:665-680.

Nyabiage, J. and Kapchanga, K. (2024) *Thousands of jobs on the line as tens of firms shut down local units*. The Standard Digital, Sunday, October 12 72th.

O'donell, J.C., Timothy, J. and Colli, D.S. 2005). *An introduction to efficiency and productivity analysis*. Springer, UK: London.

OECD, (2023*). ICT and Economic growth, Evidence from OECD countries, industries and firms, OECD.*

Orori, J. M. (2021). *Factors that influence the introduction of eprocurement in retail industry; a survey of retail chain supermarkets in Kenya*. Unpublished dissertation. Jomo Kenyatta University of agriculture and technology.

Owere, B. (2021). *Organizational attributes and adoption of electronic procurement in local governments: a case study of Tororo district local government* (Doctoral dissertation, Kyambogo University).

Pandey, I. N. (1995). *Financial management.* India: New Print India Ltd.

Pandey, S. C. (2010). The Challenges of Contract/ Project Implementation. *Journal of Defence Studies. IDSA.* 4 (1) 65- 78.

Pires, G. and Stanton, J. 2005. A research framework for the electronic procurement adoption process: drawing from Australian evidence, *Journal of Global Business and Technology*, 1: 12-20.

Public Procurement Act, 2024 and Public Procurement Regulations, 2005 Government Print. Puschmann, and Alt, (2025). *Successful use of E-Government Procurement in supply chains.* Supply Chain Management. An International JournallO (2). pp.122-133.

Putters, M. (2025). Purchasing Intelligence – Dinsdag, NBC te Nieuwegein. *https://www.capgemini-consulting.com/blog/procurement-transformation-blog/2013/09/the-seven-strategies-for-future-procurement.*

Ratnatunga, J. & Lorenzo, M. (2020). Performance management Measures that Enhance organization Value: *A Review Academy of Management Journal*, 39, 836 -926.

Ratnatunga, J. & Lorenzo, M. (2024). Performance management Measures that Enhance organization Value: *A Review Academy of Management Journal*, 39, 836 -926.

Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2023). Measuring organizational supply chain structure? Evidence on the number of suppliers. *Journal of Management Information Systems*, 25(2), 41 – 72.

Rutembesa, A. (2024). Analytic Hierarchy Process as a Correlate of Effective Decision Making in Procurement Process: A Case of Uganda Civil Aviation Authority. Masters Dissertation, Ndejje University: Kampala, Uganda.

Saari, S. (2020). Productivity. *Theory and Measurement in Business*. Productivity Handbook (In Finnish). MIDO OY. pp. 272.

Sahel Investment Management International (2024). *Report on Public Procurement* (ITC Project GAM/95/07 for Public Procurement Reform in The Gambia). Banjul, Gambia: Author. A. Touray.

Schapper, P. (2024). The impact of e-procurement on corruption: The potential of e-procurement for curbing corruption risks. In: ADB/OECD (2024). Fighting Bribery in Public Procurement in Asia and the Pacific. *Proceedings of the 14th Regional Seminar on making international anti-corruption standards operational, Indonesia.*

Sekaran, U. (2021). *Research Methods for Business.* New York: John Wiley and Sons, Inc.

Sheng, M.L. (2024). *The impact of Internet-based technologies on the procurement strategy*, in proceedings of the 2nd International Conference on Electronic Commerce, Taipei, December 2024.

Snider, K. and Rendon, R. (2024). Public Procurement: Public Administration and Public Service Perspectives. *Journal of Public Affairs Education*. 718- 804.

Sounders, M. and Lewis, P. (2020). *Research Methods for Business Students*. Fourth Harlow, England. FT Prentice Hall, Pearson Education.

The PPDA Act No. 1 of 2023 and PPDA Regulations No. 70 of 2023, Kampala: Prime Concepts Investments Limited.

Tornatzky, L. G. and Fleischer, M. (2020). *The Process of Technology Innovation*. Lexington, MA: Lexington Books.

Tsiakis et al (2021). Design of supply chain in fuzzy environment. *Review Academy of Management Journal*, 39, 803 -911.

UNCITRAL Model Law on Procurement of Goods, Construction and Services (1994). Vienna, Austria. *United Nations International Conference on International Trade Law.*

Vladmir, P. (2024). Innovativeness, quality, growth, profitability and market value. *Strategic Management Journal.* New York.

World Bank (2023). *Guidelines, Procurement under IBRD Loans and IDA Credits.* Washington, DC.

World Bank (2024, June). *Capacity Building for Economic Management Project: Mission Aide Memoire (World Bank Mission report).* Banjul, Gambia: Author. H. Soh.

Xiao, H & Proverbs, D. G. (2022). The performance of contractors in Japan, the UK, and the US: *A comparative evaluation of construction cost construction management and economics, vol. 20* pp425-35.

Yen, Y. (2020). Mixed Methods Sampling: A Typology with Examples. Louisiana State University: Baton Rouge. *Journal of Mixed Methods Research*, 1(1), 77-100.

Zulus, G. & Chileshe, N. (2020). *The impact of service quality on project performance:* A case study of building maintenance service in Zambia in Proc. Hill, R & Bowen, Vikas, Lusaka.

APPENDICES

Appendix A: Sample Size Determination Table

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20130	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2013	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

“N” is population size

“S” is sample size.

Appendix B: Research Budget Estimates

S/N	Item	Description / Quality	Estimated Amount (Ug.shs)
1	Stationery	• 2 reams of ruled papers @ 10,000/= • 10 reams of photocopy papers @ 14,000/= • 1 dozen of pens @ 5000/= • 2 rulers @ 1000/= • 2 flask Disks @ 40,000/=	20,000/= 140,000/= 5000/= 2000/= 80,000/=
2	Computer services	• Typing @ 145,000/= • Printing @ 130,000/=	145,000/= 130,000/=
3	Photocopying services	• Photocopying 750 pages @ 50	37,500/=
4	Personnel	2 Field Assistants @ 50,000 per day for 10 days.	500,000/=
5	Transport	Travel expenses 30,000 per day for 20 days	600,000/=
6	Communication	Air time @ 50,000/=	50,000/=
7	Statistician	1,500, 000/=	1,500, 000/=
7	Binding	• Spiral 6 copies @ 2000/= • Hardcover 7 copies @ 15,000/=	12,000/= 105,000/=
8	Miscellaneous	200,000/=	200,000/=
		GRAND TOTAL	**3,526,500/=**

Appendix C: Research Work Plan

ACTIVITIES	NOV 2024	DEC 2024	JAN 2025	FEB 2025	MARCH 2025	APRIL 2025	MAY 2025	JUNE 2025	JULY 2025	AUG 2025	SEPT 2025
Problem identification by students and submission of topics											
Allocation of Research supervisors											
Proposal Development											
Proposal Defense											
Data collection and report writing											
Submission of dissertation draft											✓
Distribution of research books to examiners for marking											
Viva voce and Submission of research report											

Appendix D: Self-Administered Questionnaire

Dear respondent,

The researcher is a student carrying out a study on **EFFECT OF E-PROCUREMENT ON ORGANISATIONAL PERFORMANCE IN UCAA**. People like you are expected to have important information regarding this study. It is against this background that you have been randomly selected in the above entitled study leading to the award of a Master's Degree. Remember your responses will be used for academic purposes only and will be treated with utmost confidentiality. Fill it in and have it returned to the Researcher.

Thank you for your positive response.

Yours faithfully,

……

AKANNKUNDA SHEILA

Researcher

SECTION A: DEMOGRAPHIC DATA

Please in this section, you are required to tick (✔) the appropriate answer.

AI Age in years: (i) 18-30 ☐ (ii) 31- 40 ☐ (iii) 41 -50 ☐ (iv) 51- and above ☐

A2 Gender: (i) Male ☐ (ii) Female ☐

A3 Name of your Department……

A4 Position ……

A5 Qualification:

i) Diploma ☐ ii) Degree holder ☐ iii) Masters ☐

Any other …….. (specify)

A6 Marital Status:

(a) Single ☐ (b) Married ☐ (c) Any other …… (specify

A7 Length of service ……..

For all the following items in these sections, indicate your level of agreement or disagreement to the statements under each item; use the scale where; 1 = strongly Disagree, 2 = Disagree, 3 = Not Sure; 4 = Agree and 5= Strongly agree).

PART B: Items on Organisational Performance in UCAA

SN	Item on organisational performance in UCAA	SD	D	NS	A	SA
B1	There is optimal efficiency and effectiveness within our organization (attendance, participation and interest in work)					
B2	There is transparency of procurement activities within our organization					
B3	There is high competitiveness of our organization in the marketplace					
B4	There is accuracy of bid evaluations and vendor selection					
B5	There is a reduction in the overall operational costs for our organization					
B6	There is better communication and collaboration between our organization and suppliers					
B7	There is optimal speed of service delivery within our organisation					
B8	There is easy accessibility of procurement opportunities for a wider range of suppliers					
B9	There is an optimal financial performance within our organisation					
B10	There is quality and reliability of goods and services procured by our organization					
B11	There is better decision-making within our organization.					
B12	There is high public trust within our organisation					
B13	There is less tendencies of influence peddling within our organisation					

B14	Our organisation observes the highest standards of integrity					
B15	There is high prospects for expansion of our organisation					

PART C: E-INVOING

PART D: ITEMS ON E-BIDDING

SN	**Item on e-invoicing**	**SD**	**D**	**NS**	**A**	**SA**
C1	E-Invoicing has improved the efficiency of invoice processing in our organization.					
C2	E-Invoicing has reduced the time required for invoice approval and payment.					
C3	E-Invoicing has increased the accuracy of invoice data entry and reduced errors.					
C4	E-Invoicing has improved the overall financial performance of our organization.					
C5	E-Invoicing has enhanced the transparency and visibility of invoice-related information.					
C6	E-Invoicing has positively impacted our organization's relationships with suppliers.					
C7	E-Invoicing has increased the speed of invoice dispute resolution.					
C8	E-Invoicing has improved the availability of real-time financial data for decision-making.					
C9	E-Invoicing has reduced the costs associated with invoice processing and management.					
C10	E-Invoicing has improved the overall satisfaction of employees involved in invoice processing					

SECTION D: ITEM ON E-BIDDING

SN	Item on e-bidding	SD	D	NS	A	SA
D1	E-bidding has enhanced the efficiency of our organization's procurement process.					
D2	E-bidding has improved the transparency of procurement activities within our organization.					
D3	E-bidding has increased the competitiveness of our organization in the marketplace.					
D4	E-bidding has improved the accuracy of bid evaluations and vendor selection.					
D5	E-bidding has reduced the overall procurement costs for our organization.					
D6	E-bidding has facilitated better communication and collaboration between our organization and suppliers.					
D7	E-bidding has improved the speed of procurement decision-making within our organization.					
D8	E-bidding has increased the accessibility of procurement opportunities for a wider range of suppliers.					
D9	E-bidding has positively influenced our organization's overall financial performance.					
D10	E-bidding has improved the quality and reliability of goods and services procured by our organization.					

PART E: ITEMS ON E-SOURCING

SN	Item on e-sourcing	SD	D	NS	A	SA
E1	E-sourcing has enhanced the efficiency of our organization's procurement process.					
E2	E-sourcing has improved the transparency of procurement activities within our organization.					
E3	E-sourcing has increased the competitiveness of our organization in the marketplace.					
E4	E-sourcing has improved the accuracy of bid evaluations and vendor selection.					
E5	E-sourcing has reduced the overall procurement costs for our organization.					
E6	E-sourcing has facilitated better communication and collaboration between our organization and suppliers.					
E7	E-sourcing has improved the speed of procurement decision-making within our organization.					
E8	E-sourcing has increased the accessibility of procurement opportunities for a wider range of suppliers.					
E9	E-sourcing has positively influenced our organization's overall financial performance.					
E10	E-sourcing has improved the quality and reliability of goods and services procured by our organization.					

Thank you for your valuable time and information

Appendix E: Interview Guide

1. What are the features of e-procurement prevalent in UCAA?
2. What are the Key attributes of –organisational performance within UCAA?
3. Justify the need for e-procurement in relation to organisational performance in UCAA.
4. What is the effect of e-invoicing on organisation performance within UCAA?
5. What is the impact of e-bidding on organisation performance within UCAA?
6. What is the impact of e-sourcing on organisation performance within UCAA?
7. What challenges face / affect e-procurement processes in UCAA?
8. What can be done to improve organisational performance through e-procurement processes in UCAA?
9. Any other comment.

THANK YOU FOR YOUR VALUABLE TIME AND INFORMATION