**ST.MARY'S UNIVERSITY**
**SCHOOL OF GRADUATE STUDIES**
**MASTER OF BUSINESS ADMINISTRATION**

# THE EFFECT OF ELECTRONIC GOVERNMENT PROCUREMENT ON USERS SATISFACTION IN SELECTED SECTOR OFFICES OF THE FEDERAL GOVERNMENT OF ETHIOPIA

BY

SISAY MENILE
ID:-SGS/0168/2015A

**JUNE 2024**
**S.M.U**
**ADDIS ABABA, ETHIOPIA**

# THE EFFECT OF ELECTRONIC GOVERNMENT PROCUREMENT ON USERS SATISFACTION IN SELECTED SECTOR OFFICES OF THE FEDERAL GOVERNMENT OF ETHIOPIA

**SCHOOL OF POST GRAGUATE STUDIES**
**MASTERS OF BUSINESS ADMINSTRATION PROGRAM**

BY

SISAY MENILE

ID:-SGS/0168/2015A

**A THESIS SUBMITTED TO THE SCHOOL OF POST GRAGUATE ST MARY'S UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE MASTERS OF BUSINESS ADMINSTRATION PROGRAM**

ADVISOR: TEWODROS MEKONNEN (PhD)

**JUNE 2024**
**S.M.U**
**ADDIS ABABA, ETHIOPIA**

# THE EFFECT OF ELECTRONIC GOVERNMENT PROCUREMENT ON USERS SATISFACTION IN SELECTED SECTOR OFFICES OF THE FEDERAL GOVERNMENT OF ETHIOPIA

BY

SISAY MENILE

**APPROVED BY BOARD OF EXAMINERS**

| | |
|---|---|
| _____ | _____ |
| **Dean, Graduate Studies** | **Signature** |
| _____ | _____ |
| **Advisor** | **Signature** |
| _____ | _____ |
| **External Examiner** | **Signature** |
| _____ | _____ |
| **Internal Examiner** | **Signature** |

# ACKNOWLEDGMENT

I am incredibly appreciative of everyone's assistance I am at a loss for words. I would first and foremost like to sincerely thank the Almighty God for his invaluable and immeasurable support throughout my academic journey. As a result, I would like to express my gratitude to Tewodros Mekonnen (PhD), my adviser, for helping me with this task. I owe my instructor a huge debt of gratitude for his understanding and insightful criticism. I could not have started along this path if my advisor had not so kindly offered his knowledge and experience.

I would also like to express my sincere gratitude to the staff members of the nine public institutions that were examined namely Addis Ababa University, Ministry of Finance, Government Procurement and Property Authority, Government Procurement Services, Ethiopian Government Road Administration, Ministry of Revenue, Addis Ababa Science and Technology University, Ethiopian Pharmaceutical Supply Services, and Ministry of Science and Technology who shared their insights and business practices. A particular word of gratitude is due to all the executives and employees who collaborated with me to collect the data for this study. In addition, I would like to thank all of the research assistants, study participants, and data collectors from several institutions who helped shape and inspire me.

Lastly, I would want to express my appreciation to everyone who is willing to offer the research as well as to my beloved families and friends for helping me select the topic for this research thesis. I appreciate the participation of all of the executives and staff from Property Authority and Government Procurement.

# TABLE OF CONTENTS

ACKNOWLEDGMENT ..... i
LIST OF TABLES ..... iv
LIST OF FIGURES ..... v
ACRONYMS/ABBERIVATIONS ..... vi
ABSTRACT ..... vii
**CHAPTERONE ..... 1**
**INTRODUCTION ..... 1**
1.1 Background of the Study ..... 1
1.2 Statement of the Problem ..... 2
1.3 Research Questions ..... 4
1.4 Objectives of the Study ..... 4
1.4.1 General Objective ..... 4
1.4.2 Specific Objectives ..... 5
1.5 Significance of the study ..... 5
1.6 Scope of the Study ..... 6
1.7 Limitation of the Study ..... 7
1.8 Definitions of Key Terms ..... 7
1.9 Organization of the Study ..... 8
**CHAPTER TWO ..... 10**
**REVIEW OF RELATED LITERATURE ..... 10**
2.1 Introduction ..... 10
2.2 Review of Theoretical Literature ..... 10
2.3 Review of Empirical Literature ..... 24
2.4 Identified Research Gap ..... 28
2.5 Conceptual Framework ..... 30
**CHAPTER THREE ..... 32**
**RESEARCH DESIGN AND METHODOLOGY ..... 32**
**3.1** Introduction ..... 32
3.2 Research Design ..... 32

3.3 Research Approach ..... 32
3.4 Data Type and Sources ..... 33
3.5 Population ..... 34
3.6 Data Collection Instruments ..... 34
3.7 Validity and Reliability ..... 35
3.7.1 Validity ..... 35
3.7.2 Reliability ..... 36
3.8 Data Management and Quality ..... 37
3.9 Data Analysis and Interpretation ..... 37
3.10 Model Specification ..... 38
3.11 Ethical Considerations ..... 38
**CHAPTER FOUR ..... 39**
**RESEARCHE RESULT AND DISCUSSION ..... 39**
4.1 Introduction ..... 39
4.2 Response Rate ..... 39
4.3 Demographic Data Analysis ..... 40
4.4 Descriptive Analysis ..... 42
4.5 Inferential Analysis ..... 45
4.6 Discussions ..... 58
**CHAPTER FIVE ..... 61**
**SUMMARY OF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS ..... 61**
5.1 Introduction ..... 61
5.2 Summary of Key Findings ..... 61
5.3 Conclusions ..... 62
5.4 Recommendations ..... 63
5.5 Implications for Stakeholders ..... 64
5.6 Direction for Future Researchers ..... 64
**REFERENCE ..... 66**
**APPENDIX – QUESTIONNAIRE ..... 71**

# LIST OF TABLES

Table 1 Reliability Test ..... 36
Table 2 Analysis of Response Rate ..... 39
Table 3 Respondents' Demographic Characteristics ..... 40
Table 4 Descriptive Statistics ..... 42
Table 5 Relationship between Indicators of Electronic Procurement and User Satisfactions ..... 45
Table 6 Normality Test Result ..... 48
Table 7 Multi-collinearly Test of the Independent Variable ..... 50
Table 8 Result of Durbin-Watson ..... 52
Table 9 Model Summary ..... 53
Table 10 ANOVA Results ..... 54
Table 11 Testing the Significance Level of Coefficients ..... 55
Table 12 Summary of Results ..... 57

# LIST OF FIGURES

Figure 1 Conceptual Framework ..... 30
Figure 2 Histogram ..... 48
Figure 3 P-P Plot of Regression Standardized Residual ..... 49
Figure 4 Scatter Plot ..... 51

# ACRONYMS/ABBERIVATIONS

| | |
|---|---|
| **AACARA** | Addis Ababa City Administration Road Authority |
| **ANNOVA** | Analysis of Variance |
| **B2B** | Business-to-Business |
| **B2C** | Business-to-Consumer |
| **CSI** | Customer Satisfaction Index |
| **EGP** | Electronic Government Procurement |
| **e-GPS** | Electronic Government Procurement System |
| **E-procurement** | Electronic Procurement |
| **ERP** | Enterprise Resource Planning |
| **ETE** | E-Tender Evaluation |
| **ICT** | Information Communication Technology |
| **IFMIS** | Integrated Financial Management And Information System |
| **IT** | Information Technology |
| **KPIs** | Key Performance Indicators |
| **PEU** | Perceived Ease of Use |
| **PRISMA** | Preferred Reporting Items for Systematic Reviews and Meta-Analysis |
| **PU** | Perceived Utility |
| **RBV** | Resource-Based View |
| **SD** | Standard Deviation |
| **SMU** | St. Marry's University |
| **SPSS** | Statistical Package for Social Science |
| **SquaRE** | Systems and software Quality Requirements and Evaluation |
| **TAM** | Technology Adoption Model |
| **TDT** | Technology Diffusion Theory |
| **TOL** | Tolerance |
| **UX** | User Experience |
| **VIF** | Variance Inflation Factor |
| **VMS** | Vendor Management System |

# ABSTRACT

*Electronic government procurement (e-GP), is swiftly emerging as a crucial component of national e-government initiatives since it promotes effective supplier relationships and active transparency. Nevertheless, the necessity of routinely assessing the effectiveness of e-GP portals and its impact on user satisfaction has received little attention. As a result, this study used institutional theory to examine how user satisfaction is affected by electronic government procurement. Public institutions are complicated, long-lasting social structures composed of material resources and connections. A single dependent variable (user satisfaction) and five independent factors (electronic government procurement) were described using an explanatory research design. Nine public institutions in Addis Ababa were used to assess the casual correlations between variables. The study's target group consisted of 120 individuals selected from these organizations using the census method. Of these, 103 respondents correctly completed self-administered questionnaires, yielding an 86% response rate. This study demonstrated a moderate, positive and significant correlation between user satisfaction and the following factors such as adequate ICT infrastructure, employees' competency, management support, accuracy, and timeliness. The findings reveal a positive and significant effect of adequate ICT infrastructure, employees' competency, management support, accuracy, and timeliness on user satisfaction. Therefore, users of electronic government procurement are satisfied if there is an adequate ICT infrastructure, competent employees, management support, accuracy, and timeliness. The study suggests that public institutions should pinpoint areas for collaboration and encourage knowledge sharing among government institutions, including the identification, recognition and sharing of best practices for electronic government procurement. By enhancing a culture of cooperation and transparency, it is believed that government institutions can initiate innovation and foster efficiency for advancing the growth of electronic government procurement.*

**Keywords: Accuracy, Competency, Electronic Government Procurement, Infrastructure, Support, Timeliness, User Satisfaction**

# CHAPTERONE
# INTRODUCTION

## 1.1 Background of the Study

Electronic Government Procurement (e-GP) is a technology that automates procurement procedures to enhance business processes (Gong et al., 2018). It has transformed government purchasing, introducing increased transparency, efficiency, and cost savings compared to traditional methods (Akca, 2017; Gong et al., 2018). Benefits include faster processes, reduced corruption, and improved information access (Akca, 2017). However, the success of e-GP depends significantly on user satisfaction, particularly among government employees navigating the system for crucial purchasing decisions (D'Onofrio et al., 2013). In Africa, e-GP adoption among government agencies is gaining momentum (Barnabas & Adam, 2023), reflecting a broader interest in gaining competitive advantages in the current business environment (Seo et al., 2018).

Organizational factors supporting e-GP adoption include supply strategy, policy, development strategy, supplier adoption, system integration, technology standards, and legal compliance (Zulkarnain & Sambas, 2023). Factors influencing organizational readiness for e-GP include supplier acceptance, IT infrastructure, staff dedication, and management support (Dawit, 2020). Competency of employees and legal frameworks were identified as determinants of e-GP adoption in the public sector (Muchelule & Shalle, 2017). Additionally, the strategic dimensions of supply, innovation, organization, and strategy influence the use of e-GP systems (Tsuma & Kanda, 2017).

User satisfaction with e-GP systems is associated with dimensions such as timeliness, cost-effectiveness, infrastructure, and management support (Kundi et al., 2014). The accuracy and timeliness of order fulfillment significantly impact user satisfaction (Manal, 2014). Skills of employees and technology used in companies are crucial for improving service delivery (Seo et al., 2018). Compared to traditional methods like postal submission of tender documents, e-GP expedites document transmission electronically (Kaula, 2018), which is essential for international business transactions (Seo et al., 2018).

To enhance services, understanding user experience dimensions in e-GP systems is critical (Hashim et al., 2022). Several African countries, including Kenya and Tanzania, are transforming government procurement to ensure transparency and accountability (Barnabas & Adam, 2023). In Ethiopia, the adoption of e-GP is part of efforts to modernize public procurement. The Ministry of Innovation and Technology and the Federal Public Procurement Authority launched the Electronic Government Procurement System in November 2018, aiming to conduct all government procurement online (Chandra et al., 2018). Further research is recommended to identify key factors for successful e-procurement implementation (Dawit, 2020).

This study addresses gaps in understanding how e-GP systems specifically impact user satisfaction in Ethiopian government offices. Using institutional theory, it investigates the relationship between e-GP implementation factors and user satisfaction in selected sector offices of the Federal Government of Ethiopia. While existing literature acknowledges the importance of factors such as ICT infrastructure, employee competency, management support, accuracy, and timeliness in e-GP success, few studies have systematically explored their combined effect on user satisfaction in this context. By employing an explanatory research design and drawing insights from nine public institutions in Addis Ababa, this study aims to provide empirical evidence on how specific elements of e-GP implementation influence user satisfaction levels. Such insights are crucial for policymakers and administrators to optimize e-GP systems and enhance governance effectiveness.

## 1.2 Statement of the Problem

EGP refers to the use of electronic and digital technologies to automate and streamline the procurement processes within government agencies or organizations. EGP systems are designed to facilitate various stages of procurement, including sourcing, purchasing, tendering, contract management, and payment, all conducted through electronic platforms (Seo et al., 2018). State procurement makes up a significant portion of GDP, with an estimated $9.5 trillion spent globally (World Bank, 2022). In most of African countries, public procurement is the lifeblood of public spending; according to some estimates, it contributes 17% of the continent's GDP in 2023(Edwin, 2023). In Ethiopia, government purchases account for 14% of GDP and 64% of the

whole government budget (Tadewos & Mata, 2020). This highlights the importance of implementing electronic Government Procurement in government institutions to foster efficiency and the need for satisfying users in the process. To improve the performance of organizational efficiency and satisfy public expectations, numerous governments including Ethiopia are implementing e-GP technologies (Dawit, 2020). Therefore, the Ethiopian government has made the decision to use e-GP technology as a tool to increase output and meet consumer expectations (Ministry of Finance, 2021).

The Ethiopian government has been testing an electronic Government Procurement system with nine public institutions since 2021 (Public Procurement Authority, 2021). In 2023, the system was expanded to 72 federalinstitutions (Public Procurement Authority, 2023). Although there have been some difficulties, like misplaced bid opening dates and delays in procurement approval, the government has attempted to roll out e-GP across the country since the end of 2020.

Studies, such as Marian and Fanny (2015) andShewarga (2020)have focused on e-GPpractices and challenges in developing countries. The question of whether e-GP genuinely raises user satisfaction is still up for debate.On the other hand, Dawit (2020)states that continued use of e-GPcould lead to improved business operations by connecting parties in the network and enabling effective and timely service delivery Nawi et al. (2016) also support this idea, stating that e-GPcan help companies become more successful and efficient in serving their clients.Although Academicians such as Twum and Peprah (2020) have emphasized the advantages of e-GP in service delivery;however, its impact on user satisfaction is not well understood in Ethiopia.

Preliminary interview with departments of procurement in Ministry of Education and Addis Ababa University being pilot institutions among sector offices in Ethiopia, the researcher learnt that suppliers and clients in Ethiopia are not aware of the full potential of electronic Government Procurement for their businesses. According to the interview, even if the use of e-GPtechnology has assisted in preventing misuse of resources, there is still a problem like employee incompetence, lack of infrastructures, errors on e-GPportal (inaccuracy) and mismatch between purchases and reconciliation due toconfusions in e-GP procedures, lengthy procurement cycles and delays in contract awarding(Tadewos& Mata, 2020).

Adoption of e-GPis expected to increase financial (revenue) and procurement performance (Hashim et al., 2022). However, the e-government procurement system developer has not identified how well the system meets user needs and preferences in Ethiopia (Dawit, 2020).These challenges have been attributed to issues like lack of user knowledge and inadequate operator training (Federal Public Procurement Authority, 2023).This illustrates how little is known about the topic, indicating a gap in the body of knowledge regarding e-Government Procurement and its effects on user satisfaction in the public sector. Therefore, the goal of this study is to address this gap by examining how electronic government procurement affects users' satisfaction with public procurement and the study is conducted in selected government sector offices of the Federal government of Ethiopia.

## 1.3 Research Questions

These were the study's focal points or leading questions:

1. To what extent does adequate ICT infrastructure of electronic government procurement influence user satisfaction in selected sector offices of the federal government of Ethiopia?
2. To what level does employees' competency ofelectronic government procurement influence user satisfaction in selected sector offices of the federal government of Ethiopia?
3. What is the effect of management support ofelectronic government procurement on user satisfaction in selected sector offices of the federal government of Ethiopia?
4. To what extent accuracy of electronic government procurement influence user satisfaction in selected sector offices of the federal government of Ethiopia?
5. To what level timeliness of electronic government procurement influence user satisfaction in selected sector offices of the federal government of Ethiopia?

## 1.4 Objectives of the Study

### 1.4.1 GeneralObjective

The general objective of this research to investigate the effect of electronic government procurement on user satisfaction in selected sector offices of the federal government of Ethiopia.

### 1.4.2 Specific Objectives

The specific objectives of this research were:-

1 To examine the effect of adequate ICT infrastructure of electronic government procurement on user satisfaction in selected sector offices of the federal government of Ethiopia.

2 To determine the effect employees 'competency of electronic government procurement on user satisfaction in selected sector offices of the federal government of Ethiopia.

3 To investigate the effect management support ofelectronic government procurement on user satisfaction in selected sector offices of the federal government of Ethiopia.

4. To find out the effect of accuracy of electronic government procurement on user satisfaction in selected sector offices of the federal government of Ethiopia.

5. To investigate the effect of timeliness of electronic government procurement on user satisfaction in selected sector offices of the federal government of Ethiopia.

## 1.5 Significant of the Study

The pursuit of a Master's in Business Administration (MBA) is a pivotal step in the researcher professional journey, and his research capacity development. By engaging in this research, the researcher not only contribute to the ongoing dialogue within the academic community about the effect of e-GP on user satisfaction but also enrich his own knowledge base, ensuring that the researcher is well-equipped to make meaningful contributions to the field throughout his career. Thus, the significance of this study lies not only in its practical implications for management of public sector procurement offices and user of the services but also in its contribution to the scholarly landscape and my personal growth as a researcher.

Finally, academicians may also utilize the study as a reference and as a supplement to previously published research-related content. Further, the results of this study will also be helpful to researchers because they add to the body of knowledge already available in the field of e-GP literature.

## 1.6 Scope of the Study

The scope of the study considered conceptual, methodological, geographical and time. In this study, effect of e-GP system on user satisfaction was evaluated by assessing different types of qualities, perceptions, and attributes represented by e-GP system quality and order fulfillment quality. It includes ICT infrastructure, employees' competency, management support, accuracy, timeliness and user satisfaction in Electronic Government Procurement (e-GP). Conceptually, this study is mainly limited to institutional theory but it also used Technology Adaption Theory and the diffusion theory that limited the study to effectively understand e-GP qualities and activities. This study explores the Electronic Government Procurement (e-GP) system within the framework of institutional theory to advance understanding of its objectives and investigate how users adopt and utilize this technology. Institutional theory provides a lens to examine the organizational and institutional contexts that shape e-GP adoption and implementation processes. By integrating institutional theory, the study seeks to elucidate the complex dynamics influencing the adoption and utilization of e-GP systems among users within selected sector offices of the Federal Government of Ethiopia.

Since most electronic government procurement activities are concentrated in Addis Ababa, the geographical scope of this study is limited to this area. Specifically, the study focuses on nine public organizations within Addis Ababa. It does not include recently added public offices (from 2021 to present) within Addis Ababa or regional government public offices outside of Addis Ababa. This study was conducted starting from February to April 2024. The activities performed during this period include data collection from the beginning to the end. Preparing for a trial or study (pilot study), as well as doing statistical analysis and reporting, did not take into consideration in this sense.

All these research efforts were studied based on explanatory research design. In order to examine the causality relationship of the variables, this study applied inferential analysis specifically correlation and multiple linear regression. In conducting this research, both primary and secondary sources of data was suitably used. The researcher obtained data and information from primary sources through self-administered questionnaires.

## 1.7 Limitation of the Study

There were limitations such as unavailable data based on the newness of electronic government procurement in the country unwillingness to provide data used that affected this study and its data collections operations. For the most part, some sampled respondents were disheartened to provide data as they were unable to relate how the research would assist them directly or indirectly. The researcher however assured them that the findings of the research will be useful in the organization. Only when the researcher was able to identify and manage these limitations, respondents had been ultimately convinced through discussion about the aim of the study, its academic capabilities and benefits from it. As well, the study used questionnaires which were voluntary and relied on data as provided by the respondents.

In order to avoid confusion and to allow the management to provide a great deal of information about the research study, the researcher only concentrated on a small number of public organizations. The research was greatly impacted by the secrecy public directives that applied electronic government procurement. Owing to budgetary, scheduling, and other limitations, the study did not investigate the impact of electronic government procurement procedures by universities located outside of Addis Ababa and regional public institutions. Consequently, the study's ability to present a comprehensive picture of the nation's performance with regard to electronic government procurement was limited.

## 1.8 Definitions of Key Terms

- **Accuracy** refers on order delivery it shows how tightly shipments meet clients' orders when received (Manal, 2014).
- **Delivery Timeliness** refers to whether orders arrive at the users' location when promised (Manal, 2014).
- **E-government** is defined as a government's use of ICT, particularly Web-based Internet applications, to enhance the access to and delivery of government information and service to citizens, business partners, employees, and other agencies and entities (Seo et al., 2018).

- **Electronic Government Procurement** is defined as the use of Information & Communication Technology (ICT), especially the Internet, by governments in conducting their relationships with suppliers for the acquisition of works, goods, and consultancy services required by the public sector (Joyce and Walter, 2016).
- **Employee Competency** – the combination of observable and measurable knowledge, skills, abilities and personal attributes that contribute to enhanced employee performance and ultimately result in organizational success (Hashim et al., 2022).
- **E-procurement system** refers to an innovation that is developed to enhance the purchasing functions through the Internet (Shewarga, 2020).
- **E-procurement Technology** refers to the degree to which system user experience, and perceived ease of use, interact flexibly and navigate around an E-procurement system (Hashim et al., 2022).
- **Information and Communication Technologies (ICT)** - refers to all the technologies that affect and control people's information and communication operations. It includes the markets for IT services, hardware, software, automation, telecommunications, and corporate communication (Seo et al., 2018).
- **Public Procurement** is defined as the use of public funds to purchase products and services (Tadewos and Mata, 2020).
- **User Satisfaction -** is defined as the extent to which users realize that the information system in use fulfils their work needs (Seo et al., 2018).

## 1.9 Organization of the Study

This research study is organized as follows. Chapter one, the introduction presents the research problem and the aim of the research in a nutshell. In the introduction, the definitions of the key concepts are explained and the delimitations of the thesis are discussed. Chapter two, the relevant literature is discussed through the primary theoretical frameworks used in the thesis. In addition, the concept of electronic government procurement and user satisfaction and its unique characteristics are discussed from public organization's perspective. Chapter three, the research methods applied in this research is presented in detailed. Topics such as research design, research approach, data collection, data analysis and quality in qualitative research is discussed. Chapter four, the results and findings are presented and analyzed based on the supply chain of the

selected organization through empirical research and quantitative survey. Chapter five, summary of major findings, conclusions and recommendations are presented.

# CHAPTER TWO
# REVIEW OF RELATED LITERATURE

## 2.1 Introduction

The literature review for this chapter comprises a search for pertinent works on e-Government procurement, user satisfaction, and their effects on government sector offices. It is advisable it presents definition of the key concepts, theoretical and empirical reviews. Additionally, the chapter shows research gap and conceptual framework.

## 2.2 Review of Theoretical Literature

As the purpose for a public business is to make profit, it also presents one of the most cited frameworks for procurement and user satisfaction measurements. It balances the non-financial metrics of an organization with its financial metrics in order to prove how organizational performance measurement is linked to the competitive advantage of the firm (Akca, 2017).

### 2.2.1 Concepts and Definitions

This section of the chapter defines the term "e-procurement," discusses its metrics and drivers, and highlights its significance for user satisfaction.

#### 2.2.1.1 E-procurement

Procurement is the processes required to acquire works, goods and services from outside the performing organization. It is favorable that the goods/services are appropriate and that they are procured at the best possible cost to meet the needs of the purchaser in terms of quality and quantity, time, and location (Boafo et al., 2020). Additionally, procurement is a set of activities performed as part of an acquisition effort. It involves process of acquiring goods, works and services, covering both acquisitions from third parties and from in-house providers (Kaula, 2018). It was challenging to maintain ties with vendors and monitor their performance when procurement was done by hand. With the help of electronic procurement software, businesses may better manage the terms of their supplier contracts and gain a deeper insight of their

purchasing activities. The procedure is considerably different and more effective when using electronic Procurement. Workers can use their personal computers to view approved vendor catalogues, search for necessary items, compare them, and place orders. Payments can be made electronically, and information about product availability and shipment is readily available (Zulkarnain et al., 2023). So the next sub topics indicate the concepts, definition and measurements of E-procurement.

According to Boafo et al., (2020), electronic government procurement is the process of carrying out any or all of the procurement procedures through an online platform, such as search, sourcing, negotiation, ordering, reception, and post-purchase review. According to Tsuma and Kanda (2017), E-procurement refers to the online business-to-business exchange of goods and services. This continued by saying that supplier exchange is another term for E-procurement. It is commonly competent and registered users can search for buyers or vendors of goods and services on electronic procurement websites. Three different forms of electronic procurement systems are described by Boafo et al., (2020): online intermediaries, seller electronic procurement systems, and buyer electronic procurement systems. There are various forms of electronic procurement that concentrate on one or many stages of the procurement process, such as e-tendering, e-marketplace, auction/ reverse auction, and e-catalogue. The electronic procurement application can be viewed more broadly as an end-to-end solution that integrates and streamlines many procurement processes throughout the organization. Introduction of any system should have its objectives that the firm wishes to achieve (Muchelule and Shalle, 2017).

Electronic Government procurement is the process of carrying out any or all of the steps of the procurement process, such as search, sourcing, negotiation, ordering, receipt, and post-purchase review, using Internet-based (integrated) information and communication technologies (ICTs). Electronic procurement can be viewed more broadly as an end-to-end solution that integrates and streamlines many procurement processes throughout the organization, even though there are various forms of electronic procurement that focus on one or many stages of the procurement process, such as e-Tendering, e-Marketplace, e-Auction/Reverse Auction, and e-Catalogue/Purchasing (Beatrice, 2015).

The main objectives of electronic procurementare: to reduce the time and cost of doing business for both vendors and the purchasers; to realize better value for money spent through increased competition; to standardize the procurement processes across departments/agencies and to allow equal opportunity all vendors and to bring transparency in the supply chain (Kaula, 2018).This is because electronic procurement is an information and communication technology (ICT) intervention in the purchasing domain of an organization that typically covers all processes from obtaining supplies from users to paying suppliers (Zulkarnain et al., 2023).According to Beatrice (2015) explanation of the nature of electronic procurement, users who meet the requirements and register on websites can search for buyers or sellers of products and services. Buyers or sellers may request bids or specify costs based on their chosen strategy. Both starting and finishing transactions are possible.

A comprehensive process known as electronic procurement, or electronic procurement for short, involves governments using IT systems to create contracts for the acquisition of goods or services or to make purchases of goods or services in exchange for money. Electronic ordering, online bidding, purchasing cards, reverse auctions, and integrated automated procurement systems are just a few of the components that make up electronic procurement (Hashim et al., 2022). E-GP will allow businesses to expedite product development, receive acceptable bids, cut down on product design time frames, and decrease procurement times. An organization can gain from using electronic procurement in a number of ways, such as decreased transaction costs, fewer personnel needs, shorter procurement cycles, lower inventory levels, increased transparency, and improved supplier and buyer organization communication and collaboration (Muchelule and Shalle, 2017).

This study uses the definition of electronic government procurement, as defined by Boafo et al. (2020) as the process of doing any or all of the procurement procedures including search, sourcing, negotiation, ordering, receiving, and post-purchase review through an online platform. This is because this definition gives the following additional advantages of implementing electronic government procurement: (1) The Internet's added value is in its capacity to help lower transaction and communication expenses. The Internet makes it possible to access a wealth of information both inside and outside of the company at a cheaper cost in terms of time and money. In addition to centralizing the most strategic purchasing processes (such as supplier

selection), the use of electronic procurement (2) helps to decentralize more administrative purchasing processes; (3) encourages improved internal coordination and increased efficiency; and (4) uses the Internet to quickly obtain a large amount of high-quality information, thereby lowering the risks and uncertainties associated with purchases. Electronic procurement is a component that adds value for businesses, and (6) this technology helps to foster a culture of trust among businesses (Zulkarnain et al., 2023).

#### 2.2.1.2 E-Government procurement in Public Sector

Public sector E-procurement is becoming more and more global; as a result, efforts have been put into place in Singapore, the UK, the US, Malaysia, Australia, and the EU. Projects involving e-Government Procurement are frequently a component of a nation's larger e-government initiatives to better assist its citizens and companies operating in the digital economy(Beatrice, 2015).As per the World Bank's report in 2021, electronic government procurement, or e-GP, refers to the process by which governments use the internet and other information and communication technology to conduct their procurement relationships with suppliers for the purpose of acquiring goods, works, and consulting services that are necessary for the public sector(World Bank, 2021). Public sector firms use E-procurement for contracts in order to reap benefits such as better transparency, which lowers corruption in procurement services, and increased efficiency and cost savings, which are faster and less expensive in government procurement (Akca, 2017).

The use of a transactional information system by government institutions and other public sector organizations in conducting and managing their procurement activities and relationships with suppliers for the procurement of works, goods, and services required by the public sector is how the World Bank defines e-Government Procurement, or e-GP. It must not be confused with e-government procurement, a term used generally to refer to the use of ICT to handle and manage any or all of the transactional processes in the procurement process (World Bank, 2021). Therefore, an e-GP system can be regarded as an application of e-government procurement that complies with public procurement laws.

#### 2.2.1.3 Customer Satisfaction

Customer satisfaction is crucial since it shows how well your product or service is received by your target audience. High customer satisfaction, according to research, boosts lifetime value, improves customer retention, and improves brand reputation. Low ratings for customer satisfaction are also significant (Ashenafi, 2020). According to Rahadian (2020), the degree to which a product's perceived performance lives up to a client's expectations is customer satisfaction. Accordingly, customers would be satisfied with such offer provided perceived product performance met their expectations. It's stated that customers would be happy when perceived product performance exceeded their expectations in certain situations. On the other hand, some products might perform below the standard that the client had expected, which would make the buyer unhappy with the offer. Ashenafi (2020) describes satisfaction as the reaction of the customer to being fulfilled. Satisfaction is the total assessment made after acquiring a thing. Consequently, post-purchase evaluation is used to represent client satisfaction (Beatrice, 2015).

##### 2.2.1.3.1 User Satisfaction

The extent to which a product or service satisfies a user's needs, expectations, and preferences is known as user satisfaction. Numerous elements, including usability, usefulness, design, performance, support, and value, might have an impact on it. Numerous techniques, including surveys, ratings, feedback, reviews, and testimonials, can be used to gauge user satisfaction. These techniques can assist firms in gathering both quantitative and qualitative data that will disclose the thoughts, feelings, and problems of firms' users (Wan, 2014).

According to Peter and Osman (2016), costumers' favorable perceptions of the procurement process and all of its components are referred to as perceived satisfaction with procurement methods. According to research on motivation, satisfaction can be either intrinsic or extrinsic. The pleasure and satisfaction one experiences from engaging in activities is recognized by researchers as intrinsic motivation (Zulkarnain et al., 2023). When someone is intrinsically motivated, they behave without the need for outside encouragement, coercion, or rewards; instead, they do it for the enjoyment or challenge involved (Muchelule and Shalle, 2017). As said by Peter and Osman (2016), intrinsic motivation can also be defined as a person's subjective

sensations of satisfaction, joy, pleasure, and a positive all inclusive experience. These feelings are important in explaining why users accept and employ procurement processes.

The definition provided by Kaula (2018) is accepted by this study as perceived satisfaction and perceived enjoyment are similar in that they both relate to how much one finds the use of a system or product to be enjoyable in and of itself. Perceived enjoyment is similar to perceived satisfaction because perceived enjoyment refers to the extent to which the activity of using a system or product is perceived to be enjoyable in its own right. Inferring from this, it can be concluded that individuals who are high in perceived satisfaction of the procurement process are more likely to exhibit a higher level of behavioral intention to accept the existing procurement practices than individuals who are low in perceived satisfaction (Peter and Osman, 2016).

#### 2.2.1.3.2 Measurement of User Satisfactions

The primary motivation for prioritizing quality is to satisfy client demands while maintaining economic viability. Accordingly, meeting user needs is critical to an organization's survival and calls for a thorough understanding of and continuous improvement of operational procedures, the prompt and methodical identification of issues, the establishment of accurate and trustworthy service performance metrics, and the measurement of performance outcomes such as customer satisfaction (Ashenafi, 2020).Tools for measuring customer satisfaction can assist businesses in providing exceptional customer service and gaining real-time information through online surveys. Measurement of customer satisfaction has been attempted in various ways by different groups, primarily based on responses in a properly designed (sample) survey of customers or potential customers seeking their opinions or ratings of features and functions of a supplier that beget customer satisfaction or otherwise (Peter and Osman, 2016). These responses to various items in a questionnaire are scaled and their weighted average is accepted as a Customer Satisfaction Index (CSI). Lots of variation remained in identification of the group to be surveyed, in sampling, in questionnaire design and administration, in scaling, in assignment of weighs, etc. (Barnabas and Adam, 2023).

Businesses should utilize KPIs, or key performance indicators, to measure customer satisfaction in order to determine how satisfied their consumers are. Customer satisfaction is a key performance indicator (KPI) that organizations may use to identify areas for improvement and

implement the necessary changes to better serve their customers (Peter and Osman, 2016). Additionally, it aids companies in monitoring client satisfaction over time and establishing improvement objectives. Client contentment Businesses use a type of metric called KPIs (Key Performance Indicators) to determine how satisfied or happy their consumers are with their products or services. It is a crucial indicator for any company looking to increase client retention and loyalty (Zulkarnain et al., 2023).

### 2.2.2 Related Theories

Institution theory, procurement transaction theory, technology adoption model (TAM), technology diffusion theory (TDT), resources based view, and disconfirmation theory are among the theories discussed in this area of the study.

#### 2.2.2.1 Institution Theory

According to this theory, institutions are complex, long-lasting social structures composed of social interactions, material resources, and symbolic components. Information systems researchers have employed institutional theory as a lens to examine several topics. According to Beatrice (2015), the majority of academics who employ this theory, information technology (IT) is not a strong enough indicator of how IT will affect an organization's ability to perform. IT innovation itself is a process of combining technical-rational and social forces, neither driving nor subsuming in the forces of organizational change, but interacting with them.

Institutional Theory provides a theoretical framework for understanding the adoption and implementation of Electronic Government Procurement (e-GP) systems within public organizations. This section explores how institutional factors influence the adoption decisions and utilization patterns of e-GP technology among users in selected sector offices of the Federal Government of Ethiopia. Institutional Theory helps to elucidate the organizational and environmental contexts that shape the adoption processes and outcomes of e-GP systems.

#### 2.2.2.2 Procurement Transaction Theory

Nyagu and Juma (2019) contended that exchange transactions in the procurement process take place in a "social matrix" and exhibit "relational patterns," is most closely linked to the

procurement transaction theory. As a result, a manager with an understanding of social relations is necessary to guarantee the smooth operation of the procurement process. Furthermore, it is not sufficient to understand procurement only in terms of the contract that establishes its legal framework; procurement also involves significant "relational norms" that come from the social environment of an exchange, such as flexibility, solidarity, and reciprocity. In order to provide greater value through innovation, cost savings, or a combination of both, certain networks can be purposefully planned, built, and managed as partially closed systems (Marian and Fanny, 2015).To achieve the selected value-creating goals, each member of a particular network has tasks and responsibilities that have been mutually agreed upon (Wan, 2014).

#### 2.2.2.3 Technology Adoption Model (TAM)

Technology Adoption Model (TAM) clarifies the broad factors that influence technology adoption and concentrates on user behavior particularly across a variety of platforms and demographics. According to TAM, a user's expectations about technology have a significant impact on how they use it. The perceived utility (PU) and Perceived Ease of Use (PEU) are the two presumptions that form the foundation of the TAM model. Perceived utility (PU) can be defined as an individual's belief that a system, like an electronic payment system, will be more beneficial than the conventional method of doing things. Conversely, the degree to which a prospective client expects the new system to be easy to use, effective, and efficient is known as perceived ease of use (PEU) (Michael, 2018).

#### 2.2.2.4 Technology Diffusion Theory (TDT)

The common lens used by theorists to examine the uptake and evolution of new ideas is called TDT. The process by which an invention gets embraced and accepted by individuals or members of a community is known as diffusion. The diffusion theory is one of many intricate sub-theories that together examine adoption processes. Innovation is any concept, method, or item that a person or group of people perceives as novel. Time: the non-spatial epoch during which a diffusion event occurs. The process of invention dissemination, the length of time it takes for a person or group to embrace an innovation, and social systems are among the occurrences (Beatrice, 2015).

#### 2.2.2.5 Resources Based View

The resource-based view (RBV) emphasizes that a company's resources are the primary indicators of its performance and competitive advantage. This idea states that a company can be categorized as a grouping of organizational, human, and material resources. The main sources of competitive advantage are organizational resources that are uncommon, valuable, one-of-a-kind, and non-substitutable (Michael, 2018). According to the resource-based perspective, resources can be divided into three categories: human, physical, and organizational capital resources.

#### 2.2.2.6 Disconfirmation Theory

According to this theory, customer satisfaction is determined by comparing people's expectations and perceptions of the services that are provided to them. While perception is the customer's assessment of the level of service provided to him, expectations are the customer's predictions about a certain action that will take place and is carried out by a service provider. Put differently, perception is the customer's mirror of their sentiments indicating how the product or service has satisfied their want. The customer is satisfied with the quality of the service when the value of perception is greater than the value of expectation; nevertheless, if the value of perception is less than the value of expectation it signals poor service quality which leads to customer dissatisfaction (Barnabas and Adam, 2023).

#### 2.2.2.7 Theories selected for this Study

This study relies heavily on two theoretical frameworks: Institutional Theory and Technology Adoption Theory.

Firstly, Institutional Theory is crucial in this study as it elucidates the dynamics among stakeholders and explains isomorphic mechanisms that emerge during the implementation of Information Technology (Beatrice, 2015). In the context of e-Government procurement, this theory helps depict the interactions among stakeholders and how institutional pressures influence the adoption and implementation of IT systems.

Secondly, the study incorporates the Perceived Qualities Theory, which posits that innovations are perceived based on several attributes: Relative Advantage, Compatibility, Complexity, Trialability, and Observability (Michael, 2018). These attributes guide the evaluation of innovations and influence their adoption. Understanding these qualities helps in framing questions for potential adopters, thereby facilitating a deeper comprehension of factors that influence adoption decisions (Beatrice, 2015).

Additionally, considering the long-term impact on economic growth, the study acknowledges the pivotal role of technology in procurement. Technological advancements lead to new products, markets, and processes, significantly impacting economic activities (Barnabas & Adam, 2023). The evolution towards world-class procurement emphasizes leveraging technology to enhance procurement performance and transition from paper-based transactions to secure, integrated procure-to-pay systems.

Incorporating Technology Adoption Theory guides the adoption of technology in procurement practices, emphasizing organizational readiness and change management as critical factors in achieving world-class procurement standards.

### 2.2.3 Relationship between E-Governmentand Procurementand User Satisfactions

Any method of connecting with clients and offering higher-quality services to satisfy their requirements and expectations falls under the category of customer connection in electronic government procurement. This is accomplished through electronic government procurement by encouraging good communication channels that reduce waste of time and money by promptly responding to customers' requests and providing timely feedback in an efficient way (Quesada et al., 2010). In other words, with the use of computers, electronic government procurement facilitates improved communication between procurement staff and user staff, resulting in high-quality services that satisfy the needs of internal users within the company (Kaula, 2018).The level of efficiency and effectiveness with which the company produces goods and services, as well as the degree to which they meet the needs and expectations of its clients can be determined by the operational performance of the business (Michael, 2018).

By integrating an electronic government procurement system into a supply chain, companies can use the Internet to buy direct or indirect goods and services and to get high-quality customer service (Barnabas and Adam, 2023). Given that order timeliness may also be observed as a dimension of quality when order is received from supplier, order timeliness may only be related to perceptions of quality; hence, the higher the quality, the greater the satisfaction. Customers respond favourably to prompt order delivery; conversely, a delay in service fulfilment can adversely impact customer satisfaction (Manal, 2014). Businesses can digitalize their delivery schedules and communicate extensive information with suppliers by using electronic government procurement systems, which leads to increased efficiency and control over the products delivered (Akca, 2017).

Manal (2014) also mentioned the supplier's responsibility for order correctness and delivery timeliness, and how an efficient E-procurement system can help to enhance these areas. The order fulfilment function essentially begins when a customer chooses to buy and ends when the goods or service is dispatched to the customer; as a result, the effectiveness of this function influences the perception and satisfaction of the customer. Additionally, order fulfilment necessitates a high level of functionality in the product's distribution process (Michael, 2018). Procurement is a crucial component in achieving client satisfaction, even if it's sometimes disregarded as such. Purchasing the goods and services necessary for a company to run includes procurement; it guarantees that warehouses are always fully stocked with the right supplies. Small adjustments to procurement processes can have a significant influence on profitability because procurement can account for a significant portion of a company's revenue (Wan, 2014).

#### 2.2.3.1 Adequate ICT infrastructure and User Satisfactions

Technologies that support enterprises connected to the internet are referred to as infrastructure. ICT infrastructure has an impact on a country's amount of Internet transactions and the quantity of e-business websites it has(Tsuma& Kanda, 2017).E-business development was boosted by an improved ICT infrastructure (Dawit, 2020).Since electronic government procurement has its roots in modern ICT, it is evident that the more technologically compatible an organization is, the less adjustments or changes that would be necessary, and the less resistance to the technology that may arise when it is adopted (Barnabas and Adam,2023). Additionally, the organization's existing IT infrastructure (technological compatibility), the nature of its work practices, and the

consistency of its values, culture, and legal framework (organizational compatibility) can all influence the decision to adopt e-commerce (Kaula, 2018).Having an internet presence gives public procurement agencies access to significant new techniques of procurement. It is the responsibility of procuring entities to develop electronic procurement platforms that allow stakeholders in the procurement department to log in (Beatrice, 2015). Hardware and software technologies are combined to generate information communication technologies. Because hardware serves as a platform for software and knowledge transfer, it is crucial to knowledge management systems (Hashim et al., 2022).

- ***Hypothesis $H_1$ - Adequate ICT infrastructure of electronic government procurement has a positive and significant effect on user satisfaction.***

### 2.2.3.2 Employees' Competency and User Satisfactions

The ability of people to use information technology (IT) may be crucial to the adoption of E-procurement in government procurement organizations(Tsuma& Kanda, 2017).Workers need to know how to use ICT and how it will alter their company practices. When it comes to modern ICT, like e-commerce, procure-to-pay Integrated Financial Management and Information System (IFMIS), and ERP software, this barrier is more noticeable than it is for basic ICT, such phone lines and fax machines (Beatrice, 2015). In most firms, it is normal to expect resistance from the workforce, whether it isstrong or mild. An organization may see some resistance while attempting to adopt electronic government procurement, as there will inevitably be modifications to manual procurement(Michael, 2018).Lack of employment and position from the suggested changes has been noted in the literature on change management as a major factor contributing to employees' resistance to adopting any recommended changes (Dawit, 2020). It is publicized that many personnel in public enterprises are not typically at their best when it comes to technology. This is because technology is now tightly linked to devices that promote economic growth by producing commodities in large quantities efficiently(Akca, 2017).But for many people, technology is still better left to engineers, scientists, and those with a technical bent because mastering it necessitates long, boring hours spent alone in large, isolated rooms with large machines (Boafo et al., 2020).

- ***Hypothesis $H_2$ - Employees' competency of electronic government procurement has a positive and significant effect on user satisfaction.***

### 2.2.3.3 Management Support and User Satisfactions

Electronic government procurement, like any other technological shift, causes organizational managers to implement change management techniques in order to ensure the success of the transformation process (Kaula, 2018). Having change management team structures that identify who was performing the change management work is one method that managers in organizations can demonstrate commitment to change (Tsuma& Kanda, 2017). Change management structures delineate the dynamic between the project team and the change management team. Dean goes on to say that the following are the most common team structures: - change management, where a project team member is responsible for it or an outside change management team assists a project team (Hashim et al., 2022).

Information systems adoption and implementation were made easier by top management's backing(Michael, 2018).Top management would be more likely to embrace technology in the form of e-commerce if they were well-versed in the breakthroughs in technology and the advantages that could be realized from it(Dawit, 2020). A manager's reaction revealed that motivation, training, and competency gaps exist in many public procurement officers, are some of the main reasons for which any new projects, new tools like electronic government procurement, or any change are hardly implemented and hence the need to improve the already existing bureaucratic standards in public institutions (Beatrice, 2015). The secret to creating a winning plan is to be precise and deliberate in allocating resources and responsibility for change management. Top management is usually in charge of the largest electronic procurement projects (Tsuma& Kanda, 2017).

- ***Hypothesis $H_3$ - Management support for electronic government procurement has a positive and significant effect on user satisfaction.***

### 2.2.3.4 Accuracy and User Satisfactions

Seo et al., (2018) proposed that information failure which happens whenever information obtained through an e-Government Procurement system is unable to direct vendors in their bids for public tenders would represent a significant shortcoming of e-Government Procurement systems. For example, suppliers may be misled into wasting time and effort when participating in public tenders if an e-Government Procurement system were to present false information about the bidding process(Michael, 2018).Order delivery accuracy is the degree to which shipments,

upon receipt, precisely match the clients' orders. Order accuracy in the online environment refers to processing the order in accordance with the customer's precise specifications, including the amount, agreed-upon price, and place of reception(Tsuma & Kanda, 2017).It is the possession of the correct items in the right order, the correct number of items, and the absence of substitutions for ordered items (Kaula, 2018).Order fulfillment quality and accuracy depend on whether the wrong items are shipped and incorrect shipment quantity. The level of responsiveness and the flexibility of interacting with placed orders can impact customer satisfaction (Manal, 2014).

- ***Hypothesis $H_4$ - Accuracy of electronic government procurement has a positive and significant effect on user satisfaction***

### 2.2.3.5 Timeliness and User Satisfactions

Time and speed are crucial elements of operational effectiveness since they include on-time delivery and have the power to greatly impact customer satisfaction. It also considers things like the amount of time that passes between receiving supplies and shipping the finished product to customers (Michael, 2018).Only through the appropriation of technology will clients be able to receive prompt support from pre- to post-transactional phases, particularly when it comes to the development of a tailored service experience (Seo et al., 2018). In addition, delivery timeliness is the degree to which orders reach the customer's location on the scheduled date. According to several sources, it also describes the interval of time between placing an order and receiving it (Kaula, 2018).Timeliness is one of the quality factors that identify as influencing user satisfaction. One way to characterize time-based performance would be quick reaction times. As a result, time-based delivery success may also include things like client deliveries that are made on schedule (Manal, 2014).From the perspective of the customer, online order fulfillment performance primarily consists of the order cycle time between placing and receiving the order from the client, which is normally evaluated in the logistics literature as order timeliness (Boafo et al., 2020). In such cases, the length of time it requires for customers to acquire their products or services, can immediately affect the value determinations of the service quality.

- ***Hypothesis $H_5$ - Timeliness of electronic government procurementhas a positive and significant effect on user satisfaction.***

## 2.3 Review of Empirical Literature

### 2.3.1 Perspectives From Global Studies

Hashim et al., (2022) determined the user experience (UX) parameters for E-procurement in order to measure user experience and improve services by means of Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) model. The Systems and software Quality Requirements and Evaluation (SQuaRE) standards, such as ISO 25022:2016 and ISO 25023:2016, served as the basis for the study's thematic analysis of the data. The results indicated that security, efficiency, dependability, transparency, and satisfaction were among the most often mentioned UX aspects in the literature on E-procurement. Usability, compatibility, efficacy, performance efficiency, functional appropriateness, attractiveness, explainability, fairness, and visibility were other UX-related criteria that were found during the review.

Even though there has been significant progress in understanding how citizens have adopted e-government services, Seo et al., (2018) found that, in comparison, vendors' willingness to participate in Government-to-Business transactions (such as E-procurement) is much more limited, particularly when it comes to service convenience and performance failure. Due to this, there has been a growing demand for additional research on the variables influencing the uptake of e-government services by vendors, particularly those in developing nations. It was found that the presence of information, function, and system failures negatively affects vendors' evaluations of service convenience, and that the effects of these failures vary across different dimensions of service convenience. Wan (2014) looked at the direct connections between user satisfaction, vendor assurance, vendor responsiveness, top management support, and perceived utility and simplicity of use using multiple regression analyses. The study's findings indicated that every variable examined, including perceived utility, convenience of use, top management backing, vendor assurance, and responsiveness, had a substantial positive correlation with the satisfaction of users.

### 2.3.2 African Studies

Barnabas and Adam (2023) investigated how users perceived how electronic government procurement practices affected customer satisfaction in public procurement using an explanatory sequential mixed technique. Data were analysed in two stages to ascertain users' satisfaction with

procurement service delivery: first, the mean difference between customers' perception and expectations was calculated. The effect of the independent variables (tangibility, responsiveness, reliability, empathy, and assurance) on the dependent variable (consumer satisfaction) was calculated using the Binary Logistics Regression Model. According to the study's findings, using electronic government procurement significantly increases customer satisfaction with the procurement process.The study analysed users' perspective on the effect of electronic government procurement on customer satisfaction and concluded that there is significant association between using electronic government procurement and enhancing customer satisfaction in the procurement process.

Boafo et al., (2020) evaluated how electronic government procurement has affected satisfaction level and the public sector in Ghana using descriptive research design. For the study, a purposeful sampling approach was employed to choose 15 public sector organizations in Ghana. To examine the data, multiple linear regression was employed. The results showed that electronic government procurement facilitates efficient supplier connections, enhances procurement record management, promotes transparency in supply selection, and results in an efficient E-tender evaluation (ETE).

Nyagu and Juma (2019) assessed the impact of the procurement function on the performance of electronic government procurement in county governments, investigate the role of system integration, and analyze the role of stakeholder management in electronic government procurement using a descriptive survey research design. It was found that electronic government procurement enhanced employee participation through electronic government procurement performance, which in turn boosted customer satisfaction. The study also discovered that the architecture and structure of supply chains were significantly impacted by the influence of enhanced information transmission and user access to the procurement process through the use of electronic government procurement.

The focus of the study of Joyce and Walter (2016) was how E-procurement techniques might improve the quality of customer service provided by public entities. The results showed that the e-tendering strategy has an impact on how public entities provide customer support. The results supported the hypothesis that using an e-invoicing technique improves the quality of customer

service provided by public organizations. In public institutions, billing is done online. The results showed that using an electronic payment method by suppliers improves the quality of customer service provided by public organizations.

Peter and Osman (2016) looked into how procurement processes were impacted by perceived utility and satisfaction by means of quantitative approach (regression and correlation analysis) According to the study, organizations that believe procurement offers some benefits should engage in effective procurement processes, since perceived usefulness was found to account for procurement practices. Similar to this, contentment was also revealed to be responsible for elucidating procurement habits. The study concludes that firms will only embrace and implement effective procurement processes when they believe they are beneficial and deliver a certain level of satisfaction.

### 2.3.3 Evidences from Ethiopia Studies

Dawit (2020) look at the elements influencing adoption of e-government procurement and emphasize the advantages of doing so. The results of the descriptive statistics show that the adoption of e-GP in is influenced by a number of factors, including supplier acceptance, information technology infrastructure, management support, and employee commitment. Furthermore, the outcome demonstrated that would gain from the adoption of e-GP. However, the results of the correlation model show that the preparedness of e- government procurement adoption in is significantly correlated with the availability of legal frameworks, top management commitment and support, employee commitment, and government policy. The availability of the supplier's system, the sufficiency of the existing ICT infrastructure, and the compatibility of the hardware and software all have a major impact on how ready is to adopt e-GP.

Shiferaw and Addis (2019) aimed to identify the main perceived challenges and critical success factors for e-GP implementation and to determine strategies to mitigate the existing perceived challenges for e-GP implementation in nine federal level organizations in Ethiopia that were chosen to serve as pilot scaled-down e-government procurement implementation sites. The findings showed that the following issues were identified: security fear, weak and inconsistent support, poor monitoring and evaluation procedures, inconsistent and disruptive infrastructure, integration with the legacy system, commitment and attitude of top management and employees,

supplier integration, and manpower retention. The presence of change management programs for users on implementation of e-GP through effective consultations and the high skill of procurement employees with IT perspective were found to be the major critical success factor, while training provided to employees on how to use e-GP tools and best procurement practices.

### 2.3.4 Effect of EGP on User Satisfactions

#### 2.3.4.1 ICT Infrastructure

Effective ICT infrastructure plays a crucial role in shaping user satisfaction with electronic government procurement (e-GP) systems. Seo et al. (2018) highlight that robust ICT infrastructure facilitates seamless operation and accessibility, ensuring that users can navigate procurement processes efficiently. Dawit (2020) underscores the significance of reliable internet connectivity, user-friendly interfaces, and secure data handling protocols as key determinants of user satisfaction. These studies suggest that investments in ICT infrastructure are essential for enhancing user experience and optimizing the benefits of e-GP systems in public sector organizations.

#### 2.3.4.2 Employee Competency

Employee competency emerges as a critical factor influencing user satisfaction in e-GP implementations. Tsuma and Kanda (2017) emphasize that adequate training and skills development among employees are essential for leveraging the full potential of e-GP systems. They argue that competent staff can effectively utilize system features, address technical challenges promptly, and ensure compliance with procurement regulations, thereby enhancing user satisfaction. Muchelule and Shalle (2017) further underscore the importance of ongoing training programs to keep employees abreast of technological advancements and best practices in e-GP.

#### 2.3.4.3 Management Support

The support and commitment of organizational leadership significantly impact user satisfaction with e-GP systems. Kundi et al. (2014) and Akca (2017) highlight that proactive management

support fosters a conducive environment for e-GP adoption and usage. This support includes allocating adequate resources, establishing clear policies, and promoting a culture of transparency and accountability. Organizations that prioritize management support are more likely to experience smoother procurement processes and higher levels of user satisfaction, as evidenced by empirical studies across various public sector contexts.

#### 2.3.4.4 Accuracy and Timeliness

The accuracy and timeliness of procurement processes are critical determinants of user satisfaction with e-GP systems. Barnabas and Adam (2023) argue that systems that ensure accuracy in order processing, contract management, and payment cycles contribute to enhanced user trust and satisfaction. Kaula (2018) emphasizes the role of timely information dissemination and decision-making support in reducing procurement lead times and operational delays. These studies underscore the importance of implementing robust mechanisms for data accuracy, real-time reporting, and adherence to deadlines to optimize user satisfaction and overall system performance.

## 2.4 Identified Research Gap

Business transactions require the usage of e-GP, particularly when it comes to procurement-related tasks. On the other hand, system users constantly ask for and anticipate trouble-free system operation. User experience (UX) is not a major topic of current e-GP research (UX). Though these studies are limited to e-government online services and construction, they do identify dimensions for UX evaluation (Hashim et al., 2022). In addition, the contextual, geographical and methodological gap observed in the above empirical studies is compiled as follows:

Contextual gap is the gap presented as a result in differences in the contextual properties. Dawit (2020) assessed the factors affecting the adoption of e-GP in public organizations and this study proposed that the full potential of e-GP in Ethiopian public sector has not been fulfilled, despite the many advantages it has brought about. Further research indicates that most organizations don't know much about e-GP. This indicates a lack of study in the field, indicating a need for more literature on the subject of e-GP and its effects on Ethiopian public sector.

Geographical gap is a knowledge gap that considers the untapped potential or missing/limited research literature, in the geographical area that has not yet been explored or is under-explored. Several studies like Rahadian (2020) and Peter and Osman (2016) investigated the effects ofe-GPon satisfaction within Asian and developed countries. The study was based in Ethiopian public sector thus presenting a geographical gap.

Methodological gap is the gap that is presented as a result in limitations in the methods and techniques used in the research (explains the situation as it is, avoids bias, positivism, etc.). Boafo et al. (2020) assessed the impact of e-GP Ghana's public sector and satisfaction levels. It was adopted a descriptive cross-sectional research design while targeting with this approach, research essentially characterize the frequency of a health result within a certain population. It is useless for figuring out cause and consequence. There is no guarantee that the snapshot's timing is representative (Kothari, 2004).

As per the study of Barnabas and Adam (2023), many researches address public electronic usage issues from a broad perspective, according to the literature on e-GP that is now available Most studies do not provide a thorough analytical approach to evaluating e-GP by using ICT Infrastructures, accuracy, timeliness, management support and employees competency as significant variables of determining customer satisfaction, despite the fact that some studies went further to study the use of electronic government procurement in relation to performance improvement. It is challenging to appreciate the benefits of electronic procurement in public service delivery, especially from the perspective of user personnel who are the recipients of products and services purchased by the company, due to the paucity of information available in the literature.

Consequently, it was offered empirical data about how electronic government procurement affects customer satisfaction by using ICT Infrastructures, accuracy, timeliness, management support and employees competency dimensions. Implementing a customer-satisfaction strategy throughout all aspects of a business's operations is essential, since it has the power to make or break its future. All business operations, from sourcing supplies to providing after-sales support, contribute to adding value for customers (Manal, 2014).Therefore, even though some studies like Barnabas and Adam (2023)went further to study the use of e-GP in relation to performance improvement, this study evaluated e-GP using ICT infrastructures, accuracy, timeliness,

management support, and employee competency as significant variables of determining user satisfaction.

## 2.5 Conceptual Framework

According to Beatrice(2015), a conceptual framework is a network of interrelationships among variables that is rationally formed, articulated, and elaborated and is considered an essential component of the dynamics of the situation under investigation.

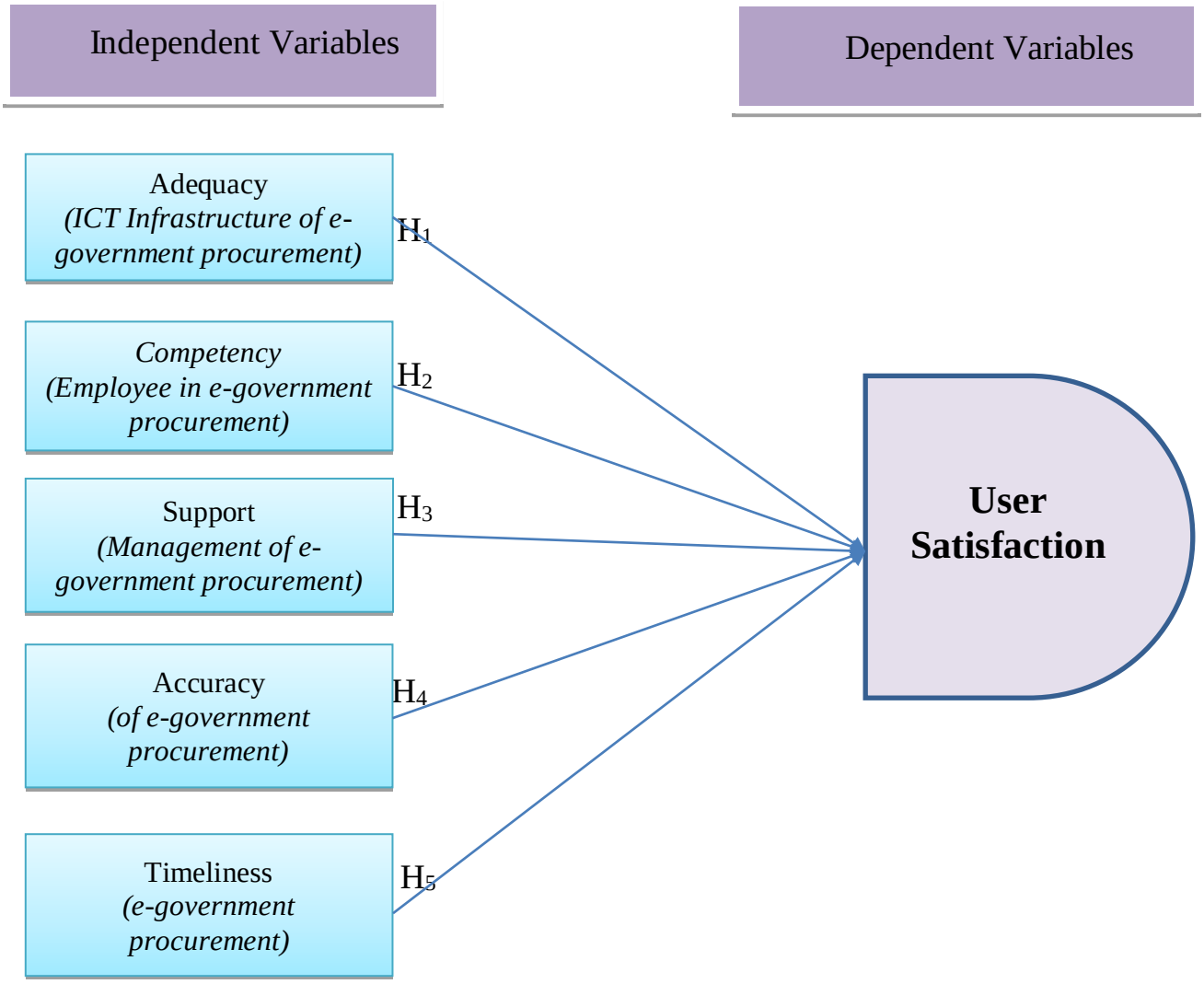


**Figure 1 Conceptual Framework**

Adapted from Wan (2014) and Beatrice (2015)

Beatrice (2015) investigated the impact of ICT infrastructure, managerial commitment, public procurement regulations, and employee competence on the successful implementation of electronic government procurement in county offices. Wan (2014) found that factors like perceived ease of use, usefulness, and management support significantly influence user satisfaction in e-procurement systems. Rahadian (2020) emphasized the importance of accuracy and timeliness in achieving optimal procurement outcomes.

This study integrates these variables as independent factors affecting the adoption of electronic government procurement. It posits that effective adoption enhances transparency, cost-effectiveness, efficiency, confidentiality, and user satisfaction. Institutional theory and the Technology Acceptance Model (TAM) guide the study, exploring how organizational dynamics and user perceptions influence the adoption and satisfaction with e-procurement systems.

# CHAPTER THREE

# RESEARCH DESIGN AND METHODOLOGY

## 3.1 Introduction

This part of the study presents the research method and approach along with its sampling and data analyses methods. It also presents its primary and secondary sources, data collection methods such as questionnaire including ethical consideration and test instruments.

## 3.2 Research Design

According to the goal of the study, there are three different kinds of research designs: exploratory, descriptive, and causal (Creswell, 2014). The explanatory research is answerable for finding the why of the events by establishing cause-effect relationships(Kothari, 2004). The causal relationship between electronic government procurement and user satisfaction also examined in this study. It examined how electronic government procurement affects user satisfactions and it attempted to contextualize its results using statistical analysis.

The study examined the cause and effect relationship among five variables and satisfactions. Barnabas and Adam (2023) investigated how users perceived how electronic government procurement practices affected user satisfaction in public procurement. It mainly used quantitative data to give interpretation on effect of electronic government procurement on user satisfaction. Consequently, the study used explanatory research design.

## 3.3 Research Approach

When a research approach has been carefully considered as the criterion of classification, research can be promoted as both qualitative and quantitative, or mixed. Accordingly, quantitative research focuses on quantifying the scale, range, frequency, etc. of events; it gathers and analyzes numerical data (Creswell, 2014). Quantitative research produces objective data that can be clearly communicated through statistics and numbers (Kothari, 2004).

In this study, the researcher applied appropriate research approach (quantitative method). The collected data generated from the questionnaire that was analyzed and interpreted using statistical models such as percentages to cover the entire population of the study to give the mean and standard deviation. Additionally, this study examined empirical investigation of cause and effect relationship between variables (electronic government procurement and user satisfactions) using statistical techniques. In the same way, Seo et al. (2018) utilized a quantitative approach to investigate factors influencing user satisfaction with electronic government procurement systems. It focused on empirical data to analyze the relationships between variables such as ICT infrastructure, management support, and user satisfaction.

## 3.4 Data Type and Sources

### 3.4.1 Data Type

Quantitative data is numbers-based, countable, or measurable. Quantitative data expresses us how many, how much, or how often in calculations (Creswell, 2014). This study collected data from questionnaire that was prepared by Likert Scale and these data can be tested and checked, and anyone can replicate both an experiment and its results. Quantitative research yields unbiased data that can be expressed intelligibly using figures and statistics.

### 3.4.2 Data Source

The researcher mainly used primary data. The primary data was collected through questionnaire from employees of selected governmental organizations of the Federal Government of Ethiopia. The main advantage with this type of data was supposed to collect data with the research's purpose in mind. It implies that the information resulting from it was more consistent with the research questions and objectives. In addition to primary materials, official documents from e-GP procedures and the Ethiopian Public Procurement Authority Annual Report for the years 2020 to 2024 were collected as secondary sources. The major characteristic of secondary sources is their ability to provide an interpretation of data collected from primary sources. The study employed procurement and e-GP literatures, which was the prevalent category of secondary sources in this study.

## 3.5 Population

Population refers to the entire group or set of individuals, objects, or events being studied, while a sample is a subset of the population that is used for analysis (Kothari, 2004). In this study, the targeted populations were 120 employees from procurement departments and endorsing committee from selected nine (9) public offices in Ethiopia. To make the study's findings more broadly applicable, the target populationwas120 employees (procurement and Endorsing committee)that received training on the electronic government procurement before 2020 made up the study's complete target population(Ethiopian Public Procurement Authority Office, 2024).This study used the census method, which is a very dependable way to collect data, to verify a greater level of accuracy than other approaches. The Census approach yields comprehensive data since every item is thoroughly examined. It is also known as 'complete enumeration' or '100% enumeration' or 'complete survey' (Creswell, 2014).

The group of trained workers included twelve(12) representatives from Addis Ababa University, ten(10) from the Ministry of Finance, forty(40) from Public Procurement Authority, ten(10) from Government Procurement Services, ten (10) from the Ethiopian Government Road Administration, eight (8) from the Ministry of Revenue, ten(10) from Addis Ababa Science and Technology University, ten (10) from Ethiopian Pharmaceutical Supply Services, and ten(10) from the Ministry of Science and Technology. These organizations were chosen from among the 172 federal entities under the Federal Government of Ethiopia because these public institutions have been the earlier implementers of electronic government procurement in the country.

## 3.6 Data Collection Instruments

The data was collected by questionnaire and organized and tabulated to test the casual relationship among the variables. Questionnaire is used for data collection since it was easy to get a wide range of data in a short period of time from each respondent. It was adapted from Akca (2017) and Manal (2014) for determinates of electronic government procurement system qualities and this study used from Manal (2014) and Barnabas and Adam(2023). The designed questionnaires are close ended questions.

The close ended questions provide alternative answers from which respondents select the answer because they are easier to analyst and are economical in terms of time. A five point Likert scale

measurement questions were intended because it is commonly recommended to be more appropriate and easier to understand by the respondents and it is the common rating scale that allows respondents to rate quality from high to low or best to worst. The questionnaire compromises questions which were related to the study objectives. The questionnaire was divided in to three sections. In this study, Part I captured the demographic background information of the respondents and state corporations. Part II and III part captured the extent of compliance with e-GP and User Satisfaction.

## 3.7 Validity and Reliability

In this study, validity and reliability are two specific research design emphases that should be given careful consideration in order to minimize the likelihood of providing the incorrect result.

### 3.7.1 Validity

Creswell (2014) defines validity as the establishment of solid evidence demonstrating that test scores accurately reflect the concept or construct they are intended to measure. According to Fraenkel and Wallen (2012), construct validity refers to the extent to which data align with theoretical predictions. In this study, the instrument developed to measure various aspects of electronic government procurement underwent expert validation involving at least three validators. These validators were chosen based on their experience in electronic government procurement and their higher level of education.

Furthermore, Creswell (2014) explains that content validity pertains to perceptions of the instrument's content and procedures within a study. The instrument in this research was designed according to specifications from the public procurement manual and electronic government procurement guidelines of the Federal Government of Ethiopia. Face and content validity were established to ensure the survey's appearance, relevance, and representativeness (Kothari, 2004). The questionnaire was also refined based on relevant studies and literature, and feedback was gathered from professionals and stakeholders in electronic government procurement and user satisfaction. Additionally, the instrument underwent a pilot test with 24 employees who received e-GP training in 2021. This pretest aimed to verify whether the questionnaires could effectively gather data needed to address the study's objectives and hypotheses. To put it briefly, content and construct validity were rigorously applied in this investigation to ensure the reliability and accuracy of the research instrument used.

### 3.7.2 Reliability

The Cronbach's alpha statistics was used to assess the instrument's degree of reliability, which is determined by the consistency of the variables. According to Croswell (2014), Cronbach's alpha is a reliability indicator linked to the variation explained by the underlying construct's true score. This study used Chronbach's alpha to assess the internal consistency of variables in the research instrument.

**Table 1 Reliability Test**

| Variables | Cronbach's Alpha | N of Items |
|---|---|---|
| ICT Infrastructure | .838 | 5 |
| Employees' Competency | .861 | 5 |
| Management Support | .827 | 5 |
| Accuracy | .868 | 5 |
| Timeliness | .869 | 5 |
| User Satisfaction | .918 | 9 |

Survey Results, 2023/24

Table 1 indicated that the reliability test based on each dimension and employed Chronbach's alpha to assess the internal consistency of variables in the research instrument. According to the Table 1, each dimension scale had a coefficient alpha more than 0.70 that indicated a strong reliability and considered adequate to determine reliability. Scale with coefficient alpha between 0.6 and 0.7 indicate fair reliability so for this study a Chronbach's alpha score of 0.70 or higher is consider adequate to determine reliability (Dawit, 2020). This study found that ICT infrastructure .838 and 5, employees' competency .861 and 5, management support .827 and 5 accuracy .868 and 5, timeliness .869 and 5 and user satisfaction .918 and 9 of Cronbach's Alpha and number of items respectively. Based on this base the researcher conducted a test to measure the internal consistency and make modification based on the test and the result showed Cronbach's alpha for all variables were rated as excellent and the items are internally consistent. As a result, it suggests that the scales' reliability was quite high, showing a high degree of internal consistency among the measurement items and that the chosen instrument measures the variables chosen accurately. It means that the chosen instrument accurately measures the variables chosen and that the reliability of the scales was rather good, indicating a high level of internal consistency across the evaluation items.

## 3.8 Data Management and Quality

In this study, rigorous data management practices were implemented to ensure the integrity and reliability of the collected data related to "The Effect of Electronic Government Procurement on Users' Satisfaction in Selected Sector Offices of the Federal Government of Ethiopia." The researcher meticulously reviewed the data for consistency, completeness, and accuracy. Data entry was conducted using SPSS V.27, and thorough checks such as frequency analysis and range checks were performed on each entry to validate accuracy. Any identified data entry errors were promptly corrected by cross-referencing completed surveys.

Several strategies were employed to uphold data quality throughout the study. Periodic supervision was conducted to monitor data collection processes, and data collectors were well-educated on the questionnaire's content to ensure uniformity in data gathering. Additionally, data collectors provided assistance to respondents encountering difficulties during the survey process. Any issues encountered during data collection were promptly addressed, and necessary actions were taken to resolve them.

Overall, these measures ensured that the data collected for the study were robust, reliable, and aligned with the research objectives, thereby enhancing the credibility of the study's findings on electronic government procurement and user satisfaction in Ethiopian federal government offices.

## 3.9 Data Analysis and Interpretation

With the support of SPSS version 27, data was gathered through the questionnaire was entered, revised, arranged, examined, interpreted, and presented in accordance with research goals.

Besides, inferential statistics such as multiple regression and Pearson Correlation was used to determine how the independent variable affects the dependent variable. Bivariate correlation is one of the inferential statistics that was utilized to examine the relationship between the independent and dependent variables. Additionally, a multiple linear regression model was utilized to ascertain the influence of e-GP on user satisfactions, while correlation and linear regression was employed to test for relationships. Finding the model's overall fit (variance

explained) and the proportional contributions of each predictor to the total variance explained are also possible using multiple linear regression analysis.

## 3.10 Model Specification

The multiple linear regression model of the study was based on the theoretical regression model as indicated follows

$$\mathbf{Y = \beta + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + e}$$

Where:

| | | | | | | |
|---|---|---|---|---|---|---|
| Y= User Satisfactions | X1 = Infrastructure | X2 = Employees' Competency | $X_3$=Management Support | $X_4$= Accuracy | $X_5$=Timeliness | e= error term. |
| β= the y intercept. | $\beta_1$= the regression coefficient of Infrastructure | $\beta_2$= the regression coefficient of Employees' Competency | $\beta_3$= the regression coefficient of Management Support | $\beta_4$= the regression coefficient of Accuracy | $\beta_5$= the regression coefficient of Timeliness | |

## 3.11 Ethical Considerations

The fact that this study provided participant anonymity means that either no personally identifiable information such as name, address, email address, etc. were collected from research participants, or the project did not able to connect individual responses to research participants' identities. There was strict maintenance of confidentiality during the entire study. As previously mentioned all available scientific data and accompanying documentation were reviewed and duly recognized with regard to the research ethics.

The respondents were allowed to give their opinion freely since questionnaires also afford them the anonymity that was required in research. Participation in the study is voluntary and confidentiality of the information was assured during as well as after data collection. The participants were informed about their right not to participate, privacy, risk and no direct benefits of the study and not to answer any question or all of the questions.

# CHAPTER FOUR

# RESEARCHE RESULT AND DISCUSSION

## 4.1 Introduction

In this chapter, the researcher attempted to address the objectives of the study stated in first chapter through insightful and systematic analysis, discussion and interpretation of the quantitative data collected from the employees and heads of different departments via using questionnaire; and, qualitative data gathered from the managers of various supply chain actors of the study area. As stated in Chapter One, the research objectives are to examine to what extent electronic government procurement influence on user satisfaction in the study area. Therefore, this section normally covers the contents relied on the response rate of respondents, profiles of `the respondents, and descriptive analysis.

## 4.2 Response Rate

**Table 2Analysis of Response Rate**

| Distributed Questionnaires | Returned Questionnaires | Response Rate (%) |
|---|---|---|
| **120** | **103** | **86%** |

*Source: Survey Result, 2023/24*

Even so, 86.00 % (n=103) of the 120 questionnaires that were given to sample operational workers or employees, medium-level managers, department managers, and executives who work at the study area the primary players in electronic government procurement of the chosen government institutions under research were returned. According to Joyce and Walter (2016), a 60% response rate is considered adequate; consequently, in their study, a response rate of more than 90.0% was considered extraordinary. Furthermore, Ashenafi (2020) noted that a response rate of more than 50% is sufficient for analysis in empirical research, indicating that the response rate was high.

## 4.3 Demographic Data Analysis

The following is a presentation, analysis, and discussion of the questionnaire, which was divided into five personal or individual background information items based on the respondents' background information, including sex, age category, academic level, current positions, and work experiences (service year(s) in government procurement and electronic government procurement), in Ethiopia.

**Table 3 Respondents' Demographic Characteristics**

| **Variables (Category)** | | **N** | **%** |
|---|---|---|---|
| Sex | Male | 64 | 62 |
| | Female | 39 | 38 |
| Age | Below 35 | 73 | 71 |
| | 36 -55 | 28 | 27 |
| | Above 55 | 2 | 2 |
| Working Experience in Government Organization | Below 5 Years | 43 | 42 |
| | 5 Years and above | 60 | 58 |
| Working with e-GP | 2 Year | 30 | 29 |
| | 3 Years | 48 | 47 |
| | 4Years | 25 | 24 |
| Education level | Diploma and below | 2 | 2 |
| | First Degree | 66 | 64 |
| | Master and above | 35 | 34 |
| Management level or job position in the current company | Operational | 72 | 70 |
| | Medium | 27 | 26 |
| | Top | 4 | 4 |
| | **Total** | **103** | **100** |

*Source: Survey Result, 2023/24*

Based on the statistics presented in Table 3, 38% of the research participants were female while the majority, 62%, was male. This indicates that the majority of respondents in electronic government procurement practices were male, highlighting the need for more support and opportunities for female participation in this field. Walter and George (2017)found that male individuals dominated the public procurement and electronic government procurement departments. It is important to have a balanced representation of both genders in research for better results, and to provide equal employment opportunities for both males and females in electronic government procurement.

According to the frequency table, 71% of the 103 valid sample respondents were young adults aged fewer than 35, while the remaining 27% were aged between 36 and 55. This suggests that the majority of electronic government procurement actors in public institutions are young. The majority of respondents in a study on electronic government procurement actors in public institutions had a Bachelor's degree, while a smaller percentage had a Master's degree or a diploma(first degree holders about 64.00 %; master's degree 34.00 % and diploma 2.00 %,). This suggests that most of the actors in electronic government procurement roles are qualified for their positions. This also recommends that the study's results are most representative of this education level's experiences and perceptions.

Relating to the respondents' electronic government procurement work experience, or service years in the organization shown in the table above, out of 103 valid observations, about 58.00 % (n=60) or the majority of the respondents have more than 5 years 'work experience in the surveyed organizations; whereas, the other sampled respondents fall under the service years below 5 years (42.0 %, n=43). This means most of the respondents have well experience in government working producers and activities. In addition, 29 % of the respondents have worked in e-GP for two years, 47 % for 3 years and 24 % of them have worked for four years. This indicates that the targeted employees understood the platform and system of e-GP via trainings and working experience. It further indicates they understood how to fit into e-GP system and its structure as well as experienced employees obtained new insight into e-GP practices.

Based on that, it can be judged that most of the surveyed organization's electronic government procurement actors have with adequate experience individuals is working at the electronic government procurement system. Essentially, based upon the above presentation, analysis and discussion, the researcher can evidently conclude that most of the electronic government procurement actors in surveyed organizations in Addis Ababa, Ethiopia have adequate maturity level, sufficient academic background and working experiences to carry out their duties and responsibilities as well as provide pertinent and applicable information for the study (Table3).

Overall, the profile of respondents demonstrates how their educational background, job experience, and academic standing aided in the study's understanding of ICT infrastructure, staff competency, management support, timeliness, accuracy, and user satisfaction in electronic government procurement.

## 4.4 Descriptive Analysis

In analyzing the effectiveness of electronic government procurement (e-GP) within selected public institutions, this study utilized a measurement scale adapted from established guidelines. Effectiveness was evaluated based on specific intervals: scores ranging from 4.51 to 5.00 were categorized as excellent, 3.51 to 4.50 as very good, 2.51 to 3.50 as good or average, 1.51 to 2.50 as fair, and 1.00 to 1.50 as poor. Dawit (2020) used a mean score between 3 and 5 indicated that most respondents agreed or strongly agreed with the researcher's questions. Scores above 3 reflected agreement, while scores below 3 indicated disagreement. A mean of 3 was considered neutral, indicating no strong agreement or disagreement. These intervals provided a structured framework for interpreting and discussing the questionnaire results, highlighting the varying degrees of success in e-GP implementation across different sectors of the federal government in Ethiopia.

The findings revealed that several institutions achieved ratings in the very good to excellent range, indicating robust implementation and positive outcomes attributed to e-GP initiatives. Conversely, some sectors fell within the good or average category, suggesting moderate effectiveness with room for improvement. Importantly, the study's comprehensive approach facilitated a nuanced understanding of how e-GP impacts user satisfaction and operational efficiency within governmental procurement processes.

**Table 4 Descriptive Statistics**

| | N | Mean | Std. Deviation |
|---|---|---|---|
| | Statistic | Statistic | Statistic |
| Adequate ICT infrastructure | 103 | 4.17 | .789 |
| Employees' Competency | 103 | 3.85 | .886 |
| Management Support | 103 | 3.61 | .834 |
| Accuracy | 103 | 4.04 | .779 |
| Timeliness | 103 | 4.00 | .809 |
| User Satisfaction | 103 | 3.79 | .819 |
| Valid N (listwise) | 103 | | |

*Source: Survey Result, 2023/24*

### 4.4.1 Adequate ICT infrastructure

The evaluation of the variables comprised under the provision of technology infrastructures as illustrated in the above table was carried out based on the perceptions and opinions of 103 valid cases of sampled respondents' responses (see Table 4).The study found a grand mean value of 4.17 which shows an agreement response on e-GP makes use of technologies that enable internet-connected procurement services. It means respondents agreed that they have felt when effectively applied ICT for electronic government procurement. On other hand, there is a low standard deviation (close to 1 or lower than 2), it suggests that the data points tend to be closer to the mean, indicating low variance. This shows that the respondents agreed respectively under the same variable where the frequency result further confirmed the mean result. The decision to implement e-commerce can also be influenced by the organization's current IT infrastructure (technical compatibility), work habits, and the coherence of its values, culture, and legal framework (organizational compatibility) (Kaula, 2018).

### 4.4.2 Employees' Competency

The findings in the above table show the respondents indicated that there is a good employee's competency in electronic government procurement. The mean score 3.85 was rated as very good(see Table 4).This implies that they have the necessary experience to make e-GP more successful and are aware of the fundamentals of e-GP's operating method, regulations, and policy. They comprehend and evaluate the e-GP assignments that are immediately assigned to them. They are able to manage e-GP related technical duties by themselves. Since implementing e-procurement may need alterations to manual procurement, an organization may encounter resistance (Dawit, 2020). Because of this, many people including managers who have the power to make crucial decisions about it see it as ethereal, unquantifiable, and uncontrollable (Boafo et al., 2020).

### 4.4.3 Management Support

The rated grand mean of management support variable was 3.61 that suggests that most of the respondents agreed pertaining to their leader has an idealized influence or professionals personalities in his/her leadership style (see Table 4).It means a sufficient budget and resources is provided fore-GP by their management team. In the same way, the standard deviation values were less than two which is a small standard deviation and therefore suggests that respondents

had similar opinions. One way for managers in businesses to show their commitment to change should change management team structures that clearly define who were doing the change management job (Tsuma & Kanda, 2017).

### 4.4.4 Accuracy

The findings in the above table show the respondents indicated that there is accuracy in electronic government procurement. The grand mean score 4.04was rated as very good(see Table 4).It means that public e-GP system provides them with correct information and the e-GP system enables vendors to be guided in their public tender bids in their organization. Similarly, the standard deviation values were less than two which is a small standard deviation and therefore suggests that respondents had similar opinions. When a procurement order is processed online, order accuracy pertains to adhering to the user's exact specifications, which may include the quantity, price, and delivery location (Tsuma & Kanda, 2017).

### 4.4.5 Timeliness

This study requested respondents' perceived electronic procurement timeliness in public procurement. The grand mean score 4.00 was rated as very good or serious issue (see Table 4). It implies that the public e-GP system at their organization provides them with up-to-date information. Their company's e-GP system makes it possible for users to get timely assistance. In a similar vein, the standard deviation numbers were less than two, indicating that respondents' opinions were likely to be similar due to the small standard deviation. Thus, user deliveries that are made on time may also be considered a part of time-based delivery success (Manal, 2014). It also takes into account factors such as the duration between obtaining materials and distributing the completed product to clients (Michael, 2018).

### 4.4.6 User Satisfaction

Out of 103 valid observations shown in the table above, the new items of the user satisfactions was rated grand mean value figured to be 3.79 which implies that most of the respondents agreed on the items raised(see Table 4).It means the respondents are satisfied with the technical assistance that the e-GP offers. The sampled respondents are pleased that public procurement is offering alternate services for electronic government procurement. They plan to keep utilizing the services provided by e-GP. They want to tell others about the benefits of using e-GP services. They are satisfied with the user care that e-GP offers. According to Ashenafi (2020), user

satisfaction is the response they receive after being met. Thus, user satisfaction is measured via post-purchase evaluation (Beatrice, 2015).For both government organizations and suppliers, the e-GP Platform is a web-based, collaborative tool for managing the entire lifecycle of a tendering and contract management process.

## 4.5 Inferential Analysis

### 4.5.1 Correlation Results

The main objective of the study was to assess to investigate the effect of electronic government procurement on user satisfactions in public procurement.

**Table 5 Relationship between Indicators of Electronic Government Procurement and User Satisfactions (N= 103)**

| | | Adequate ICT infrastructure | Employees' Competency | Management Support | Accuracy | Timeliness | User Satisfaction |
|---|---|---|---|---|---|---|---|
| **Adequate ICT infrastructure** | Pearson Correlation | 1 | .525** | .434** | .427** | .440** | ***.594*** |
| | Sig. (1-tailed) | | .000 | .000 | .000 | .000 | ***.000*** |
| **Employees' Competency** | Pearson Correlation | .525** | 1 | .490** | .453** | .470** | ***.613*** |
| | Sig. (1-tailed) | .000 | | .000 | .000 | .000 | ***.000*** |
| **Management Support** | Pearson Correlation | .434** | .490** | 1 | .422** | .433** | ***.563*** |
| | Sig. (1-tailed) | .000 | .000 | | .000 | .000 | ***.000*** |
| **Accuracy** | Pearson Correlation | .427** | .453** | .422** | 1 | .756** | ***.670*** |
| | Sig. (1-tailed) | .000 | .000 | .000 | | .000 | ***.000*** |
| **Timeliness** | Pearson Correlation | .440** | .470** | .433** | .756** | 1 | ***.696*** |
| | Sig. (1-tailed) | .000 | .000 | .000 | .000 | | ***.000*** |
| **User Satisfaction** | Pearson Correlation | .594** | .613** | .563** | .670** | .696** | ***1*** |
| | Sig. (1-tailed) | .000 | .000 | .000 | .000 | .000 | |

**. Correlation is significant at the 0.05 level (1-tailed).

*Source: Survey Result, 2023/24*

In order to realize the relationship between variables, Pearson correlation was employed via using SPSS. As Pearson product moment indicates that the relationship of variables is expressed by correlation coefficient (r) value within the range of $^{-}1.00$ to $^{+}1.00$. The value of correlation coefficients (r) becomes nearer to +1 or –1 indicates high degree of correlation between the two variables or .03 to .07 moderate and more than .07 strong. A zero correlation indicates that there is no relationship between the variables as per Michael (2018). Thus, the significance of relationship was determined by p-value. For this study, the significance level of 0.05 was taken as the standard for a one-tailed test of correlation.

Using correlation analysis, this study found that there is a positive (direction), moderate substantial (strength, or between 0.3 and0.7) and significant relationship between adequate ICT infrastructure (r=.594; .000) and user satisfaction and its correlation coefficient is considered statistically significant as its P-value is less than the 5% (P<0.05).

This study employed correlation analysis and it found that there is a positive (direction), moderate substantial (strength) and significant relationship between employees' competency (r=.613; .000) and user satisfaction and because its P-value is less than 5% (P<0.05), its correlation coefficient is regarded as statistically significant.

This study engaged in correlational analysis and it found that there is a positive (direction), moderate substantial (strength) and significant relationship between management support (r=.563; .000) and user satisfaction. Due to its P-value being less than 5% (P<0.05), the correlation coefficient is deemed statistically significant.

Using this analysis, this study found that there is a positive (direction), moderate substantial (strength) and significant relationship between accuracy (r=.670, .000) and user satisfaction. Given that its P-value is less than 5% (P<0.05), its correlation coefficient is regarded as statistically significant.

Though the medium, a positive (direction), moderate substantial (strength) and significant relationship or correlation result is shown between, timeliness and user satisfaction (r= .696; .000)and since its P-value is less than 5% (P<0.05), its correlation coefficient is regarded as statistically significant (See Table 5).

### 4.5.2 Regression Analysis

By utilizing Multiple Linear Regression, researchers can quantify the impact of each independent variable on the dependent variable and understand the combined effect of these factors. This technique not only determines the strength of the relationships but also evaluates the predictive power of the independent variables collectively. The results of the regression analysis provide valuable insights into which factors significantly influence user satisfaction in e-GP implementations within selected sector offices of the Federal Government of Ethiopia.Therefore, Multiple Linear Regression serves as a robust tool in this study to uncover the nuanced dynamics between various factors of e-GP implementation and user satisfaction, shedding light on strategies to enhance the effectiveness and efficiency of electronic procurement systems in public institutions.

#### 4.5.2.1 Multiple Regression Assumptions

Regression assumption tests such as normality, multicollinearity, autocorrelation and other were done based on theoretical and empirical multiple regression concepts and results found on in this part of the study.

##### 4.5.2.1.1 Sample Size

The Tabachnick and Fidell (2011) formula specifies the sample size needed for multiple regression analysis. The calculation indicates that $N > 50 + 8m$, where m is the number of independent variables, is the minimum sample size that is needed. There were five independent variables and this calculation indicates that $N > 50 + 8m = 90$ which is less than 103 participants in this particular study. As a result, the study satisfied the minimal sample size criteria. It is impossible to exaggerate the significance of having a sufficient sample size for multiple regression analysis. Inaccurate or deceptive results may arise from small sample sizes because they can obscure the underlying link between the dependent and independent variables and produce erroneous estimates of regression coefficients.

##### 4.5.2.1.2 Normality Test

Data with Skewness values less than -1 (negative skewed) or greater than 1 (Positive Skewed) are considered highly skewed (Creswell, 2014), thus data is normally distributed and had a reasonable variance to use subsequent analysis (Stephanie, 2018).

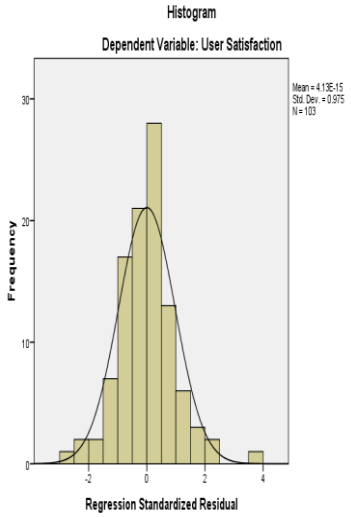


**Table 6 Normality Test Result**

**Descriptive Statistics**

| | N | Skewness | | Kurtosis | |
|---|---|---|---|---|---|
| | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| Adequate ICT infrastructure | 103 | -1.136 | .238 | .741 | .472 |
| Employees' Competency | 103 | -1.000 | .238 | .599 | .472 |
| Management Support | 103 | -.316 | .238 | -.618 | .472 |
| Accuracy | 103 | -.734 | .238 | -.169 | .472 |
| Timeliness | 103 | -.811 | .238 | .028 | .472 |
| User Satisfaction | 103 | -.521 | .238 | -.180 | .472 |
| Valid N (listwise) | 103 | | | | |

**Figure 2 Histogram**

Survey Results, 2023/24

To make sure that the assumptions of the statistical tests are being met, it is crucial to verify the normality of the residuals and the dependent variable's distribution when analyzing data with SPSS. A bell-shaped histogram that is symmetrical suggests that the distribution is centered around its mean, which in this instance is zero. The residuals appear to be regularly distributed based on the bell-shaped curve that covers the histogram bars. This suggests that the normality assumptions of the regression model are satisfied. The residuals have a mean of about 4.13E-15, or practically nil. This suggests that, on average, the model's predictions are objective. The residuals' standard deviation, which is 0.975, indicates that while they are dispersed around the mean, the majority of them fall within the range that is predicted by a normal distribution. With 103 sample sizes (N), there is enough data to evaluate the performance of the model. The histogram suggests that the regression model for predicting user satisfaction based on e-GP is well-fitted, with residuals that are normally distributed and centered on zero. This implies that the model does not systematically overestimate or underestimate the dependent variable "user satisfaction".

The Skewness statistic for adequate ICT infrastructure -1.136, employees' competency -1.000, management support -.316, accuracy -.734, timeliness -.811 and user satisfaction -.521 indicate a moderately negatively skewed distribution. This suggests that the distribution of these

Variables scores has a longer tail on the left side. The kurtosis statistic for these variables included adequate ICT infrastructure .741, employees' competency .599, management support -.618, accuracy -.169, timeliness .028 and user satisfaction -.180 which is less than 3, indicating a platykurtic distribution. This suggests that the distribution has lighter tails and a flatter peak compared to a normal distribution. It is possible to understand the histogram graph indicate that the data have a normal distribution when the sample size is greater than 200 (Suleyman, 2022). But when the Kurtosis and Skewness increase, the histogram graph will visibly deviate from the normal distribution. So, this study conducted a normality test before the analysis was conducted.

As we can see from the above descriptive statistic from Table 6, Skewness and Kurtosis statics calculation demonstrates that the distribution is normal because Skewness and Kurtosis are values within the range of -1 and -0.5 (negative skewed) indicate slightly skewed data distributions.The plotted graph on the above graph, the data follows a bell shape, with most values clustering around a central region and tapering off as they go further away from the centre.

#### 4.5.2.1.3 Linearity Test

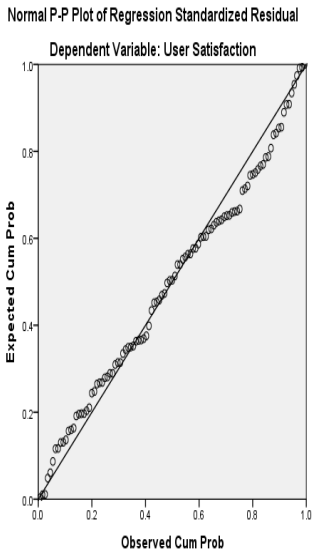


**Figure 3 P-P Plot of Regression Standardized Residual**

*Source: Survey Result, 2023/24*

The linearity of associations between the dependent and independent variables can be tested by looking at the P-P plot for the model. The closer the dots lie to the diagonal line, the closer to normal the residuals are distributed. As depicted in the above graph, the visual inspections of the

p-p plot revealed that there exist linear relationship between the dependent and independent variables. A graphical tool for evaluating the normality of residuals in regression analysis is the P-P plot that is supplied. An explanation of the P-P plot is as follows:

- Expected vs. Observed Cumulative Probabilities: Plotting the observed cumulative probabilities of the residuals versus the expected cumulative probabilities which would arise from a perfectly regularly distributed residual distribution represents the dots.
- Diagonal Line: If the residuals were entirely normally distributed, the diagonal line would depict the anticipated connection.
- Alignment: The dots' near alignment with the diagonal line indicates a normal distribution for the residuals. This suggests that the normality assumption of the regression model is probably satisfied.
- Outliers: Significant departures from the diagonal line by the dots would suggest the possibility of outliers or a break from normality.

An advantageous characteristic of a well-fitted model is that the P-P plot indicates that the residuals from the regression model, with user satisfaction as the dependent variable, are normally distributed. This suggests that the normal statistical tests on the model's coefficients are probably true and that the model's predictions agree with the observed data.

#### 4.5.2.1.4 Multi-collinearly Test Result

Multi-collinearity exists when an independent variable is extremely correlated with one or more of the other independent variables in a multiple regression equation. For this study result of multi-collinearity test of the independent variables was display in the following table.

**Table 7 Multi-collinearly Test of the Independent Variable**

| Model | | Collinearity Statistics | |
|---|---|---|---|
| | | Tolerance | VIF |
| 1 | (Constant) | | |
| | Adequate ICT infrastructure | .649 | 1.541 |
| | Employees' Competency | .600 | 1.667 |
| | Management Support | .678 | 1.475 |
| | Accuracy | .408 | 2.449 |
| | Timeliness | .398 | 2.516 |

*Source: Survey Result, 2023/24*

The decision rule is a variable whose Variance Inflation Factor (VIF) value is greater than 10 indicates the possible existence of the multicollinearity problem. Tolerance (TOL) is a statistics applied to display the variability of the stated independent variable that is not explained by another independent variable in the model. The decision rule for tolerance is a variable whose TOL value is less than 0.1 shows the possible existence of a multi-collinearity problem (Michael, 2018). In this study, the Tolerance and VIF values for adequate ICT infrastructure are .649 and 1.541, employees' competency .600 and 1.667, management support .678 and 1.475, accuracy .408 and 2.449 and timeliness .398 and 2.516 respectively, these show all VIF variables less than 2 and all tolerance (TOL) is greater than 0.2, therefore, this study has no multi-collinearity problem. This suggests that there is no significant multicollinearity between one variable to other variables. It shows the estimated regression coefficients are accurate; the standard errors of the coefficients are not inflated and the p-values, and all subsequent inference, cannot be wrong.

#### 4.5.2.1.5 Homescadacity

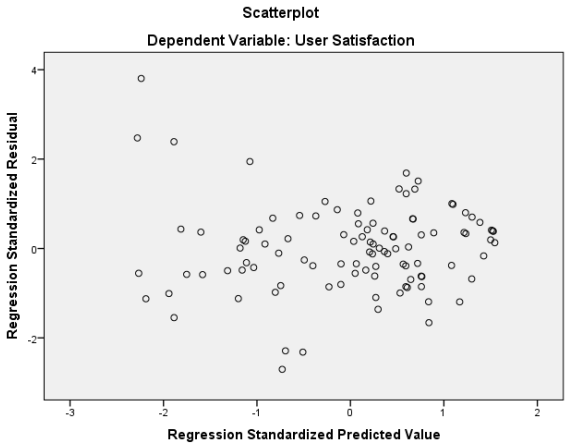


**Figure 4 Scatter Plot**
*Source: Survey Result, 2023/24*

The residuals of this study's data, which resembled a "shotgun blast" of points, were evenly distributed across the range of expected values, fully meeting the homoscedastic assumption. The constant variance of mistakes is guaranteed by this uniform distribution. The assumption of equal or comparable variances among the many groups under comparison is known as homoscedasticity, or homogeneity of variances. If every random variable in a sequence of random variables has the same finite variance, it is called homoscedastic in statistics (Barnabas

and Adam, 2023). The scatterplot provided examines the relationship between the Regression Standardized Predicted Value and the Regression Standardized Residual for the dependent variable "user satisfaction." Based on Central Clustering, the data points are chiefly gathered around the center, particularly near the (0,0) coordinate. This suggests that for most observations, the predicted values are close to the actual values, and the residuals (differences between observed and predicted values) are small. Second we can see Spread of Data Points, as the spread of data points away from the center appears random and does not show any distinct patterns, such as a funnel shape, which would indicate heteroscedasticity. There is no vibrant trend or systematic pattern in the residuals as they are scattered across the range of predicted values. This is a good indication that the regression model is appropriately capturing the relationship without bias. The scatter plot suggests that the regression model for predicting user satisfaction based on e-GP is performing well, with residuals that are randomly distributed and centered on zero, indicating no obvious violations of the assumptions of homoscedasticity and linearity.

### 4.5.2.1.6 Test for Autocorrelation

**Table 8Result of Durbin-Watson (N=103)**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .820[a] | .673 | .656 | .480 | 1.885 |

a. Predictors: (Constant), Timeliness, Management Support, Adequate ICT infrastructure , Employees' Competency, Accuracy
b. Dependent Variable: User Satisfaction

*Source: Survey Result, 2023/24*

This regression assumption was tested for the non-independent residuals, another aspect of the assumption, can be done with the Durbin-Watson test as sides Stephanie (2018) cited Durbin& Watson, 1950, 1951), also with similar potential problems with interpreting significance and deciding whether the magnitude is important. The result of this test was established to 1.885; that was found with the specified range from 1.5 to 2.5, representing that the residuals are uncorrelated; therefore, the independence assumption is met for this analysis (Frost, 2017).

### 4.5.2.2 Multiple Regression Model Results

**Table 9Model Summary**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .820[a] | .673 | .656 | .480 |

a. Predictors: (Constant), Timeliness, Management Support, Adequate ICT infrastructure , Employees' Competency, Accuracy

*Source: Survey Result, 2023/24*

Table 9 shows the model summary that mainly contains R, R Square, Adjusted R Square. Firstly, correlation coefficient (R) with the dependent variable (user satisfaction) is 0.820 which indicates the presence of high positive and strong correlation between the dependent and the independent variables as a whole (See Table 9).

The independent variables (namely; ICT infrastructure, employees' competency, management support, accuracy, and timeliness in electronic government procurement (e-GP) explain 67.3 % variability on the dependent variable (user satisfaction) since R square value is .673. As exposed in the above table, the overall bundle of determinant factors of the five electronic government procurement independent variables were 67.3 % ($R^2$ = .673) explained the dependent variable. This suggests that 67.3 % of user satisfaction depends on the five electronic government procurement independent variables while the remaining 32.7 % is determined by other unaccounted factors in this study. Further, SPSS forms something called the R-square change, which is just the improvement in R-square when the second predictor is added.

The standard error of the estimate is 0.480. This statistic provides a measure of the standard deviation of the error term, and thus a measure of the "typical" distance between the observed values of the response variable (user satisfaction) and the values predicted by the model. The model appears to have a moderate to strong fit, explaining about the variance in the dependent variable, user satisfaction. The residuals show no signs of autocorrelation, and the standard error of the estimate suggests a reasonable level of accuracy in the prediction of user satisfaction from the independent variables.

**Table 10ANOVA Results**

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 46.041 | 5 | 9.208 | 39.935 | .000[b] |
| | Residual | 22.366 | 97 | .231 | | |
| | Total | 68.408 | 102 | | | |

a. Dependent Variable: User Satisfaction
b. Predictors: (Constant), Timeliness, Management Support, Adequate ICT infrastructure , Employees' Competency, Accuracy

*Source: Survey Result, 2023/24*

The ANOVA table (Table 10) indicates the existence of a significant regression model which predict the dependent variable based on the models independent variable (F statistics = 39.935, P value < .05). The table demonstrates that the dependent variable, F(5, 97) = 39.935, p <. 0005, is statistically significantly predicted by the independent variables (i.e., the regression model is a good fit of the data).Additionally, it demonstrates how the applied overall model can predict the dependent variable, which may be statistically significant. An additional table revealed that of the 68.408 total sum of squares, regression could explain 46.041 of the variation, and the residual could explain 22.366 of the variation in the user satisfaction dependent variable. Regression provides a relatively large percentage of the explanation, hence it may be concluded that the model fits.

F (F-statistic) is calculated by dividing the Mean Square Regression (9.208) by the Mean Square Residual (0.231). The F-value is 39.935in the model. A small p-value (less than 0.05) indicates strong evidence that the null hypothesis is invalid and that your predictors are having an effect on the outcome. In this case, the p-value is 0.000, indicating that at least one of the predictors is significantly related to the dependent variable, user satisfaction.

The ANOVA table suggests that the regression model is statistically significant and that it explains a significant amount of the variance in the dependent variable, user satisfaction. This means that the predictors (five independent variables) are useful for predicting user satisfaction.

**Table 11 Testing the Significance Level of Coefficients**

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | β | Std. Error | Beta | | |
| 1 | (Constant) | -.419 | .308 | | -1.361 | .177 |
| | Adequate ICT infrastructure | .212 | .075 | .204 | 2.831 | .006 |
| | Employees' Competency | .181 | .069 | .195 | 2.606 | .011 |
| | Management Support | .165 | .069 | .168 | 2.387 | .019 |
| | Accuracy | .219 | .096 | .208 | 2.293 | .024 |
| | Timeliness | .288 | .093 | .284 | 3.087 | .003 |

a. Dependent Variable: User Satisfaction

*Source: Survey Result, 2023/24*

Based on the coefficient table (Table 11) presented above, one of the independent variable of effective electronic government procurement in this study called adequate infrastructure (ICT) [β= .212; P-value=.006 i.e. less than .05 or P<.05], were found significantly and positively affect user satisfaction using a commonly used threshold of alpha 0.05. A positive coefficient indicates that as the value of the independent variable increases, the mean of the dependent variable also tends to increase. An increase of one unit in the availability of sufficient ICT infrastructure leads to a 21.2% rise in user satisfaction with electronic government procurement. The results are in line with findings of a research conducted by Joyce and Walter (2016) revealed adequate infrastructure was statistically significant on user satisfaction.

In terms of the magnitudes of the predictors' coefficients, employees' competency has a positive and significant effect [β= .181 P-value=.011 i.e. less than .05 or P <.05] on user satisfaction. A positive coefficient suggests that the dependent variable's mean tends to increase along with the independent variable's value. For every unit increase, the competency deployment of personnel increases user satisfaction in electronic government procurement by 18.1%. On the other hand, Barnabas and Adam (2023) exposed employees' competency was statistically significant on user satisfaction.

From this multiple regression table, this study found similar results as there is a positive and significant effect of management support [β= .165; P-value=.019; i.e. less than .05 or P <.05] on user satisfaction. A positive coefficient suggests that the mean of the dependent variable tends to increase along with the increase in the value of the independent variable. User satisfaction in electronic government procurement increases by 16.5 % for every unit increase in the presence of management support. This study also found similar results from Joyce and Walter (2016) as there is a positive and significant effect of management support on user satisfaction. E-payment strategy is positively related to user service delivery and has the most statistically significant coefficient (Rahadian, 2020). This implies that the e-payment strategy improvement will positively affect the user service delivery.

This study employed multiple regression table and it found there is a positive and significant effect of accuracy (.0001) [β= .219; P-value=.024; i.e. less than .05 or P <.05] on usersatisfaction.When the value of the independent variable rises, the dependent variable's mean tends to rise as well, according to a positive coefficient. For every unit increase in the presence of electronic procurement accuracy, user satisfaction with government procurement through electronic means rises by 21.9%. Barnabas and Adam (2023) exposed accuracy of electronic government procurement was statistically significant on user satisfaction.This allows for quicker and more efficient quotations, as well as better order accuracy.

Using multiple regression table, this study found that there is a positive and significant effect of timeliness [β= .288; P-value=.003; i.e. less than .05or P <.05] on user satisfaction. A positive coefficient indicates that as the value of the independent variable grows, the mean of the dependent variable tends to climb as well. User satisfaction with government procurement via electronic means increases by 28.8% for each unit increase in the presence of electronic government procurement timeliness. Hauwa and Umar (2024) indicate a positive relationship between e-procurement practices and project completion times, with e-invoicing having the most significant impact on it.

### 4.5.2.3 Summary of Results

**Table 12 Summary of Results**

| Variables | Hypothesis | r | β* | Sig.* | Decision |
|---|---|---|---|---|---|
| Adequate ICT infrastructure | *Hypothesis $H_1$ - Adequate ICT infrastructure of E-procurement has a positive and significant effect on user satisfaction.* | .594** | .212 | .006 | Accepted |
| Employees' Competency | *Hypothesis $H_2$ - Employees' competency of E-procurement has a positive and significant effect on user satisfaction.* | .613** | .181 | .011 | Accepted |
| Management Support | *Hypothesis $H_3$ - Management support for E-procurement has a positive and significant effect on user satisfaction.* | .563 | .165 | .019 | Accepted |
| Accuracy | *Hypothesis $H_4$ - Accuracy of E-procurement has a positive and significant effect on user satisfaction* | .670** | .219 | .024 | Accepted |
| Timeliness | *Hypothesis $H_5$ - Timeliness of E-procurement has a positive and significant effect on user satisfaction.* | .696** | .288 | .003 | Accepted |

** *r= from Correlation Analysis, B* and Sig*.= from Multiple Regression Analysis*

*Source: Survey Result, 2023/24*

Using correlation analysis, this study found that there is a substantial relationship between adequate ICT infrastructure (r=.594; .000), employees' competency (r=.613; .000), management support (r=.563; .000), accuracy (r=.670, .000) and timeliness and user satisfaction (r= .696; .000)(See Table 12).Based on the summary table (Table 12) presented above, this study also confirmed that adequate infrastructure (ICT) [β= .212; P-value=.006 i.e. less than .05 or P<.05], employees' competency [β= .181 P-value=.011 i.e. less than .05 or P <.05], management support [β= .165; P-value=.019; i.e. less than .05 or P <.05], accuracy (.0001) [β= .219; P-value=.024; i.e. less than .05 or P <.05] and timeliness [β= .288; P-value=.003; i.e. less than .05or P <.05] have a positive and significant effect on user satisfaction. This shows that this study successfully confirmed that Adequate ICT infrastructure, employees' competency, management support, accuracy and timeliness of E-procurement have a positive and significant effect on user satisfaction.

## 4.6 Discussions

This part of the study presents the consistency and inconsistency of the results found in the study with other similar researches conducted.

### 4.6.1 Adequate Infrastructure

This study's use of correlation analysisis revealed a positive and significant correlation (r=.594; .000) between user satisfaction and adequate ICT infrastructure. Using a commonly used threshold of alpha 0.05, it was found that one of the independent variables of effective electronic government procurement called adequate infrastructure (ICT) [β=.212; P-value=.006 as this value (.006) is less than.05] significantly and positively affect user satisfaction. This conclusion is based on the coefficient of regression analysis that was previously presented. The outcomes are consistent with a study by Joyce and Walter (2016), which showed that user satisfaction, was statistically significantly impacted by suitable infrastructure. Consistent with this investigation, Dawit (2020) suggests that the correlation between the adequacy of current ICT infrastructure and user contentment in regard to readiness of the adoption of e-procurement. Since current ICT is the foundation of e-procurement, it follows that the more technologically skills an organization is, the fewer modifications or adaptations would be required, and the less opposition to the technology that would emerge upon adoption (Barnabas and Adam,2023). The decision to implement e-commerce can also be influenced by the organization's current IT infrastructure (technical compatibility), work habits, and the coherence of its values, culture, and legal framework (organizational compatibility) (Kaula, 2018).

### 4.6.2 Employees' Competency and User Satisfactions

Employing correlational analysis, this study discovered a positive and significant correlation (r=.613; .000) between employee competency and user satisfaction. Employee competency has a positive and significant effect [β=.181 P-value=.011 given that this number (.011) is below.05].on user satisfaction based on the magnitudes of the predictors' coefficients. Likewise, Barnabas and Adam (2023) found a statistically significant relationship between employee competency and user satisfaction. According to Boafo et al. (2020), there is a favorable correlation between it and usersatisfaction. It implies that providing staff training programs that successfully advance workers' technological knowledge and proficiency is also essential. The adoption of E-procurement in government procurement organizations may depend significantly

on people's IT proficiency (Beatrice, 2015). It is well known that many employees of public companies are not always the most proficient with technology. This is a result of the close relationship between technology and tools that efficiently produce commodities in big quantities to foster economic growth (Boafo et al., 2020).

### 4.6.3 Management Support and User Satisfactions

Correlational analysis was used in this study, and the results showed a positive and significant relationship (r=.563; .000) between management support and user satisfaction. Similar findings were obtained by this study using multiple regression analysis, showing that management support has a positive and substantial impact on user satisfaction [β=.165; P-value=.019; i.e. since this number (.019) is below the.05.]. Similar findings from Joyce and Walter (2016) were also discovered in this study, indicating that managerial assistance has a favorable and significant impact on user satisfaction. Similar to this study, Peter and Osman (2016) discovered a favorable correlation between it and user satisfaction. Organizational managers must utilize change management strategies in conjunction with e-procurement, just like they would with any other technology change, to guarantee the transformation process's success (Kaula, 2018). One way for managers in businesses to show their commitment to change are to have change management team structures that clearly define who was doing the change management job (Tsuma& Kanda, 2017). The dynamics between the project team and the change management team are defined by change management structures (Hashim et al., 2022).

### 4.6.4 Accuracy and User Satisfactions

By using this approach, the study discovered that there is a significant correlation and accuracy (r=.670, .000). Using a multiple regression analysis, this study discovered that accuracy has a positive and substantial effect on user satisfaction [β=.219; P-value=.024; i.e. because this figure (.024) is below.05]. According to Dawit (2020), there is a favorable correlation between it and user satisfaction. According to Barnabas and Adam (2023), user satisfaction was statistically and significantly impacted by the correctness of electronic government procurement. Better order accuracy and faster, more effective quotations are made possible by this. According to the research of Seo et al. (2018), a major drawback of e-government procurement systems would be information failure, which occurs when data gathered through the system is unable to guide

vendors in their bids for open tenders. When an order is processed online, order accuracy pertains to adhering to the user's exact specifications, which may include the quantity, price, and delivery location (Tsuma & Kanda, 2017).It is having the appropriate amount of stuff, the right items in the right order, and no replacements for the ordered products. Whether the wrong items are shipped and the quantity of the shipment are shipped incorrectly it determine the quality and accuracy of order fulfillment (Manal, 2014).

### 4.6.5 Timeliness and User Satisfactions

This study found that there is a positive and significant effect of timeliness [β=.288; P-value=.003; i.e. given that this number (.03) is below.05.] on user satisfaction, despite the medium, positive, and significant correlation result between timeliness and user satisfaction (r=.696). According to Hauwa and Umar (2024), there is a positive correlation between e-procurement practices and project completion times, with e-invoicing having the biggest effect. Michael (2018) also found a correlation between user satisfaction and the timeliness of electronic government procurement. It also takes into account factors such as the duration between obtaining materials and distributing the completed product to clients (Michael, 2018).Clients can only obtain timely help from pre- to post-transactional stages by utilizing technology, especially when it comes to creating a customized service experience (Seo et al., 2018). Furthermore, delivery timeliness refers to how well orders arrive at the user's location on the designated date. Thus, user deliveries that are made on time may also be considered a part of time-based delivery success (Manal, 2014). The order cycle time between placing and receiving the client's order makes up the majority of online order fulfillment performance. This order cycle time is typically measured in the logistics literature as order timeliness (Boafo et al., 2020). In these situations, the time it takes for clients to purchase their goods or services can have an instant impact on how much the quality of the services is valued.

# CHAPTER FIVE

# SUMMARY OF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Introduction

This chapter includes the summary of the major findings and the conclusions as well as the recommendation part of the study. It also comprises the implication often study and future studies.

## 5.2 Summary of Key Findings

The study was looking at the effect of electronic government procurement in government institutions on user satisfactions mostly based on institutional theory. It applied five independent variables and one dependent variable. In order to achieve the aim of the study, primary data were collected from 103 sampled respondents through questionnaires and through a review of literature relevant to the study. Thus, this study found that

- Using correlation analysis, this study found a mediating correlation (r=.594; .000) between sufficient ICT infrastructure and user satisfaction. The results of multiple regression analysis showed that user satisfaction is considerably and positively impacted by suitable infrastructure (ICT) [β=.212; P-value=.006 i.e. less than.05].
- This study used correlation analysis to find a moderate correlation (r=.613; .000) between user satisfaction and employee competency. Based on multiple regression analysis, employee competency has a positive and significant effect [β=.181 P-value=.011 i.e. less than.05] on user satisfaction.
- This study employed correlation analysis, and the findings indicated that management support and user satisfaction had a substantial and positive association (r=.563; .000). This study's multiple regression analysis produced similar results, demonstrating that management support significantly and favorably affects user satisfaction [β=.165; P-value=.019; i.e. less than.05].
- Using this correlation method, the study found that accuracy (r=.670) and user

satisfaction. This study found that accuracy had a significant and positive impact on user satisfaction (.0001) [β=.219; P-value=.024; i.e. Less than.05] using a multiple regression analysis.

- Despite the medium, positive, and significant correlation result between timeliness and user satisfaction (r=.696), this study indicated that there is a positive and significant influence of timeliness [β=.288; P-value=.003; i.e. less than.05] on user satisfaction.

## 5.3 Conclusions

Electronic government procurement's technology platforms have a key impact on the quality of information. More businesses are using e-procurement owing to the growth of IT platforms. It is possible that an online-accessible semantic technology protocol, following standard and common data models, formal query languages, and semantic data models, can satisfy the demands of intelligent electronic government procurement. The study also concludes that adequate or appropriate infrastructure (ICT) has a significant and beneficial impact on user satisfaction.

Users are more likely to be satisfied when workers are satisfied. Employees that are happy with their jobs are more likely to greet clients with a smile and provide better user service. In the end, this boosts client loyalty, improves users' satisfaction, and increases performance. According to the study's findings, employee competency significantly and favorably affects user satisfaction.

The company's senior executives should be in charge of overseeing the company's day-to-day operations. The direction of a company's growth will be determined by the actions, directives, and efforts of its senior management. The primary objective of top-level management assistance is to elevate a project's chances of success to an all-important level. The conclusion is that user satisfaction is greatly and favorably impacted by managerial support.

Understanding this connection is vital for the government to accurately gauge progress, pinpoint shortfalls and implement changes to optimize procurement processes and project results. The study also concludes that user satisfaction was significantly and favorably impacted by accuracy.

As a result of using technology and submitting orders online, the business saves time and money, which helps to enhance supply chain efficiency and the overall performance of the organization.

Additionally, when business transactions are conducted electronically, the approval of requisitions is also included in the sourcing process. According to the study's findings, timeliness significantly and favorably affects user satisfaction.

## 5.4 Recommendations

The following are the major recommendations

1. The study also finds that user satisfaction is significantly and favorably impacted by proper infrastructure (ICT). Because e-GP is digitally empowered in an electronic government procurement that boosts efficiency across the board, managers must have a firm grasp of the technology and the forces that drive it. Managers should consider the administration's of e-GP implementation system since they may optimize the implemented process' efficacy and reduce its cost. Finally, it is emphasized that the predicted advantages of e-GP depend on the company's size.
2. The results of the study show that user satisfaction is positively and significantly impacted by employee competency. The study suggests that public organizations should evaluate their employee competency and skills. It emphasizes the need for understanding the learning curves and adjustment periods and their skills should be enhanced by strategic competency building, clear goal setting, proper instructions, and adherence to procedures, leading to improved capabilities and organizational development.
3. The conclusion is that managerial support has a positive and significant impact on user satisfaction. So this study suggests that managers and executives of public organizations should enhance and capitalize their effective communication with their workers; they should involve workers in important decisions; they should give workers clear feedback on their performance and helping them with difficult tasks.
4. The study also finds that accuracy has a large and positive impact on user satisfaction. This study suggests that government institutions should improve the electronic procurement process by establish a Vendor Management System (VMS), leverage technology to streamline the procurement process, develop strong supplier relationships, and focus on total cost of ownership and continuously monitoring the process.

5 The results of the study show that user satisfaction is positively and significantly impacted by timeliness. Thus, this study suggests that in order to effectively use of electronic government procurement, public administrations combined with organizational change and new skills in order to improve online services and processes by improved quality of information and information supply and reduction of process time.

## 5.5 Implications for Stakeholders

The results from this study designate that there is significant relationship between using electronic government procurement and user satisfaction. In other words, electronic government procurement has an important role in improving goods and service delivery to user. With this understanding, chief executive officers managing public institutions should develop relevant policies, procedures and deploy more resources for effective use of electronic government procurement as a strategy to improve service delivery as well as to increase user satisfaction. This means that the public institutions need to plan for, and undertake effective and efficient management of electronic government procurement performance, delivery and payment using good leadership, internal business processes and ICT using methodical and measured change control; active risk mitigation and management and agile resolution of issues and disputes. Good electronic government procurement management involves planning how to manage the electronic government procurement platform, implementing the plan and then checking the results. It needs to vigorously managing electronic government procurement implementation to ensure the efficient and effective delivery of the contracted outputs and/or outcomes. Effective electronic government procurement management enables firms to maximize value for money in delivering development outcomes.

## 5.6 Direction for Future Researchers

Major international organizations have advocated for the use of electronic government procurement, which is widely acknowledged as a method for improving efficiency and transparency. According to this study, further research is necessary to determine how Ethiopia's public sector's use of electronic procurement, or "electric government procurement," affects

project completion timelines. Future studies should examine the effect of electronic tendering, electronic invoicing, and electronic sourcing on procurement completion times. Future studies may use with additional variables on that they may study the effect of quality electronic government procurement management, technology selection and relationship on operational performance. They might also carry out research on the attitudes of managers and staff regarding the use of electronic procurement, as well as how it affects job satisfaction and productivity on organizational performance in local, state, and multinational organizations, including multinational corporations.

# REFERENCE


Aguiar, A., Arantes, A., & Valadares, L. (2013). Evidence of the impacts of public E-procurement: The Portuguese experience. *Journal of Purchasing and Supply Management,* 19 (4), 238–246.

Akca, K. (2017). The impact of E-procurement on organisational performance: A case study of Turkish public organisations. *International Journal of Public Sector Management*, 30(4), 463-483.

Ashenafi, Tola. (2020). Effect of E-Government Based Service Delivery on Customers' Satisfaction The Case of Addis Ababa City Administration Vital Events Registration Agency, Ethiopian Civil Service University (Leadership and Good Governance)

Barnabas, Maagi. and Adam, Mwakalobo. (2023). Users' Perception Regarding the Effect of E-procurement Practice on Customer Satisfaction in Public Procurement in Tanzania, *Open Journal of Business and Management*, 2023, 11, 570-584

Beatrice, KananuKahiu. (2015). Determinants of Implementation of Electronic Procurement in Procuring Entities at the County Level in Kenya. (Case Study of Lamu County Service Delivery Coordinating Unit, *International Journal of Scientific and Research Publications,* Volume 5, Issue 9, September 2015 1

Boafo, N. D., Ahudey, E., &Darteh, A. O. (2020). Evaluating E-procurement Impact in the Public Sector, *Archives of Business Research,* 8*(5). 235-247*

Chandra, T., Ng, M., Chandra, S., &Priyono, P. (2018). The Effect of Service Quality onStudent Satisfaction and Student Loyalty: An Empirical Study. *Journal of Social StudiesEducation Research,* 9, 109-131.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* Thousand Oaks: Sage Publications, Inc.

Dawit, Teklu. (2020). Factors Affecting the Adoption of E-procurement in Public Organizations: The Case of Addis Ababa City Roads Authority, School of Graduate Studies, St. Mary's University

D'Onofrio, G., Biros, D., &Parziale, A. (2013). User satisfaction with E-procurement systems: A comprehensive model. *International Journal of Logistics Management*, 24(1), 130-153.

Fraenkel, J. R. &Wallen, N. E. (2012).How to Design and Evaluate Research in Education (8thed.). New York: McGraw Hill

Frost, J. (2017). How to interpret R-squared in regression analysis.Retrieved fromhttp://statisticsbyjim.com/regression/interpret-r-squared-regression/ Accessed on 02 June 2018.

Gong, M., Huang, Y., & Pan, Y. (2018). The impact of E-procurement on government agencies' operational performance: Evidence from China. *International Journal of Public Administration*, 41(12), 877-893

Hashim, NorLaily and Yusof, Norhanisha and Hussain, Azham and Ibrahim, Marhaiza. (2022). User Experience Dimensions for E-procurement: A Systematic Review. *Journal of Information and Communication Technology*, 21 (4). pp. 465-494. ISSN 2180-3862

Hauwa, Aliyu. Oniyangi, A. and Umar, Abbas Ibrahim. (2024). Optimizing Project Timelines: The Impact Of E-Procurement in Accelerating Public Sector Projects in Nigeria, Intern. *Journal of Profess. Bus. Review*, Miami, v. 9 , n. 3, p. 01-16, e04182 | 2024

Joyce, MokeiraOnyiego. and Walter, OkiboBichanga. (2016). The Influence of E-procurement Strategies in Enhancing Customer Service Delivery in Public Institutions (A Survey ofKisiiandNyamira Counties), Vol II Issue IX, October 2016

Kaula, S. (2018). Assessment on the Factors Hindering Performance Procurement: A Case of MbeyaTanzania. Open University of Tanzania.

Kothari C.R. (2004).*Research Methodology, Methods and Techniques*, Fifth Revised Edition New Age International (P) Ltd., Publishers, New Delhi

Kundi, G. M., Qureshi, Q. A., Khan, Y., &Akhtar, R. (2014).Impact of Service Quality onCustomer Satisfaction in Higher Education Institutions.*International Institute for Science, Technology and Education*, 4, 23-28.

Manal M. N. Sharabati. (2014). The Impact of E-procurement System Qualities and Trust on End-User Satisfaction, the Degree of Doctor of Philosophy Faculty of Business and Accountancy University of Malaya Kualalumpur

Marian, Tukuta. AndFanny, Saruchera. (2015). Challenges facing procurement professionals in developing economies: Unlocking value through professional international purchasing, *Journal of Transport and Supply Chain Management*9(1)

Michael, MusyokiKiusya. (2018). Effect of E-procurement Practices on the Operational Performance of Manufacturing Firms in Mombasa County, Kenya, the Degree of Master of Business Administration, School of Business, University of Nairobi.

Ministry of Finance. (2021). Annual Report of e-GP and Progress Report on Public Procurement, Addis Ababa, Ethiopia

Muchelule, S. C., &Shalle, N. I. (2017). Determinants of E-procurement Adoption in the Kenyan Public Sector: A Case of Kakamega County. *The Strategic Journal of Business Management and Change,* 1-18.

Nawi, M. N. M., Roslan, S., Salleh, N. A., Zulhumadi, F., &Harun, A. N. (2016). The Benefits and Challenges of E-Procurement Implementation: A Case Study of Malaysian Company. *International Journal of Economics and Financial Issues*, 6, 329-332

Nyagu, D. M. and Juma, D. (2019). Determinants of E-procurement Performance in County Governments, A Case Of Kajiado County, Kenya, *The Strategic Journal of Business & Change Management*, Vol. 6, Iss. 2, pp 735 - 747

Peter, AsareBediako. and Osman, Issah. (2016). The Effects of Perceived Usefulness and Satisfaction on Acceptance of Procurement Practices, International Journal of Economics, *Commerce and Management*, United Kingdom Vol. IV, Issue 1, January 2016

Public Procurement Authority. (2021). Unofficial Annual report of e-GP on Public Procurement, Addis Ababa, Ethiopia

Public Procurement Authority. (2023). Unofficial Annual report of e-GP on Public Procurement, Addis Ababa, Ethiopia

Quesada, G., González, M. E., Mueller, J., & Mueller, R. (2010).Impact of E-Procurementon Procurement Practices and Performance, *Benchmarking: An International Journal*,17, 516-538.

Rahadian, AgusHamdani. (2020). Gap Analysis E-procurement Satisfaction Service Quality Index Through Internal and External Survey Using E-Service Quality Model, *Advances in Economics, Business and Management Research*, volume 187

Seo, Dong Back. Chee-Wee, Tan. andGumalaWarman. (2018). Vendor satisfaction of E-government procurement systems in developing countries: an empirical research in Indonesia, *Computer Science journals*, Pages 554-581,

Shewarga, AyalewGesie. (2020). The Effect of E-procurement Practices on Operational. Performance: The Case of Ethiopian Airlines, Addis Ababa University

Shiferaw, Mitiku. and Addis, Yessuf. (2019). Challenges and Critical Success Factors For E-procurement Adoption In Ethiopia, *RJOAS*, 2(86), February 2019

Stephanie. (2018). Beta Weight: Definition, uses. Retrieved from http://www.statisticshowto.com/beta-weight/ Accessed on 02 may 2012

Suleyman, Demir. (2022). Comparison of Normality Tests in Terms of Sample Sizes under Different Skewness and Kurtosis Coefficients, *International Journal of Assessment Tools in Education*, 2022, Vol. 9, No. 2, 397–409

Tabachnik, B. and Fidel, L. (2011).*Using Multivariate Statistics*.Allyn and Bacon, Needham Heights.

Tadewos,Mentta. andMata,Maldaye. Transparency in Public Procurement: The Case of Federal Public Organizations of Ethiopia, *International Journal of Academic Multidisciplinary Research (IJAMR)* ISSN: 2643-9670 Vol. 4 Issue 11, November - 2020, Pages: 3-10

Tsuma, V. I., & Kanda, M. (2017). Factors Affecting the Adoption of E-procurement Systems among International Non-Governmental Organizations in Kenya, *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(2), 164-176.

Twum, F. O., &Peprah, W. K. (2020).The Impact of Service Quality on Students' Satisfaction.*International Journal of Academic Research in Business and Social Sciences*,10, 169-181.

Walter, P. Karungani.andGeorge,Ochiri. (2017). Effect Of Procurement Contract Determinants On Organization Performance A Case Of Nairobi County, Kenya, *International Journal of Economics, Commerce and Management*, United Kingdom Vol. V, Issue 7, July 2017

Wan, NurulhidayahBinti Wan Samsudin. (2014). A Study on Electronic Procurement's User Satisfaction, Universiti Utara Malaysia, Othman Yeop Abdullah Graduate School of Business University Utara Malaysia

World Bank. (2021). Electronic Government Procurement Implementation Types: Options for

Africa, International Bank for Reconstruction and Development, USA

Zulkarnain, IskandarMuda. and Sambas Ade Kesum. (2023). Factors Determining the Adoption of E-procurement in Developing Countries: A Systematic Literature Review, *International Journal of Social Service and Research*, Vol. 03, No. 02, February 2023

# APPENDIX – QUESTIONNAIRE

## St. Mary's University
## Mastersof Business Administration
**(TO BE FILLED BY EMPLOYEES')**

Dear Sir/Madam

First and foremost, I want to express my gratitude to you in advance for sharing your thoughts and recommendations with me on the survey questions. Getting the primary data required to study "***The Effect of Electronic Procurement on Users Satisfaction in Selected Government Sector Offices of the Federal Government of Ethiopia***" is the major goal of this question's design. Thus, your sincere answer helps me in conducting this research.

Many thanks for your help in advance!

General Direction

- Do not write your name in any part of the questionnaire
- Your frank response is vital for the success of the study
- Please put a "√ " mark on your choices
- Give a short and precise answers for questions followed by a blank space

**Keywords**

- ICT- Information Technology and Communication
- IT – Information Technology
- EP– Electronic Procurement
- e-GP- Electronic Government Procurement

Please feel free to contact me at sisaymenilemba@gmail.com with any questions or comments using the following address:

Thanking you in advance.
Yours sincerely,

SisayMenile
Telephone: 0932 550650

## Part I- Personal Demographic Information of Respondent

**Directions-** Please, tick or circle the relevant answer for each choice question and write your comment on the space provide for demanding.

| | | |
|---|---|---|
| Sex: | Male | [ ] |
| | Female | [ ] |
| Age | _____ (in years) | |
| Experience working | | |
| with public procurement | _____ (in years) | |
| in your current company | _____ (in years) | |
| EGP | _____ (in years) | |
| Your education level: | Diploma and below | [ ] |
| | First Degree | [ ] |
| | Master and above | [ ] |
| Your management level or job position in your current company | Operational | [ ] |
| | Medium | [ ] |
| | Top | [ ] |

## Part II- The following statements relate to your feelings about Electronic Government Procurement and Users Satisfaction.

**Directions-** Please give your score based on service you received at Electronic Government Procurement and describe to what extent you implement the listed activities by circling numbers grades Note : - 5= Strongly Agree (SA), 4= Agree (A), 3= Neutral (N), 2= Disagree (D) and 1= Strongly Disagree (SD).

**Note**

**AICT- Adequate ICT infrastructure of E-procurement**
**EC- Employees' Competency**
**MS- Management Support**
**ACC- Accuracy**
**TL- Timeliness**

| | Code | Statement | SA (5) | A (4) | N (3) | D (2) | SD (1) |
|---|---|---|---|---|---|---|---|
| **Adequate ICT infrastructure of E-procurement** | **AICT1** | e-GP makes use of technologies that enable internet-connected procurement services. | | | | | |
| | **AICT2** | Current ICT is the cornerstone of e-GP in my organization as public procurement. | | | | | |
| | **AICT3** | My organization adopts modern technology when it comes to e-GP. | | | | | |
| | **AICT4** | Public Procurement Agency sets the procedure governing the e-GP of materials for public organizations. | | | | | |
| | **AICT5** | The e-GP technologies that have been put into place require minor change in my organization. | | | | | |
| **Employees' Competency** | **EC1** | I possess relevant experience to increase e-GP 's effectiveness. | | | | | |
| | **EC2** | I understand the concepts of the working procedure, rules and policy of e-GP. | | | | | |
| | **EC3** | I understand and analysis the tasks of e-GP assigned to me promptly. | | | | | |
| | **EC4** | I am capable of handling technical tasks related to e-GP on my own. | | | | | |
| | **EC5** | I am competent in coming up with appropriate methods that address e-GP. | | | | | |
| **Management Support** | **MS1** | Our management team provides adequate budget for e-GP | | | | | |
| | **MS2** | Our top management team provides adequate material and resources for e-GP development. | | | | | |
| | **MS3** | To continuously improve our e-GP skill set and knowledge base, our top management team arranges access to continuous external training. | | | | | |
| | **MS4** | Our leaders are ambitious enough to be successful in e-GP environment. | | | | | |
| | **MS5** | Our top management team devotes time to plans review, results follow up, and facilitate management problem related to e-GP. | | | | | |
| **Accuracy** | **ACC1** | I obtain accurate information through public e-GP system in my organization. | | | | | |
| | **ACC2** | The e-GP system in my organization allows to direct vendors in their bids for public tenders. | | | | | |
| | **ACC3** | The e-GP system in my organization allows suppliers to save time and effort when participating in public tenders. | | | | | |
| | **ACC4** | The e-GP system in my organization allows to process procurement order in accordance with the customer's precise specifications. | | | | | |
| | **ACC5** | The e-GP system in my organization possesses the right items in the right order. | | | | | |
| **Timeliness** | **TL1** | I get timely information from my organization's public e-GP system. | | | | | |
| | **TL2** | The e-GP system in my organization allows clients to receive prompt support. | | | | | |
| | **TL3** | My organization's e-GP system makes it possible for orders to arrive at the customer's location on the designated day. | | | | | |
| | **TL4** | My organization's e-GP system receives time-based delivery | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | success including things like client deliveries that are made on schedule. | | | | | |
| | **TL5** | My organization's e-GP system achieves better online order fulfillment performance. | | | | | |

## Part III- The following statements relate to your Satisfaction on public EGP

**Directions -** Please rate your level of satisfaction with electronic procurement for public procurement services. Please circle the numbers and grades that correspond to how satisfied you are with the mentioned activities. Take note: - 5= Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree and 1= Strongly Disagree,

Note – US – User Satisfaction

| | Code | Statement | SA (5) | A (4) | N (3) | D (2) | SD (1) |
|---|---|---|---|---|---|---|---|
| **User Satisfaction** | **US1** | I am satisfied with the technical support provided by the e-GP platform. | | | | | |
| | **US2** | I am happy with public procurement that is providing alternative e-GP's services. | | | | | |
| | **US3** | I intend to continue using public e-GP's services. | | | | | |
| | **US4** | I would like to say positive things about e-GP's services to other people. | | | | | |
| | **US5** | I am satisfied with the customer support provided by e-GP procurement's services. | | | | | |
| | **US6** | I find it easy to communicate with user staff (user department) via e-GP. | | | | | |
| | **US7** | Because of the e-GP platform, I can quickly report procurement actions on time. | | | | | |
| | **US8** | Under e-GP, customer complaints are communicated timely and feedback sent promptly to the one complaining. | | | | | |
| | **US9** | The use of e-GP has prevented unethical practices such as specious orders, incorrect invoicing, corruption and biasness in the public procurement process. | | | | | |

**Thank You!**