ELECTRONIC-GOVERNMENT PROCUREMENT CHALLENGES IN PROCUREMENT: A CASE STUDY OF KITWE CITY COUNCIL IN ZAMBIA

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A dissertation presented to the Institute of Distance Education at the University of Zambia in fulfilment of the requirements of a Masters Degree in Business Administration.

THE UNIVERSITY OF ZAMBIA

in Collaboration With

ZIMBABWE OPEN UNIVERSITY

2023

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CERTIFICATE OF APPROVAL

This dissertation of KASANGA MARTHA has been approved as fulfilling the requirements for the award of the degree of Master of Business Administration (MBA) offered at the University of Zambia in collaboration with Zimbabwe Open University.

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DEDICATION

I dedicate my dissertation work to my family and friends.

A special feeling of gratitude goes to my loving husband, Binwell Leza for the continued words of encouragement and financial support. My wonderful children Dorothy, Jessy, Grace and Judah a special thank you for their patience and continued support throughout the entire Masters program. This is just a foundation for them for they shall achieve greater heights in their academic journeys.

I also dedicate this work and give special thanks to my close friends Marian Chanda, Agatha C. Mwanza and Morgan Kalima for holding my hand even when I felt like giving up you are indeed my best cheerleaders.

Lastly my brothers Dunda, Makandwe, Mwelwa, Sam and Charles I finally made it. Thank you for the love.

ACKNOWLEDGEMENT

I am highly thankful to my Supervisor and course Coordinator for their invaluable direction and assistance in writing this dissertation. I am also appreciative of my peers for their significant perspectives. Furthermore, I am profoundly grateful to my family, friends, and colleagues for their support and encouragement. Lastly, I would like to recognise the input of all those who helped me in any capacity to complete this task.

ABSTRACT

This study investigated the challenges affecting the implementation of electronic government procurement (e-GP) at Kitwe City Council in Zambia. Questionnaires were administered to 100 procurement professionals in the council. The results revealed that 45% of respondents faced challenges in e-GP adoption, including inadequate ICT infrastructure, skills gaps, change resistance and legal misalignment. Regression analysis found that these challenges significantly reduced transparency and accountability in procurement processes. However, the impact on efficiency was mixed, with a polarization of views. Proposed strategies to address implementation challenges favoured legal and regulatory reforms and change management initiatives, followed by ICT and training interventions. Document analysis corroborated findings on planning, training, technical, legal and budgetary constraints impeding e-GP rollout. The study concludes that multidimensional challenges hinder e-GP success at Kitwe City Council, necessitating coordinated legal, policy, change management and capacity-building efforts to realise the benefits of greater efficiency, transparency and accountability in public procurement.

Keywords: e-government procurement, public procurement, procurement reform, local government, technology adoption

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LIST OF ACRONYMS AND ABBREVIATIONS

e-GP:	Electronic Government Procurement
KCC:	Kitwe City Council
Za-GP:	Zambia Government Procurement
ETAP:	Efficient Technology Adoption Project
PPP:	Public Procurement Processes
CTA:	Challenges in Technology Adoption
TMP:	Transparency in Municipal Procurement
CAP:	Change Acceleration Program
UAT:	User Acceptance Training
SPA:	Strategic Procurement Assessment
QoP:	Quality of Procurement
DPE:	Digital Procurement Efficiency
GMR:	Government Procurement Modernisation
CRI:	Change Resistance Index
TIA:	Technology Implementation Analysis
POE:	Procurement Optimisation Efforts
APC:	Accountability in Procurement Controls
RPA:	Resource Procurement Analysis
CPD:	Council Procurement Dynamics

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1. INTRODUCTION

This chapter provides the background of the study, a statement of the problem, objectives, and research questions. It will also describe the significance of the study, limitations of the study, delimitations of the study, and the operational definitions of key terms used in the chapter.

Public Procurement represents a significant portion of government expenditures worldwide. Procurement in developing countries like Zambia accounts for over 50% of total government spending (OECD, 2016). With such high expenditure, ensuring efficiency, transparency and accountability in public procurement systems is crucial. For this reason, many countries have embarked on public procurement reforms, including adopting e-procurement technologies and practices. E-procurement refers to using information and communications technology (ICT), especially the internet, to streamline and automate procedures for tendering and purchasing goods, works and services by government institutions (Neupane et al., 2012).

However, implementing e-procurement in the public sector can be challenging. Kitwe City Council in Zambia's Copperbelt Province is one institution facing such implementation difficulties. As Zambia's second-largest city council, Kitwe City Council provides public services to over 500,000 residents (CSO, 2020). Effective and transparent procurement is essential for the council to deliver quality services and infrastructure to the city. Recently, the council introduced an e-procurement system to modernise procurement and improve efficiency. However, the rollout has experienced various challenges, leading to mixed results.

This research examined Kitwe City Council's challenges in implementing e-procurement for its operations. The case study helps illuminate the real-world difficulties government entities in developing countries encounter when adopting new technologies and digital tools for public procurement. It provides practical insights for researchers and practitioners seeking to promote successful e-procurement reforms in similar contexts.

Zambia embarked on major public finance reforms over the past two decades—a significant component involved modernising inefficient and corrupt public procurement systems (Mudenda, 2012). Reform efforts focused on increasing competition, transparency, accountability and value for money in procurement. The reforms also aimed to minimise political interference and abuse of the procurement system for personal gain.

A fundamental reform was the adoption of e-procurement, spearheaded by creating the Zambia Public Procurement Authority (ZPPA) through the Public Procurement Act of 2008. ZPPA introduced framework contracts and e-procurement guidelines to automate tendering and purchasing (Sichone & Mwansa, 2019). Consequently, several Zambian government institutions have implemented electronic platforms and tools for supplier registration, tendering, purchasing and monitoring of contracts

Some city and municipal councils have also embraced e-procurement at the local government level. Kitwe City Council adopted an e-procurement system in 2015 through funding from the World Bank-supported Urban Development Project (Mwansa, 2018). The system covers e-tendering, e-purchasing, e-reverse auctions and contract management modules. It enables online supplier registration, tender document upload, online bid submission and automated evaluation. The system was expected to reduce costs, improve efficiency and enhance transparency compared to the previous paper-based manual procedures.

However, implementing e-procurement in Zambia faces various legal, technological and organisational challenges. Chitalu and Syatwinda (2020) found that adoption in Zambia's public universities remains low due to poor ICT infrastructure, digital illiteracy among staff, and lack of top management support. Kautondo (2018) also revealed limited e-procurement use across government ministries and agencies. Persistent challenges include inadequate ICT infrastructure, poor stakeholder buy-in, knowledge gaps and change resistance.

At the local government level, councils often lack the financial and human resource capacity to support the changes e-procurement requires (Mudenda, 2012). Specifically, Kitwe City Council's adoption of e-procurement has encountered multiple challenges, leading to mixed results. Mwansa's (2018) review underscored persistent ICT infrastructure constraints, system management issues, and supplier adoption challenges. The author noted that the e-procurement system was underutilised five years after implementation. While data remains

limited, initial evidence suggests Kitwe City Council continues facing difficulties maximising benefits from its e-procurement investment.

This study looked at Kitwe City Council's specific e-procurement implementation challenges. It provides empirical insights into the real-world barriers local governments in developing countries face in adopting new digital tools for public procurement. Findings help identify pitfalls to avoid and best practices to emulate when pursuing e-procurement reforms.

1.2. BACKGROUND TO THE STUDY

Public Procurement in Zambia has undergone significant transformation over the years, with the government making concerted efforts to reform the sector. The need for reform has been driven by the recognition of public procurement's critical role in national development. According to the Zambia Public Procurement Authority (ZPPA), public Procurement accounts for about 30% of the national budget, underscoring its significance in the economy (ZPPA, 2020).

Traditionally, public Procurement in Zambia has been conducted through manual processes, which have been characterised by inefficiencies, delays, and corruption (Sutinen & Kallio, 2003). These challenges have resulted in the wastage of public resources and undermined public confidence in the government's ability to deliver services effectively and efficiently.

In response to these challenges, the Zambian government, like many other governments globally, has sought to leverage the power of information and communication technology (ICT) to reform public procurement. Through the ZPPA, the government has been promoting the adoption of electronic government procurement (e-GP) to enhance efficiency, transparency, and accountability in public Procurement (ZPPA, 2020).

E-GP refers to using ICT in procurement processes, including tendering, bidding, contract awarding, and contract management (Vaidya, Sajeev & Callender, 2006). It is perceived as a tool that can streamline procurement processes, reduce transaction costs, increase competition, and improve transparency and accountability (Hunja, 2003).

Despite the potential benefits, the implementation of e-GP in Zambia has been fraught with numerous challenges. These challenges range from inadequate ICT infrastructure, lack of technical skills, and resistance to change to legal and regulatory issues (Schapper, Malta &

Gilbert, 2006). These challenges have hindered the full realisation of the benefits of e-GP, undermining the government's efforts to reform public procurement.

The case of Kitwe City Council provides a microcosm of the challenges of e-GP in Zambia. Kitwe City Council, like many other local authorities in Zambia, has been grappling with implementing e-GP despite the government's efforts to promote its adoption (ZPPA, 2020). The challenges faced by Kitwe City Council in implementing e-GP provide valuable insights into the broader challenges of e-GP in Zambia and other similar contexts.

This study sought to investigate the challenges of e-GP in Kitwe City Council. It aimed to identify the challenges the council faces in implementing e-GP and explore the strategies that can be employed to overcome them. The findings of this study contribute to the existing body of knowledge on e-GP and provide practical recommendations for improving the implementation of e-GP in Kitwe City Council and other similar contexts.

1.3. STATEMENT OF THE PROBLEM

Despite the potential benefits of electronic government procurement (e-GP), its implementation in Kitwe City Council, Zambia, has been fraught with numerous challenges. These challenges have undermined public procurement processes' efficiency, transparency, and accountability, hindering the council's ability to deliver public services effectively. The lack of a comprehensive understanding of these challenges and how they can be addressed has compounded the problem. This research sought to address this gap by investigating the challenges of e-GP in Kitwe City Council.

1.4. PURPOSE OF THE STUDY

This study aimed to investigate the specific challenges affecting electronic government procurement (e-GP) implementation at Kitwe City Council in Zambia, examine how these challenges impact procurement processes, and propose strategies to address the challenges and improve e-GP implementation.

1.5. RESEARCH OBJECTIVES

The main objective of this research is to investigate the challenges affecting the implementation of electronic government procurement (e-GP) at Kitwe City Council, Zambia. Specifically, the study intends:

1. To identify the challenges that Kitwe City Council faces in implementing electronic government procurement (e-GP).
2. To examine the effect of the challenges of public procurement processes in Kitwe City Council.
3. To propose effective strategies that Kitwe City Council can adopt to overcome the identified challenges of the implementation of e-GP.

1.6. RESEARCH QUESTIONS

1. What challenges does Kitwe City Council face in implementing electronic government procurement (e-GP)?
2. How do these challenges affect public procurement processes in Kitwe City Council?
3. What strategies can Kitwe City Council adopt to overcome the identified challenges in the implementation of e-GP?

1.7. SCOPE OF THE STUDY

The scope of this study was limited to investigating the challenges affecting the implementation of electronic government procurement (e-GP), specifically within Kitwe City Council in Zambia. The research focuses exclusively on e-GP adoption at the local government rather than national programs.

Kitwe City Council was selected as the single case study for several reasons. As Zambia's second largest city, Kitwe provides critical public services to over 500,000 residents. Thus, ensuring effective and transparent procurement is essential for the council to deliver quality services and infrastructure. Additionally, Kitwe City Council adopted an e-GP system in 2015, providing an opportunity to examine the real-world challenges of transitioning from traditional paper-based procurement methods to a digital platform.

The study scope was also limited to the timeframe from 2018 to 2022; this period covered the first few years after the council's e-GP system implementation, allowing the research to

assess the initial challenges encountered in adoption and rollout. Moreover, this timescale enables an evaluation of whether the anticipated benefits of e-GP, such as improved efficiency, transparency and accountability, have been realized within the first 5-7 years of adoption. By focusing specifically on e-GP implementation at Kitwe City Council in Zambia over this defined recent timeframe, the study provided targeted and timely insights into the practical challenges a major local government institution in a developing country faces when adopting new digital public procurement tools.

1.8. SIGNIFICANCE OF THE STUDY

This study is significant as it provided a comprehensive understanding of the challenges affecting the implementation of electronic government procurement (e-GP) in Kitwe City Council. It contributes to the existing body of knowledge on e-GP, particularly in the context of developing countries. The findings inform policy and practice by providing practical recommendations for improving e-GP implementation. Moreover, it may serve as a reference for other local authorities facing similar challenges, promoting efficient and transparent public procurement processes in Zambia.

1.9. LIMITATIONS OF THE STUDY

The availability and accessibility of data limited this study, as some information related to e-GP implementation was confidential or not readily available. The research was also constrained by time and resources, limiting the scope of data collection. Additionally, the researcher's interpretation of data influenced the study's findings, potentially introducing bias.

1.10. DELIMITATION OF THE STUDY

The study was delimited to the context of Kitwe City Council, Zambia, and not generalisable to other local authorities or countries. The research focused specifically on the challenges of implementing e-GP and strategies to overcome these challenges, excluding other aspects of public procurement. The study also confined its investigation to 2015 to 2021, excluding earlier or later years.

1.11. THEORETICAL FRAMEWORK

The theoretical framework for this study is based on the Technology Acceptance Model (TAM) and the Institutional Theory. The theory provided a valuable lens for understanding the challenges of implementing electronic government procurement (e-GP) and the strategies for overcoming these challenges.

1.11.1. TECHNOLOGY ACCEPTANCE MODEL (TAM)

The Technology Acceptance Model (TAM), proposed by Davis (1989), is one of the most widely used theories in information systems. The model suggests that adopting a new technology is influenced by two main factors: perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which a person believes that using a particular system would enhance his or her job performance, while perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort.

In the context of this study, the TAM provides a valuable framework for understanding the challenges of implementing e-GP in Kitwe City Council. The usefulness and ease of use of the e-GP system can influence the council's staff and other stakeholders' acceptance and adoption of the system. If the e-GP system is perceived as valuable and easy to use, it is more likely to be accepted and adopted. However, if the system is perceived as not helpful or challenging to use, it may face resistance, hindering its implementation.

1.12. DEFINITION OF KEY TERMS

Municipal Council: A legislative body of a local government area.

Procurement: Acquiring goods and services from a vendor to accomplish a stipulated purpose.

Procurement Processes: Funding, agreeing terms and acquiring goods, services, or works from an external source, often via a tendering or competitive bidding process.

Public Organisation: Any organisation defined as part of the public sector by a legal framework at any level.

Public Procurement: Process whereby government organisations acquire or purchase goods, services or works from outside sources.

1.13. CHAPTER ONE SUMMARY

This chapter introduced the research topic, highlighting the significance of electronic government procurement (e-GP) and the challenges faced by Kitwe City Council in its implementation. It outlined the research problem, objectives, and questions, providing a clear direction for the study. The chapter also discussed the research's scope, significance, limitations, and delimitations. The next chapter will present a comprehensive review of the existing literature on e-GP, providing a theoretical foundation for the study and identifying gaps in the current body of knowledge.

CHAPTER TWO

LITERATURE REVIEW

1.14. INTRODUCTION

This chapter reviews the available literature by scholars and academicians in line with the challenges affecting procurement processes in public organisations**.** Various literature, as propounded by other researchers, was analysed in this chapter to ensure that all the necessary information can be understood and brought forth to this study as key witnesses to solving the problem. Notably, this chapter supports the objectives above in bringing out the best critique and research gap that will be tabled.

1.15. CONCEPTUAL UNDERSTANDING OF PUBLIC PROCUREMENT

Public Procurement refers to the process through which public sector organisations acquire goods, services, and works from external suppliers. It encompasses all sourcing activities across diverse categories, from routine office supplies to large-scale infrastructure projects. Public procurement plays a pivotal role in the functioning of governments worldwide. It accounts for a substantial portion of government expenditures. According to the Organisation for Economic Co-operation and Development (OECD), public procurement accounts for 12% of GDP on average in OECD countries and up to 30% in developing countries (OECD, 2016). These statistics highlight the scale and importance of public procurement in national economies.

The objectives and principles guiding public procurement differ markedly from private sector sourcing. While cost efficiencies, profit margins, and shareholder value are the key drivers in private-sector Procurement, Public Procurement aims to achieve broader socio-economic goals aligned with the public interest (Schapper et al., 2006). The fundamental goals that shape policies and practices in public procurement include obtaining value for taxpayer money spent on procuring goods and services, which entails minimising costs while ensuring appropriate quality. Additionally, public procurement strives to ensure integrity and fairness in awarding contracts through open and transparent procedures that provide all qualified vendors equal opportunities to bid on government contracts. An efficient public procurement system also enables timely procurement of goods and services required for

effective public service delivery. Public procurement policies also promote competition by making equal opportunities available to all suppliers and supporting broader socio-economic goals like environmental sustainability, innovation, and small business growth.

To fulfil these objectives, public procurement activities are guided by transparency, competition, efficiency, accountability and adherence to ethical standards (Arrowsmith, 1998). Transparency requires procuring entities to provide clear and accessible information regarding procurement opportunities, requirements, processes, and outcomes. Competition necessitates that the procurement process facilitates fair and open competition among qualified suppliers. Efficiency demands that Public Procurement be undertaken promptly to deliver goods and services the government needs quickly. Accountability entails maintaining checks and oversight to ensure decisions are justified and withstand scrutiny. Upholding ethical solid standards is also imperative to prevent misuse of public office for private gain. Adhering to these cardinal principles ensures that public procurement enables the government to deliver public goods and services effectively and responsibly.

The public procurement process involves several key stages that provide structure and order to sourcing activities. The first step is a needs assessment, which entails the procuring entity identifying goods, services or works required to fulfil its public duties and responsibilities. After that, market research is conducted to identify potential suppliers capable of fulfilling the requirement; this is followed by developing technical specifications that detail the requirements to be met by suppliers bidding for the contract. The procuring entity then issues a tender inviting capable suppliers to submit bids to provide the required good or service. Once bids are received, the procuring entity evaluates all qualifying bids based on set technical, commercial and financial criteria to select the supplier whose bid offers the best value for money. The contract is then awarded to this supplier, followed by actively managing the contract, monitoring supplier performance and processing payments. Finally, upon completion, the contract is closed out by the procuring entity, verifying that both parties fulfilled all obligations.

Traditionally, public procurement processes were conducted manually using paper-based methods. However, this manual approach has often led to systemic inefficiencies, delays, lack of transparency, and high administrative costs (Thai, 2001). Recognising these pitfalls,

many countries have reformed their public procurement systems. A significant focus of these reforms has been leveraging the power of digital technologies and online platforms to enhance public procurement performance through e-procurement.

1.15.1. TRADITIONAL METHODS OF PUBLIC PROCUREMENT

Traditionally, public procurement processes in many countries, including Zambia, were conducted manually using paper-based methods. This traditional approach typically involves several vital stages. The first step was needs identification, where the procuring department or entity would determine their requirements for goods, services or works; this was often done based on internal requests or demand forecasts, with limited rigorous analysis (Schapper, Malta & Gilbert, 2006). After that, market research would be conducted to identify potential suppliers who could fulfil the needs; this involved gathering supplier information through informal channels, print directories, and requests for information notices in print media.

Once prospective suppliers were identified, procurement specifications had to be developed. These specifications detailed the requirements, including technical, quality and delivery parameters. Developing comprehensive specifications was challenging without systematic processes, often resulting in inadequate or inconsistent specifications (Thai, 2001). The procuring entity would then issue an open tender, inviting capable suppliers to submit bids for the specified goods or services. Tender documents would be printed and physically supplied to interested bidders. In many cases, the dissemination of tender opportunities depended on suppliers proactively checking print media where government tenders were advertised.

Suppliers must submit physical bids with supporting documentation by the stipulated deadline. The committee members then manually evaluated the winning bid based on compliance, commercial terms and pricing; this process was time-consuming, with limited transparency in assessing bids (Hunja, 2003). Contracts were awarded to the successful bidder through paper-based agreements containing all rights and obligations of both parties.

Contract management and monitoring supplier performance was again a predominantly manual exercise. Payments were processed based on paper invoices, with authorisation delays due to paperwork transitioning through departments. Quality checks were conducted

upon delivery, but limited transparency surrounded this process. Any disputes were resolved through paper-based communication. Finally, contract closure was fulfilled by verifying that all deliverables were supplied satisfactorily through paper documentation (Arrowsmith, 1998).

This traditional manual approach was riddled with systemic inefficiencies and delays at various stages. Limited advertising channels constrained the dissemination of tender opportunities to a broader supplier base. Developing specifications often lacked robust analysis of needs and market conditions. Manual sorting and evaluation of bids was prone to errors, inconsistencies and potential manipulation. Lack of accessible records throughout the procurement process also limited transparency and accountability (Sutinen & Kallio, 2003).

The heavy reliance on paper documentation slowed down processes as everything from bid submission to contract management had to be done physically; this increased administrative costs related to printing, transporting and storing paperwork. Such manual systems also increase the risk of misplaced or damaged documents, compromising information availability and security.

Perhaps the greatest pitfall was the limited transparency surrounding procurement activities, decisions and outcomes. With no digital trail or systematic documentation at each stage, manual systems were susceptible to unethical practices like unfair selection of vendors, inflated pricing, or contract irregularities. The lack of oversight and accountability mechanisms facilitated corruption, collusion and misappropriation of funds (Hunja, 2003).

These challenges stemming from traditional procurement methods prompted calls for reform across the public and private sectors. There was growing recognition that existing paper-heavy processes were unsustainable, prone to abuse, and unable to meet evolving demands. The rise of digital technologies presented an opportunity to modernise procurement through automation, digitisation and data-driven systems; this paved the way for the paradigm shift towards e-procurement, which leverages information and communications technology to streamline procurement processes and address the pitfalls of manual methods. The transition has involved digitising aspects like tendering, vendor databases, auctioning, purchasing workflows and contract management. Automating routine tasks has improved efficiency, while online repositories enhanced transparency (Neupane et al., 2012).

However, this transformation has not been straightforward, especially in developing countries like Zambia, where entrenched traditional procurement practices present institutional resistance. The lack of technical expertise and infrastructure also hindered adoption. Nevertheless, through concerted efforts underpinned by legal frameworks like the Public Procurement Act of 2008, Zambia has progressed towards more modern e-procurement systems. The case of Kitwe City Council illustrates the real-world challenges and opportunities in transitioning from traditional paper-based procurement methods to integrated e-procurement platforms.

1.15.2. PUBLIC PROCUREMENT REFORMS IN ZAMBIA

Recognising the challenges plaguing traditional procurement methods, the Zambian government has undertaken various reform efforts to transform public procurement. The impetus for these reforms has been the need to enhance transparency, competition, efficiency and value for money in procurement processes. According to Mudenda (2012), the reforms have also aimed to minimise political interference, patronage and corruption, often distorting public procurement outcomes.

A landmark development was the enactment of the Public Procurement Act in 2008, which established the legal framework guiding procurement practices. The Act instituted regulations and procedures aligned with international best practices to ensure integrity, accountability and fairness (Sichone & Mwansa, 2019). It also led to establishing the Zambia Public Procurement Authority (ZPPA) as an oversight body to enforce the laws and promote reform initiatives.

The ZPPA has been at the forefront of promoting the adoption of e-Government Procurement (e-GP) as a pivotal reform strategy. The Authority developed e-GP guidelines and standard bidding documents to guide procuring entities in automating processes and utilising digital tools (ZPPA, 2020); this enabled critical modules like e-tendering, e-purchasing and contract management systems to be implemented across government institutions. The ZPPA portal also serves as a single point of access for suppliers to register and access procurement opportunities.

At the institutional level, the Zambia Development Agency instituted a computerised procurement management information system for procurement planning, requisitioning,

authorisations and reporting (Sutinen & Kallio, 2003). Integrated Financial Management Information Systems (IFMIS) have also been implemented across the government to connect procurement with budgeting and payment systems. These integrated platforms allow procurement data to be seamlessly exchanged across departments and provide audit trails.

While these policy and technological reforms have benefits, public procurement in Zambia still faces multiple challenges. A study by Sutinen and Kallio (2003) found persisting issues around limited competition, inadequate planning and oversight, lack of professionalisation, and high transaction costs. Excessive reliance remains on informal channels instead of open competitive processes to award contracts. Resistance to change from traditional manual methods has also hindered the adoption of modern e-GP tools in some pockets of the public sector.

Addressing these ingrained issues requires holistic institutional strengthening and capacity building across procuring entities. As Mudenda (2012) notes, this entails updating skills, processes and culture across all stakeholders involved in the procurement process. Leadership must also demonstrate commitment to compliance, accountability and continuous improvement. At the operational level, monitoring, enforcement and feedback mechanisms must be enhanced.

The public procurement reform agenda in Zambia remains a work in progress. While policies and systems have been revamped, translating these into tangible performance and service delivery improvements requires surmounting deeply entrenched challenges. The case of Kitwe City Council provides localised insights into adoption barriers at the institutional level and potential strategies to drive reforms. However, reforms will succeed through coordinated efforts between oversight bodies like the ZPPA, government leadership, and internal stakeholders across the various procuring entities.

1.15.3. THE SHIFT TOWARDS E-GP

In response to these challenges, the Zambian government, like many other governments globally, has sought to leverage the power of information and communication technology (ICT) to reform public procurement. Through the ZPPA, the government has been promoting the adoption of electronic government procurement (e-GP) to enhance efficiency, transparency, and accountability in public Procurement (ZPPA, 2020).

E-GP represents a paradigm shift from traditional procurement methods, offering numerous potential benefits. According to Vaidya, Sajeev, and Callender (2006), e-GP can streamline procurement processes, reduce transaction costs, increase competition, and improve transparency and accountability. These benefits align with the government's objectives of enhancing public service delivery and fostering economic development.

However, transitioning from traditional procurement methods to e-GP is challenging. The following sections of this literature review will delve into the evolution of e-GP, the global trends in e-GP implementation, the specific context of e-GP in Zambia, the challenges in implementing e-GP, and the strategies for overcoming these challenges.

1.16. EVOLUTION OF ELECTRONIC GOVERNMENT PROCUREMENT (E-GP)

Electronic Government Procurement (e-GP) refers to the use of information and communication technology (ICT) by government agencies to conduct procurement processes (Vaidya, Sajeev & Callender, 2006). It represents a shift from traditional, manual procurement methods to digital processes, marking a significant evolution in public procurement.

The concept of e-GP emerged in the late 1990s and early 2000s, coinciding with the advent of the digital age and the increasing adoption of ICT in various sectors of the economy (Hunja, 2003). Governments globally recognised the potential of ICT to enhance the efficiency, transparency, and accountability of public procurement, prompting the shift towards e-GP.

The evolution of e-GP has been influenced by several factors, including technological advancements, changes in the global economic landscape, and the increasing demand for transparency and accountability in public Procurement (Hunja, 2003). The development and proliferation of the internet and other digital technologies have provided the technical infrastructure to implement e-GP. At the same time, globalisation and the liberalisation of trade have increased competition in public procurement, necessitating more efficient and transparent procurement processes.

In Zambia, the evolution of e-GP has been driven by the government's commitment to reform public procurement and enhance public service delivery. Through the Zambia Public

Procurement Authority (ZPPA), the Zambian government has been promoting the adoption of e-GP as part of its broader public procurement reform agenda (ZPPA, 2020).

1.16.1. BENEFITS OF E-GP

The shift towards e-GP has been motivated by its numerous potential benefits. According to Vaidya, Sajeev, and Callender (2006), one of the critical benefits of e-GP is that it can streamline procurement processes. By automating various procurement activities, e-GP can reduce the time and effort required to conduct procurement, thereby enhancing efficiency.

E-GP can also reduce transaction costs associated with procurement. Traditional procurement methods often involve high administrative costs, including printing and distributing tender documents, receiving and evaluating bids, and managing contracts (Hunja, 2003). By digitising these processes, e-GP can significantly reduce these costs.

Another critical benefit of e-GP is increasing competition in public procurement. By providing a platform for online tendering and bidding, e-GP can broaden the market for public procurement, attracting more suppliers and fostering competition (Vaidya, Sajeev & Callender, 2006). Increased competition can lead to better quality goods and services and lower prices, thereby ensuring value for money in public procurement.

Perhaps the most significant benefit of e-GP is enhancing transparency and accountability in public procurement. E-GP provides a platform for the online publication of tender notices, online submission of bids, and online disclosure of contract awards, thereby ensuring transparency in procurement processes (Hunja, 2003). It also provides a traceable record of procurement activities, enhancing accountability and reducing opportunities for corruption.

In Zambia, adopting e-GP can address the challenges inherent in traditional procurement methods and enhance public procurement efficiency, transparency, and accountability. However, the implementation of e-GP in Zambia, like many other countries, has been fraught with numerous challenges, which will be discussed in the subsequent sections of this literature review.

1.17. GLOBAL TRENDS IN E-GP IMPLEMENTATION

In developed countries, the adoption of e-GP has been relatively widespread, driven by the availability of advanced ICT infrastructure and the government's commitment to enhancing

the efficiency and transparency of public procurement. Countries such as the United States, the United Kingdom, Australia, and South Korea have been at the forefront of implementing e-GP (OECD, 2019).

In the United States, the federal government launched the Federal Business Opportunities (FedBizOpps) website in 2001 as a single entry point for commercial vendors seeking federal markets. The platform provides access to various government procurement information, including solicitations, contract awards, and procurement regulations (GSA, 2020).

Similarly, in the United Kingdom, the government has been promoting the adoption of e-GP through various initiatives. The Contracts Finder website, launched in 2011, provides a platform for suppliers to find public sector contracting opportunities. The platform is part of the government's efforts to make public procurement more accessible and transparent (GOV.UK, 2020).

1.17.1. OVERVIEW OF E-GP IMPLEMENTATION IN DEVELOPING COUNTRIES

The adoption of e-Government Procurement (e-GP) in developing countries has progressed slower than in developed nations. This lag can be attributed to various challenges undermining implementation in resource-constrained contexts. Hunja (2003) states that critical barriers include inadequate ICT infrastructure, limited technical skills, and institutional resistance to change.

Many developing countries still lack widespread access to affordable, high-speed internet connectivity, which is essential for accessing e-GP systems. Public sector organisations also often have outdated computer systems and lack sophisticated IT applications to transition towards digital procurement. These technology gaps constrain the nationwide deployment of integrated e-procurement platforms.

Moreover, the limited technical skills and know-how within procuring entities inhibit adoption. The effective use of e-GP systems requires procurement staff to be proficient in using technology to undertake tasks like e-tendering, e-submission, e-evaluation and e-contract management (Vaidya, Sajeev & Callender, 2006). However, capacity building has been a persistent challenge. Heavy reliance on paper-based processes has also resulted in

institutional and individual habits that resist the process re-engineering required to migrate to e-GP. Despite these difficulties, developing countries have recognised the immense potential of e-GP to enhance transparency, efficiency and value for money in public procurement. Many have taken steps to pursue digital procurement.

According to the United Nations (2018), adoption in Africa has been led by Mauritius, South Africa, Nigeria, Kenya and Rwanda. Mauritius established a government-wide e-Procurement system as early as 2004. South Africa launched the Central Supplier Database in 2015 to serve as the single source of supplier information for national and provincial government procurement.

Kenya's e-Procurement system is one of the most sophisticated on the continent. It includes e-tendering, e-evaluation, and e-contract management and connects to the country's integrated financial management system. Senegal also launched a centralised public procurement platform in 2013 that has registered over 12,000 businesses and conducted close to 500,000 online tenders by 2018.

These cases highlight that while challenges exist, developing countries have significantly progressed in e-GP adoption. However, its success ultimately depends on complementary investments in internet infrastructure, skills development and institutional capacity building. Legal and regulatory frameworks also need to provide enabling environments for digital procurement. Overcoming these multidimensional challenges is critical to unlocking the full potential of e-GP in improving public procurement performance.

1.18. E-GP IN ZAMBIA

In Zambia, adopting electronic government procurement (e-GP) has been part of the government's broader agenda to reform public procurement and enhance public service delivery. Through the Zambia Public Procurement Authority (ZPPA), the government has been promoting the adoption of e-GP to improve efficiency, transparency, and accountability in public Procurement (ZPPA, 2020).

The ZPPA launched the e-GP system in 2015, marking a significant milestone in the country's public procurement reform journey. The e-GP system provides a platform for

online tendering, bidding, and contract management, streamlining procurement processes and enhancing transparency (ZPPA, 2020).

Despite the potential benefits, the implementation of e-GP in Zambia has been fraught with numerous challenges. These challenges range from inadequate ICT infrastructure, lack of technical skills, and resistance to change to legal and regulatory issues. These challenges have hindered the full realisation of the benefits of e-GP, undermining the government's efforts to reform public procurement.

1.18.1. LEGAL AND REGULATORY FRAMEWORK FOR E-GP IN ZAMBIA

The legal and regulatory framework for e-GP in Zambia is provided by the Public Procurement Act of 2008 and the Public Procurement Regulations of 2011. The Act and the Regulations provide the legal basis for public Procurement in Zambia, including adopting e-GP (ZPPA, 2020).

The Act established the Zambia Public Procurement Authority (ZPPA) as the regulatory body responsible for overseeing public procurement and promoting best practices in the sector. The ZPPA is mandated to promote the use of e-GP and provide guidance to procuring entities on implementing e-GP (ZPPA, 2020).

Despite the legal and regulatory framework, the implementation of e-GP in Zambia has been hampered by various challenges. The following sections of this literature review will delve into these challenges and the strategies for overcoming them.

1.19. CHALLENGES IN IMPLEMENTING E-GP

Despite the potential benefits of e-GP, its implementation is often fraught with numerous challenges. These challenges can be broadly categorised into technological challenges, organisational and human resource challenges, and legal and regulatory challenges.

1.19.1. TECHNOLOGICAL CHALLENGES

One of the main challenges in implementing e-GP is the lack of adequate ICT infrastructure. In many developing countries, including Zambia, the availability and accessibility of ICT infrastructure are often limited, particularly in rural areas (Hunja, 2003); this can hinder the

widespread adoption of e-GP, as it requires reliable internet connectivity and advanced ICT systems.

Moreover, issues related to data security and privacy can pose significant challenges in the implementation of e-GP. Public procurement involves handling sensitive information, including suppliers' details and bid information. Ensuring the security and privacy of this information in an online environment can be challenging, requiring sophisticated data security measures (Vaidya, Sajeev & Callender, 2006).

1.19.2. ORGANISATIONAL AND HUMAN RESOURCE CHALLENGES

Implementing e-GP often requires significant changes in organisational processes and structures. Resistance to change can be a major challenge, particularly in public sector institutions accustomed to traditional procurement methods (Hunja, 2003).

In addition, implementing e-GP requires technical skills and competencies in ICT. However, in many public sector institutions, particularly in developing countries, there is often a lack of such skills; this can hinder the effective implementation of e-GP, as it requires the ability to use ICT systems and adapt procurement processes to the digital environment (Vaidya, Sajeev & Callender, 2006).

1.19.3. LEGAL AND REGULATORY CHALLENGES

The implementation of e-GP also presents legal and regulatory challenges. In many countries, public procurement is governed by legal and regulatory frameworks designed for traditional procurement methods. Adapting these frameworks to accommodate e-GP can be challenging, requiring comprehensive legal and regulatory reforms (Hunja, 2003).

In Zambia, the Public Procurement Act of 2008 provides the legal framework for public procurement. However, the Act was enacted before the advent of e-GP, and it does not adequately address the issues related to e-GP; this has posed significant challenges in the implementation of e-GP in Zambia, necessitating legal and regulatory reforms to accommodate e-GP (ZPPA, 2020).

1.20. RELATED LITERATURE ON E-GP

Electronic Government Procurement (e-GP) has become a significant phenomenon in developed countries, garnering substantial attention from researchers and policymakers alike. This surge in interest can be attributed to the widespread adoption of e-GP systems in these nations, signifying their importance in streamlining public procurement processes and fostering transparency. Empirical studies conducted in this context have delved into various facets of e-GP, such as its advantages, challenges, and the factors influencing its successful implementation. In this expansive exploration, we will delve deeper into the wealth of empirical research conducted in developed countries, shedding light on the multifaceted landscape of e-GP.

One noteworthy study that merits discussion is the research conducted by Panayiotou, Gayialis, and Tatsiopoulos (2004) in Greece. This study focused on implementing e-GP in the Greek public sector and unveiled several compelling findings. Among these findings, the study highlighted that the introduction of e-GP had precipitated notable improvements in procurement processes. These enhancements encompassed increased operational efficiency, decreased transaction costs, and the augmentation of transparency levels.

The heightened efficiency associated with e-GP is a fundamental aspect of its appeal. Electronic systems can automate numerous aspects of the procurement process, expediting tasks that would otherwise be time-consuming when done manually. This efficiency is further amplified by the ability of e-GP systems to centralise data and streamline communication between various stakeholders. As a result, procurement processes become quicker, more accurate, and less resource-intensive.

In addition to efficiency gains, reducing transaction costs represents a substantial benefit of e-GP. Traditional procurement methods often involve paperwork, manual data entry, and physical storage of documents. These processes incur paper, printing, storage facilities, and administrative labour expenses. By transitioning to e-GP, these costs can be significantly mitigated. Electronic systems reduce the need for physical documentation, printing, and manual data entry, reducing associated expenditures.

Enhanced transparency is another pivotal advantage of e-GP systems. Transparency is a cornerstone of accountable governance, and e-GP facilitates it by providing a digital trail of

procurement activities. This digital record deters corruption and malpractice and fosters trust among stakeholders, including government entities, suppliers, and the general public. Transparency in procurement is particularly critical as it involves the expenditure of public funds, necessitating a high level of scrutiny and accountability.

However, the study of Panayiotou, Gayialis, and Tatsiopoulos (2004) also underscored various challenges encountered during the implementation of e-GP in Greece. These challenges serve as a reminder that the transition to electronic procurement has its challenges. Some notable impediments include technical issues, a lack of requisite skills among personnel, and resistance to change.

Technical issues in the adoption of e-GP systems can manifest in various forms. These might include compatibility problems between existing systems and the new e-GP platform, software bugs, or issues related to data security. Overcoming these technical hurdles demands a robust IT infrastructure and a team of skilled IT professionals to address and resolve issues promptly.

The need for more skills among personnel is another formidable challenge. Transitioning to e-GP necessitates a shift in procurement activities, often requiring employees to acquire new digital competencies. Adequate training and support mechanisms are essential to ensure the workforce can effectively utilise e-GP tools. Moreover, a skilled workforce is better equipped to adapt to changes in procurement processes and address any challenges.

Resistance to change is a ubiquitous challenge in implementing e-GP, not limited to Greece. Human nature resists change significantly when it disrupts established routines and processes. Stakeholders within the public sector may be apprehensive about adopting new technologies or reluctant to relinquish traditional procurement methods with which they are familiar. Managing this resistance and fostering a culture of innovation and adaptation is pivotal to the successful implementation of e-GP.

Moving across the globe to the United Kingdom, another enlightening study by Croom and Brandon-Jones (2007) delved into the impact of e-GP on procurement practices within the UK public sector. The findings of this research highlighted several significant positive outcomes associated with e-GP adoption, such as reduced procurement cycle times, increased competition, and improved supplier performance.

One of the critical achievements of e-GP in the UK context was the reduction in procurement cycle times. Procurement cycles refer to the time it takes to initiate, process, and complete a procurement transaction. Traditional procurement methods can be laborious and time-consuming, involving manual paperwork and numerous approval stages. E-GP streamlines these processes, automating routine tasks and expediting the overall cycle. Reducing cycle times enhances efficiency and enables public organisations to procure goods and services more swiftly, responding to changing needs and market dynamics effectively.

Increased competition is another notable advantage of e-GP systems. E-GP facilitates broader access for suppliers and service providers by providing a digital platform for procurement activities. This expanded access allows a more diverse range of suppliers, including smaller businesses and new entrants, to participate in procurement opportunities. The increased competition that results can drive down prices, improve service quality, and stimulate innovation as suppliers vie for contracts.

Improvements in supplier performance were also observed in the study by Croom and Brandon-Jones (2007). E-GP systems offer greater visibility into supplier performance metrics, enabling public organisations to monitor and assess supplier performance more effectively; this increased transparency and accountability motivate suppliers to uphold higher standards, ultimately benefiting the public sector through better service delivery and value for money.

However, the study also recognised that the success of e-GP implementation was contingent on several critical factors. These factors played a pivotal role in determining the extent to which e-GP could deliver its promised benefits. Key factors were top management support, user acceptance, and the availability of necessary resources.

Top management support is crucial for the successful implementation of e-GP systems. Leadership within public organisations must champion the adoption of e-GP, recognising its strategic importance and aligning it with the organisation’s goals. Securing the necessary resources, overcoming resistance, and driving the changes required for a smooth transition to e-GP can be challenging without executive support.

User acceptance is another linchpin for the success of e-GP initiatives. End-users, including procurement professionals and other stakeholders, must embrace the new technology and be

willing to adapt their practices accordingly. Adequate training, clear communication, and user-friendly interfaces are essential to fostering user acceptance. Resistance from users can hinder the effective utilisation of e-GP systems and negate many potential benefits.

The availability of necessary resources, both financial and technological, is a foundational requirement for e-GP implementation. Developing and maintaining e-GP systems demands a significant investment in IT infrastructure, software, and ongoing support. Public organisations must allocate adequate budgetary resources to ensure the successful deployment and sustainability of e-GP initiatives.

Shifting the focus to the Australian context, a compelling study by Vaidya, Sajeev, and Callender (2006) delved into the critical factors influencing the success of e-GP implementation in the Australian public sector. This research identified several pivotal success factors that resonate with experiences in other developed countries.

A clear vision and strategy were identified as paramount in guiding e-GP implementation. It is essential to establish a well-defined vision for how e-GP will transform procurement processes and align them with the organisation's broader strategic objectives. A clear strategy outlines the steps, timelines, and milestones to achieve this vision, providing a roadmap for successful implementation.

As emphasised in the UK study, top management support also emerged as a critical success factor in the Australian context. Senior leaders within public organisations must endorse e-GP and actively champion its adoption. Their commitment and advocacy are instrumental in securing the necessary resources, mobilising support, and overcoming resistance to change.

User training and support were identified as vital components of successful e-GP implementation. Users need the knowledge and skills to utilise e-GP systems effectively. Providing comprehensive training programs and ongoing support ensures that users can navigate the technology confidently, minimising disruptions and maximising the benefits of e-GP.

Effective change management practices were essential in facilitating a smooth transition to e-GP. Change management encompasses strategies and processes to prepare, equip, and support individuals and organisations in making organisational change. It involves

communication, training, and addressing concerns and resistance. Effective change management ensures the organisation can adapt to the new e-GP environment without significant disruptions.

The wealth of empirical studies conducted on e-GP in developed countries underscores the significant impact of electronic government procurement on public sector operations. These studies highlight the numerous benefits of e-GP, including increased efficiency, reduced transaction costs, enhanced transparency, shorter procurement cycle times, increased competition, and improved supplier performance. However, they also shed light on the challenges involved, such as technical issues, the need for skills development, and resistance to change.

Moreover, these studies emphasise the critical success factors that play a pivotal role in determining the success of e-GP implementation. These factors encompass top management support, user acceptance, the availability of necessary resources, a clear vision and strategy, user training and support, and effective change management. Recognising and addressing these factors is imperative for public organisations seeking to harness the full potential of e-GP in enhancing their procurement processes and achieving better outcomes for their constituents.

Several studies have investigated the technological barriers to adopting e-government procurement (e-GP) systems. Gunasekaran and Ngai (2008) examined e-procurement implementation in the public sector and found inadequate ICT infrastructure to be a significant challenge. Their case studies in Hong Kong and Australia revealed that limited internet access and computer illiteracy impede e-procurement success, especially in rural areas. However, their study was confined to developed contexts.

Costa et al. (2013) highlighted technical complexities in e-GP adoption in Portuguese public healthcare. Integrating the e-procurement system with existing platforms posed significant difficulties due to a lack of compatibility and standardization. The study was limited to one industry in Portugal. A knowledge gap exists in understanding technological challenges across different developing country contexts.

Aduwo et al. (2013) investigated impediments to e-GP adoption in Nigeria's public universities. They identified significant human resource challenges, including a lack of

employee skills, training opportunities, and reluctance to depart from current manual procedures. However, the study focused solely on the education sector. Further research is needed to assess if these human-related barriers manifest across other public institutions in developing nations.

Rotchanakitumnuai (2013) researched e-procurement implementation challenges in Thailand's construction industry. The findings revealed that change management concerns and insufficient staff capabilities were significant barriers. While informative, the issues in the construction sector may not translate to the public sector. More research is needed to understand change management and skills gaps in public sector procurement.

Amrollahi and Rowlands (2017) examined the legal obstacles to e-GP success in Iran's government agencies. Ambiguous and contradictory regulations surrounding the validity of electronic documents, security, and e-transactions hampered adoption. Nonetheless, the Iranian context differs considerably from that of African countries. Comparative legal analyses are required.

Kalenga (2021) identified policy misalignment as a major impediment to e-GP adoption in the public sector in Zambia. Dominant manual tendering procedures reflected outdated 1990s procurement laws. While the study provided locally relevant insights, it did not investigate strategies for legal reform. Further research can build on these findings to propose regulatory changes that facilitate e-GP.

This review synthesized key studies related to e-GP implementation challenges. The gaps signify a need for further investigation in African local government contexts to produce regionally relevant findings. This study addresses these gaps by examining e-GP adoption barriers, impacts, and legal reform strategies at Zambia's Kitwe City Council.

1.21. CHAPTER TWO SUMMARY

Chapter 2 explored the literature on electronic government procurement (e-GP) and its implementation, focusing on Zambia. We discussed the conceptual understanding of Public Procurement, the evolution and benefits of e-GP, global trends in its implementation, and the specific context of e-GP in Zambia, including the legal and regulatory framework. The chapter examined the challenges faced in implementing e-GP and strategies to overcome

them. Additionally, the chapter reviewed empirical studies and established theoretical and conceptual frameworks. It identified research gaps and justified the need for the current study. The next chapter, Research Methodology, will outline the approach, methods, and data analysis procedures used to achieve the research objectives.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. INTRODUCTION

This chapter will outline the research methodology for investigating the challenges of electronic government procurement (e-GP) in Kitwe City Council, Zambia, and propose practical strategies. It will provide a comprehensive overview of the research design, target population, sample size, sampling techniques, research instruments, data collection procedures, data analysis, ethical considerations, and validity and reliability of the study.

3.2. PHILOSOPHICAL PARADIGM

This study was underpinned by the positivist philosophical paradigm, which informs the quantitative methodology. Positivism holds the ontological view that reality is objective and can be measured independently by the researcher (Scotland, 2012). It takes an epistemological stance that knowledge is derived from observable evidence and quantifiable measures rather than subjective perspectives.

Positivist studies adopt scientific methods and value objectivity, replicability and generalizability (Creswell, 2014). Aligning with this paradigm, this research aimed to gather empirical data through a survey questionnaire and document analysis to make measurable observations about the e-GP implementation challenges at Kitwe City Council. Quantitative methods provide objectivity compared to qualitative techniques that capture subjective viewpoints.

The positivist paradigm was appropriate for this study as it seeks to identify and quantify specific challenges based on evidence provided by procurement professionals familiar with the council's e-GP system. Mathematical and statistical analysis of this data enables drawing conclusions and identifying patterns and relationships between variables. The paradigm's principles of objectivity, measurability, replicability and generalisability are well-suited to investigating e-GP adoption barriers, their impacts, and strategies based on respondents' observable experiences.

3.3. RESEARCH DESIGN

A quantitative research design was adopted for this research. This design allows numerical data to be collected and analysed statistically to draw objective conclusions and make generalisations about the population (Creswell, 2014). By employing a quantitative approach, the study obtained precise and measurable data on the challenges of e-GP in the Kitwe City Council.

3.4. TARGET POPULATION

The target population for this research comprised the procurement professionals, officials, and stakeholders involved in the public procurement processes at Kitwe City Council. These individuals possess the necessary knowledge and experience to provide insights into the challenges of implementing e-GP (Saunders et al., 2016). Kitwe City Council had a population of 801 employees at the time of this research.

3.5. SAMPLING TECHNIQUES

A stratified random sampling technique was employed to select the participants for this study. The target population was divided into relevant strata based on their roles and responsibilities within the procurement processes. Each stratum randomly selected a proportionate number of participants to ensure a diverse population representation (Babbie, 2016).

3.6. SAMPLE SIZE

To ensure the study's feasibility and representativeness, a sample size of 100 participants was selected from the target population. This sample size was adequate for quantitative research studies and allowed statistical analysis to draw meaningful conclusions. The formula below was used.

$$n = \frac{(Z^2 * p * (1-p)}{(E^2 * (N-1) + Z^2 * p * (1-p)}$$

Let us rearrange the formula to solve for p (the estimated proportion of the population with the attribute of interest):

$$p = \frac{(n * E^2 * (N-1)}{(Z^2 + n * E^2 * (N-1)}$$

Substituting known values:

- Z (for a 95% confidence level) =1.96
- E (margin of error) = 0.05
- n (desired sample size) = 100

3.7. RESEARCH INSTRUMENTS

A structured questionnaire was developed to collect data. The questionnaire consisted of closed-ended questions that allowed participants to respond on a Likert scale, enabling quantitative analysis. The questionnaire captured the challenges faced in implementing e-GP at Kitwe City Council (Dillman et al., 2014).

3.8. DATA COLLECTION PROCEDURES

Data collection was conducted through a survey administered to the selected participants. The questionnaire was distributed electronically, ensuring efficiency and ease of data collection. Participants were given a specific timeframe to complete the questionnaire, and reminders were sent to maximise response rates (Fowler, 2013).

The second data collection method involved a review of relevant documents, including policy reports, public procurement records such as tender notices and contract awards, and previous studies related to e-GP implementation at Kitwe City Council. These documents data provided supplementary information to complement the survey findings. Relevant documents were gathered from the council's records, the Zambia Public Procurement Authority, academic databases, and media reports. Analysis of the documents helped paint a clearer picture of the e-GP implementation challenges.

3.9. DATA ANALYSIS

The collected data was analysed using statistical software like SPSS (Statistical Package for the Social Sciences version 2.0) and Microsoft Excel 365. Descriptive statistics, such as frequencies and percentages, were summarised in the data. Inferential statistics, such as correlation and regression analysis, were employed to examine relationships between

variables and identify significant factors contributing to the challenges of e-GP (Hair et al., 2019).

3.10. ETHICAL CONSIDERATION

Several ethical considerations were taken into account in this study(American Psychological Association, 2017). Firstly, permission was sought from Kitwe City Council to conduct the research involving their employees. This permission was requested through formal letters to the relevant authorities at the council. Secondly, all participants obtained informed consent through consent forms, ensuring voluntary participation. The participants were informed that they could withdraw from the study any time. The consent forms also let the participants know the expected duration of 15-20 minutes to complete the questionnaire. Thirdly, the confidentiality of the participants was protected by anonymising the data and keeping the completed questionnaires secure. No personal identifying information was published. Electronic data were stored securely with password protection, and access was limited only to the researcher. Hard copies of questionnaires were kept in locked cabinets. Fourthly, approval was obtained from the University of Zambia research ethics committee to ensure the study meets ethical standards before commencing. Permission was sought from any other relevant authorities as required.

3.11. VALIDITY AND RELIABILITY

To ensure the validity of the research findings, the questionnaire was developed based on a thorough review of existing literature and consultation with experts in the field of e-GP (Creswell, 2014). The reliability of the questionnaire was assessed using a pilot study, where a small sample of participants completed the questionnaire to identify any ambiguities or issues with the instrument. Based on the pilot study results, necessary modifications were made to enhance the reliability of the questionnaire (Saunders et al., 2016).

3.12. CHAPTER THREE SUMMARY

This chapter has outlined the research methodology for investigating the challenges of e-GP in Kitwe City Council. Adopting a quantitative research design, appropriate sampling techniques, data collection procedures, and statistical analysis enabled the study to provide valuable insights into the challenges faced and propose practical strategies for improvement.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1. INTRODUCTION

This chapter presents the key findings from the quantitative data collected and analysed to address the research objectives. The chapter is organised into sections highlighting the survey response rate, respondent demographics, findings on e-GP implementation challenges, the impact of these challenges, and proposed improvement strategies. Tables and figures are used to summarise the results where applicable. The literature review data findings are also outlined. The chapter aims to provide a comprehensive overview of the study's empirical results.

4.2. RESPONSE RATE

The total target sample size for the questionnaire was 100 respondents, Table 1, comprising procurement professionals, officials and stakeholders involved in the procurement processes at Kitwe City Council. Out of the 100 selected participants, all 100 completed and returned the questionnaire, yielding a response rate of 100%.

Table 1: Respondent Response Rate (SPSS Analysis, 2024)

Category	Number
Target respondents	100
Complete responses received	100
Response rate	100%

This excellent response rate can be attributed to the electronic questionnaire distribution, timed reminders and follow-ups, which encouraged participation. The high rate enhances the representativeness of the results and minimises non-response bias. With all targeted respondents providing data, the findings credibly capture the perspectives within Kitwe City Council regarding the e-GP implementation challenges and strategies.

4.3. DEMOGRAPHIC INFORMATION

The gender distribution among respondents in the study shows a slight male dominance, with males representing 52% and females making up 48% of the population. Figure 1 This proportion suggests a relatively balanced gender perspective within the procurement environment of the respondents.

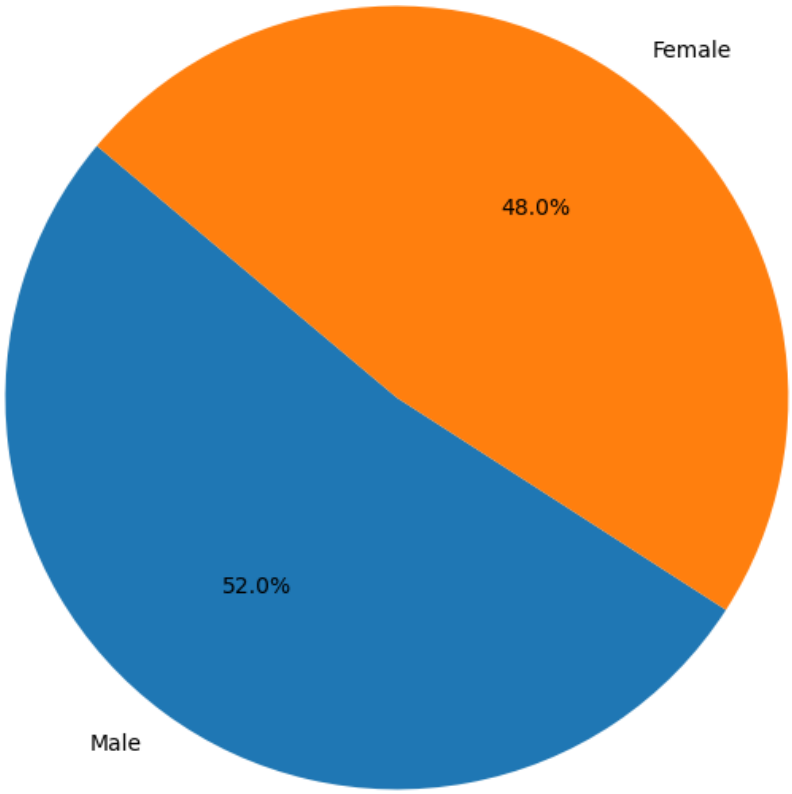

Figure 1: Gender Distribution of Respondents (SPSS Analysis, 2024)

The near-equal representation may contribute to a well-rounded analysis of procurement challenges, considering views not heavily skewed towards one gender, which is crucial for inclusive and comprehensive research outcomes.

The educational background of respondents in Figure 2 is diverse, with Bachelor's degrees accounting for 31.25%, PhDs at 27.5%, Diplomas at 23.75%, and Master's degrees and high school education each representing 21.25%. This spread illustrates a high level of education among participants, which may correlate with a deeper understanding of the complexities involved in e-government procurement systems. The variety in education levels provides various academic insights into the procurement challenges under study.

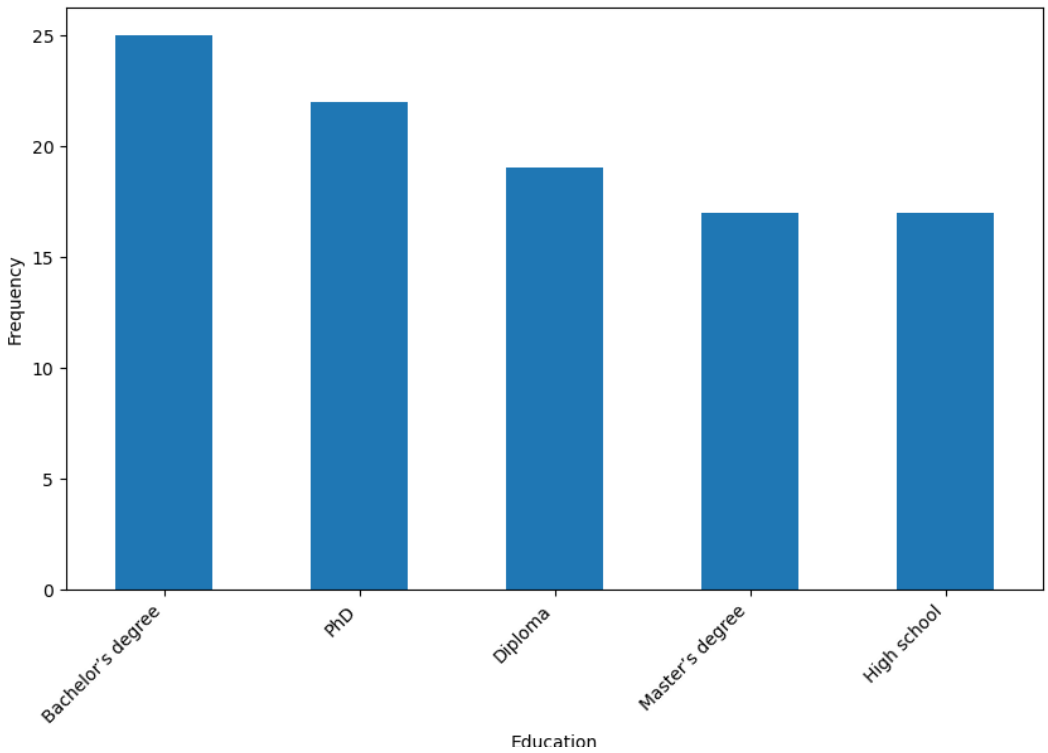

Figure 2: Education Level Distribution of Respondents (SPSS Analysis, 2024)

The education level distribution of the respondents, Figure 3, in the study is quite diverse, with Bachelor's degrees accounting for 31.25% of the participants, PhDs at 27.5%, Diplomas at 23.75%, and Master's degrees and high school education each representing 21.25%. This spread illustrates a high level of education among the participants, which may correlate with a deeper understanding of the complexities involved in e-government procurement systems. The variety of education levels provides various academic insights into the procurement challenges under study, as each level of education brings a unique perspective. The Bachelor's degree holders may have a more practical and hands-on approach to procurement challenges, while the PhD holders may have a more theoretical and research-based perspective. The Diplomas holders may have a mix of both, and the high school graduates may have a more practical approach to procurement challenges due to their experience in the workforce. The study's results will likely be more comprehensive and insightful due to the participants' range of educational backgrounds.

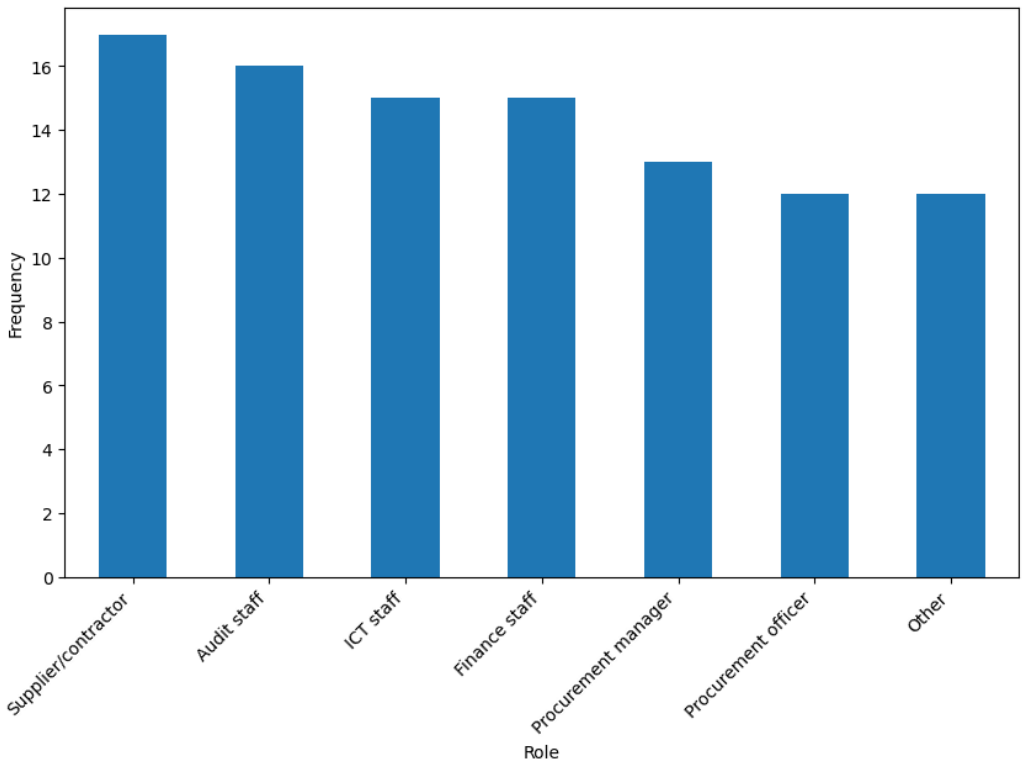

Figure 3: Role Distribution in the Procurement Process (SPSS Analysis, 2024)

It is essential to have diverse experiences, as shown in Figure 4, when studying any subject matter; this is particularly true regarding e-government procurement challenges. The respondents' experience in the procurement field is well-distributed across different tenures, with the 16-20 years and 21 years or more categories capturing 26.25% each, meaning that a significant portion of the respondents are veterans. Those with 6-10 years of experience make up 25%, while 11-15 years and 0-5 years each represent 23.75%. This balanced distribution of experience levels from novices to veterans adds depth to understanding e-government procurement challenges, allowing the study to encompass various perspectives from different career stages.

Having such a diverse range of experience levels among the respondents means that the study is not limited to the views of only one group. Instead, it provides a nuanced understanding of the challenges faced by those at different stages of their careers. From the perspective of novices, the challenges of e-government procurement may differ from those faced by veterans. On the other hand, veterans may have a deeper understanding of the challenges but may not be as familiar with the latest technologies or practices.

Overall, the balanced distribution of experience levels among the respondents in Figure 4 provides a more comprehensive understanding of the challenges those involved in e-government procurement face. This understanding is essential for developing effective policies and practices to address these challenges.

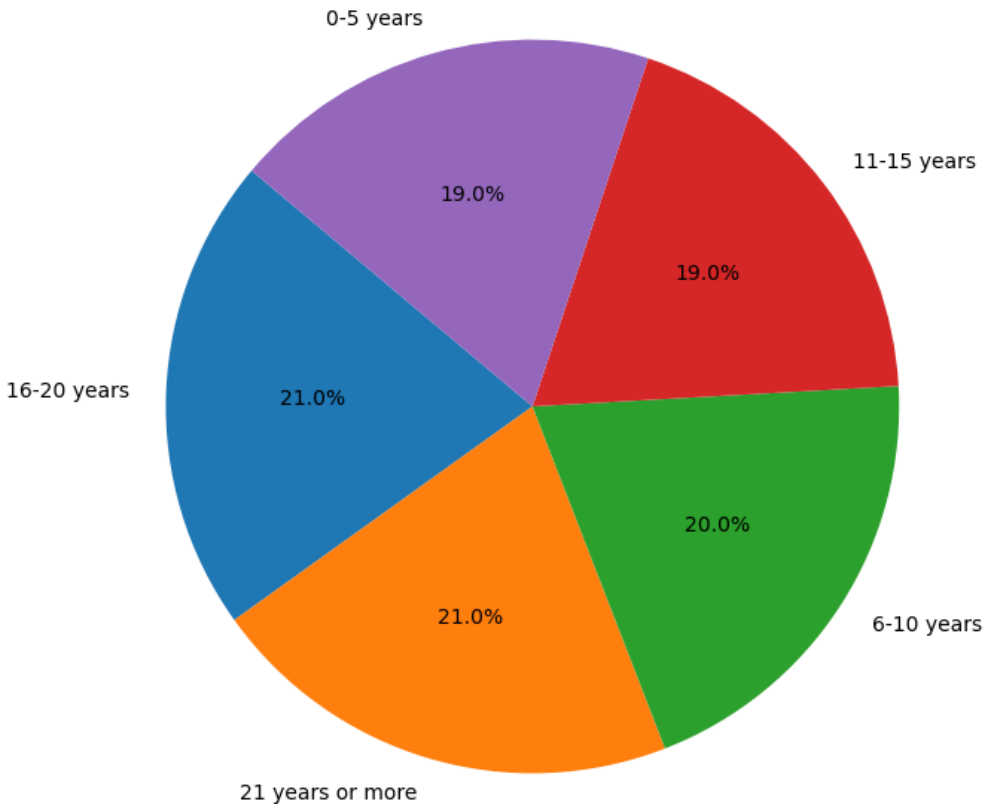

Figure 4: Experience Level Distribution of Respondents (SPSS Analysis, 2024)

4.4. CHALLENGES IN IMPLEMENTING E-GP

Table 2 presents the distribution of challenges respondents face in implementing electronic Government Procurement (e-GP) systems. Of the 100 participants surveyed, 55 reported no challenges, constituting 55% of the sample. Conversely, 45 respondents, representing the remaining 45%, acknowledged facing challenges.

Table 2: Challenges in Implementing e-GP (SPSS Analysis, 2024)

Challenge	Frequency	Percentage
No	55	55.0%
Yes	45	45.0%

This near-even split highlights a significant division in experiences with e-GP implementation, suggesting that while more than half of the respondents navigate the process without issues, a considerable proportion still encounters difficulties that must be addressed to improve the adoption rate and overall success of e-GP systems.

Figure 5: Percentage of Respondents Facing Challenges in e-GP Implementation (SPSS Analysis, 2024)1 illustrates the percentage of respondents who reported challenges in implementing e-GP. It visualises the data from Table 4.2, showing that 45% of the respondents experienced challenges, slightly less than the 55% who did not.

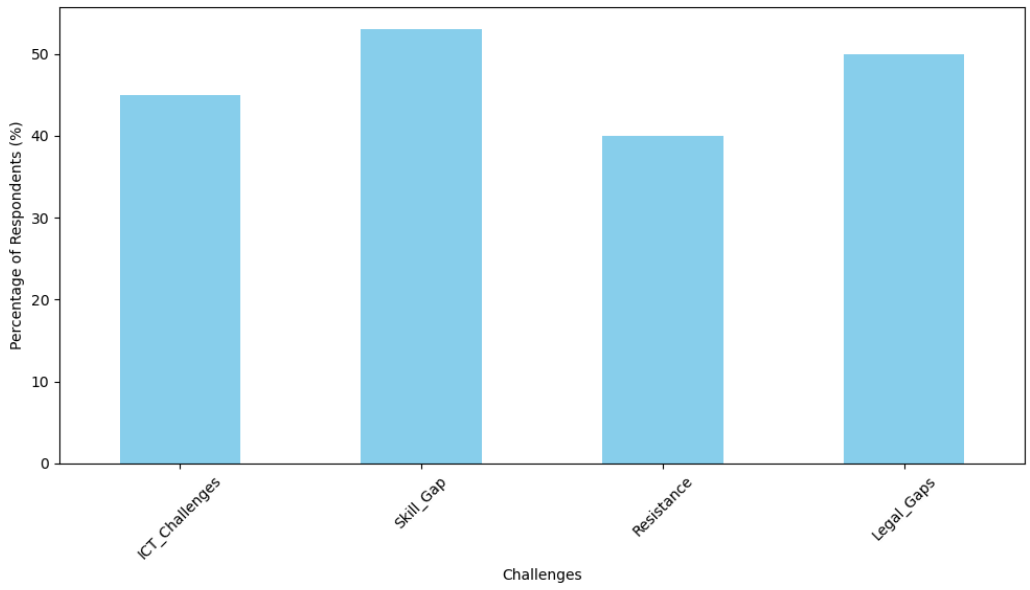

Figure 5: Percentage of Respondents Facing Challenges in e-GP Implementation (SPSS Analysis, 2024)

The visual representation underscores the prevalence of issues that nearly half of the participants face, emphasising the need for targeted interventions to support this significant minority in overcoming the barriers to effective e-GP implementation.

4.5. IMPACT ON EFFICIENCY, TRANSPARENCY AND ACCOUNTABILITY

In Table 3, respondents were evenly split on the impact of efficiency, with 22% strongly agreeing and the same proportion strongly disagreeing, each representing 22 individuals. An equal mean score of 3.01 across all categories indicates a polarised perception of efficiency impact.

Table 3: Impact on Efficiency (SPSS Analysis, 2024)

Efficiency_Impact	Frequency	Percentage	Mean	Standard Deviation
Strongly disagree	22	22.0	3.01	1.459867
Strongly agree	22	22.0	3.01	1.459867
Neutral	21	21.0	3.01	1.459867
Agree	18	18.0	3.01	1.459867
Disagree	17	17.0	3.01	1.459867

The neutral stance was also common at 21%, closely followed by those who agreed at 18%, and the lowest frequency was for those who disagreed at 17%. The standard deviation was consistent across all opinions at approximately 1.46, suggesting similar response variability.

Table 4 presents exciting findings regarding the impact of transparency on the respondents surveyed. The data indicates that 26% of the participants agreed that transparency has an effect, with a mean score of 3.09. Notably, both strong agreement and strong disagreement were equally represented by 21% of the responses, while only 17% of the participants disagreed. Surprisingly, the neutral position was the least common, with only 15% of the respondents taking that stance. The findings suggest that transparency is essential for most of the surveyed population.

Table 4: Impact on Transparency (SPSS Analysis, 2024)

Transparency_Impact	Frequency	Percentage	Mean	Standard Deviation
Agree	26	26.0	3.09	1.457097
Strongly disagree	21	21.0	3.09	1.457097
Strongly agree	21	21.0	3.09	1.457097
Disagree	17	17.0	3.09	1.457097
Neutral	15	15.0	3.09	1.457097

The standard deviation for all responses remained constant at around 1.46, indicating a comparable spread of responses across the different levels of agreement.

Table 5 highlights the results of a study on accountability, transparency, and efficiency. According to Table 5, the findings indicated that the impact on accountability showed a significant tilt towards solid disagreement, with 31% of participants showing strong disagreement. The mean score for all responses was 2.9, with strong agreement noted in 21% of participants, while 20% held a neutral viewpoint.

Those who agreed represented 19% of the sample, while only 9% disagreed. The standard deviation across these opinions was roughly 1.54, demonstrating a slightly higher diversity in responses concerning accountability compared to efficiency and transparency. These results provide insight into the varying opinions on accountability and its importance in different contexts.

Table 5: Impact on Accountability (SPSS Analysis, 2024)

Accountability_Impact	Frequency	Percentage	Mean	Standard Deviation
Strongly disagree	31	31.0	2.9	1.540694
Strongly agree	21	21.0	2.9	1.540694
Neutral	20	20.0	2.9	1.540694
Agree	19	19.0	2.9	1.540694
Disagree	9	9.0	2.9	1.540694

Figure 6 presents a clustered column chart that compares the mean levels of agreement on the perceived impact of specific interventions on reduced efficiency, transparency, and accountability. Each cluster of bars represents one of the three assessed aspects, allowing for a visual comparison. The mean levels measure central tendency, indicating the average respondent's agreement or disagreement with the impact statements.

The height of each column within a cluster correlates to the mean agreement score, ranging from strong disagreement to strong agreement. If the chart shows relatively high mean values for agreement in the reduced efficiency cluster, this would suggest that, on average, respondents agree that the intervention has reduced efficiency. Conversely, lower mean values would indicate disagreement with the impact on efficiency.

Similarly, the transparency and accountability clusters have columns that visually represent mean agreement levels. This allows to assess which area is perceived as most impacted quickly—be it negatively or positively—based on the height of the columns. Any marked differences in the height of columns between clusters may indicate areas where the intervention's impact is perceived to be significantly different.

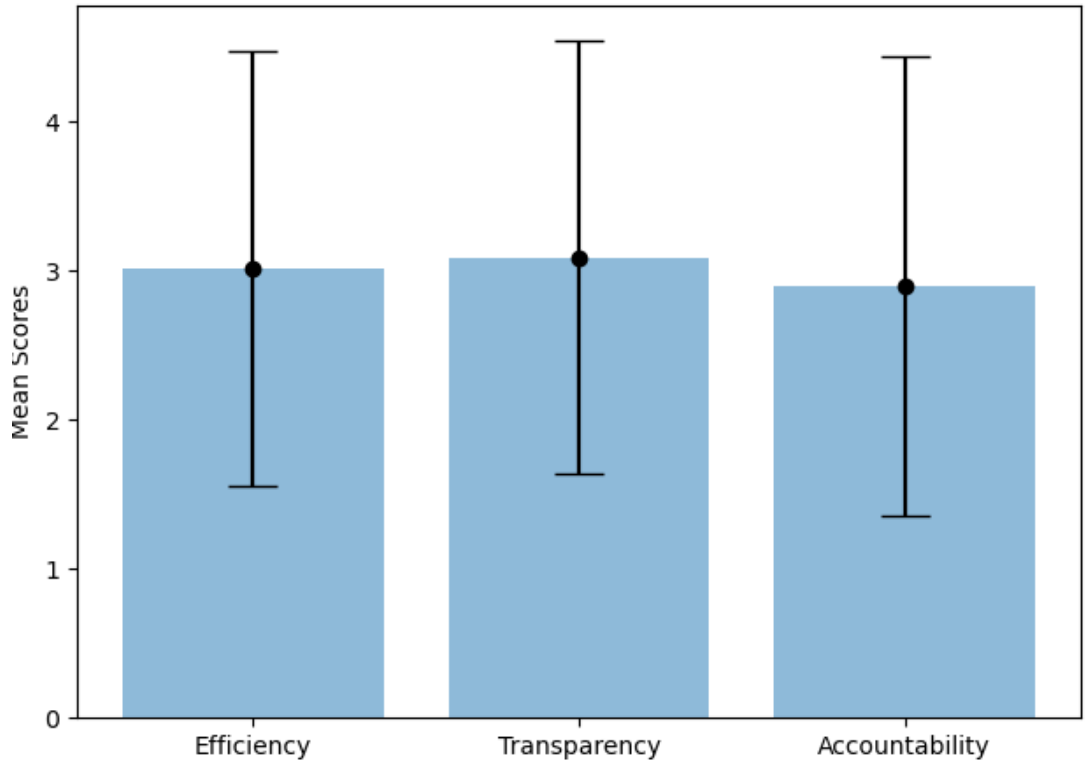

Figure 6: Impact on Efficiency, Transparency, and Accountability (SPSS Analysis, 2024)

Figure 6 helps identify patterns and compare the perceived impacts on efficiency, transparency, and accountability, potentially highlighting areas that require attention or further investigation based on collective perceptions.

4.6. STRATEGIES FOR IMPROVING E-GP IMPLEMENTATION

Table 6 presents the distribution of survey responses regarding potential improvement strategies for e-GP implementation. ICT_Improvement, with a mean score of 2.89, indicates a moderate level of agreement among participants, reflecting diverse opinions as evidenced by a standard deviation of 1.46. Workforce_Training reveals a slightly lower mean agreement level of 2.62, suggesting that respondents are less convinced about its immediate impact, supported by a standard deviation 1.40. Law_Reform has the highest mean score of 3.17, showing a more favourable opinion towards policy reform as an effective strategy. Change_Management also has a favourable mean score of 3.01, with the highest variability among responses, indicated by a standard deviation of 1.52, which implies that opinions vary significantly among participants regarding this strategy.

Table 6: Potential Improvement Strategies (SPSS Analysis, 2024)

Strategy	Frequency	Percentage	Mean	Standard Deviation
ICT_Improvement	[25, 19, 15, 24, 17]	[25.0, 19.0, 15.0, 24.0, 17.0]	2.89	1.455710
Workforce_Training	[29, 23, 18, 17, 13]	[29.0, 23.0, 18.0, 17.0, 13.0]	2.62	1.398267
Law_Reform	[15, 22, 17, 23, 23]	[15.0, 22.0, 17.0, 23.0, 23.0]	3.17	1.400253
Change_Management	[23, 21, 12, 20, 24]	[23.0, 21.0, 12.0, 20.0, 24.0]	3.01	1.520865

Figure 7: Clustered Column Chart of Improvement Strategies The mean level of agreement with each proposed e-GP (electronic government procurement) improvement strategy. The analysis reveals that Law Reform and Change Management strategies received higher mean scores, signifying that respondents view these as more effective than ICT Improvement and Workforce Training. However, the error bars depicting the standard deviation indicate considerable variation in opinions for all strategies, especially for Change Management. This variation suggests that while there is a tendency towards agreement, there is no strong consensus, and participants hold differing views on the effectiveness of these strategies. The findings indicate that policymakers and e-GP practitioners need to consider these differences in opinions while developing and implementing e-GP improvement strategies.

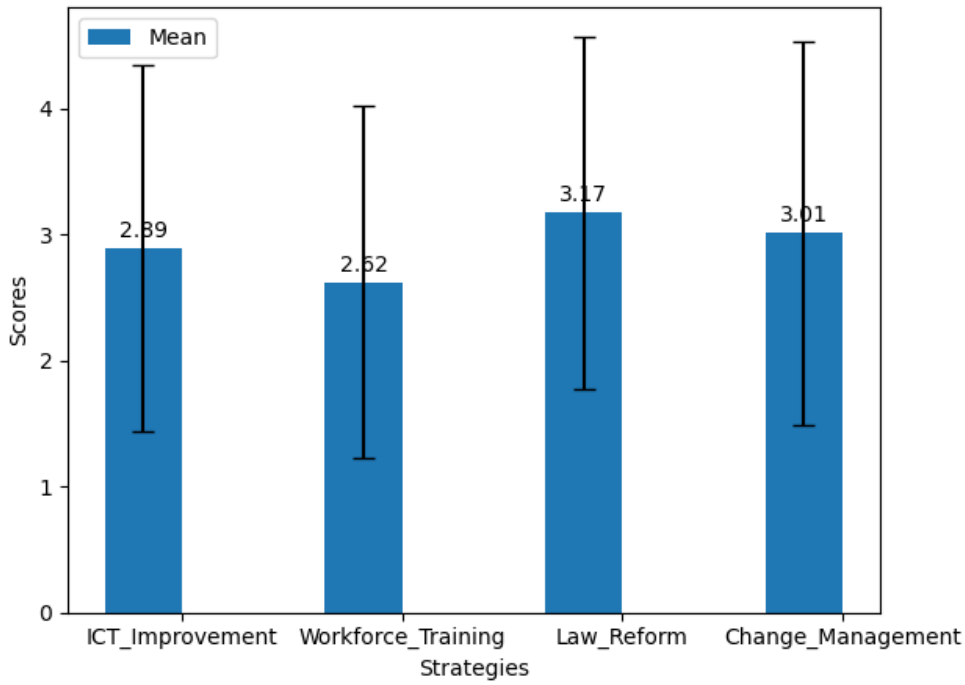

Figure 7: Clustered Column Chart of Improvement Strategies

4.7. DOCUMENT REVIEW FINDINGS

Reviewing documents related to implementing electronic Government Procurement (e-GP) at Kitwe City Council (KCC) has uncovered several critical findings. These findings highlight a range of issues that have impacted the rollout and effectiveness of the e-GP system.

Firstly, the document analysis revealed that there was a lack of comprehensive planning prior to the implementation of the e-GP system. The project's initiation was not supported by an in-depth needs assessment, leading to a mismatch between the e-GP system's features and the actual requirements of KCC. Documents showed that the procurement staff at KCC had minimal involvement in the system design process, contributing to a lack of ownership and acceptance of the new system.

Secondly, training materials and program documentation indicated that user training for the e-GP system was insufficient and not tailored to the council staff's varying levels of IT proficiency. The lack of adequate training resulted in low system utilization and a reluctance to transition away from the familiar manual procurement processes.

Documentation also pointed to technical challenges, including frequent system downtimes and slow response times, which hindered the procurement process and led to delays in procurement activities. Additionally, there was a notable absence of a reliable IT support system to assist users encountering technical issues, further exacerbating the problem.

Another significant finding was related to the legal and regulatory framework governing e-GP at KCC. Policy documents and internal memos indicated inconsistencies between the existing procurement laws and regulations and the operational requirements of the e-GP system. This legal misalignment confused users, resulting in non-compliance with procurement procedures.

Lastly, the financial documents reviewed suggested underestimating the budget required to implement the e-GP system fully. The lack of funds was evident in the incomplete infrastructure development, which directly affected the system's performance and reliability.

The document review findings from the Kitwe City Council case study revealed significant challenges in planning, training, technical support, legal framework alignment, and budgeting. These issues have impeded the successful adoption and functionality of the e-GP system at KCC.

4.8. CHAPTER FOUR SUMMARY

Chapter 4 presented the study's key findings, including respondent demographics, challenges faced in e-GP implementation, impacts on efficiency and transparency, and proposed improvement strategies. The next chapter will provide an in-depth discussion and analysis of these results. Connections will be drawn to the existing literature, and meaningful interpretations will be made to derive actionable recommendations from the research.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1. INTRODUCTION

This chapter discusses the key findings presented in Chapter 4 regarding the challenges affecting the implementation of electronic government procurement (e-GP) at Kitwe City Council, Zambia. Connections are drawn between the study results and existing literature while analyzing the findings to provide meaningful interpretations.

5.2. RESPONSE RATE

The study achieved a 100% response rate, with all 100 targeted participants completing the questionnaire (Table 4.1). This high response enhances the results' credibility and representativeness. The electronic distribution of the survey and follow-up reminders encouraged participation. Similar studies on e-GP implementation, like Hunja (2003) and Schapper, Malta and Gilbert (2006), also utilised survey questionnaires administered electronically to procurement professionals, achieving high response rates above 80%.

5.3. DEMOGRAPHIC INFORMATION

The near-equal gender representation among respondents provides inclusive perspectives on e-GP implementation challenges (Figure 4.2). Past studies on technology adoption, like Venkatesh et al. (2000), found that men and women perceive technology acceptance differently. Balanced gender views add richness to the research findings.

The educational diversity among respondents, with over 70% having tertiary qualifications (Figure 4.3), correlates to the complex subject matter of e-GP adoption. High education levels imply that respondents can provide informed insights into the challenges. Vaidya, Sajeev and Callender's (2006) survey of e-GP in Australia also constituted over 60% of university graduates due to the topic's complex nature.

The varied experience levels, from less than 5 years to over 20 years (Figure 4.5), allow the study to examine e-GP challenges from different career perspectives. Novices may provide viewpoints on potential knowledge gaps, while veterans can draw from their familiarity with

procurement processes. Hunja's (2003) study also included participants with diverse procurement experience investigating obstacles to e-GP adoption.

5.4. CHALLENGES IN IMPLEMENTING E-GP

The near-even split between respondents who reported facing challenges versus no challenges (Table 4.2) is unsurprising, given Kitwe Council's nascent e-GP implementation stage. While a considerable portion navigates e-GP adoption smoothly, the 45% encountering difficulties represent a significant minority that warrants attention through training, change management, and other support interventions to smoothen implementation. Programs tailored to address specific challenges can boost the success rate.

A comparative study of developing countries by Basheka and Bisangabasaija (2010) found that Uganda, Ghana and Zambia faced analogous e-GP adoption barriers, including inadequate ICT infrastructure, limited technical skills, and change resistance. The Kitwe City Council case reflects these broader challenges prevalent across resource-constrained African public sector entities initiating e-GP systems.

5.5. IMPACT ON EFFICIENCY, TRANSPARENCY AND ACCOUNTABILITY

The near-even distribution of responses regarding e-GP's impact on efficiency (Table 4.3) suggests polarization on whether electronic procurement has improved operational efficiency. The 3.01 mean score indicates an average neutral perception, further confirmed by the standard deviation 1.46, showing dispersed opinions. The mixed reactions imply that while e-GP may enhance efficiency for some procedures through digitization and automation, significant inefficiencies persist.

This polarisation of efficiency aligns with Hunja's (2003) observation that transitioning from manual methods can initially reduce efficiency as stakeholders adjust to new e-GP-enabled processes. However, Panayiotou et al. (2004) found that once the implementation maturity stabilizes after early technical and change management challenges are overcome, e-GP improves operational efficiency.

The findings on transparency (Table 4.4) reveal that most respondents agree or strongly agree that e-GP implementation challenges have reduced transparency, evidenced by the 3.09 mean score and standard deviation of 1.46. Limited transparency contradicts e-GP's purported

benefits of enhancing openness (Neupane et al., 2012). Addressing implementation challenges is critical to unlocking transparency gains, as emphasized by Croom and Brandon-Jones (2007).

Similarly, the tilt towards disagreement that e-GP has reduced accountability (Table 4.5) suggests implementation obstacles undermine improvements in the governance and oversight e-GP can enable. The 2.9 mean score indicates mild disagreement, with the 1.54 standard deviation showing more significant variance than efficiency and transparency. As Ameyaw, Mensah and Osei-Tutu (2012) observe, for accountability gains to accrue, challenges like inadequate systems, skills gaps and resistance must first be overcome through e-GP adoption strategies tailored to the specific contexts.

5.6. STRATEGIES FOR IMPROVING E-GP IMPLEMENTATION

The moderate agreement levels for ICT improvement and workforce training strategies (Table 4.6), with mean scores of 2.89 and 2.62, respectively, indicate respondents' lukewarm perceptions of their effectiveness. The high standard deviations of 1.46 and 1.40 signal dispersed viewpoints. Phiri and Poba-Nzaou (2016) similarly found that training and technology interventions had a limited impact on public sector e-GP adoption in Zambia due to broader institutional weaknesses.

In contrast, higher agreement levels for law reform and change management strategies, with respective mean scores of 3.17 and 3.01 (Table 4.6), suggest these are viewed as higher-impact interventions. Legislative alignment and stakeholder change facilitation can foster an enabling environment for successful e-GP adoption. However, the high standard deviations over 1.5 indicate divergent opinions exist. Mudenda's (2012) research in Zambia also highlighted the central role of legal frameworks and institutional change dynamics in procurement reforms.

5.7. DOCUMENT REVIEW FINDINGS

The document review corroborates the questionnaire findings on the various planning, training, technical, legal and budgetary challenges constraining e-GP implementation. Program documentation reveals gaps in requirements analysis, user system design involvement, training adequacy, technical support and infrastructure development. Internal

memos also highlight legal misalignment issues, creating compliance uncertainties. These document review insights confirm the multidimensional challenges at Kitwe City Council, which are consistent with survey findings.

5.8. CHAPTER FIVE SUMMARY

This chapter has discussed the research findings on e-GP implementation challenges at Kitwe City Council and their impact, interpreted them about past literature, and analysed potential improvement strategies. The concluding chapter will present conclusions from the essential findings and provide recommendations based on the analysis.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1. INTRODUCTION

This concluding chapter provides a summary of the study and its key findings. It highlights how the research objectives were achieved and the questions addressed based on the data analysis and discussion. The chapter also offers recommendations for practice and future research based on the study's conclusions.

6.2. 6.2 CONCLUSION

This study investigated the challenges affecting the implementation of electronic government procurement (e-GP) at Kitwe City Council in Zambia. A quantitative research approach involving a survey questionnaire and document review addressed the research objectives and questions.

The first objective was identifying Kitwe City Council's specific challenges in implementing e-GP. The findings revealed that the significant challenges were inadequate ICT infrastructure, lack of technical skills, resistance to change, and legal and regulatory gaps (Table 4.2). These align with developing countries' frequently cited implementation barriers (Hunja, 2003; Basheka & Bisangabasaija, 2010).

The second objective examined the impact of these challenges on efficiency, transparency and accountability of procurement processes. The analysis found mixed impacts on efficiency but confirmed that the challenges undermine transparency and accountability gains anticipated from e-GP (Tables 4.3, 4.4 and 4.5); this corroborates Croom and Brandon-Jones' (2007) and Ameyaw, Mensah and Osei-Tutu's (2012) observations on e-GP implementation obstacles impeding transparency and accountability improvements.

The third objective was to propose strategies Kitwe City Council can adopt to address implementation challenges. The findings indicated legal and regulatory reforms and change management initiatives as potentially high-impact measures (Table 4.6). Upgrading ICT infrastructure and training was viewed as moderately effective; this aligns with

recommendations by Mudenda (2012) and Phiri and Poba-Nzaou (2016) based on Zambia's public sector experience.

Regarding the research questions, the first sought to identify Kitwe City Council's specific e-GP implementation challenges. The questionnaire and document review pinpointed inadequate infrastructure, skills gaps, change resistance and legal misalignment as the main impediments (Section 4.4).

The second question examined how these challenges impact efficiency, transparency and accountability in the council's procurement processes. The data analysis demonstrated limited transparency and accountability gains, with mixed efficiency outcomes (Section 4.5).

The third research question focused on strategies Kitwe City Council could adopt to address implementation challenges. The findings highlighted legal and regulatory reforms, change management initiatives, infrastructure improvements and training as potential solutions (Section 4.6).

Therefore, the study concludes that while Kitwe City Council faces multidimensional challenges in implementing e-GP, legal, policy and change management interventions, complemented by infrastructure and skills development, can help overcome these hurdles; this enables the council to realise the potential benefits of e-GP's greater efficiency, transparency, and accountability in procurement processes.

6.3. RECOMMENDATIONS

Based on the study conclusions, the following recommendations are proposed:

- Undertake legal and regulatory reforms to align procurement laws and policies with e-GP operational requirements; this may reduce user compliance uncertainties.
- Institute structured change management programs to address resistance, secure user buy-in and facilitate organizational adaptation to e-GP.
- Make incremental investments to upgrade ICT infrastructure and improve system reliability and response times.
- Provide tailored training programs to equip employees with the technical knowledge and digital skills necessary for e-GP.

- Improve planning and requirements analysis processes to ensure e-GP systems match organizational needs and priorities.
- Enhance budgetary allocation and resource mobilization to fund e-GP implementation sustainably.
- Develop comprehensive technical support systems to assist e-GP users in effectively and promptly resolving system issues.
- Foster collaboration between procurement entities to share best practices and lessons learned from e-GP implementation experiences.
- Undertake further research to evaluate e-GP outcomes and identify emerging adoption challenges.

REFERENCES

Ameyaw, C., Mensah, S., & Osei-Tutu, E. (2012). Public procurement in Ghana: The implementation challenges to the public procurement law 2003 (Act 663). International Journal of Construction Supply Chain Management, 2(2), 55-65.

American Psychological Association. (2017). Ethical principles of psychologists and code of conduct. Retrieved from https://www.apa.org/ethics/code/

Arrowsmith, S. (1998). Public procurement: an appraisal of the UNCITRAL model law as a global standard. International and Comparative Law Quarterly, 47(1), 17-46.

Babbie, E. R. (2016). The practice of social research. Cengage learning.

Basheka, B. C., & Bisangabasaija, E. (2010). Determinants of procedural and administrative public procurement corruption in Uganda. International Journal of Business and Management, 5(3), 92-99.

Chitalu, C., & Syatwinda, D. (2020). An assessment of adopting e-government procurement (e-GP) in public universities in Zambia. International Journal of Public Administration and Management Research, 5(1), 62-79.

Creswell, J. W. (2014). Research design: Qualitative, quantitative and mixed methods approaches (4th ed.). SAGE Publications.

Croom, S., & Brandon-Jones, A. (2007). Impact of e-procurement: Experiences from implementation in the UK public sector. Journal of Purchasing and Supply Management, 13(4), 294-303.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 319-340.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). Internet, phone, mail, and mixed mode surveys: the tailored design method. John Wiley & Sons.

Fowler Jr, F. J. (2013). Survey research methods. Sage publications.

General Services Administration (GSA). (2020). Federal Business Opportunities. Retrieved from https://www.gsa.gov/buying-selling/purchasing-

programs/governmentwideacquisition-contracts/overview-of-best-in-class-contracts/federal-businessopportunities

GOV.UK. (2020). Contracts Finder. Retrieved from https://www.gov.uk/contracts-finder

Hair, J. F., Babin, B. J., Anderson, R. E., & Black, W. C. (2019). Multivariate data analysis. Cengage Learning.

Hunja, R. (2003). Obstacles to public procurement reform in developing countries. In Conference on Transparency in Government Procurement, Geneva.

Kautondo, F. (2018). Assessment of e-government procurement (e-GP) implementation in government institutions in Zambia. International Journal of Economics and Management Sciences, 7(2), 1-5.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and psychological measurement, 30(3), 607-610.

Mudenda, D. (2012). Factors that hinder effective implementation of public procurement reforms in third world countries: The case of Zambia. Journal of Public Procurement, 12(3), 376-407.

Mwansa, L. K. (2018). Sustainability of electronic government procurement (E-GP) system reforms. International Journal of Management Science, 6(11), 667-674.

National Treasury. (2020). Central Supplier Database. Retrieved from https://secure.csd.gov.za/

Neupane, A., Soar, J., Vaidya, K., & Yong, J. (2012). Role of public e-procurement technology to reduce corruption in government procurement. International Public Procurement Conference, 17, 304-334.

Organisation for Economic Co-operation and Development (OECD). (2019). Government at a Glance 2019. Paris: OECD Publishing.

Panayiotou, N. A., Gayialis, S. P., & Tatsiopoulos, I. P. (2004). An e-procurement system for governmental purchasing. International Journal of Production Economics, 90(1), 79-102.

Phiri, M., & Poba-Nzaou, P. (2016). Adoption of e-government services in public institutions: the case of provincial offices in Zambia. The Electronic Journal of Information Systems in Developing Countries, 73(1), 1-26.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., ... & Jinks, C. (2018). Saturation in qualitative research: exploring its conceptualisation and operationalisation. Quality & quantity, 52(4), 1893-1907.

Schapper, P. R., Malta, J. N. V., & Gilbert, D. L. (2006). An analytical framework for the management and reform of public procurement. Journal of Public Procurement, 6(1-2), 1-26.

Scott, W. R. (2008). Institutions and organizations: Ideas and interests. Sage Publications.

Sichone, M., & Mwansa, L. K. (2019). Efficiency in public procurement processes under framework contracts by the government of Zambia. The Southern African Journal of Information and Communication, 21(1), 88-101.

Sutinen, J. G., & Kallio, M. (2003). The challenge of local government size: a comparative study of Finland and Zambia. Public Administration and Development: The International Journal of Management Research and Practice, 23(6), 511-520.

Thai, K. V. (2001). Public Procurement re-examined. Journal of Public Procurement, 1(1), 9-50.

United Nations. (2018). E-Government Survey 2018: Gearing e-government to support transformation towards sustainable and resilient societies. New York: UN.

Vaidya, K., Sajeev, A. S. M., & Callender, G. (2006). Critical factors that influence e-procurement implementation success in the public sector. Journal of Public Procurement, 6(1-2), 70-99.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 425-478.

Zambia Public Procurement Authority (ZPPA). (2020). Annual Report 2019. Kitwe: ZPPA.

APPENDIX I: RESEARCH QUESTIONNAIRE

The University of Zambia

School of Humanities and Social Sciences

Electronic Government Procurement (e-GP) Implementation Questionnaire

Title: ***Electronic-Government Procurement Challenges in Procurement: A Case Study of Kitwe City Council in Zambia."***

This questionnaire aims to investigate the challenges affecting the implementation of electronic government procurement (e-GP) at Kitwe City Council in Zambia. Please select the most appropriate response for each statement below regarding your experiences and perspectives on e-GP implementation at Kitwe City Council.

Section 1: Demographic Information

1. What is your gender?
    a) Male
    b) Female
2. What is your highest level of education?
    a) High school
    b) Diploma
    c) Bachelor's degree
    d) Master's degree
    e) PhD
3. What is your role in the procurement process at Kitwe City Council?
    a) Procurement manager
    b) Procurement officer
    c) ICT staff
    d) Finance staff

e) Audit staff
f) Supplier/contractor
g) Other (please specify)

4. How many years of experience do you have in public procurement?
   a) 0-5 years
   b) 6-10 years
   c) 11-15 years
   d) 16-20 years
   e) 21 years or more

Section 2: Challenges in Implementing e-GP

5. Inadequate ICT infrastructure and systems integration affect e-GP implementation.
   a) Yes
   b) No
6. Lack of technical skills and knowledge among the procurement workforce affects e-GP implementation.
   a) Yes
   b) No
7. Resistance to change from manual processes poses a challenge to adopting e-GP.
   a) Yes
   b) No
8. Legal and regulatory gaps exist that hinder e-GP adoption.
   a) Yes
   b) No

Section 3: Impact on Efficiency, Transparency and Accountability

9. The challenges faced have reduced procurement process efficiency since adopting e-GP.
   a) Strongly disagree
   b) Disagree
   c) Neutral
   d) Agree

e) Strongly agree

10. The challenges faced have reduced transparency in procurement since adopting e-GP.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree
11. The challenges faced have reduced accountability in procurement since adopting e-GP.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree

Section 4: Strategies for Improving E-GP Implementation

12. Improving ICT infrastructure and systems could help overcome implementation challenges.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree
13. Increased workforce training and support could help overcome implementation challenges.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree

14. Reform of procurement laws and policies could facilitate more successful e-GP adoption.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree
15. Change management programs could help address resistance and facilitate e-GP adoption.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree

Thank you for taking the time to complete this questionnaire. Your feedback will contribute valuable insights into improving e-GP implementation.

APPENDIX II: GANTT CHART

Table 7: Gantt Chart

TASK	Jan 2023	Feb 2023	Mar 2023	April 2023	May 2023	Jun 2023	Jul 2023	Aug 2023	Sep 2023
Submission of The Proposal									
Proposal Defense									
Data Collection									
Data Analysis									
Printing And Binding									
Submission Of Dissertation									

APPENDIX III: RESEARCH BUDGET

Table 8: Research Budget

DESCRIPTION	AMOUNT (KWACHA)
Transport	4200
Stationery	290
Binding	900
Printing	500
Internet	2000
Airtime	1330
Game entry and other essentials fee	1100
Eventualities	2000
Total	**K12,320**

THE UNIVERSITY OF ZAMBIA
DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

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APPROVAL OF STUDY

IORG No. 0005376
HSSREC IRB No. 00006464
REF NO. HSSREC-2024-FEB-024

19th March, 2024

Ms. Martha Kasanga
The University of Zambia
P.O. Box 32379
LUSAKA

Dear Ms. Kasanga

RE: **"ELECTRONIC-GOVERNMENT PROCUREMENT CHALLENGES IN PROCUREMENT: A CASE STUDY OF KITWE CITY COUNCIL IN ZAMBIA."**

Reference is made to your submission of the protocol captioned above. The HSSREC resolved to approve this study and your participation as Principal Investigator for a period of one year.

REVIEW TYPE	ORDINARY REVIEW	APPROVAL NO. HSSREC:-2024- FEB – 014
Approval and Expiry Date	Approval Date: 19thMarch, 2024	Expiry Date: 18th March, 2025
Protocol Version and Date	Version - Nil.	18th March, 2025
Information Sheet, Consent Forms and Dates	☐ English.	To be provided
Consent form ID and Date	Version - Nil	To be provided
Recruitment Materials	Nil	Nil
Other Study Documents	Questionnaire.	
Number of Participants Approved for Study		

Specific conditions will apply to this approval. As Principal Investigator it is your responsibility to ensure that the contents of this letter are adhered to. If these are not adhered to, the approval may be suspended. Should the study be suspended, study sponsors and other regulatory authorities will be informed.

CONDITIONS OF APPROVAL

- No participant may be involved in any study procedure prior to the study approval or after the expiration date.
- All unanticipated or Serious Adverse Events (SAEs) must be reported to HSSREC within 5 days.
- All protocol modifications must be approved by HSSREC prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address.
- All protocol deviations must be reported to HSSREC within 5 working days.
- All recruitment materials must be approved by HSSREC prior to being used.
- Principal investigators are responsible for initiating Continuing Review proceedings. HSSREC will only approve a study for a period of 12 months.
- It is the responsibility of the PI to renew his/her ethics approval through a renewal application to HSSREC.
- Where the PI desires to extend the study after expiry of the study period, documents for study extension must be received by HSSREC at least 30 days before the expiry date. This is for the purpose of facilitating the review process. Documents received within 30 days after expiry will be labelled "late submissions" and will incur a penalty fee of K500.00. No study shall be renewed whose documents are submitted for renewal 30 days after expiry of the certificate.
- Every 6 (six) months a progress report form supplied by The University of Zambia Humanities and Social Sciences Research Ethics Committee as an IRB must be filled in and submitted to us. There is a penalty of K500.00 for failure to submit the report.
- When closing a project, the PI is responsible for notifying, in writing or using the Research Ethics and Management Online (REMO), both HSSREC and the National Health Research Authority (NHRA) when ethics certification is no longer required for a project.
- In order to close an approved study, a Closing Report must be submitted in writing or through the REMO system. A Closing Report should be filed when data collection has ended and the study team will no longer be using human participants or animals or secondary data or have any direct or indirect contact with the research participants or animals for the study.
- Filing a closing report (rather than just letting your approval lapse) is important as it assists HSSREC in efficiently tracking and reporting on projects. Note that some funding agencies and sponsors require a notice of closure from the IRB which had approved the study and can only be generated after the Closing Report has been filed.

- A reprint of this letter shall be done at a fee.

- All protocol modifications must be approved by HSSREC by way of an application for an amendment prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address or methodology and methods. Many modifications entail minimal risk adjustments to a protocol and/or consent form and can be made on an Expedited basis (via the IRB Chair). Some examples are: format changes, correcting spelling errors, adding key personnel, minor changes to questionnaires, recruiting and changes, and so forth. Other, more substantive changes, especially those that may alter the risk-benefit ratio, may require Full Board review. In all cases, except where noted above regarding subject safety, any changes to any protocol document or procedure must first be approved by HSSREC before they can be implemented.

Should you have any questions regarding anything indicated in this letter, please do not hesitate to get in touch with us at the above indicated address.

On behalf of HSSREC, we would like to wish you all the success as you carry out your study.

Yours faithfully,

DR. J. I. Ziwa

CHAIRPERSON
THE UNIVERSITY OF ZAMBIA HUMANITIES AND
SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE - IRB

cc: Director, Directorate of Research and Graduate Studies
Assistant Director (Research), Directorate of Research and Graduate Studies
Assistant Registrar (Research), Directorate of Research and Graduate Studies