

BINDURA UNIVERSITY OF SCIENCE EDUCATION



FACULTY OF COMMERCE

DEPARTMENT OF ECONOMICS

**AN INVESTIGATION ON THE IMPACT OF E-PROCUREMENT ON THE
PERFORMANCE OF AN ORGANISATION. A CASE OF THE MINISTRY
OF JUSTICE, LEGAL AND PARLIMENTARY AFFAIRS (MOJLPA)**

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APPROVAL FORM

The undersigned confirm reading and recommending to Bindura University to accept a project entitled AN INVESTIGATION ON THE IMPACT OF E-PROCUREMENT ON THE PERFORMANCE OF AN ORGANISATION AT MINISTRY OF JUSTICE LEGAL AND PALIAMENTARY AFFAIRS (MOJLPA) by MOREBLESSING CHIMHONDWA in partial fulfilment of the requirements of Bachelor of Commerce (Honours) Degree in Purchasing and Supply.

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DEDICATION

I would like to dedicate the project to God Almighty for making it possible for me to reach this stage, my father Mr Chimhondwa and my brothers for sparing their time and allowing me to study without complaining and for their moral and social support and continuous support during my education. God bless them abundantly.

ABSTRACT

The focus of this study was on influence of e-procurement on the performance of an organisation. The research questions and objectives acted as guides in carrying out the study. The study adopted the mixed method and simple random sampling techniques to select 25 research participants from MOJLPA. Questionnaire and interviews were used to collect primary data and descriptive statistics were used for data analysis. The study revealed that e-procurement has been adopted and operationalised as indicated by 95.2% participants. The study found that e-procurement through e-sourcing, e-tendering, e-invoicing and e-auctioning improves communication between the organization and new suppliers; increase coordination between buyers and suppliers; Increases transparency and data security; and improves as well as promote the establishment of an information sharing platform. The study established that, most of the challenges identified by the participants included poor technology, poor access and connectivity to the internet, unskilled workforce, high software cost and poor IT systems, policies and procedures. The study established that, to effectively implement e-procurement, there is need for the improvement of the technological infrastructure through private-public partnership, maintenance of employee competence through knowledge and skills training, promotion and supporting an adequate legal environment and improvement of internet access through private-public partnership.

Abbreviations and Acronyms

OECD	Organisation for European Co-operation and Development
GNP	Gross Net Profit
IT	Information Technology
B2B	Business to Business
B2C	Business to Customer
MJLPA	Ministry of Justice Legal and Parliamentary Affairs
ICT	Information and Communication Technology
TCT	Transaction Cost Theory
ERA	Electronic Reverse Auction
PPA	Public Procurement Authority

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction

E-purchase is a system that uses internet-based information to facilitate the procurement of goods and services. The entire transaction procedure can be completed electronically, eliminating the necessity for face-to-face meetings between the procurement committee and participants. (Komakech, 2018). However, the e-procurement system faces several major problems, particularly low process efficiency, insufficient transparency, and an elevated chance of procurement corruption and fraud. The chapter provided a preliminary information on the background of the study, the problem statement and how the research is of significance to numerous stakeholders among them policy and law makers and the academic as well as the Zimbabwean community at large.

1.2 Background of the study

The history of public procurement traces back to the development of China's silk trade and a Greek settlement in 800B.C (Thai 2001). Coe (1989) argues that the initial procurement order was inscribed on a red clay table found in Syria with order dates from 2400 and 2800B.C. The orders were for 50 vessels of fragment smooth oil in exchange for small weight in grain. Page (1980) reported that the United States of America government procurement in municipalities started before the state and federal governments with no procurement staff.

Public procurement boards were created in the late 1800s and according to Mchopa (2015), of the gross domestic product, public procurement account for up-to 5% in developing countries and up-to 20% public expenditure as estimated by the Organisation for European Co-operation and Development (OECD). According to Chimberengwa, Masuka, Gombe, Tshimanga and Bangure (2015) public procurement spending is between 10% to 30% of gross net profit (GNP) in any given year globally. Musanzikwa (2013) revealed that in the Middle East, central government procurement ranges from 9% to 13% indicating the crucial role that public procurement plays for social and economic development of any country.

Technological advancements, e-commerce and digitalisation has significantly influenced the adoption of new systems throughout the supply chain globally and acquisition functions have been impacted in various ways covering both transitional buying and strategic sourcing activities (Greunen et al., 2015). Organisations across the globe are increasingly adopting e-procurement and are prioritising and implementing (Chimberengwa, Masuka, Gombe, Tshimanga and Bangure 2015) it with countries such as Australia, UK, and USA leading the way (Masheti (2016), as well as emerging economies such as China, India, Mexico, South Korea, Malaysia, and Brazil also implementing e-procurement initiatives. Business have continuously relied on information technology (IT) for the improvement and execution of their operation effectively and efficiently and internet based supply chain network solutions as well as electronic solutions have proved to be advantageous. Traditional business models have been threatened as the working practices have been revolutionised by the introduction e-commerce in the late 1990s (Chan and Lu, 2014). In Europe, Palma and Soares (2016) examined the factors impacting the adoption of electronic procurement in Portugal whole Nagle et al. (2016 explored how business to business (B2B) relationships affect e-procurement systems. The authors revealed that, adversarial types of relationships negatively affect e-procurement while collaboration positively affect e-procurement. Williams and Hardy (2017), revealed that e-procurement adoption in Australia had increasingly become part of strategic management across the private and public and investment in electronic procurement functions and processes increased.

Across Africa, Business to Business (B2B) as well as Business to Customer (B2C) is significantly low despite an increase in internet sales (Kamel, 2014). As stated by Organization for Economic Co-operation and Development (OECD), the rate and extent of adoption of e-procurement is below expectations and progressing slowly across Africa (Ambe 2016). Varma and Khan (2014) emphasized that e-procurement is still in its early stages of acceptance across Africa due to the costly expenses that come with establishing e-procurement infrastructure, which are intensified by the labour market's skill gap. As Information and Communication Technology is key pillar in the achievement of vision 2030 and transform countries into industrialized nations (Chebii, 2016), there is need for the

revolutionisation of the procurement systems and fully adopting e-procurement systems.

Public procurement adjustments in Zimbabwe came about with the introduction of the Procurement Act Chapter 22:23 (Munyede and Mapuva, 2020). The Act brought about a range of improvements, particularly problems to do with transparency issues that were previously missing in Zimbabwe's public sector (Jachi, Makumbe and Mandongwe, 2019). Despite advancements being implemented to address multiple concerns within the public procurement arena, there has been a number of emerging problems that affect service delivery.. The deterioration of ethical systems, obligations and morality has significantly affected public procurement resulting in high profile procurement scandals. According to (Chimberengwa et al., 2015). Chimberengwa et al. (2015), in the research on procurement processes at Gwanda Provincial Hospital, Matabeleland South Province Zimbabwe asserted that Zimbabwean public sector is still to fully embrace e-procurement.

1.3 Purpose of the Study

The study seeks to examine the impact of e-procurement on the performance of an organisation. This will empower the investigator to scrutinise and understand the barriers and complications as well as the implications of the adoption and implementation of digital procurement in the public sector. The aim and purpose of the study is not only to uncover the deterrents and complications confronting e-procurement in the public sector but to understand the procedures, processes and action need for effective and efficient implementation and utilisation of e-procurement.

1.4 Statement of the problem

Despite an arsenal of progressive systems and policies in Zimbabwe that promote digitalisation and e-procurement in particular put very ably in place, e-procurement continue to be inefficiently implemented and executed presenting a plethora of challenges and problems that could have substantial adverse impact on the performance of the public organisations. Among the challenges are insufficient and inadequate Information Technology systems, poor funding, absence of political will, while inadequate training and poor organisational culture down played the efficiency and effectiveness of the e-procurement system. In the

light of the challenges confronting e-procurement the study sought to examine the bearing of e-procurement on public organisations' performance.

1.5 Research Objectives

Primary objective of this research seeks to examine the impact of e-procurement on the performance of an organisation. It was fulfilled through the following sub-objectives.

1. To determine the impact of e-procurement data transmission on the performance of Ministry of Justice Legal and Parliamentary Affairs.
2. To examine the benefits of implementing e-sourcing, e-tendering, e-invoicing and e-auctioning on Ministry of Justice Legal and Parliamentary Affairs' performance.
3. To establish the risks and challenges associated with the implementation of e-sourcing, e-tendering, e-invoicing and e-auctioning on the Ministry of Justice Legal and Parliamentary Affairs' performance.
4. To identify strategies that can promote the positive impact and outcome of the execution of e-procurement and avert the possible risks and challenges.

1.6 Research questions

1. What is the influence of e-procurement data transmission on the performance of the Ministry of Justice Legal and Parliamentary Affairs?
2. What are the benefits of implementing e-sourcing, e-tendering, e-invoicing and e-auctioning on the Ministry of Justice Legal and Parliamentary Affairs' performance?
3. What are the risks and challenges associated with the implementation of e-sourcing, e-tendering, e-invoicing and e-auctioning on the Ministry of Justice Legal and Parliamentary Affairs' performance?
4. What strategies can be adopted to promote the positive impact and outcome of the execution of the e-procurement and avert the possible risks and challenges?

1.7 Significance of the study

Implementing the results of the study may have several valuable benefits including the development of the student's research skills as well as providing avenues for the enhancement and development of policies and systems that support and promote procurement systems digitalisation. The results may also

help in addressing possible challenges and risks associated with e-procurement. The findings of the study would highlight the importance of e-procurement for adoption by the public sector and line ministries. In so doing, the public sector would benefit from effective competitive strategies to enable them keep abreast with the dynamics of digital environment for them to stay relevant and competitive in their operations.

The study would provide the academic arena with profound information valuable to the field of e-procurement studies as well as e-procurement in particular. Information would be the basis for further in-depth research on the digitalisation of the procurement systems.

1.8 Assumptions of the study

The assumptions of the study are a special set of research challenges that might have an impact on the quality and quantity of information and the quality of research results, therefore, the researcher would be vigilant. Below are the assumptions of the study.

The perceptions procurement officers are of paramount importance in exploring the impact and influence of e-procurement on the Ministry of Justice Legal and Parliamentary Affairs' performance. Therefore, the investigator assumes that, the research participants would give their honest opinions and perceptions without fear or outside influence.

Time management is an essential tool for researchers, therefore the researcher anticipates that study respondents will respond within a suitable time period, allowing the researcher to complete the research as planned.

1.9 Delimitation of the study

Geographically, the study was delimited to the Ministry of Justice, legal and Parliamentary Affairs. Theoretically, it focused on the impact of e-procurement guided by the theoretical framework. Methodologically, the study was driven by the mixed research method.

1.10 Limitations of the study

The limitations of the research are:

- Due to fear of victimisation and loss of employment, some participants may decide not to participate in the study. To guarantee research participants of their safety and security, the researcher would assure the participants that the study is purely academic and no harm would be imminent reiterating that

participants possess the freedom to withdraw from the study at any time to answer any question without consequences.

- The researcher would face confidentiality and anonymity challenges because some questions may seem to be extracting personal private information; therefore, participants would withhold some information. The researcher would seek consent through the provision of consent forms and assure participants that collected information would be used only to fulfil academic purposes and no names would be required.

1.11 Definition of terms

E-Procurement

This is the use of information and communication technology to carry out individual or all steps of the procurement process, including sourcing, negotiation, ordering, receipt, and post-procurement review, resulting in considerable cost and time reductions (Muguro 2014).

Performance refers to the measurement of a company's policies and operations in monetary and non-monetary terms. These outcomes are represented in the company's efficiency, effectiveness, quality service dematerialization, and value creation (Kipngeno and Okello, 2015).

E-tendering

Refers to a process where suppliers or contractors are selected using the internet and ICT infrastructure which reduces face to face transaction (Chisire and Kunitai 2015)

E-auction

An online, real-time auction between a buying organization and two or more invited suppliers, where suppliers can submit many bids during the time period of the auction, ensuring that suppliers have some degree of visibility into the actions of their competitors(Avedi 2016)

E-invoicing

Is the provision and creation of invoices through the internet and invoices are electronically generated and are send through the suppliers' portal or document scanning (Brun, 2007).

E-Sourcing

Refers to the searching of suppliers from the internet using the ICT infrastructure (Knudsen, 2003)

1.12 Summary

This chapter provided the preliminary overview against which the research is being carried out. Overall, the e-procurement system confronts several significant challenges, such as low process efficiency, insufficient transparency, and an elevated chance of procurement corruption and fraud. E-procurement continues to be ineffectively and inefficiently implemented and executed presenting a plethora of challenges and problems that could have significant negative impacts on the performance of the public organisations. The study would be of significant value to procurement officers, public sector leaders as well as policy makers in designing strategies to correctly adopt and utilise e-procurement systems which subsequently impact on organisational performance.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter provides an illumination on conceptualisation of e-procurement based on the available literature. The study drew literature from journals, books, newspapers, published documents, government publications and circulars related to e-procurement from the global, regional and local perspective. The aim was to examine how previous studies analysed and conceptualised the concept of e-procurement and its influence on organisational performance as well as challenges and barriers faced by organisations in adoption and implementation of e-procurement. The chapter focuses on the theoretical and conceptual framework as well as knowledge gaps that inspired the study.

2.2 The Theoretical framework

The main purpose of this study was to examine the influence of e-procurement on organizational performance.

2.2.1 Transaction Cost Theory

The study was guided by the Transaction Cost Theory. According to the Transaction Cost Theory, organisations are faced by challenges of opportunism when faced by a situation that requires bargaining when dealing with few suppliers, therefore, having suppliers a greater number of suppliers reduces the challenges and risks. The more suppliers the organisation has, the more it has the ability to negotiate for better procurement deals (Dedrick et al. 2008). According to Derick et al. (2008), Optimal balance on coordination costs and opportunism risk is influenced by the number of suppliers the organisation has. The availability of suppliers has been curtailed by information communication technology this presents the potential to reduce the cost of coordinating as most of the procurement processes and procedures are standardized and automated. Based on the Transaction Cost Theory, information technology benefit organisations by reducing the number of suppliers while allowing the organisation to focus on low cost suppliers and consolidate the purchases to acquire volume discounts (Dedrick et al., 2008)

The Transaction Cost Theory posits that, information communication technologies are key in the reducing the cost coordination in procurement as the cost of searching and obtaining information are reduced (Bakker et al, 2018).

Additionally, information communication technology promotes collaboration by facilitating the sharing of information which reduces supply chain uncertainty and contracting costs (Arrowsmith, 2012). This is so as supply chain uncertainty is caused by the development of new products, uncertain demand, supply and technology uncertainty (Koufteros, 2015). Unforeseen events in the supply chain management process including late deliveries and shortage of materials disrupt the flow and distribution of goods and services from wholesalers as well as retailers. On the other hand, demand uncertainty occurs when unpredictable events occur in the downstream of the supply chain such as short life cycles, volatility or fads and seasonality of products (Johnston, 2015). It is this uncertainty that causes coordination challenges, technological problems as well as communication barriers which adversely affect transaction execution.

Based on the Transaction Cost theory, information sharing seems to have any benefits, while simultaneously increasing transaction risk, leading to unprincipled practices affecting affect organisations' initiatives to share information. This study therefore aim at investigating the impact of e-procurement on performance of an organisation through the Transaction Cost theory perspective.

2.2.2 Conceptual Framework

Independent Variables

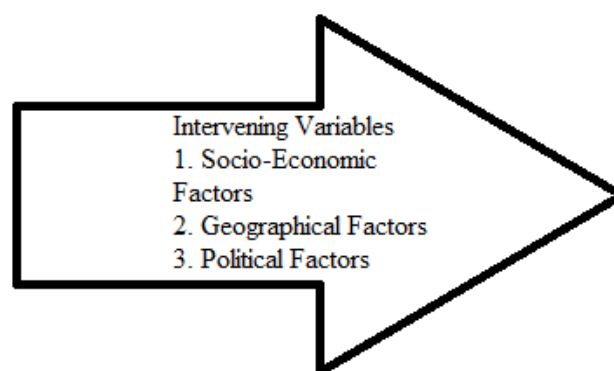
Data Transmission

1. Automation
2. E-Notification
3. Security
4. Real-time

Communication

E-Procurement

1. E-tendering
2. E-sourcing
3. E-invoicing
4. E-auctioning



Dependent Variables

Organisational Performance

1. Organizational efficiency
2. Order Fillfillment Quality Services

In e-procurement, data transmission systems facilitate and increase the capacity and capabilities of electronic proposals automatic validation for suppliers To obtain feedback in a timely manner making the cost of e-procurement effective. This significantly influences organisation efficiency and effectiveness. Therefore, independent variable impact on the ultimate outcome and operation of e-procurement as well as its effects on the organisation performance. The advantages of e-procurement include cost saving, better supplier relations and efficiency are attained when interventions such as geographical limits, economic and social as well as political factors are put in effect.

2.3 The concept of procurement

Procurement is broadly defined as a process or procedures of receiving and purchasing goods and services which starts from formulating the demand to delivering the end receipt to be accepted. (Rahmani et al., 2021). The procedure of procurement involves analysing and brand development, setting product specifications, negotiations and buying of goods or services (Moretto et al., 2017). Bag et al. (2020), defines procurement as a procedure categorised by the selection of suppliers, establishment of settlement terms, strategically evaluating, selecting, contract negotiations and the actual purchase of goods or services. The of procurement is to acquire goods and services important and relevant to the organisation and its operations. According to Lauderer (2019), procurement is a process aimed at finding and agreeing with the terms of goods and services acquisition through a competitive tender or bidding process. In this regard, the procurement process is at the centre of controlling the source, quality, quantity and timing of goods and services to ensure that the best total cost is attained.

In the public sector, procurement is strictly monitored to promote unbiased open competition and eliminate corruption and its challenges to accomplish the best possible outcome (Adjei-Bamfo and Maloreh-Nyamekye, 2019). Procurement envisages the idea and activities of acquiring the right goods and services in the right quantities and qualities delivered at the right time and place (Konys, 2019).

2.3.1 E-Procurement

Electronic Procurement (E-Procurement) denotes the current form of procurement which uses advanced technology and heavily rely on the internet and network systems (Bag et al., 2020), as purchases are made via online systems and digital network platforms. It involves heavy deployment of technology in all stages and

processes of procurement from requirements identification, contract management and payment (Saastamoinen et al., 2018). As the modification of e-procurement started with paper-based procurement, e-mails, internet tools, websites and platforms complimented the paper-based tradition procurement system. The internet and extranet applications are at the centre of the purchasing process including the purchasing of goods and services through the internet for organisational purposes

A well implemented e-procurement system does not only promote online purchasing but provide organisation with connections with suppliers and other organisations as well as the management of their interaction (Saastamoinen et al., 2018). E-procurement heavily relies and use data transfer to promote and facilitate documentation through the use of information communication technology bringing an enormous transformation in the procurement systems (Bag et al., 2020).

2.4 Influence of e-procurement Data Transmission

The process of modern procurement includes e-sourcing, e-tendering, e-payment, e-auctioning and e-maintenance of records. Sourcing is associated with browsing of the internet to identify potential suppliers, their products, terms of sale, how prices can be negotiated and ascertaining the best price for product to be purchased. Tendering focuses on the selection of suppliers of good quality and quantity goods and services and placing orders for goods required through the internet. Payment refers to the preparation, processing, approving invoices and arranging for payment. Record maintenance include the storage of vital and relevant information about the suppliers. Therefore, e-procurement is an integration of the pillars of procurement to create a synergy for efficiency for organisational performance.

Craig, Carter, and Washispack (2018) argued that, security and messaging agents are the two facets are at the centre of the data transmitted over the internet. The authors opined that, messaging and data tools capacitate the internet based exchange of data between the buyer and the supplier in the market. The internal information communication technology characteristics and information communication strategies of the organisation primarily determines the effects of e-procurement on routines and processes of the organisation (Dzuke and Naude 2017). As security is important in any internet transaction, there is need to protect

both the buyer and the supplier's confidential information and ensure that integrated and secure access to information to ensure confidence in the e-procurement system. A study by Cheptora (2018), found that, the benefits of e-procurement include a shorter requisition to fulfilment cycles by 70%-80%, reduced cost of materials by 5% to 10%, reduced inventory costs by 25% to 50%, reduce administrative costs by 73%, and reduced contract buying by half.

2.5 Benefits of implementing e-procurement on organisational performance

The dynamics and transformations in the corporate business environment globally and the continued adoption of technology has resulted in an increased uptake of technology and technology based services both in the public and private sector. The call for companies to provide innovative solutions and improve customer satisfaction has resulted in the design and implementation of technological innovative methods and ideas. Organisation across sectors have been forced to transform and adopt information communication technology in their day-to-day operations and shift from traditional business operations to e-business, e-procurement, and e-supply chain to ensure their survival and sustenance (Farr 2016). Organizations use e-procurement to foster organizational flexibility, strategic flexibility, technological flexibility, and environmental flexibility. (Anguelov 2020) The most common e-procurement practices used in public procurement are: E-Tendering, E-Request for Quotations, E-Auctions, E-Catalogues, and E-Invoicing (Loader and Norton 2015). According to Trammell, Abutabenjeh, and Dimand (2020), tools such as E-Notice, E Auction, E-Catalogue, E-Dossier, E-Submission and E-Signatures are part and parcel of e procurement.

E-procurement benefits can be grouped into strategic benefits and operational benefits encompassing buying price reduction, transactional costs, shortening of the procurement process and information exchange and control. Hawking and Stein (2014) argued that, e-procurement enhances the value chain as the use of e-equipment and systems impacts on quality and output levels. The operational impacts of e-procurement are higher productivity, cost reduction and quality improvement (Mukhopadhyay, 2017). Through, electronic commerce, the communication and transaction aspects of e-procurement are enhanced (Oslomebekor et al., 2012).

According to Nair (2013), information sharing and performance are enhanced by information communication technology while supply chain risks are reduced as systems and processes are based on implementation of tasks and activities provides information for effective decision making. According to Craig, Carter and Washispack (2018), developing and developed countries have adopted information communication technology to ensure that service delivery is enhanced and access to information by the people is increased which is important for the participation in social, economic and political systems and processes.

According to Patrucco, Agasisti, and Glas (2021), the categories of the benefits of e-procurement are cost, strategic, internal and supplier relationship. The authors stated that, the cost benefits of e-procurement refers to the events where costs are reduced, while the strategic benefits refer to involving management and administrative processes such as efficient and informed decision making. Internal benefits focus on the processes and activities in the organisation such as productivity while supplier benefits include improved relations and relationships with suppliers (Patrucco, Agasisti, and Glas 2021). Rokkan and Haugland (2022), argued that, cost benefits incorporate operational services and activities including ordering, invoicing and expediting as paper work is eliminated. Additionally, the automation of the procurement systems and processes reduces data errors as well as inaccuracies found in the manual systems and processes (Patrucco, Agasisti, and Glas 2021).

E-procurement reduces the cost of procurement by reducing the procurement cycles which subsequently reduces stocking requirements and inventory levels (Schepper, Steven, and Dooms 2015) as well as facilitating the opportunity for negotiating unit cost reduction (Brunjes and Anguelov 2021). Additionally, e-procurement can facilitate and create a platform where a large number of suppliers can be reached in a short space of time reducing sourcing costs. E-procurement can also provide a market advantage through access to market intelligence and information and the increased visibility and availability of customer demand (Mai and Casady 2023). Further, e-procurement can increase administrative efficiency and informed decision making (Brewer, Wallin, and Ashenbaum 2014) impacting on planning and control (Petersen et al., 2019).

The procurement cycle times is reduced by the automation of the e-procurement systems and processes which shorten administrative lead times (Rokkan and

Haugland 2022), impacting on flexibility and responsiveness. Further, e-procurement has been proven to lessen time spent on purchasing and operative tasks increasing time for strategic issues and operations (Joaquin and Greitens 2012) enhancing resource utilisation. Through e-procurement, buyer-supplier relations are enhanced through constant exchange of information (Prier, Prysmakova, and McCue 2018) enhancing transparency and inter-organisational collaboration (Mai and Casady 2023) while providing opportunities for new relationships between buyers and suppliers (Schoute, Budding, and Gradus 2018).

2.5.1 E-Tendering

E-tendering is an e-procurement strategy designed to select a competent supplier by making use of internet-based ICT infrastructures or online transactions using the internet. It is expected to reduce both face-to-face transactions and bribery (Stek and Schiele 2021). E-tendering is viewed as a feasible method for selecting a suitable contractor in a fair, efficient, and productive manner (Katri and Van Raaij 2015). Prier, Prysmakova, and McCue (2018) theorised that e-tendering reduces specification costs, supplier selection costs and contracting costs while e-auctioning reduces operational and strategic costs as organisations are allowed to obtain lower prices using the e-market mechanism. Prier, Prysmakova, and McCue (2018) expect that e-tendering will have an impact on purchasing cost only indirectly, as firms are able to consider more alternatives over time. The benefit of expanding the supplier base also applies to e-auctions.

Through the execution of e-procurement, e-tendering increases transparency, accountability and efficiency, its implementation however is characterised by various challenges and constrains including poor ICT expertise, poor human resources, poor internet connectivity as well as lack of contractor unpreparedness (Brewer, Wallin, and Ashenbaum 2014). Furthermore, the human and technology factors, the two most critical success factors in e tendering are expensive to acquire. Human factor is influenced by a host of variables including human behaviour and expertise, support management, business case, user uptake and training, project management, and supplier adoption aspects. Technology category, which is dependent on activities and deployment technologies, is related to reliability, availability, efficiency, and interoperability aspects (Rokkan and Haugland 2022). Additionally, understanding of legal rules and principles becomes another important factor necessary to make security compliance for e-

tendering and to minimize fraud and collusion inside and outside of the process (Brewer, Wallin, and Ashenbaum 2014).

2.5.2 E-Sourcing

In their study, Patrucco, Luzzini, and Ronchi (2016), found that strategic sourcing significantly affect various aspects of organisation's performance and operation. Using the theory of dynamic capability, they concluded that, e-procurement increases organisational competitive advantage as purchases are conducted with minimised costs and increased transparency. However, Mugume and Ntayi (2014) argued though e-procurement has attracted significant research confusion around the conceptualisation and understanding to strategic sourcing still exists.

2.5.3 E-Invoicing

E-invoicing possesses several advantages, including significant cost savings, simplified processes, shortened payment times, enhanced data security, and countless environmental benefits. This is proven by enterprises and public authorities that currently use it (Lian et al., 2014). They seek to explain why private companies do not do asset transformation solely highlighting the transaction expenses involved. According to transaction cost economics, the cost of infrastructure decreases per transaction as the amount of transactions increases. (Chang et al., 2013). Security is one of the most important concerns in connection with ICT, such as internet retailing and financial transactions (Patrucco, Luzzini, and Ronchi 2016). It reflects a perception of the reliability of the payment methods used and the mechanisms of data transmission and storage (Prier, Prysmakova, and McCue 2018). It worth to note that, technological advancements to strengthen web-based transactions' security is increasing especially invoicing and digital signature security (Schepper, Steven, and Dooms 2015). However, the internet relationships between buyers and suppliers are still a cause of concern as internet security is a major barrier to the development of e-invoicing (Farr 2016). The requirement and standard that e-invoicing should meet and satisfy strict security requirement has significantly impacted the practice and operationalization of e-invoicing by firms (Anguelov 2020). The standards and requirements emanate from the organisations' relationships with other organisations and agents including confidentiality and authentication while the organisation's technological culture including its security policy also influence e-invoicing.

2.5.4 Effect of E-auction

E-auction is concerned with the interaction and negotiation between buyers and suppliers as they seek to draw the conclusion of the bidding process (Dagg, 2015). Within e-procurement, electronic reverse auction (ERA), is where buyers request suppliers to submit e-bids and directly compete with each other online and in real time (Anguelov 2020). In this essence, transactions and operations previously conducted physically using the face-to-face negotiations are conducted online (Farr 2016). According to Brunjes and Anguelov (2021) the impact of e-auctioning include increased transparency, increased competition, reduced costs of contracting and better economic outcomes. The provision of information to particular or favourable firms is limited as all information is available to all bidders through an open and equal system. Also, bidders are allowed to alter their tender information within a limited time period increasing information transparency and availability as well as procedures (Katri and Van Raaij 2015). Anguelov (2020) confirms positive effects associated with the usage of ICT in public procurement and claims that e-procurement provides more information while lowering costs. As a result, e-procurement should be viewed as a critical tool for reducing corruption while boosting openness and efficiency in the use of public funds. Well-designed and implemented systems can avoid unnecessary face-to-face contracts and reduce potential for the incorrect use of discretion. According to a study by Masudin et al. (2021) e-procurement affected top management support in decision making, the quality of information, the execution of procurement functions and activities as well as company performance. The study revealed that e-procurement positively and significantly affected organisation performance. Another study by Waithaka and Kimani (2021) revealed that, e-procurement increases organisations' supply chain efficiency and effectiveness resulting in the attainment of quality goods as well as competitive advantage.

A study by Pattanayak and Punyatoya (2020) on the effects of e-procurement on the supply chain found that e-procurement significantly and positively affect supply chain outcomes. The authors revealed that implementation of supply chain integration is beneficial to e-procurement and supply chain activities..

2.6 E-procurement challenges and Organizations Performance

Across the globe, governments are increasingly adopting e-procurement transforming from traditional paper-based procurement systems and operations though knowledge shortage and scarcity continue to affect the fulfilment of e-procurement in the public sector especially in developing countries (Bialas et al., 2016). To benefit from e-procurement adoption, procurement staff must be skilled enough to use the applications of software that offers the organization management skills to manage their activities, such as distribution channel and value addition in a company. (Madzimure et al., 2020). This technology depends on database servers, which are easily accessible on real-time platforms. ERP systems accurately provide procurement management with the possibility to provide solid, consistent, and timely information required for the achievement of corporate objectives. According to Zhao et al., (2015), the implementation of e-procurement has been affected by the lack of competent human resources who have adequate knowledge in the enforcement of e-procurement quality standards, determination of e-procurement specifications, defining e-procurement requirements and monitor e-procurement processes.

Pattanayak and Punyatoya, (2020) argued that the availability of skilled and knowledgeable employees influence adoption and acceptance of a new technology. In their claim, employees with skills and knowledge affect and necessitates the implementation of e-procurement while lack of such personnel result in delayed adoption and implementation of e-procurement. According to the authors, there is a direct and positive correlation between human resources and technology acceptance which impact the organisation's capacity to explore new technology. Chegugu and Yusuf (2017) found that, in Tanzania, e-procurement was directly influenced by the information communication infrastructure, existing legislative frameworks and human resources capacities. Therefore, e-procurement adoption and implementation required competent employees as well as the alignment of legislations (Kioko and Mwangangi 2017).

A study by Omai (2013) revealed that, employees were the most important aspect in the adoption and implementation of new technology while Ombat (2015), stated that, human resources were c=key and critical for companies to effectively perform in the supply chain market resulting in increased investment in both human resources and technological infrastructure. Training and education of

procurement staff is of paramount importance to enable them to effectively and efficiently use e-procurement tools for the productivity and success of the organisation (Chegugu and Yusuf 2017) as the benefits of e-procurement can only be realised from understanding its operational functionalities (Bialas et al., 2016) placing high precedence and importance on employee training. This means that training should be given a high priority, alongside the need for public sector agencies to identify the skills required by all those engaged in procurement (Kioko and Mwangangi 2017).

Legal framework is the foundation for the execution and operation of business transaction in both the public and private sector as it defines the legal obligations and responsibilities of transacting partners towards the fulfilment of each other's goals. According to Madzimure et al., (2020) the legal systems that govern B2B commerce especially e-procurement are still a work in progress as technology continues to improve. The authors voiced concern over the legality of the role of electronic signatures, e-mail contracts and application of copyright laws to electronically copied documents which still remain unresolved. In Zimbabwe, the Public Procurement Authority acknowledges that the existing PPA 2005 and PPDR 2006 legal framework insufficiently covered aspects of e-procurement transaction (Policy framework for Public Procurement 2009).

A study by Pattanayak and Punyatoya, (2020) established that systems integration was critical for the success of e-procurement adoption and implementation linking customer information with suppliers. Waithaka and Kimani (2021) stated that, the slow uptake and adoption of e-procurement was influenced by factors including software integration, low investment in hardware, software, as well as personnel training. The authors revealed that, technological infrastructure plays an important function in adoption and implementation of e-procurement.

Waniani et al., (2016) established that, security and confidentiality of data were central and significant barriers to the adoption and implementation of e-procurement. Barasa et al., (2017) opined that, transaction risks, incomplete and misleading information, security risks including failure to protect transaction related data as well as privacy risks acted as deterrents to the adoption and implementation of e-procurement. Agreeably Nyile and Shale (2016) found that lack of adequate security measures to protect data acted as discouraging factors to the adoption and implementation of e-procurement as organizations desire to

keep their information secret for competition and competitive reasons. According to Mwangangi (2017), the public procurement legal framework in Ghana legalised confidentiality of all procurement processes as the adoption and use of web-based technology increased data security challenges such as hacking and other related cyber-crimes. According to Rutto (2016) reverse online auctions significantly affected supplier trust resulting their reluctance to continue to participate in the future. Waigwa and Njeru (2016) further noted that, online auctions are associated with contract default, product misrepresentation, non-enforceable warranties, delivery delays and payment problems.

According to Waithaka and Kimani (2021), the challenges and barriers to the adoption and implementation of e-procurement can be categorised into five groups namely: internal organization challenges, technological challenges, supplier relationship challenges, cost challenges and external challenges.

2.6.1 Technological challenges

According to Mwangangi (2017) technology immaturity is a major and commonly obstacle to the adoption and employment of e-procurement while lack of technical knowledge and expertise and skilled personnel inhibited e-procurement adoption (Waniani et al., 2016). Nyile and Shale (2016) noted that, security, interoperability, reliability and integration with other systems as well as the inadequate and insufficient technological (Waithaka and Kimani 2021) have crippled and stalled the adoption and implementation of e-procurement. Rutto (2016) reiterated that, the integration between organisations as well as system-to-system integration presented as major impediments to the adoption and implementation of e-procurement as well as poor systems and standards of data exchange (Mwangangi 2017). These challenges heighten security concerns particularly the authentication of identity (Dzuke and Naude 2017).

2.6.2 Internal Organization Challenges

According to Nyile and Shale (2016), lack of will and management commitment has significantly affected the adoption and implementation of e-procurement, with the absence of top management support leading to poor understanding and conceptualisation of e-procurement initiatives as well as the performance of employees as the performance of the organisation.

Mwangangi (2017) noted that, failure to improve traditional systems and the integration of the old systems and new systems resulted in the failure of e-

procurement systems. Also the availability of resources affected the success of the implementation of e-procurement (Dzuke and Naude 2017) while changes in organisational culture especially technological culture have a significant bearing on the adoption and implementation of procurement resulting in various degrees of resistance (Dzuke and Naude 2017).

2.6.3 Supplier relationship Challenges

E-procurement has an impact on the quality of the relationship that ensue between buyers and suppliers affecting decision making and the corresponding trust between the parties. E-procurement has the ability to improve and damage long-time partnerships between buyers and suppliers (Barasa et al., 2017). Nyile and Shale (2016), found that, there is a positive correlation between buyer-supplier relationships and successful implementation of e-procurement as bad relationships may negatively affect the implementation of e-procurement.

2.6.4 Cost and external focus Challenges

Major barriers to e-procurement include the cost of installation and lack of capital (Mwangangi 2017).

It is essential that the benefits compensate for the costs associated with e-procurement. Some of the external factors to consider before introducing e-procurement systems include regulatory and legal constraints. If trade is international, there are challenges such as language, culture, and compliance obstacles that may restrict some firms from achieving e-procurement benefits(Waniani et al., 2016).

According to Truong (2019) distrust and lack of confidence have affected the implementation of e-procurement systems impeding Collaboration and information transition are essential in the product development and purchasing processes.

2.7 Knowledge Gaps

As technology continues to evolve, e-procurement also continues to evolve. Despite e-procurement being publicised as a innovative and ground breaking tool in supply chain management with varying advantages to organisations and suppliers, its adoption and implementation is very slow. The complexity of the e-procurement adoption and implementation process, inadequate legal frameworks, poor technology, resistance to change, poor IT infrastructure and the lack of clear adoption and implementation strategies have been noted as impediments to e-

procurement adoption. Though Zimbabwe's public sector applications and adoption of e-procurement are unknown, its challenges and impact may be extrapolated from other African countries though variations exist. Effects of adoption and utilisation of e-procurement process therefore warrants further research. Therefore study sought to examine the impact of e-procurement on organisational performance with a specific focus on the public sector.

2.8 Chapter Summary

This chapter explored published information in relation to the impact of e-procurement on organisation fulfilment. The Transaction Cost Theory was adopted as the theoretical framework of the study while the conceptual framework was also illustrated. Procurement and E-procurement as a concept was explored. After reviewing the concepts the benefits of e-procurement and its implication on organisation performance were explored. The e-procurement challenges were also reviewed. The thematic areas were linked to research questions and objectives. The next chapter focuses on the research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a detailed explanation of the methodology used to solicit for answers to the research question. The first part provides a detailed description of the chosen research strategy, as well as the rationale for using a mixed method approach and descriptive research design. The chapter also focuses on data collection techniques and instruments while providing justification for the use of a questionnaire. The chapter also discusses the research population, sampling techniques, sampling methods, data collection procedures and data analysis.

3.2 Research Philosophy

This research is an attempt to the influence of e-procurement on the performance of an organisation. To gain this understanding, the pragmatic paradigm which integrates both the qualitative (interpretive) and quantitative (positivist) research methods was adopted. As the research utilised the pragmatic approach, the mixed research method was utilised.

Research paradigm is an underlying assumptions and scholarly structure which provides the basis for research and development. A pragmatic paradigm analysis method provides understandings into the question with no philosophical devotion to any paradigm (Kuhn's 2010). The study utilized pragmatic paradigm which incorporating both the positivism and interpretivism with the intention of understanding the study based on the notion that knowledge and reality about the influence of e-procurement on organisation performance already existing and can be observed and measured (positivism). The study also adopted the interpretivist approach to understand the reality about the impact of e-procurement on organisation performance that could not be observed by could be constructed based on individual experiences.

3.2.1 Positivism and interpretivism

The research utilised the positivism and interpretivism perspectives as the philosophical positions of the study. Positivist research paradigm assumes that reality which can be measured and observed is objective and and already exists and the researcher seeks to expose it. The researcher remained neutral in the quest to uncover existing objective reality e.

However, the need to capture subjective reality about e-procurement's influence on the performance of an organisation based on individual experiences led to the adoption of the interpretivist approach. The interpretivist perspective assumes that reality is not singular and can be constructed, therefore reality on e-procurement's influence on the performance of an organisation can be constructed based on performances, experiences and perceptions. It assumes that, there are multiple realities or interpretations of e-procurement and its impact in organisation performance. According to the principles of the interpretive paradigm, knowledge is not found but researcher construct and truth is relative depending on individual narratives and perspectives and human beings are central to the creation of reality. Based on this principle, reality about e-procurement's influence on the performance of an organisation is subjective and is created based on the experiences of e-procurement officers as well as the management of the organisation.

3.2.2 Research Approach

The research utilized the mixed method approach which gave an extensive interpretation regarding the theoretical and practical aspects the e-procurement and its impact on organisation performance. The use of qualitative analysis helped in the consolidation of individual participant storylines, and data connections were recognised.

The basis for the adoption of the mixed method was that the need to understand e-procurement's influence on the performance of an organisation from both philosophical world views. The integration of quantitative and qualitative research provided a clear understanding of e-procurement's influence on the performance of an organisation which a single method could not provide alone. Mixed research can be concurrent (that is mixing them at the same time) or sequential (that is one after the other). Concurrent mixed research was adopted with the aim to time and resource, since it was carried out at the same.

The mixed methodology was chosen because of its ability to support the results of the study as the benefits of one methodology may compensate for the weakness of the other. Mixed method was chosen because it describes systematically e-procurement's influence on the performance of an organisation and provides data about operational condition.

3.2.3 Research Design

The study utilised the case study research design with the aim to generate a practical test to support and contest existing knowledge on e-procurement's influence on the performance of an organisation. The researcher sought to systematically and strategically plan, select, rationalise and organise research procedures sequentially while handling collected data based on the research questions to provide a solution to the research problem. The case study was favoured because it allowed for an in-depth investigation on e-procurement's influence on the performance of an organisation providing an understanding and explanations on the interactions and influences between factors. The existing studies knowledge and theoretical knowledge on e-procurement's influence on the performance of an organisation were used to understand the subject matter and issues.

The case study allowed the researcher to provide a good explanation about what happened, where it happened and to whom while placing focus on the results with regard to e-procurement's influence on the performance of an organisation. The case study provided information on how and why things happen allowing the researcher to contextualise realities about e-procurement's influence on the performance of an organisation. The case study was valuable as it allowed to distinguish cases with rich information about e-procurement's influence on the performance of an organisation.

3.3 Research Population

A population is a total quantity of entities and substances in a group with the same features meeting a certain description (Mugenda 2003). According to Parahoo (2009) a population is the total sum of components from which data can be collected. The population of the study consisted of management and staff in the Ministry of Justice, Legal and Parliamentary Affairs and the study's target population were management and staff.

3.3.1 Sample and Sampling technique

Barley (2016) defines a sample as a subset or part of the total population. According to Saunders et al., (2019) sampling allows for the rationalisation and predetermination of the selection of research participants from a larger population to collect trustworthy responses that answer the research question. Simple random sampling was used to select research participants giving every member of the

population a chance to be selected. A simple random sampling was adopted because it could be used for small populations. The initial step was to determine the audience from which a sample would be drawn . Simple random sampling was essential in giving each research participant a fair chance to be selected for the study.

3.3.2 Sample Frame

Sampling frame is a comprehensive list of the total population (Saunders and Lewis 2012) from which research participants are selected. According to Cooper and Schindler (2006) every sample must have a non-zero probability of selection. Taking a non-zero probability of selection of 0.101 the sample size was:

$$0.101 = \text{Sample Size}/250$$

The sample size for this study will be 25 research participants.

3.4 Data collection instruments

The study adopted semi-structured questionnaire guide and interview guide, with the aim of acquiring information based on the participants' experiences, feelings and interpretation of e-procurement's influence on the performance of an organisation.

3.4.1 Questionnaire

According to Flick (2012) questionnaires are systematically designed questions aimed at stimulating responses collecting relevant data from research participants. Through questionnaires participants answered the questions at their convenient time while the researcher emphasised same day collection to reduce questionnaire mortality rate.

The researcher used semi-structured questionnaires which are quantitative positivist research method which includes the low level of involvement of the researcher and high number of respondents. The questionnaires were divided into four sections. The first part of the questionnaire had questions soliciting information on the respondent's profile. The second part contained questions focusing on e-procurements benefits. The third segment contained questions regarding the operational challenges of e-procurement on organisation performance. The forth section consisted of the solutions to improve the operation and effectiveness of e-procurement to promote positive organisational performance.

A questionnaire was considered for use in this research because of its advantages as proposed by Suphat (2014) and Saunders et al (2003); it allowed for the collection of large amounts of information from a large population in a short space of time and with relatively low costs, and with limited affect data validity and reliability.

3.4.2 Interviews

Interviews are organized meetings during which an interviewee is asked questions and providing responding (Burglear, 2015). Interviews were used to interview key personnel in the procurement unit. Semi-structured interview were used to avoid wasting time while the questions were agenda specific.

Semi-structured interviews allowed the researcher to explore key issues as well as probing deeper and make insightful follow ups on responses. The researcher was provided with an opportunity to encourage the encourage participants to subjectively express their feelings on e-procurement's impact on organisational performance. Questions were predetermined allowing the researcher to focus on questions that answer the research problem.

The purpose of the interviews was to obtain description, understanding as well as the interpretations of the interviewees on the meaning of e-procurement's impact on organisational performance. The time arranged for the interviews was approximately 25 minutes for every participant.

3.4.3 Pilot study

A pilot study which is a trial session was used to assess whether the research instruments were suitable for the study as well as the fitness of the research methodology, sampling and analysis (Strydom, 2015). The aim was to identify challenges and problems that would affect the feasibility of the study as a result of the use of the mixed method, questionnaires and interviews as well as the use of simple random sampling. Five respondents who were not included in the main study were used for the pilot study.

3.4.4 Validity and reliability

As validity is focused with the effectiveness of the research instrument in collecting relevant data, the researcher consulted with the supervisor to ensure that the questionnaire was aligned to the research objectives. To ensure the validity, the researcher conducted a pilot study while seeking the guidance of the research supervisor in the design and modification of the questionnaires. Reliability of the

research instruments refers to their ability to acquire reliable and correct information when reused thus the researcher conducted a pilot study to increase reliability of data. The researcher sought the perspectives of fellow students to check on the reliability of the questionnaire while constantly consulting with the supervisor. Changes were made following the pre-testing of the research instruments.

3.5 Data collection procedure

The researcher first prepared the research tools that are the questionnaire guide. Approval was sought from the supervisor, the University and relevant authorities. After approval and permission is sought, selected participant were given questionnaires. The questionnaires were distributed in person by the researcher with an emphasis on the same day collection to reduce questionnaire mortality.

The study considered confidentiality, respect for people's rights, integrity, informed consent, and permission while being cognisant of respondent's primary human rights such as the right of freedom of expression.

3.5.1 Data analysis and presentation

Data analysis is the procedure and process of transforming mass raw data into sense making data applying statistical and logical techniques systematically to condense, describe and illustrate, and evaluate data. The researcher stressed the importance of analysing the results of the study and linking them to the research problem and to the research questions and research objectives of the study. Descriptive statistics and the tabulated statistics variables were analysed using correlation analysis. The research findings were also presented in a way understandable to the readers and interpreted and analysed in such a manner to give an understanding to the would-be readers. Thematic analysis was used to analyse qualitative data which was presented through narratives under themes.

3.6 Ethical Considerations

The study adhered to the following ethical principles, as a requirement for social and business research.

3.6.1 Informed consent

Informed consent is essential to allow all individuals to freely participate in any event Kumar, (2014). No individual was forced to participate in the study as voluntary participation was emphasised and participants were allowed to withdraw from the research at any given time without consequences. No

incentives were extended to coerce or encourage participants to participate in this study. Respondents were made aware of the nature of the study as well as how the study would affect them.

3.6.2 Avoidance of harm

Since it is the researcher's responsibility not to cause harm, this study would be safe for human participants. Eliminating sensitive and emotionally charged questions, avoiding revealing of personal information, and causing physical, emotional, or psychological harm to participants were all done with caution. The study maintained a strict avoidance of harm principle in all aspects.

3.6.3 Anonymity, privacy, and confidentiality

In an effort to avoid physical and psychological risks to participants, the study included features of anonymity and confidentiality. In terms of anonymity, respondents' names are protected from publishing or scrutiny through the use of pseudonyms. Confidentiality of information that is related to individuals was considered and not be divulged to anyone. Participants in any field of scientific research should be guaranteed of their right to privacy in order for researchers to arrive at a valid and accurate result (Babbie, 2015).

3.6.4 Handling of data and results

In order to prevent plagiarism, all documents in this work were explicitly acknowledged using proper citation and reference. In addition, data counterfeiting and manipulation were severely prohibited. On the other hand, the researcher ensured that the study's results and findings were properly communicated in order to avoid data breaches that could result in retaliation actions against the study's respondents.

3.6.5 Elimination of bias

The study used objectivity to eliminate bias in the study. This was ensured through among other things, consulting with experts in research instrument drafting, abiding to the research objectives as a benchmark throughout the study, data analysis and interpretation. In addition, bias was eliminated by way of abiding with the cited arguments on the validity and reliability of the findings.

3.7 Summary of the Chapter

This chapter has discussed the mixed method as the research methodology employed in this study. The study adopted the pragmatic paradigm which integrated the qualitative and quantitative research methods. The research the research utilized a case study approach as the research design while simple random sampling was used to collect data from 25 research participant. Primary data was collected using questionnaires and interviews which were pilot tested to identify potential anomalies. Qualitative data was analysed thematically while descriptive statistics was used to analyse quantitative data and the ethical considerations were explained in detail.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4.0 Introduction

This chapter presents a detailed account of the findings and results of the study based on the research questions. Responses from the questionnaires and interviews were analysed and organised into themes based on research objectives. A sample of 25 participants was used. Data analysis was done with the aid of SPSS and Microsoft Excel. The response rate is shown below:

Table 1: Questionnaire response rate

Categorization of respondents	Expected	Actual
Procurement department	10	9
Information technology department	9	7
Employees/ staff	6	5
Total	25	21

Response Rate = Number of Questionnaires Completed/Number of Sample Size
= $21/25 * 100 = 84\%$

4.1 General Information

This section presents respondents' demographic information including the gender of participants, education level, duration worked in the organization, and e-procurement adoption.

4.1.1 Gender of the Respondents

Figure 1 Gender of the respondents

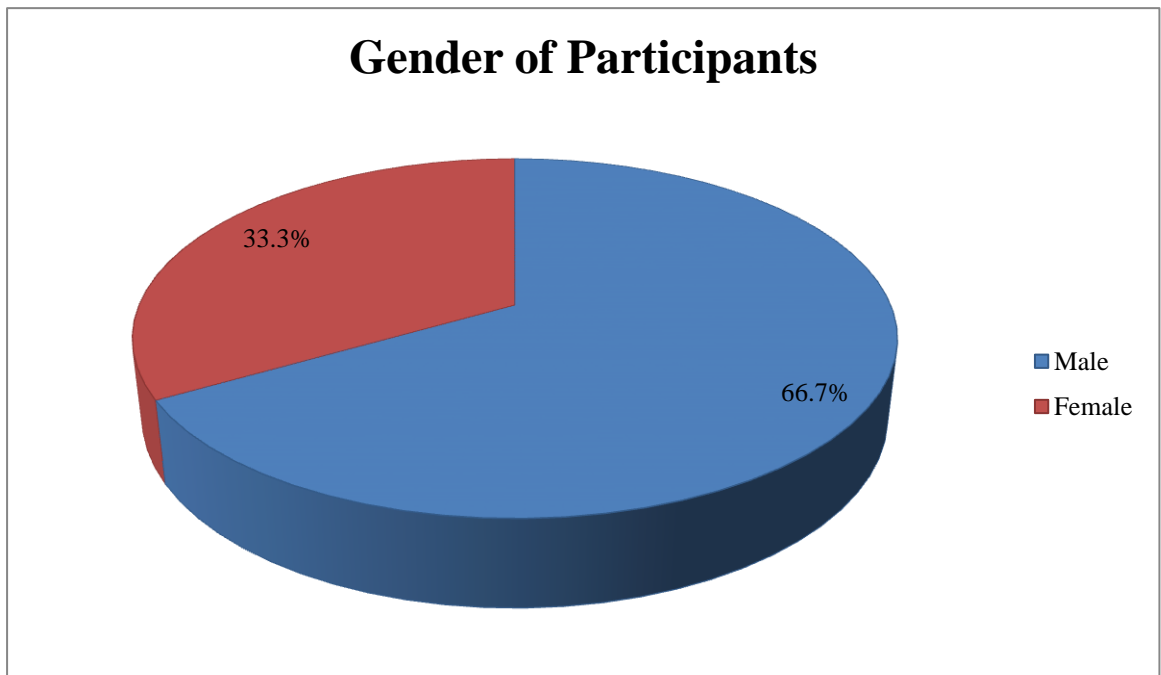


Figure 4.1 shows that, out of 21 participants who participated in the study, (33.3%) the majority were females while 66.7% were males. The findings indicate that most of the participants in the MoLJPA are males. The findings resonate with the narration that there are some professions that are still male dominated despite the gains and milestones of gender equality.

4.1.2 Duration Worked in the Organization

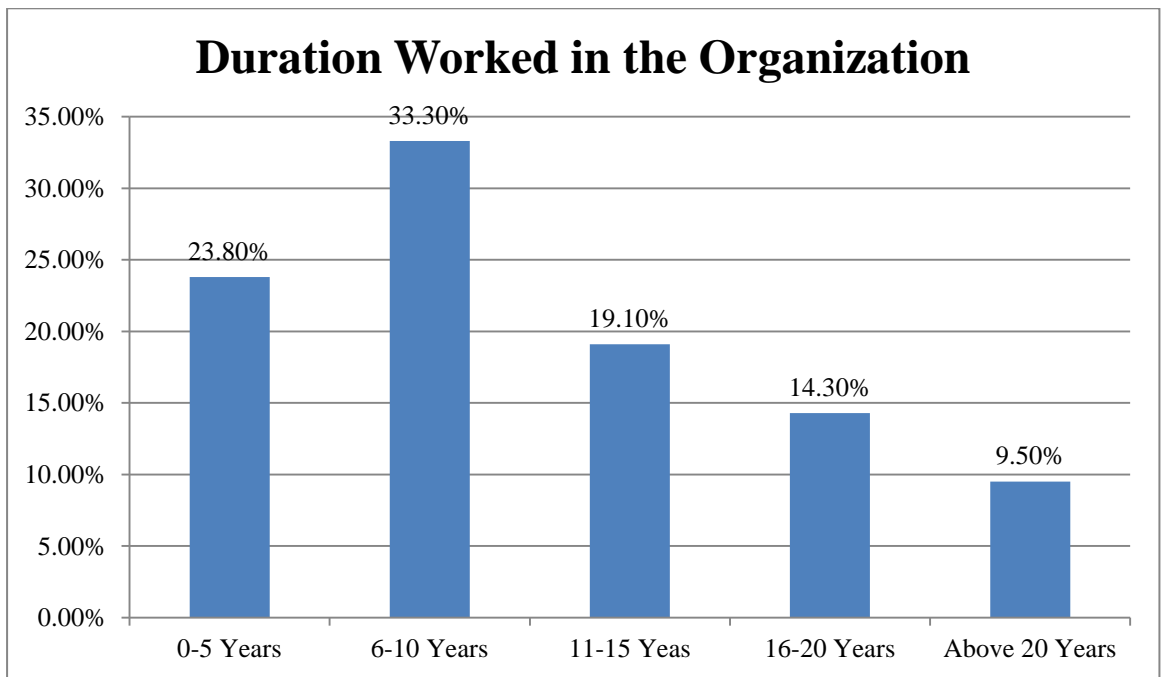


Figure 4.2 Duration of work in the organisation

Figure 2 Duration of work in the organisation

From the data shown in Figure 4.2, majority of the participants (33.3%) have been working in the organization for a period of 6-10 years, 23.8% of the participants have been working in the organisation for less than 5 years, 19.1% of the participants have been working in the organisation for a period of 11-15 years and 14.3% of the participants have been working in the organisation for a period of 16-20 years and 9.5% of the participants have been working in the organisation for a period of above 20 years. The findings imply that majority of the participants have been working in the organization for a period sufficient enough for them to have adequate knowledge and information to answer the research questions.

4.1.3 Distribution of the participants by education level

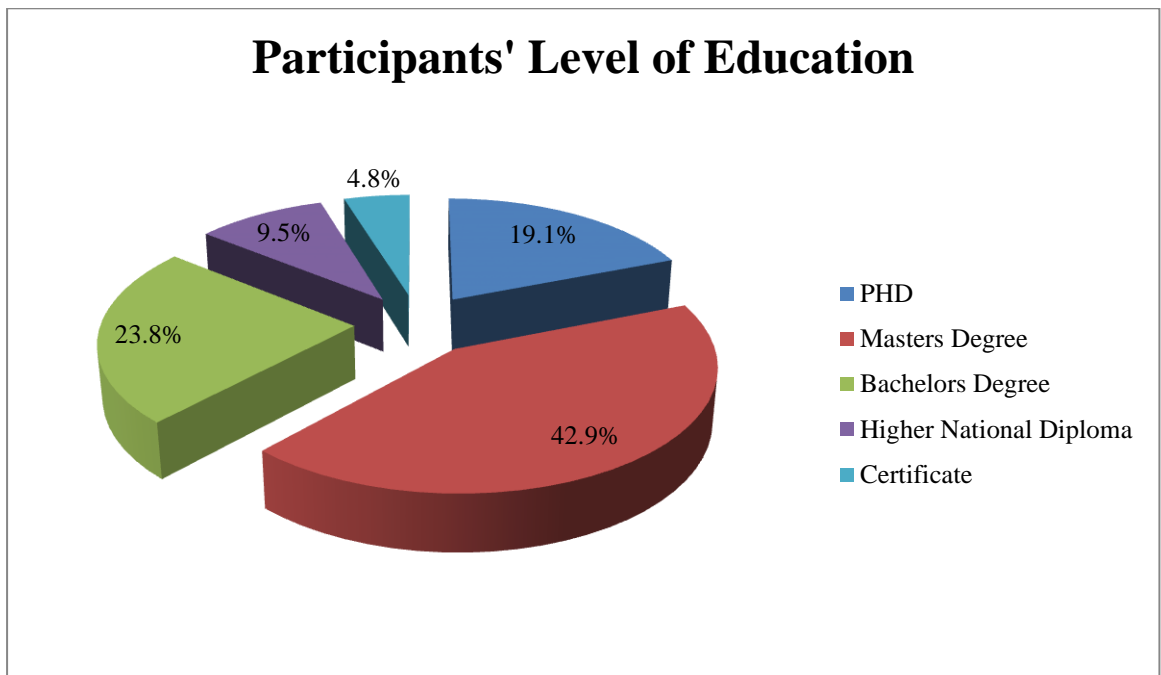


Figure 4.3 Participants education level

Figure 3 Participants education level

Figure 4.3 shows that majority of the participants (42.9%) had master's level of education, 23.8% had bachelors degree, 19.1% had PHD, 9.5% had higher national diploma and 4.8% had certificates. The findings implied that participants had adequate educational background to understand the research study topic and provide relevant answers.

4.1.4 Adoption of E-Procurement

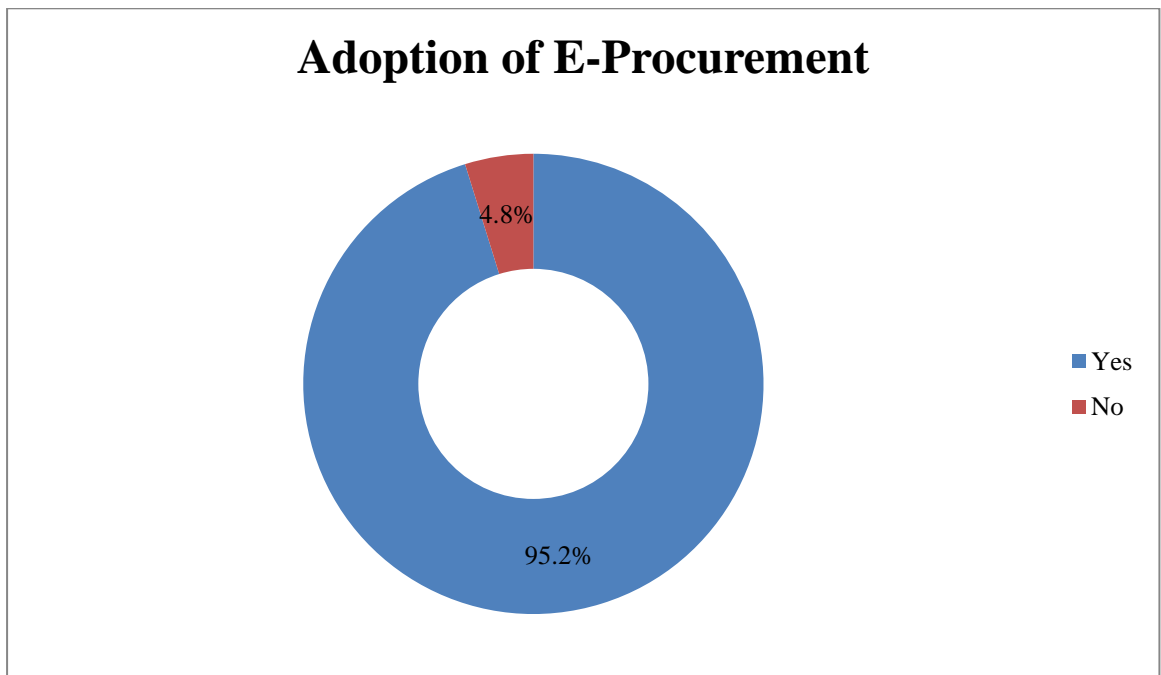


Figure 4.4 Adoption of e-procurement

Figure 4 Adoption of e-procurement

Data from figure 4.4 revealed that the organisation had adopted e-procurement as indicated by 95.2% participants. This shows that, e-procurement was in use and operation in the organisation. The findings of the study imply that the organisation recognises the fact that it has to improve procurement systems to improve service delivery to the population.

4.2 Integration of Data transmission systems into the procurement function

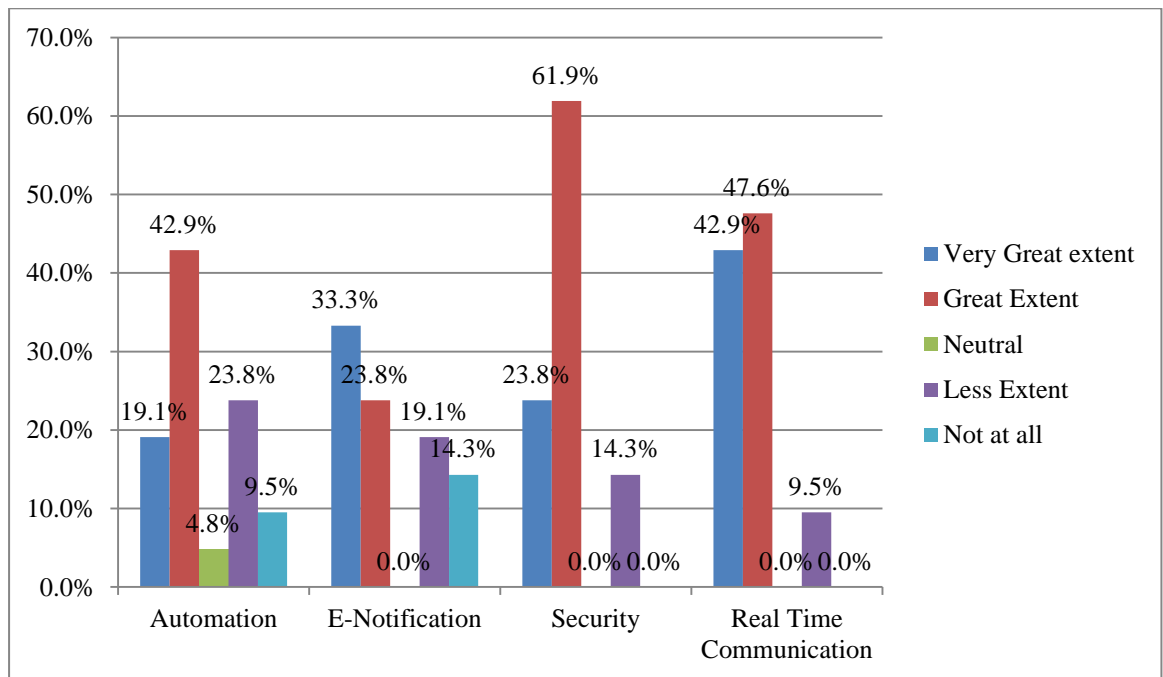


Figure 5 Integration of data transmission into e-procurement function

a. Automation

From the findings as presented in figure 4.5, 19.1% and 42.9% agreed to a greater extent that automation was integrated into the procurement function and 23.8% agreed to a lesser extent. Another 4.8% were indifferent while 9.5% were having a opposing views and did not believe that data transmission was integrated into the procurement function.

b. Security

The study revealed that, security as a data transmission function was integrated into the procurement function as indicated by 23.8% and 61.9% participants who agreed to a greater extent. On the contrary, 14.03% agreed to a less extent that security was integrated into the procurement function.

c. E-Notification

Figure 4.5 shows that, e-notification has been integrated into the procurement function as indicated by 33.3% and 23.8% who agreed to a greater extent. 19.1% of the participants agreed to a less extent while 14.3% of the participants did not agree at all that e-notification have been integrated into the organization.

d. Real time communication

Majority of the participants (90.5%) agreed to a great extent that real time communication was integrated into the procurement function and only 9.5% agreed to a less extent.

4.2.1 Data Transmission and Organizational Performance

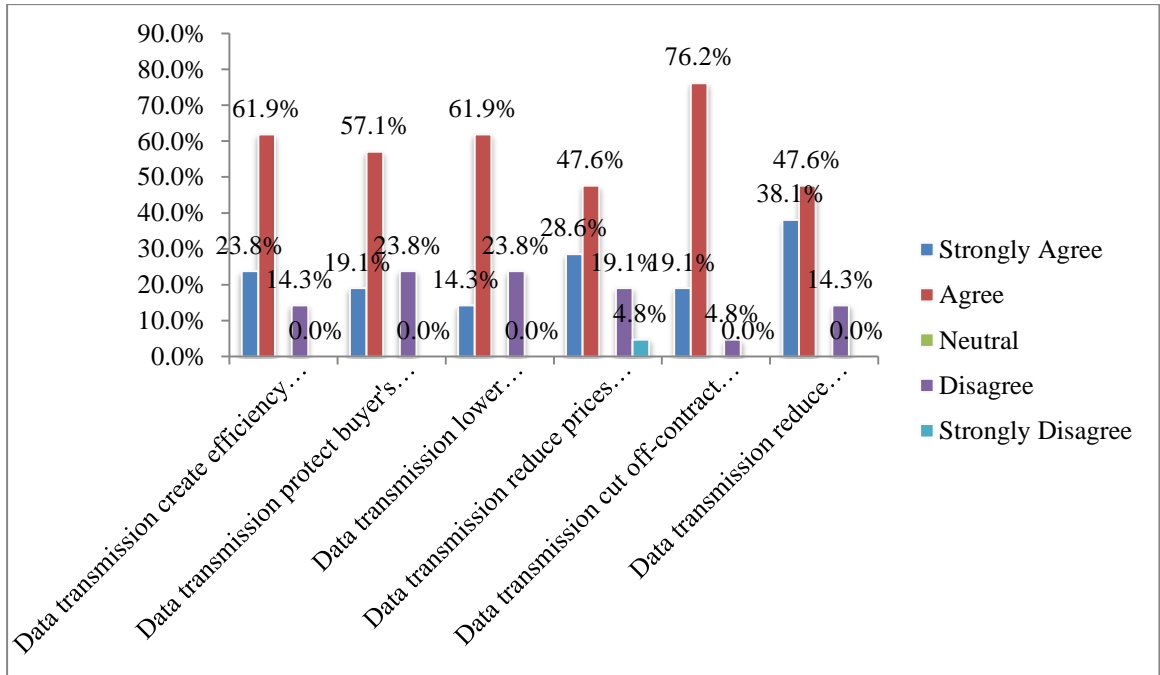


Figure 4.6 Effects of e-procurement on organisational performance

Figure 6 Effects of e-procurement on organisational performance

Figure 4.6 shows the impact and influence of data transmission on organisation performance.

Majority of the participants agreed that data transmission create efficiency and synergy in procurement. This was indicated by 23.8% who strongly agreed and 61.9% who agreed. However, 14.3% of the participants did not agree that data transmission create efficiency and synergy in procurement.

Of the participants, 19.5 strongly agreed and 57.1% agreed that data transmission protects buyer's confidential information. On the contrary, 23.8% did not agree that data transmission protects buyer's confidential information

Figure 4.6 revealed that, the majority of the participants agreed that data transmission lower procurement administrative costs as indicated by 14.03% who strongly agreed and 61.9% who agreed. Only 23.8% did not agree that data transmission lowers procurement administrative costs.

The study revealed that data transmission reduces prices paid for materials as indicated by 76.2% of the participants who agreed while 23.8% of the participants strongly disagreed that data transmission reduce prices paid for materials.

Data from figure 4.6 shows, data transmission cut off-contract buying as 19.1% strongly agreed and 76.2% agreed. Only 4.8% of the participants disagreed that data transmission cut off-contract buying.

The study found that 38.1% strongly agreed and 47.6% agreed that data transmission reduce inventory costs while only 14.3% disagreed that data transmission reduce inventory costs.

From the interviews, one participant alluded:

Data transmission support and promote faster and more intelligent decision making and eliminates intuition based decision making. It promotes data driven decision making that is important in e-procurement execution improving organisation performance. Data transmission vitalises the organisation to remain agile and competitive.

Data from figure 4.6 and the narrations from the interviews imply that data transmission significantly influences cost reduction, efficiency and has significant implications on information confidentiality. The findings of the study agree with a study by Cheptora (2018), who found that, the benefits of e-procurement include a shorter requisition to fulfilment cycles by 70%-80%, reduced cost of materials by 5% to 10%, reduced inventory costs by 25% to 50%, lower administrative costs by 73%, and reduced contract buying by half. On the other hand Dzuke and Naude (2017) pointed to the fact that, security is a critical and vital feature of any internet transaction and e-procurement data transmission is exposed to security threats including suppliers and buyers information confidentiality. The findings imply that, e-procurement is not a perfect system, therefore it requires careful and well planned adoption and implementation to ensure that buyers and suppliers' information is not exposed and compromised. If information security and confidentiality is compromised, it significantly affects trust which negatively affects the performance of the organisation.

4.3 Effects of e-tendering, e-sourcing, e-invoicing and e-auctioning on performance of the organization

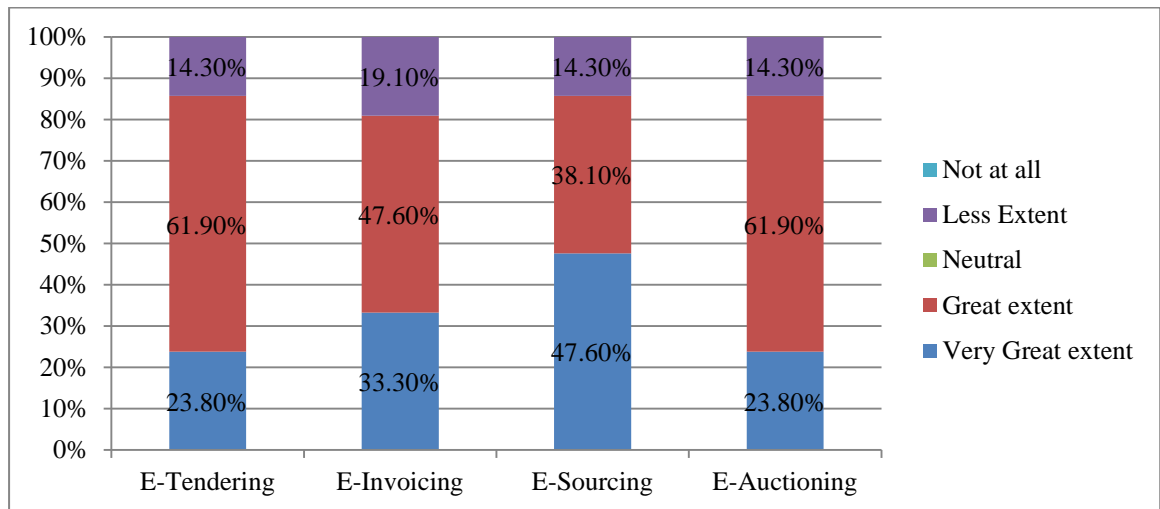


Figure 7 Effects of e-tendering, e-sourcing, e-invoicing and e-auctioning on organisational performance

Figure 4.7 shows e-procurement's effects on organisational performance. The study findings showed that e-tendering affected the performance of an organisation to a greater extent (61.9%) and very great extent (23.8%). Only 14.3% agreed to a less extent that e-tendering affects the performance of an organisation.

Majority of the participants (80.9%) agreed that e-invoicing affect the performance of an organisation to a great extent while only 19.1% agreed to a less extent. E-sourcing was reported to have significant effects on the performance of an organisation by 85.7% who agreed to a great while 14.3% agreed to a less extent. Majority of the participants also agreed to a very great extent (23.8%) and great extent (61.9%) that e-auctioning affect the performance of an organisation while 14.3% agreed to a less extent.

The findings of the study revealed that, the influence and impact of e-procurement on the performance of the organisation varies. The findings are supported by Anguelov (2020) who stated that, organizations adopt and implement e-procurement to improve flexibility administratively, strategically, practically and environmentally. However, the extent to which e-procurement promote administrative, strategic, technical and environmental flexibility varies.

4.3.1 Effects of E-Procurement on organisation performance

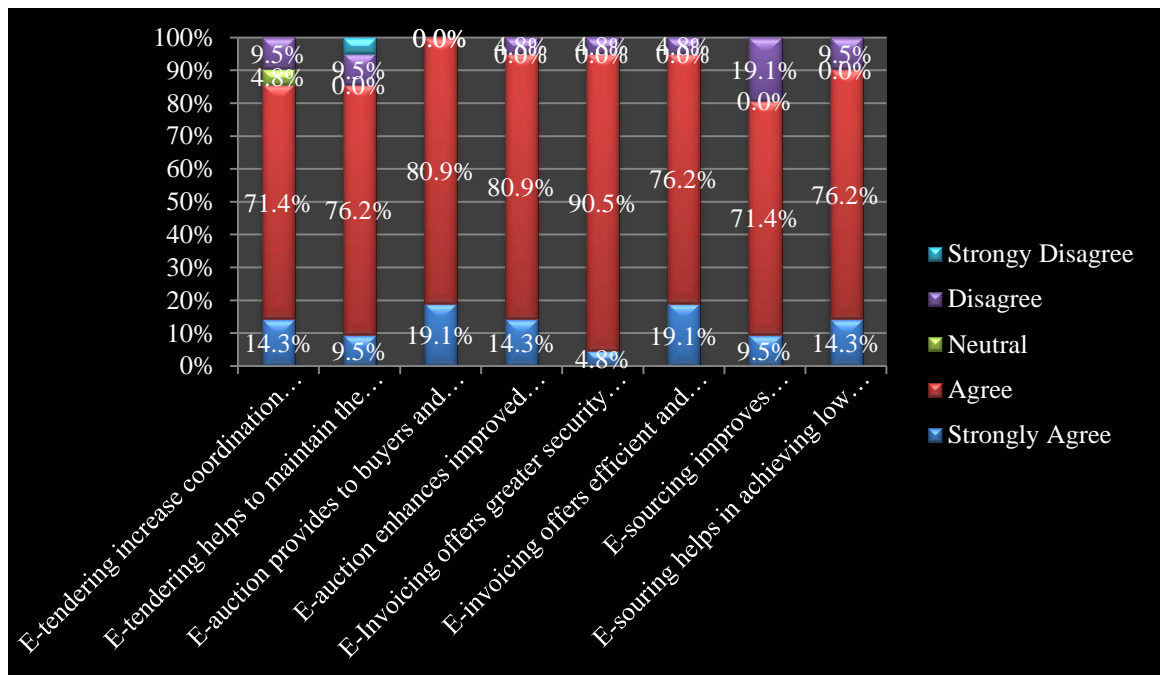


Figure 8 Effects of e-procurement in organisational performance

a) E-Sourcing

The findings of the study in figure 4.8 shows that e-sourcing improves communication between the organization and new suppliers with majority (9.5% strongly agree and 71.4% agree) of the participants agreeing. On the contrary, 19.1% of the participants did not agree that e-sourcing improves communication between the organization and new suppliers. The study also established that e-sourcing helps in achieving low cost in procurement transactions. This was revealed by 14.3% who strongly agree and 76.2% who agreed that e-sourcing helps in achieving low cost in procurement transactions. Only 9.5% did not agree that e-sourcing helps in achieving low cost in procurement transactions. The findings of the study revealed a strong impact of e-sourcing on organisational performance. The findings resonate with Patrucco, Luzzini, and Ronchi (2016) who found that, e-procurement minimises transaction costs and improves organisations' competitive advantage while enhancing transparency. Despite the potential benefits of e-sourcing, Mugume and Ntayi (2014) argued that, there is confusion surrounding the conceptualization of strategic sourcing, which has implications on organisation performance.

b) E-Tendering

The results in figure 4.8 revealed that e-tendering increase coordination between buyers and suppliers. This was indicated by 14.3% of the participants who strongly agreed and 71.45 who agreed that e-tendering increase coordination between buyers and suppliers. Only 9.5% did not that, e-tendering increase coordination between buyers and suppliers while 4.8% remained neutral. The study e-tendering promote organisational confidentiality and integrity as well as the authenticity of bids submitted as indicated by 9.5% participants who strongly agreed and 76.2% who agreed. Only 9.5% did not agree and 4.8% strongly disagree that e-tendering promote organisational confidentiality and integrity as well as the authenticity of bids submitted. The results concur with Prier, Prysmakova, and McCue (2018) theorised that e-tendering reduces specification costs, supplier selection costs and contracting costs while e-auctioning reduces operational and strategic costs as organisations are allowed to obtain lower prices using the e-market mechanism. However, Brewer, Wallin, and Ashenbaum (2014) stated that, the adoption and implementation of e-procurement is confronted by challenges ranging from poor human resource capital, poor and limited internet connectivity, lack of ICT expertise, and the unpreparedness of contractors to adopt digital change. The results indicate a positive impact and implication of e-tendering on organisation performance; however, attention needs to be paid on human resources capacity and structural systems to effectively implement e-procurement.

c) E-Auctioning

The study revealed that e-auction provides to buyers and suppliers an open atmosphere to compare and assess the true value of their services and products as indicated by 19.1% and 81% who strongly agree and agree respectively. The study also revealed majority of the participants (14.3% strongly agree, 80.9% agree) noted that, e-auctioning promotes efficient procurement processes which save time for suppliers and buyers alike. Only 4.8% did not agree that -auction promotes efficient procurement processes which save time for suppliers and buyers equally. The findings show a positive implication of e-auctioning on organisation performance. The results agreed with Brunjes and Anguelov (2021) who established that, e-auctions has better economic outcomes.

d) E-Invoicing

Figure 4.8 shows that, e-invoicing promotes data security as indicated by 95.2% of the participants who agreed while only 4.8% did not agree. The study also found that e-invoicing support and promote the exchange and sharing of information efficiently and effectively with 19.1% participants strongly agreeing and 76.2% participants were agreeing. The findings imply that, e-invoicing has a positive impact on organisation performance. The findings concur with Lian et al., (2014) who established that, e-invoicing significantly reduces e-procurement processing costs, reduces payment time and support data security. However, Anguelov (2020) indicated security concerns with regard to e-invoicing including authentication and non-repudiation of origin and receipt, confidentiality and privacy.

From the interviews, one key informant stated that:

E-procurement has the money saving benefit as it can avert duplicate spending, support bulk buying while saving processing costs including paper work costs. It improves transparency and removes inefficiencies in the procurement system by focusing on cutting costs and improving stock management. As a result, e-procurement reduces the cost of searching and the cost of evaluation giving access to a various potential suppliers.

The findings therefore revealed a positive relationships and influence of e-procurement on organisation performance.

4.4 Benefits of E-Procurement

Table 2 Benefits of e-procurement

Benefits	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Reduces cost of transaction	4.8%	9.5%	0%	71.4%	14.3%
Improve data accessibility	0%	19.1%	0%	76.2%	4.8%
Reduces manpower	0%	9.5%	0%	85.6%	4.8%
Improve the management of information	0%	14.3%	4.8%	80.9%	0%
Increase compliance	4.8%	14.3%	0%	71.4%	9.5%
Improve buyers and suppliers communication	0%	4.8%	0%	85.7%	9.5%
Eased the buying process of the organization	0%	28.6%	0%	61.9%	9.5%

4.4.1 Reduced cost of transaction

Majority of the participants (85.7%) agreed that e-procurement has a reduction effect on transaction costs with 14.3% agreeing strongly and 71.4% agreeing. Of the participants 14.3% did not agree that e-procurement has a reduction effect on transaction costs of which 9.5% disagreed and 4.8% disagreed strongly. The

findings agree with the transactional cost theory which states that, the potential of information technology include coordination cost reduction due to standardisation and automation reducing the cost of working with many suppliers according to Bakker et al, (2018).

4.4.2 Data Accessibility

The majority of the participants (81%) agreed that e-procurement brings benefits to organisations by improving data accessibility with 76.2% agreeing and 4.8% strongly agreeing. Of the participants, 19.1% did not agree that e-procurement improves data accessibility. The findings resonate with Craig, Carter and Washispack (2018) who noted that ICT was adopted into the public sector to improve service delivery, information access and inclusion and participation of all stakeholders.

E-procurement therefore promotes accelerated flow of information between the buyer and suppliers making access information very easy allowing them to make and take faster decisions. However, Waniyani et al., (2016) in their study found that confidentiality and security concerns were the barriers for the adoption and implementation of electronic procurement. Therefore, as e-procurement promote easy access to data and information, data and information security remains a significant concern for the adoption and implementation of e-procurement.

4.4.3 Reduced manpower

Majority of the participants (90.5%) revealed that during business transaction electronic procurement decreases the requirement for manpower as indicated by 85.6% who agreed and 4.8% who strongly agreed. Only 9.5% did not agree with the view that e-procurement has the capacity to reduce the number of workforce during transactions. Though the findings revealed that e-procurement reduces manpower, Brewer, Wallin, and Ashenbaum (2014) argued that, the major challenge confronting the implementation of e-procurement is human resources capacity and knowledge expertise

4.4.4 Management information benefits

The study revealed that, electronic procurement positively influences information management with 80.9% respondents supporting the notion while only 14.3% did not agree. The results agree with Petersen, Potoski, and Brown (2021) who stated that, electronic procurement which has the potential to eliminate paperwork has the potential of reducing administrative costs especially for items with low value.

4.4.5 Compliance benefits

Among the participants, 80.9% agreed that electronic procurement positively influence and improves compliance where 9.5% agreed strongly and 71.4% agreed. On the contrary, 19.1% did not agree that e-procurement improves compliance where 14.3% disagreed and 4.8% disagreed strongly.

4.4.6 Improve buyers and suppliers' communication

The study established that, the adoption and implementation of electronic procurement, enabled suppliers and buyers to effectively and efficiently communicate reducing procurement delay time. Majority of the participants 95.2% agree that e-procurement improves the communication between buyers and suppliers while 4.8% do not agree. The findings concur with Saastamoinen et al., (2018) who stated that, the adoption and implementation of e-procurement properly among other things improves organisational connectivity and organisation to organisation interaction.

4.4.7 E-procurement has eased the buying process of the organization

From the table 2 above 9.5% strongly agree that the adoption and implementation of e-procurement promoted easy buying process by reducing physical associated with paper work based procurement and 61.9% agree. On the contrary 28.6% disagree the adoption and implementation of e-procurement promoted easy buying process by reducing physical associated with paper work based procurement. This implies that e-procurement has a positive significant effect on the buying process of the organization. The findings agree with Mukhopadhyay, (2017) who reinforced that electronic procurement as a tool of e-commerce improves communication and transaction efficiency.

One key informant alluded:

The major benefit of e-procurement is that it has automated the purchasing procedure resulting in access to information anywhere anytime. If effectively utilised it reduces human error and mistakes resulting in fewer missing orders and less order duplication. E-sourcing provides procurement officers with the ability to manage multiple suppliers and seamlessly manage complex procurement projects.

Therefore, the results revealed that, e-procurement impact on the quality of information flow, purchase and attainment of quality goods and cost reduction.

4.5 Challenges associated with the implementation of e-procurement

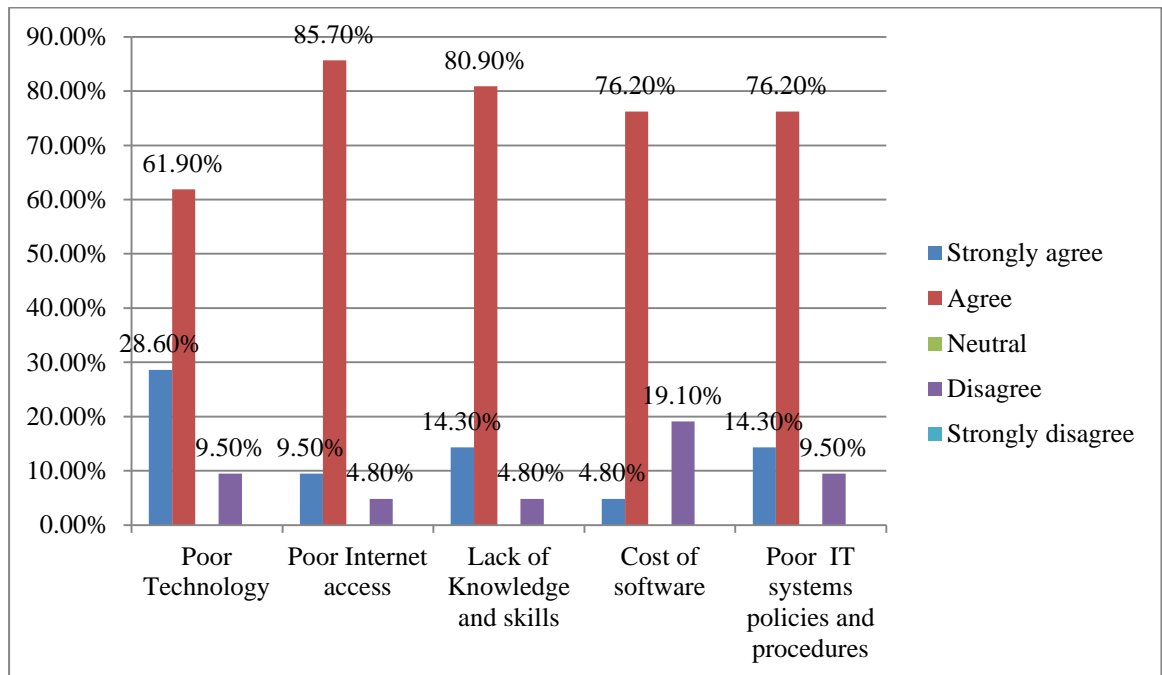


Figure 4.9 Challenges associated with the implementation of e-procurement

Figure 9 Challenges associated with the implementation of e-procurement

The results in figure 4.9 revealed that most of the challenges identified the participants included poor internet access and connectivity, poor technology, unskilled workforce, high software cost and poor IT systems, policies and procedures. The findings resonate with Brewer, Wallin, and Ashenbaum (2014) who found that, human resource capital, connectivity and access to the internet, and poor contractor preparedness were the challenges confronting the adoption and implementation of e-procurement. Further, Pattanayak and Punyatoya, (2020) argued availability of skilled workforce increases the potential of adoption and implementation of e-procurement while lack of skilled manpower reduces the adoption and implementation of electronic procurement in public institutions.

4.5.1 Poor Technology

The study revealed that 90.5% of participants agreed that poor and out-dated technology was a major problem in the implementation and utilisation of e-procurement. From the results in figure 4.9 28.6% of the participants agreed strongly and 61.9% agreed. Only 9.5% did not agree that poor and out-dated

technology was an impediment to the implementation and utilisation of e-procurement.

One key informant stated that:

Primitive an out-dated technology has affected and hindered the effective utilisation of e-procurement to effectively influence ad impact on organisation performance. As modern e-procurement requires modern technology which uses advanced features, the organisation still utilise and is characterised by obsolete and very old technology.

The findings revealed technological challenges confronting e-procurement's adoption and implementation. The findings agree with Waithaka and Kimani (2021) who stated that, inadequate technological infrastructure within the organisation affect the adoption and implementation of e-procurement.

4.5.2 Poor Internet access

Majority of the participants agreed that poor internet access was a major problem in the implementation and utilisation of e-procurement in organisations with (9.5% agreeing strongly and 85.7 agreeing. Only 4.8% did not consider that access and connectivity to internet as a significant challenge impeding the adoption, implementation and utilisation of e-procurement.

The level of internet connectivity has significantly affected the application and operation of e-procurement as the speed of the internet is very slow. Slow internet connection as a result of inefficient routers, internet service providers, and out-dated devices has affected e-procurement's impact on organisation performance. The internet systems in the organisation are characterised by old and poor quality cables and routers which significantly affect internet speed.

The findings of the study resonate with Brewer, Wallin, and Ashenbaum (2014) who established that, inadequate internet connectivity significantly affect the application and operation of e-procurement which subsequently affect organisation performance.

4.5.3 Poor Knowledge and skills

The study findings in figure 4.9 show that, insufficient knowledge and unskilled workforce were impeding challenges to the application and operation of e-procurement. Of the participants 80.9% agreed and 14.3% strongly agreed that lack of knowledge and skills was a major problem in the implementation and utilisation of e-procurement. Only 4.8% % were having a contrary view and did

not believe that insufficient knowledge and unskilled workforce were impeding challenges to the application and operation of e-procurement.

From the interviews one participant noted that:

Knowledge gap in the utilisation and function of e-procurement has affected the utilisation and the realisation of the expected benefits of e-procurement on organisation performance. Knowledge and skills are necessary for employees to effectively perform their job and lack of adequate knowledge with regard to e-procurement has hindered organisation from realising the potential benefits of e-procurement.

The results of the study agree with Zhao et al., (2015) who established that, skilled and knowledgeable workforce was a challenge confronting procurement entities significantly affected e-procurement processes implementation and operation. Further, Pattanayak and Punyatoya, (2020) stated that the level of knowledge and skills possessed by employees has a significant impact on the adoption and operation of new technology.

4.4.4 Cost of acquiring e-procurement software

The responses from figure 4.9 indicate that 81%% of the participants agreed that cost of acquiring the e-procurement software was a major problem in the adoption, application and operation of e-procurement. Amongst them 76.2% agreed and 4.8% strongly agreed. Only 19.1 did not agree that cost of acquiring the e-procurement software was a major problem in the implementation and utilisation of e-procurement.

One key informant narrated:

The cost of acquiring e-procurement software from trusted sources and suppliers has thwarted the potential of adoption and implementation of e-procurement. E-procurement systems that are more secure and effective have a higher cost which may act as a deterrent to their utilisation. This has impacted on the quality of e-procurement software and systems being implemented.

The results of the study resonate with Ombat, (2015) who found that, in Singapore, the adoption, application and operation of e-procurement was affected by high investment costs in hardware and software as well as the high cost of personnel training.

4.4.5 Poor IT systems, policies and procedures

The study established that poor IT systems, policies and procedures were prohibitive and impeding to the implementation and operation of e-procurement. Majority of the participants, 14.3% agreed strongly and 76.2% agreed that poor IT systems, policies and procedures were problems in the implementation and utilisation of e-procurement. Only 9.5% of the participants did not agree that poor IT systems, policies and procedures were problems in the implementation and utilisation of e-procurement.

From the interviews, one participant alluded:

Poor IT systems frustrate procurement officers which negatively impact on the service delivery, disrupt communication and create internal blockages that waste time. Poor IT systems and procedures can result in data breaches, identity theft, and loss of intellectual property and can potentially damage the reputation of the organisation. Poor IT infrastructure has severely impacted e-procurement resulting in financial losses as well as trust between procurement stakeholders.

While the study revealed that internal challenges affected the adoption and operation of e-procurement, Waigwa and Njeru (2016) suggested product misrepresentation, non-enforceable warranties as well as payment problems affected the implementation and operation of e-procurement.

4.5 Strategies to improve the impact of e-procurement on organisation performance

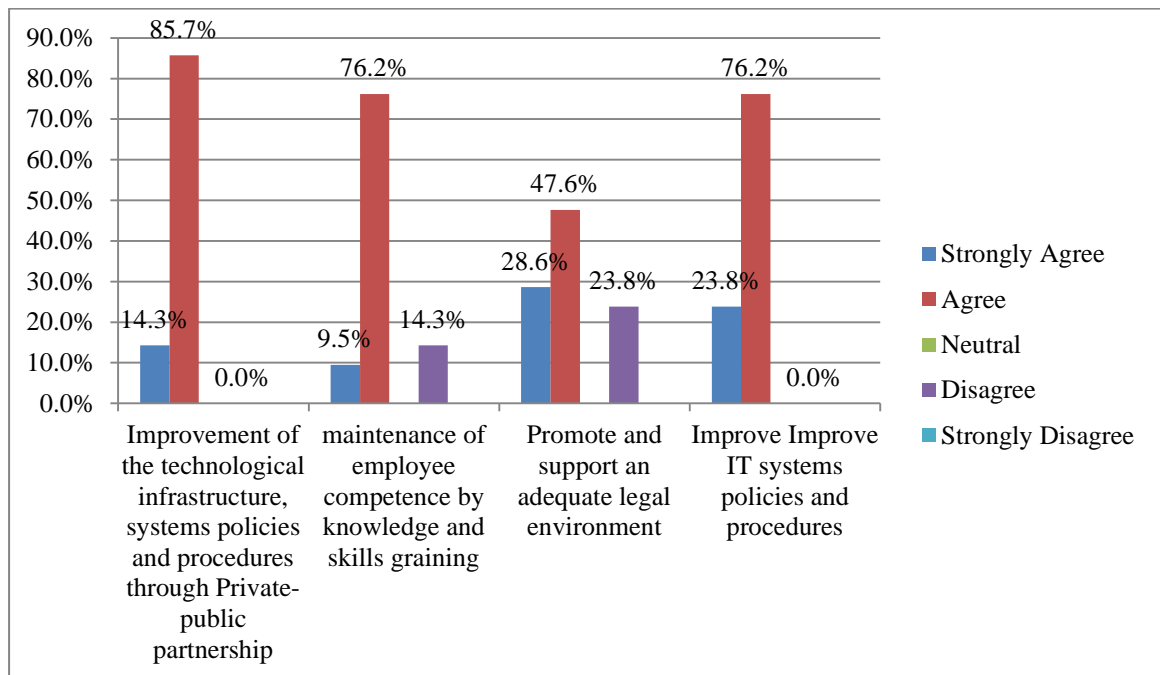


Figure 4.10 Solution to improve the effects of e-procurement on organisation performance

Figure 10 Solution to improve the effects of e-procurement on organisational performance

Results from figure 4.10 show the solution that can be implemented to allow organization to realise the benefits of the implementation of e-procurement. The indicated solutions and suggestions include the improvement of the technological infrastructure through Private-public partnership. All participants (100%) agreed and strongly agreed that the improvement of the technological infrastructure through Private-public partnership leverages the realisation of e-procurement benefits.

From the interviews, one key informant stated that:

Technological infrastructure enables the organisation to build and run e-procurement applications and systems including computers, networks, and workplace and data platform capabilities. Technological infrastructure if properly designed can enhance efficient and effective e-procurement development and functioning impacting on cost saving. Technological infrastructure may also help

the organisation meet its goals and provide high performance storage, security and zero downtime.

The results of the study agree with Waithaka and Kimani (2021) who argued that, for organisations to realise e-procurement benefits, there was need for effective and efficient technological infrastructure

The study established that, improvement of employee knowledge and skills through training increases their competence in the implementation and operation of e-procurement. Of the participants, 85.7% agreed and strongly agreed that, to improve the impact of e-procurement on organisation performance, there was need for the maintenance of employee competence through knowledge and skills training.

One key informant alluded:

The implementation and utilisation of e-procurement requires continuous learning and skills improvement for professional progress. Developing the knowledge and skills in e-procurement is important to ensure that the required expertise is up to date and that procurement officer is familiar with technological developments. Skills training are important as it provide procurement officers with the information they need improving their abilities and capabilities in fulfilling specific requirements of e-procurement.

The findings resonate with Madzimore et al., 2020) who argued that, the benefits of e-procurement can be realised through a competent workforce.

Majority of the participants (76.2%) suggested that promoting and supporting an adequate legal environment was of paramount importance. The findings reveal that, the legal environment would help e-procurement to be compliant to state and international laws and standards allowing the organisation to conduct e-procurement in a fair and safe environment.

From the interviews, one participant noted that:

The legal environment plays an essential role in designing and shaping the procedures of the application and operation of e-procurement including systems of laws and regulations which e-procurement is subject as well as related enforcement agencies and judicial systems.

The study established that, for effective and efficient implementation and utilisation of e-procurement, there is need to improve internet access through private-public partnership. All participants agreed and strongly agreed that access

to internet was critical and of paramount importance in the implementation and utilisation of e-procurement.

One key informant stated that:

Access to internet is central to the functioning of e-procurement as it establishes connectivity. Without internet connectivity, e-procurement remains in the doldrums. Everything about e-procurement requires internet connectivity from e-tendering, e-sourcing, e-invoicing and e-auctioning. Therefore, to ensure that e-procurement brings positive effects on organisation performance, internet connectivity is critical.

The findings of the study revealed that ICT infrastructure, public private partnership, legal environment and competent workforce positively influence successes of the application and operation of e-procurement systems subsequently affect organisation performance.

4.6 Chapter Summary

This study revealed the data transmission was integrated into the procurement system and it has significant effects on organisation performance. The study also established that, e-procurement saves money and time as well as other resources which subsequently affect the performance of an organisation. However, poor technology, unskilled workforce, as well as poor internet connectivity and access were noted as major challenges affecting the implementation of e-procurement and its operation. To improve the adoption, application and operation of e-procurement internet access and connectivity, IT infrastructure and procedure as well as the improvement of the legal environment were important.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter provided a comprehensive summary of the study focusing on the findings of the study and the conclusions drawn from the research findings based on research objectives and literature reviewed on the influence of e-procurement on organisation performance. The chapter also presented recommendations based on the findings of the study.

5.1 Summary of the research

The aim of the study was to examine the influence of the adoption, application and operation of e-procurement on the performance of an organisation. Research questions that guided the study were; what is the influence of e-procurement on organisation performance? The objectives of the study were: To determine the influence of e-procurement data transmission on the performance of the ministry of justice; To examine the benefits of implementing e-tendering, e-sourcing, e-invoicing and e-auctioning on the performance of the ministry of justice; To establish the risks and challenges associated with the implementation of e-tendering, e-sourcing, e-invoicing and e-auctioning on the performance of the ministry of justice; and To identify strategies that can promote the positive impact and outcome of the application and operation of the e-procurement and avert the possible risks and challenges.

The theoretical framework that has underpinned this study on e-procurement's influence on the performance of an organisation was the Transaction Cost Theory. Based on the Transaction Cost theory, the sharing of information has various benefits, while at the same time increasing business operation risk affecting organisations' capacity and willingness to share information.

The study adopted a pragmatic paradigm which integrates both the qualitative (interpretive) and quantitative (positivist) research methods and the mixed method approach. The study endeavoured to understand subjective reality experienced by procurement officers from the interpretive lens while understanding the objective reality about e-procurement and its implications on organisation performance from a positivist perspective. The research adopted a case study research design and utilized questionnaires, and interviews guides as primary research

instruments. Simple random sampling was used to select sample size of 25 respondents.

Summary of the research findings: The study revealed that e-procurement has been adopted and operationalized as indicated by 95.2% participants. Further, the results revealed that data transmission created efficiency and synergy in procurement, lowered procurement administrative costs, reduced prices paid for materials and reduced inventory costs.

The findings of the study revealed that, though e-procurement affected the performance of the organisation to a greater extent, the effects had significant variations. The study found that e-procurement through e-sourcing, tendering, e-invoicing and e-auctioning improves communication between the organization and new suppliers; increase coordination between buyers and suppliers; Increases transparency and data security; and improves as well as promote the establishment of an information sharing platform. This result in reduced costs of procurement transactions and improved procurement stakeholders interaction.

The study found that e-procurement reduces the cost of transaction, improves data accessibility, reduces manpower during business transaction, improves management of information, improves the communication between buyers and suppliers.

The study established that, most of the challenges identified the participants included poor technology, poor access and connectivity to the internet, unskilled workforce, high software cost and poor IT systems, policies and procedures.

The study established that, to effectively implement e-procurement, there is need for the improvement of the technological infrastructure through private-public partnership, maintenance of employee competence through knowledge and skills training, promotion and supporting an adequate legal environment and improvement of internet access through private-public partnership.

5.2 Conclusion

Based on these findings the researcher concludes that:

- To determine the influence of e-procurement data transmission on the performance of the ministry of justice.

There is a affirmative significant association between data transmission and the performance of an organisational as it was revealed that e-procurement data transmission created efficiency and synergy in procurement, lowered procurement

administrative costs, reduced prices paid for materials and reduced inventory costs.

- To examine the benefits of implementing e-tendering, e-sourcing, e-invoicing and e-auctioning on the performance of the ministry of justice.

The study concludes that, e-procurement has many benefits and implications on organisation performance and the benefits range from improved communication between buyers and suppliers, improved procurement process efficiency, greater security of data, reduced cost of transaction, improved data accessibility and improved management of information. This revealed a strong positive relationship between e-procurement and the performance of an organisation.

- To establish the risks and challenges associated with the implementation of e-tendering, e-sourcing, e-invoicing and e-auctioning on the performance of the ministry of justice.

E-procurement application, operation and utilisation is confronted by a plethora of challenges including poor technology, poor access and connection to the internet, unsliced workforce, high software cost and poor IT systems, policies and procedures.

- To identify strategies that can promote the positive impact and outcome of the implementation of the e-procurement and avert the possible risks and challenges.

The improvement of the technological infrastructure through private-public partnership, maintenance of employee competence through knowledge and skills training, promotion and supporting an adequate legal environment are key for effective and efficient implementation of e-procurement.

5.3 Recommendations

Based on the conclusions of the study, the following recommendations were made:

- There is need for the consolidate private-public partnership with the aim to improve the legal environment in which e-procurement operate.
- There is need to improve the abilities of the workforce through training and skills development to improve their competence in the execution of e-procurement systems, processes and procedures.

- Government and private sector organisations should work in partnerships to improve technological infrastructure necessary for the application and operationalization of e-procurement.
- There is need for multi-stakeholder cooperation in designing e-procurement policy systems and structures that promote effective and efficient implementation and operation of e-procurement.

5.3 Areas of further research

- Policy challenges affecting the application and operationalization of e-procurement
- The impact of public-private partnership on the adoption and implementation of e-procurement.

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APPENDIX A: QUESTIONNAIRE



This questionnaire is divided into five sections. Section A will focus on the general information about the respondent. Section B will be used to obtain information on the effect of e-procurement data transmission on performance of the organization. Section C will seek to obtain information on effect of e-tendering, e-sourcing, e-invoicing and e-auctioning on performance of the organization. Section D focuses on benefits of implementing e-tendering, e-sourcing, e-invoicing and e-auctioning on performance of the organization.

Section E focuses on the strategies that can be adopted to promote the positive impact and outcome of the implementation of the e-procurement and avert the possible risks and challenges.

NB: The information obtained will be strictly treated in confidence.

Section A: Demographic Data

1. What is your gender?

Male () Female ()

2. How long have you worked in this organization?

Less than 5 years () between 6 to 10 years () between 11 to 15years ()
between 16 to 20years () Above 20 years ()

3. What is your highest level of education?

PhD () Masters () Bachelors () Higher Diploma () Certificate
() Other, please specify _____

4. Has your Organisation adopted e-procurement?

Yes () No ()

SECTION B: DATA TRANSMISSION

Please indicate the extent to which the following data transmission systems have been integrated into the procurement function of this organization. Use a scale of 1-5, where (1. *Very great extent* 2. *Great extent* 3. *Neutral extent* 4. *Less extent* 5. *Not at all*)

Data Transmission	1	2	3	4	5
Automation					
E – notification					
Security					
Real time communication					

5. To what extent do you agree with each of the following statements regarding the effect of e-procurement data transmission on performance of the organization?
Use the following ranking: SD=strongly disagree; D=disagree; N=neutral; A=agree; SA=strongly agree.

Impact	SD	D	N	A	SA
Data transmission create efficiency and synergy in procurement					
Data transmission protect buyer's confidential information					
Data transmission lower administrative costs					
Data transmission reduce prices paid for materials					
Data transmission cut off-contract buying					
Data transmission reduce inventory costs					

SECTION B: EFFECTS OF E-TENDERING, E-SOURCING, E-INVOICING AND E-AUCTIONING ON PERFORMANCE OF THE ORGANIZATION

6. To what extent does E-tendering process influence performance of procurement function in your organization?

Very great extent () Great extent () Neutral extent () Less extent ()
Not at all ()

7. To what extent does E-sourcing process influence performance of procurement function in your organization?

Very great extent () Great extent () Neutral extent () Less extent ()
Not at all ()

8. To what extent does E-invoicing process influence performance of procurement function in your organization?

Very great extent () Great extent () Neutral extent () Less extent ()
Not at all ()

9. To what extent does E-auctioning process influence performance of procurement function in your organization?

Very great extent () Great extent () Neutral extent () Less extent ()
Not at all ()

10. To what extent do you agree with each of the following statements regarding the effects of e-tendering, e-sourcing, e-invoicing and e-auctioning on performance of the organization? Use the following ranking: SD=strongly disagree; D=disagree; N=neutral; A-agree; SA=strongly agree.

SD D N A SA

Impact

E-tendering increase coordination between suppliers and buyers

E-tendering helps to maintain the integrity, confidentiality, and authenticity of bids submitted

E-auction provides to buyers and sellers an open environment where they can compare the true value of their products

E-auction enhances improved procurement process efficiency which includes the time savings for both the buyers and suppliers

E-Invoicing offers greater security of data in the organization

E-invoicing offers efficient and effective exchange and utilization of information to users in the organization

E-sourcing improves communication between the organization and new suppliers

E-sourcing helps in achieving low cost in procurement transactions

SECTION C: BENEFITS OF IMPLEMENTING E-TENDERING, E-SOURCING, E-INVOICING AND E-AUCTIONING ON THE PERFORMANCE OF AN ORGANISATION

11. How would you agree or disagree to each of these as other benefits derived from e-procurement? Use the following ranking: SD=strongly disagree; D=disagree; N=neutral; A=agree; SA=strongly agree.

Benefits	SD	D	N	A	SA
Reduces cost of transaction					
Improve data accessibility					
Reduces manpower					
Improve the management of information					
Increase compliance					
Improve buyers and suppliers communication					
Eased the buying process of the organization					

SECTION D: RISKS AND CHALLENGES ASSOCIATED WITH THE IMPLEMENTATION OF E-TENDERING, E-SOURCING, E-INVOICING AND E-AUCTIONING ON THE PERFORMANCE ON AN ORGANISATION

12. Show your level of agreement or disagreement to each of the following as a challenge of e-procurement. Use the following ranking: SD=strongly disagree; D=disagree; N=neutral; A=agree; SA=strongly agree.

Challenge	SD	D	N	A	SA
Technology					
Internet access					
Knowledge and skills					
Cost of software					
Poor IT systems policies and procedures					

SECTION E: STRATEGIES TO PROMOTE THE POSITIVE IMPACT AND OUTCOME OF THE IMPLEMENTATION OF THE E-PROCUREMENT AND AVERT THE POSSIBLE RISKS AND CHALLENGES.

13. Show your level of agreement or disagreement to each of the following as strategies to improve the impact of e-procurement. *Use the following ranking: SD=strongly disagree; D=disagree; N=neutral; A-agree; SA=strongly agree.*

Strategy	SD	D	N	A	SA
Improvement of the technological infrastructure through Private-public partnership					
Maintenance of employee competence through knowledge and skills training					
Promote and support an adequate legal environment					
Improve internet Access through private-public partnership					

THANK YOU

APPENDIX B: INTERVIEW GUIDE



- 1) What is the influence of e-procurement data transmission on the performance of the ministry of justice?
- 2) What are the benefits of implementing e-tendering, e-sourcing, e-invoicing and e-auctioning on the performance of the ministry of justice?
- 3) What are the risks and challenges associated with the implementation of e-tendering, e-sourcing, e-invoicing and e-auctioning on the performance of the ministry of justice?
- 4) What strategies can be adopted to promote the positive impact and outcome of the implementation of the e-procurement and avert the possible risks and challenges?

APPENDIX C: APPLICATION LETTER

22 March 2024

To: Ministry of Justice, Legal and Parliamentary Affairs

APPLICATION FOR AUTHORITY TO CARRYOUT AN ACADEMIC RESEARCH INTERVIEW WITH YOUR ORGANISATION REPRESENTATIVE

I am a student studying Bcom Honors Degree in Purchasing and Supply with Bindura University. I hereby wish to carry out a research study interview and distribute questionnaires within your organisation on '**An Investigation on the Impact of E-Procurement on the Performance of an Organisation.**

The purpose of the study is for academic reason. However, it is hoped that the findings might help alert policy makers regarding the formulation of policies and strategies to improve the implementation of e-procurement. I am kindly asking for your permission to carry out the study within your organisation.

Your consideration is highly appreciated

Yours faithfully

Moreblessing Chimhondwa

APPENDIX D: INTRODUCTION LETTER

Dear Respondent,

RE: DATA COLLECTION

I am a student at Bindura State University currently undertaking a research study to fulfill the requirements of the Award of Bsc Honours Degree in Purchasing and Supply on the topic: **An Investigation on the Impact of E-Procurement on the Performance of an Organisation. A Case of the Ministry of Justice, Legal and Parliamentary Affairs (Mojlpa)**. I would greatly appreciate your participation as you have been selected to participate in this study by answering all the questions truthfully and completely. The responses will be treated with extreme confidentiality and privacy as they will be used solely for this study. This study will only be used for academic research. You are required to participate voluntarily and no one will be coerced to participate. Kindly spare a few minutes to complete the questionnaire attached.

Thank you in advance for your co-operation.

Yours Faithfully,

Moreblessing Chimhondwa

Researcher

APPENDIX E: RESPONSE LETTER FROM MoJPLA

Telephone 774620-7774589-94774560
Fax: 772999



Reference:

MINISTRY OF JUSTICE, LEGAL
AND PARLIAMENTARY AFFAIRS
Private Bag 7751
Causeway
ZIMBABWE

Ref: AB/164

16 May 2024

**The Deputy Director
Procurement Management Unit**

Attention: Mr E. Dhliwayo

**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH:
PROCUREMENT MANAGEMENT UNIT: MS MOREBLESSING
CHIMHONDWA: STUDENT: BINDURA UNIVERSITY**

The Secretary has approved that Ms Chimhondwa, a student from Bindura be permitted to conduct research in the Procurement Management Unit, Her research topic is **"An investigation on the impact of E- Procurement on the performance of an Organisation."**

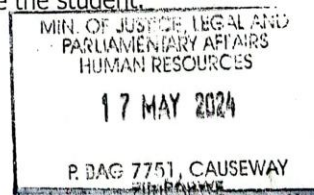
In this regard, may you therefore allow the student to conduct her research.

Please be advised that the student is required to submit a copy of research document to the Deputy Director, Procurement Management Unit before she submits it to her University. This is meant for you to monitor and guide the student.

T. Nhamuro (Mrs)

Director, Human Resources

For: SECRETARY FOR JUSTICE, LEGAL AND PARLIAMENTARY



C.c Ms Moreblessing Chimhondwa, Bindura University.

Moreblessing third draft.docx

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