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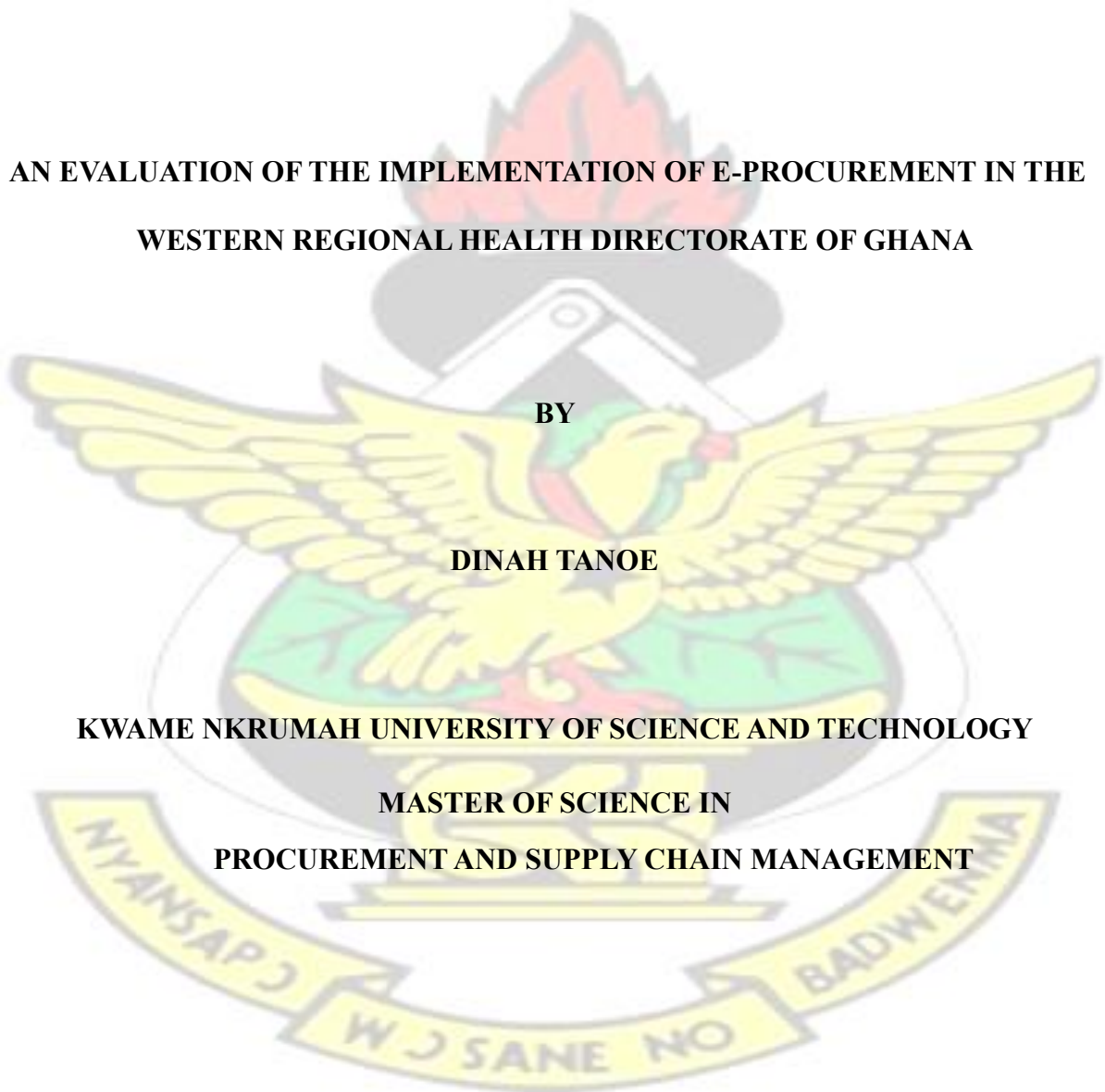
**AN EVALUATION OF THE IMPLEMENTATION OF E-PROCUREMENT IN THE
WESTERN REGIONAL HEALTH DIRECTORATE OF GHANA**

BY

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KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

**MASTER OF SCIENCE IN
PROCUREMENT AND SUPPLY CHAIN MANAGEMENT**



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**AN EVALUATION OF THE IMPLEMENTATION OF E-PROCUREMENT IN THE
WESTERN REGIONAL HEALTH DIRECTORATE OF GHANA**

KNUST

BY

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**A thesis submitted to the Institute of Distance Learning, Kwame Nkrumah
University of science and technology, in partial fulfilment of the
requirements for the degree of Masters of Science in
PROCUREMENT AND SUPPLY CHAIN MANAGEMENT**

Institute of Distance Learning, KNUST

NOVEMBER 2023

DECLARATION

Candidate's Declaration

I hereby declare that this submission is my own work towards the Masters of Science and that to the best of my knowledge, it contains no material previously published by another person or material which has been accepted for the award of any other degree of the university except where due acknowledgement has been made in the text.

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(Head of Department)

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Date

DEDICATION

This research is dedicated to the God of the Bible for his grace and mercy and to my supportive husband and children for their concern and efforts throughout my academic work.

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May the Name of Yahweh be praised forever. Thank you, Lord, I am grateful.

I would like to express my sincere gratitude to my supervisor, Dr. Mawuko Dza for his professional guidance, critics, advice, encouragement, and the goodwill with which he supervised this project work. I am grateful.

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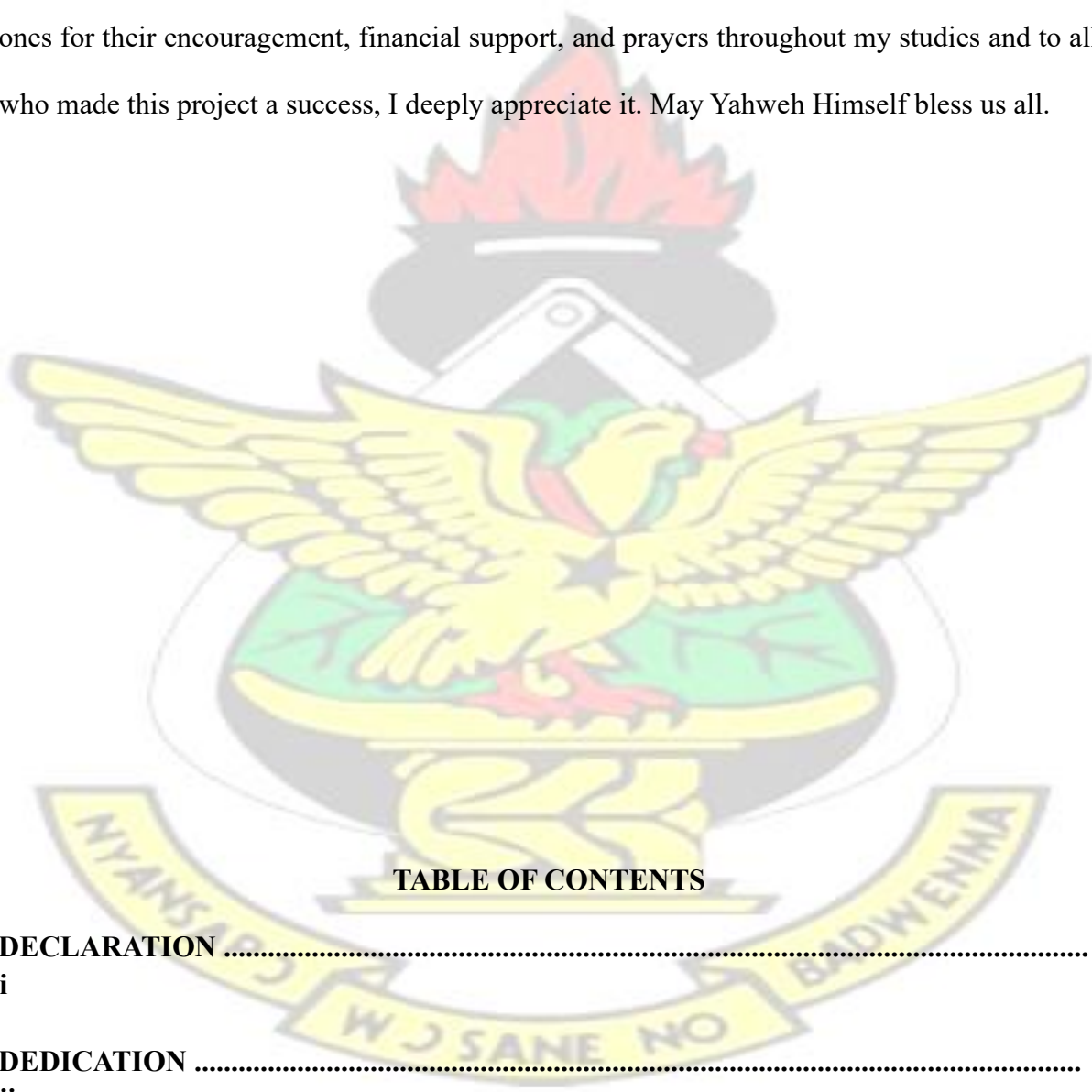


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ABSTRACT

The general objective of this study is to evaluate the implementation of e-procurement in the Western Regional Health Directorate of Ghana. Specifically, the study sought to; identify the e-procurement process in place at Western Regional Health Directorate; assess the benefits of e-procurement to Western Regional Health Directorate; determine the challenges of eprocurement at Western Regional Health Directorate and to establish the relationship between e-procurement and organisational performance. The study was purely quantitative and was descriptive in nature. The population of the study were all employees of Western Regional Health Directorate who are directly or indirectly involved with the procurement process at the Directorate. They are fifteen (15) in number. Looking at the small number of the population, all fifteen (15) employees were sampled out for the study. Purposive sample was chosen as the sampling technique. A questionnaire was chosen as the data collection instrument. Statistical Package of Social Sciences (SPSS.v.21.0) was used to analyze the data gathered. In spite of its e-procurement importance, it is faced with many challenges which need to be tackled to make the procurement unit of institutions more vibrant as their activities go a long to impact on the performance of the whole organization or institution. For this reason, the e-procurement method has been adopted to replace the traditional procurement method so as to address most of the challenges in this unit. The study revealed that there was a positive relationship between

e-procurement and organisational performance. The study concludes that the Western Regional Health Directorate is using the GHANEPS platform for its e-procurement processes and that the e-procurement is duly implemented at the directorate. It was recommended that there should be a strong commitment on the part of government in the key area of e-procurement infrastructure development in the country. Proper policies, legislations and regulations should also be put in place to safe guide the whole system of e-procurement, in that e-procurement comes with own security issues.



CHAPTER ONE

INTRODUCTION

1.0 Background of the study

In the era of globalization and increasing business challenges, procurement has become a major focus point for many organizations (Gunasekaran, Patel & McGaughey, 2014). The arrival of the Internet as a means of doing business has served as a medium for major changes in the operation and status of organizational procurement. It is evident that Information Technologies have totally transformed the way organizations and governments operate (Nelson et.al., 2011). Procurement usually represents one of the largest expense items in a firm's cost structure (K'akumu, 2015). Electronic procurement, commonly referred to as e-procurement, can be defined as the automation of an organisation's procurement processes using web-based applications (Turban, 2016). According to International Business Machines Corporation (IBM, 2012), e-procurement is the acquisition of direct and indirect products and services using the internet and new technologies to facilitate a seamless, end-to-end stream of strategic procurement activities by connecting buyers with suppliers.

E-procurement is very important when it comes to improving procurement performance and by extension organizational performance (Manrodt, Gibson, & Stephen, 2015). The software used in e-procurement integrates procurement functions and creates interfaces that enable fast and cost friendly execution of activities like tendering, catalogues generation and management, supplier contracting and management, and general communication (Manrodt et al., 2015). The automation of processes helps make transactions quick, enhances relationships through more contact between procuring entities and suppliers, provides evidence of transactions, and reduces paperwork and related costs among other benefits (Egbu, Vines & Tookey, 2013). Due to the numerous benefits of e-procurement, many organizations both private and public are opting for e-procurement systems

E-procurement converts the traditional manual procurement process in organisations machinery to electronic based procurement on the Internet (Tiago, 2019). As a result, it helps the business to simplify regulatory processes and cut the red tape, while still fully complying with regulations (Ronchi, 2010). According to the Epiq Technologies (2010) report, adoption of e-procurement technology in an organization enables a firm to organize its interactions with its most crucial suppliers, a set of built-in monitoring tools to help control costs, assure maximum supplier performance and keeping an open line of communication with potential suppliers during a business process. The system allows managers to confirm pricing and leverage previous agreements to assure each new price quote is more competitive than the last (Subramaniam & Shaw, 2012).

Based on previous researchers, there are factors contributing to challenges in the implementation of e-procurement such as technology, infrastructure and legislation, environment; besides, resource constraints, organisational and management characteristics are also contributing factors to the success, or otherwise, of an e-procurement implementation (Capgemini, 2018). External factors from the industry, market, government, and technological change are beyond the control of organisations. However, these barriers can be minimized and even completely mitigated through careful planning and research. The technology barriers to suppliers include understanding and commitment to specialist software and the start-up fee required by the vendors that is usually beyond the financial capabilities of organisations or that they do not want to commit to such a high-priced system (Christopher, 2011). The wide-spread use of e-procurement systems also depends on the availability of supporting infrastructures such as sufficient broadband coverage. This study therefore seeks to evaluate the implementation of e-procurement in public sector organisations specifically the Western Regional Health Directorate of Ghana.

1.1 Problem Statement

Implementation of e-procurement in an organization is associated with several benefits and challenges. Several studies have been undertaken by various researchers on both the benefits and challenges to the implementation of e-procurement. For example, Greunen, et al. (2010) undertook a study on the implementation of regulation-based e-procurement in the Eastern Cape provincial administration, South Africa. The study found that measurable benefits of supply chain management have not yet been realized due to general limited understanding of how supply chain management concept works within government environment. Other studies include those of Orori (2011), Njoroge (2010) and Mburu (2011).

Lin, Huang, Jalleh & Tung (2010) found that some health care practitioners related challenges of e-procurement to disaster recovery and security. They emphasized the importance of having a backup/alternative e-procurement system and IT disaster recovery and data security contingency plans in case of system failure or other security issues. Makau (2014) focused on the challenges facing e-procurement in the public sector. Some of the challenges identified and examined in the study include managerial commitment, challenges arising from the legal framework in government's procurement, the competence of employees in information communication technology and technology-related challenges.

With many state-owned enterprises across the country, not all are involved in procurement activities. Western Regional Health Directorate is one of the state-owned enterprises that does quite several procurement activities. Many studies have looked at the impact of e-procurement in Ghana (Ameyaw, Mensah & Osei-Tutu; 2012; Boateng; 2013; Boateng & Evelyn, 2017). However, the impact of e-procurement in state-owned enterprises has gotten less attention. Furthermore, most state-owned enterprises trail behind privately owned organisations when it comes to the adoption of technological solutions (Boateng & Evelyn, 2017). Also, more studies

on e-procurement in Ghana has been amongst privately owned organisations and not on stateowned enterprises. To address this gap, this study sought to evaluate the implementation of eprocurement in the Western Regional Health Directorate of Ghana.

1.2 Objectives of the Study

The general objective of this study is to evaluate the implementation of e-procurement in the Western Regional Health Directorate of Ghana. Specifically, the study seeks to:

1. Identify the e-procurement process in place at Western Regional Health Directorate.
2. Assess the benefits of e-procurement to Western Regional Health Directorate.
3. Determine the challenges of e-procurement at Western Regional Health Directorate.
4. Establish the relationship between e-procurement and organisational performance.

1.3 Research Questions

The study was undergirded by the following questions.

1. What is the e-procurement process in place at Western Regional Health Directorate?
2. What are the benefits of e-procurement to Western Regional Health Directorate?
3. What are the challenges of e-procurement at Western Regional Health Directorate?
4. What is the relationship between e-procurement and organisational performance?

1.4 Significance of the Study

Although many governments urge their public sectors to use e-Procurement, there are still several obstacles in the way of their attempts to put this new system into place (Office Government Commences, 2002). The Ghanaian procurement Act, Act 663 (2003), was put into effect by parliament as the suitable tool to aid in bringing sanity and uniformity to public procurement through the introduction of principles that unify the nation's public procurement procedures. According to Dagaba (2013), the Act has incorporated a number of pertinent, contemporary procurement rules that are anticipated to fix any anomalies or dishonest practices

related to public procurement. Even though the act is still in effect, several flaws have emerged that have raised serious concerns, prompting calls for the Ghanaian public sector to implement e-Procurement to address these inefficiencies. Despite the numerous potential advantages, there are still several teething issues that must be resolved before e-procurement may be widely used in the Ghanaian public sector.

The findings in this study will provide procurement managers with critical information on the need for technological solutions in enhancing the efficiency of the firm. Such information would be critical in making decisions on how to go through the evaluation and implementation processes. This study will also provide clear evidence with or against the studies that indicated a positive impact of technology on procurement performance. The study will help to identify determinants of organizational procurement dimensions that impact overall organizational performance. An understanding of the technology's impact on procurement will help the top management and decision makers within firms in Ghana to focus on achieving these conditions and desired effects. The results of the study will provide material for researchers and academicians interested in understanding the concept of technology in procurement. It will also form the foundation for further research into the topic. The study will provide insights for future researchers to apply the research findings to different areas.

1.5 Scope of the Study

The study revolves around the impact of the implementation of e-procurement on organizational performance in the healthcare industry. The health sector organisation that was used is the Western Regional Health Directorate. The target population of the study were staff of the procurement department and other departments, contractors and suppliers of the directorate.

1.6 Summary of Research Methodology

The study will adopt a descriptive survey research approach as it enables the identification and classification of the elements or characteristics of the subject. The population of the study were all employees of Western Regional Health Directorate who are directly or indirectly involved with the procurement process at the Directorate. They are fifteen (15) in number. Looking at the small number of the population, all fifteen (15) employees will be sampled out for the study. The study will adopt the purposive sampling technique. Questionnaires will be used as the tool for data collection. Data obtained from the study will be quantitatively analyzed using frequencies and percentages. The Statistical Package for the Social Sciences (SPSS.v.21) will be used for data coding, entry, and analysis. The data analysis and presentation will be done by using relevant descriptive statistics.

1.7 Ethical Considerations

The researcher considers the research values of voluntary participation, anonymity, and protection of respondents from any possible harm that can arise from participation in the study.

The researcher will request the respondents to participate in the study on a voluntary basis. Refusal or abstaining from participation will be permitted. The researcher will also assure the respondents of confidentiality of the information they will give and protection from any possible harm that could arise from the study since the findings would be used for the intended purposes only.

1.8 Limitations of the Study

Almost every field research encounters some challenges, this study will be no exception. The study will cover only one public sector organization in Ghana specifically Western Regional Health Directorate. Therefore, not being able to generalize the results to be obtained can be considered as a limitation. In addition, the study is limited to employees of the procurement department and other oversight departments mainly. Additionally, there might be some cases

of data loss in the responses and some questionnaires might never be returned. As a result, data that will be collected will be checked and re-tested through all other means possible to improve on its validity and reliability. Also, due to the upsurge of the Covid-19 pandemic, the study might take longer than expected.

1.9 Organization of Chapters

This study was structured as follows. Chapter one introduces the topic of the study including the background, the problem statement, the research questions, and research objectives as well as the significance, scope, and limitation of the study. Chapter two contains literature on various topics related to e-procurement. Chapter three covers the research methodology. Chapter four discusses the findings from the research by using percentages and illustrations from diagrams. Finally, chapter five gives a summary, conclusion and suggests recommendations for the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The study sought to evaluate the implementation of e-procurement in the Western Regional Health Directorate of Ghana. This chapter probes the important literature on the area of this research study. In this chapter, concepts and theories underpinning the research topic and other findings of the research are reviewed to expedite the development of a theoretical framework for the research work.

2.1 Overview of E-procurement

According to Weele and Van Raaij (2014), procurement is the processes required to acquire works, goods and services from outside the performing organization. It is favorable that the goods/services are appropriate and that they are procured at the best possible cost to meet the needs of the purchaser in terms of quality and quantity, time, and location. In the view of Software Engineering Institute (2008) at Carnegie Mellon, procurement is a set of activities performed as part of an acquisition effort. It involves process of acquiring goods, works and services, covering both acquisitions from third parties and from in-house providers.

Hui et al. (2011), emphasized that due to the colossal amount of money involved in government procurement and the fact that such money comes from the public, there is need for accountability and transparency therefore, a well-functioning procurement system based on transparency, competition, economy, efficiency and accountability is critical for good economic management and addressing leakages of government funds, improving the effectiveness of public expenditure in poverty reduction and enhancing the public's confidence in government intentions and programmes. Failure to properly manage the procurement process and systems can lead to wasted effort and poor development results and consequently increased poverty and deprivation of social and economic rights of the citizenry.

Electronic procurement, as defined by Parida and Parida (2015) is a technological solution that enables corporations to acquire goods and services through the Internet. E-Procurement refers to the use of Internet-based (integrated) ICTs to carry out individual or all stages of the procurement process including search, sourcing, negotiation, ordering, receipt, and postpurchase review (Croom & Brandon-Jones, 2014). E-Procurement can be viewed as a comprehensive solution that integrates and streamlines many different procurement processes across the organization, even if some of the more specific forms focus on just one or a few

stages of the procurement process, such as e-Tendering, e-Marketplace, e-Auction/Reverse Auction, and e-Catalogue/Purchasing (Lin & Shaw 2018).

A good e-procurement system will help a firm organize its interactions with its most crucial suppliers and become the business partner in handling the change in the business environment (Mwongela, 2014; Eyholzer & Hunziker, 2000; Alor-Hernandez *et al.*, 2011). The eprocurement system provides a set of built-in monitoring tools to help control or analyse expenses, assure maximum supplier performance and provides a platform for suppliers to communicate with the company. It provides an organized way to keep an open line of communication with potential suppliers during a business process and a channel for new suppliers to participate at the tender stage or request for a proposal. The system will become the channel for the managers to confirm pricing, and leverage previous agreements to assure each new price quote is more competitive than the last (Alor-Hernandez *et al.*, 2011).

E-procurement refers to the purchase of goods, and even services, via the Internet for business purposes (Akibate, 2015). For example, if a company needs a new fax machine, a representative can go to the local office supplies store and purchase the equipment, however, they may end up paying more than is necessary and the purchase will be more difficult to track, particularly if that business is part of a larger company with multiple offices. With an eprocurement system, purchases can be regulated and tracked more efficiently so unnecessary or extravagant purchases are nearly eliminated. In addition, an e-procurement system streamlines the purchasing process because employees no longer have to take time away from their schedule to go to the store and shop around. Instead, they can go online, place the order, and get back to work. Some companies that have put e-procurement systems in place have seen as much as a 25% decrease in waste and savings of millions of dollars annually (Mahdillou, 2014; Eyholzer & Hunziker, 2000; Bahri *et al.*, 2012).

While the benefits of an e-procurement system may be significant, companies must introduce the system carefully if they want it to be successful (Mose, 2013). One adoption strategy that has worked for other businesses is simply to take it slowly. Instead of attempting to bring all business purchases online immediately, companies bring different categories of purchase online one at a time. For instance, a business may begin by buying its stationery supplies over the Internet, then its computer equipment, and eventually its temporary staff.

The incremental approach to e-procurement implementation has several benefits (Vaidya *et al.*, 2006). For example, the approach allows the staff to become familiar with the system and with using the system for necessary purchases. Additionally, it gives suppliers the chance to adopt the appropriate technology.

Another important implementation strategy is to determine beforehand the specifications for all of the products and services required by the business (Sanderson *et al.*, 2015). Generally, this process involves determining what type of ink cartridges the printers require, what brand of ink pens are used, what style of desk chairs are needed, etc. While this step may seem timeconsuming, it prevents employees from using the e-procurement system to make unnecessary purchases for items such as palm pilots, leather chairs, or expensive writing instruments.

Despite taking these precautions when implementing an e-procurement system, many companies still find that they must also work hard to avoid some common pitfalls (Bahri *et al.*, 2013). One of the biggest problems these companies have found is that employees simply refuse to use the system. Implementing the system slowly and providing the necessary training can help employees feel more comfortable with e-procurement and more inclined to make use of the system. Another common problem is that many companies do not have a plan in place

to deal with purchasing items that are not available through the online suppliers. When this occurs, these businesses usually fall back on using the corporate credit card and the local office supply store, which undermines the benefits of e-procurement. Instead, these businesses could explain to their existing online suppliers what goods or services they require, then allow the suppliers the opportunity to meet those needs for them (Teece, 2010).

The bottom line is that e-procurement systems can be effective in reducing waste and saving money, but special steps must be taken to effectively implement the system and avoid the types of problems that can hinder the successful adoption of e-procurement systems (Koriret *al.*, 2015).

Despite the widespread use of the phrase end-to-end e-Procurement (the end-to-end process a company goes through when selecting and sourcing goods or services), experts in the industry and academia report that this ideal model is seldom attained (Department of Information Resources, 2011), and most e-Procurement implementations incorporate a combination of several models. Costs related to the deployment of electronic procurement systems in the public sector were shown to have a direct influence on businesses (Kipyego, 2012).

2.1.1 Stages of E-Procurement

Tavares (2011) outlined some major stages that describe the e-public procurement process. Below are the various stages: E-noticing, E-Invitation, E-tendering, E-Evaluation, E-award and e-contract, E-executing of the Contract and E-evaluation and auditing.

E-noticing: It is an electronic document that contains the elements of the procurement process and is disseminated over the internet and other electronic channels (Barsemoi et al., 2014).

E-Invitation: Using the term "e-invitation" refers to an invitation that is sent electronically. Procurement news from government agencies is gathered and disseminated using technology

in this approach. Tenders for low-value contracts and restricted procedures may incorporate an electronic platform that permits chosen economic operators to participate in the tendering process (Tavares, 2011).

E-tendering: Procurement bodies and contractors benefit from electronic tendering, which aids in the selection process. The whole bidding procedure is covered, from the request for expressions of interest through the award of the contract. It is common for this type of tendering to include help in the evaluation and analysis of the various phases of interest. It ensures that all suppliers are treated fairly since it ensures openness in the selection process and improves the efficiency of the tendering operations. UNDP-IAPSO and UNHCR, for example, have utilized E-tendering to develop long-term agreements for automobiles, motorbikes, and pharmaceuticals using an in-house built tendering web page (UN Procurement, 2012).

E-Evaluation: Applicants' electronic data is retrieved from tenders and analyzed by a committee using suitable software to get the information of each contractor in terms of the statutory and commercial requirements and award criteria (Maia & Tavares, 2013).

E-award and e-contract: A unified procurement platform may be used to record and store econtracts, saving agencies from endless and disorderly piles of papers during the contract process (Laudon & Laudon, 2011).

E-executing of the Contract: To ensure the project's successful completion, the contract's implementation should be carried out immediately after the contract's award, with the eplatform handling all critical tasks (Ferreira & Spinola, 2013).

2.2 Ghana Electronic Procurement System (GHANEPS)

Ghana developed an electronic government procurement system known as the Ghana Electronic Procurement System in an effort by the government to increase transparency, efficiency, and lower the cost of the public procurement process (GHANEPS). A web-based, collaborative system called GHANEPS (Ghana Electronic Procurement System) was created

to streamline Ghana's public procurement procedures in conformity with the requirements of public procurement regulations. It provides a safe, engaging, and dynamic environment for doing procurement across all categories, levels of complexity, and budgets. GHANEPS facilitates the procedures for acquiring goods, works, consulting, non-consulting, and asset disposal.

The system covers several public procurement processes, such as user registration, tender notification, tender preparation and submission, online tender assessment, contract awarding, catalogue development and administration, creation and management of framework agreements, auctions, and payments. The system's operations were carried out in accordance with published instructions for its use. Vice President Dr. Mohammadu Bawumia introduced the system on April 30, 2019, after it had been built over the course of two years. After that, a trial phase lasting six months was implemented. Immediately after, in November 2019, the roll-out phase began. It will last through the end of October 2023. The roll-out made sure that all 660 or so public entities, including ministries, departments, and agencies as well as metropolitan, municipal, and district assemblies and public tertiary institutions and public hospitals, were gradually brought on board with the system.

The three stages of the roll-out took around three months. Stakeholder engagement was carried out with the management of the chosen companies during stage one, which was known as the On-Boarding stage. The second step, Training, was then formally extended to them. At this point, all chosen Entities underwent training at one area. Hands-on training was provided to the Management of these Entities, the Procurement Officials, and other pertinent officers. Suppliers, Contractors, and Consultants were also given specialised training on how to utilize the system so they could submit tenders or proposals through the system.

The Entities entered the live platform when the training was over, at which time they were set up on GHANEPS. The third and final step, known as Post-Go-Live Support (PGLS), was subsequently activated. Since November 2019, 359 Entities have participated in stakeholder interactions with PPA, 318 Entities have received training, and 308 Entities have been added to the live platform. In the process, 2,234 employees of suppliers, contractors, and consultants as well as 1,999 procurement officers, 1,963 management and other key workers, and 1,999 procurement officers have received training. 3,606 users have been generated for the enrolled entities in the live environment. The number of Suppliers, Contractors, and Consultants on GHANEPS is now 22,179. As Entities become acclimated to using the system, GHANEPS activity levels have been progressively rising. By the end of 2023, it is anticipated that all public bodies would use the system to manage their procurements.

The planning stage of the procurement process is first. Therefore, it is necessary for entities to create an annual purchase strategy. The Entity Tender Committee must adopt the plan by the end of November for the next year, as well as any future quarterly revisions. Additionally, this proposal must be submitted to GHANEPS. As of right now, 235 Entities have published their procurement plans for 2022 to GHANEPS. After planning, the following step is to conduct the tender using the specified procurement technique. An invitation or advertising will be posted on the system following the drafting of the tender. So far, the technology has been used to produce over 784 bids. While invitations for Request for Quotations and Restrictive Tenders are only given to the service providers chosen by the Entity to participate in the tender, Open Tenders (National Competitive Tendering and International Competitive Tendering) advertising are published for the public.

After the tender is published, service providers can reply. After the tender is opened and evaluated, the winning tenderer is given the contract. There are now 58 contracts in GHANEPS. The Authority has put strategies in place to increase the media's and civil society

organizations' ability so that they may better comprehend public procurement and our system implementation strategy and give informed comments in this area.

Public procurement is a process by which public authority procure to meet the needs and goals of their institutions (Baldi, Bottasso, Conti and Piccardo (2016). Public procurement is crucial to promoting innovation within firms. This is because it helps customers to make informed and wise decisions in the market (Uyarra, Edler, Garcia-Estevez, Gerorghious and Yeow, 2014). They affirmed that public procurement directs its effort to the acquisition of products being it tangible and intangible by both private and public organizations. Also, public procurement aims at achieving accountability and fairness in trade (Spagnolo, 2012).

Mansi (2015), and Mansi and Pandey (2016), advised that public procurement activities enhance corporate social responsibility activities within an organization irrespective of the size of the firm. Despite these known benefits, some scholars like Baldi et al., (2016) concluded in their study that public procurement contributes largely to over-corruption. Notably, public procurement has achieved success in achieving socially responsible goals rather than achieving environmental goals (Amann, Roehrich, EBig and Harland, 2014). Though, the same study suggests that practitioners should enforce public procurement as a means to achieve both environmental and social goals because of the strategic influence public procurement has on such goals.

2.3 Benefits of E-Procurement in the Public Sector

Using an e-procurement system has several benefits, such as decreased administrative expenses and improved online item procurement efficiency. E-procurement provides several benefits, including reduced costs, reorganized processes, increased contract fulfilment, increased spending under oversight, and many more (Tiago, 2019). E-procurement decreases both the

time and effort needed to complete a purchase order as well as the time and effort needed to fulfil purchases. According to prior study, using an e-procurement system may save costs in four areas: order cost, administrative cost, order lead-time cost, and capital opportunity cost (Ronchi, 2010). The malpractice of cartel formation may be largely handled by GHANEPS. This safeguard applies to all user-entered data. The manual procurement process can occasionally jeopardise data security; this is something the GHANEPS e-platform is supposed to eliminate. The capacity of GHANEPS to enhance procurement while reducing costs is more critical than ever as government finances are put under increasing pressure. When services are made available online, more service providers can take part in procurement procedures. It's a more environmentally friendly way for the government to conduct business, and it helps businesses save time by speeding up the process of placing orders and receiving goods.

Transparency is guaranteed by GHANEPS since little to no human interaction is required throughout the evaluation and awarding processes. The e-procurement process makes information readily accessible online, allowing interested parties—such as civil societies, suppliers, contractors, etc.—to quickly access data related to each tender and award process. Additionally, e-procurement may boost supplier competition, reduce financial risk and technology risk, provide high-quality bids and prompt deliveries while simultaneously saving money and requiring less work from company operations (Thai, 2011). According to Layne and Lee (2011), the optimum uses of electronic procurement of goods and services are in public sector projects because of the high level of information openness that comes with electronic bidding.

The e-procurement system offers a more effective and efficient procurement process, in line with the nation's economic transition to a knowledge-based economy. This is a strategy used by the government to encourage more individuals to conduct business online. The government may get the most recent product information and pricing online thanks to e-procurement. The

system should enable the customer to make a knowledgeable buying decision based on the most recent data.

Procurement may be improved by using e-procurement, by reducing the administrative costs of granting contracts to the public sector while increasing the efficiency of procurement. Electronic procurement provides for greater involvement by service providers, which results in increased healthy competition (Bondzi, 2010). It also speeds up the delivery of government services by allowing them to run in a more continuous fashion. The test and the awarding process are both carried out online, assuring complete openness (Baily et al., 2018). Eprocurement allows interested parties to acquire information directly relevant to each tender and award process through quick access to information (PPA E-Bulletin, 2010).

As an added benefit, requests for bids and proposals may be posted online or sent to service providers through email rather than being sent through the postal system, which is inefficient and slows the entire process. E-Procurement will assist to streamline the purchase order, resulting in less labor being duplicated and more accuracy. A notification is sent to the bidders right away through email (Bakos, 2019). With the help of the National Electronic Commerce Coordinating Council (NECCC) (2012), e-procurement can reduce procurement costs by enhancing payment processing and lowering cycle time. Controlling the flow of work electronically through e-procurement procedures helps to reduce human error as well as processing time. The shorter time between request and payment is due to these efficiencies. It is possible that inventory levels might be reduced because of the time saved, resulting in considerable savings in the form of increased cash flow and decreased inventory carrying costs.

By utilizing e-Procurement, the government may have access to a broader market than just the local one, ensuring a more equitable application procedure for all parties involved. Firms that provide government requirements have additional ways to engage with the Internet, increasing

the supplier database and driving down prices because of more competition (Bakos, 2019). It is easier for government agencies to discover the best value when there are more contractors to pick from. Online reverse auctions allow buyers and sellers to quickly exchange information and bids, which often results in significant savings (PPA E-Bulletin, 2010). E-procurement allows government-registered entities to communicate procurement-related information via a single channel. E-Procurement, on the other hand, enables more access to nationwide procurement data, enabling the government to negotiate better contract terms. To make it simpler to exchange and distribute information, purchase orders are processed and sent to suppliers in a fraction of the time. Supervisors can watch the progress of orders and handle issues as they emerge thanks to computerized transactions that are more detailed and accurate (Bakos, 2019).

2.4 Challenges of E-procurement

Although e-procurement has various advantages, public procurement organizations nevertheless are confronted with several related difficulties. While implementing public procurement, several issues may arise at the organizational level. It is possible that these issues may be solved by using e-procurement, however acceptance of the system itself could be an issue.

2.4.1 Lack of Employee Competency

Procurement operations are being migrated to E-procurement platforms by governments in many countries; yet there is still a lack of information about how the public sector uses these platforms (As-Saber & Rahim, 2011). A company's procurement team must have the ability to utilize the applications of software that give the organization management abilities necessary to manage their operations, for example, the distribution chain and value-added in a company's supply chain (Beth et al. 2013). Real-time databases are the core of this technology, which may be accessed at any moment. ERP systems completely give procurement management and

management with the chance to provide constant, consistent, and timely information required for the achievement of corporate goals.

Procurement organizations often lack the human resources necessary to effectively manage procurement procedures (Barsemoi et al., 2014). Shortages in government budgets result from a lack of qualified staff to ensure quality standards are enforced and e-procurement procedures are monitored, specifications are determined, and requirements defined. Mbeche et al., (2014) stated that workers' skills and knowledge impact the adoption of a new technology in the future. Thus, the implementation of e-procurement calls for well-versed and qualified personnel.

E-procurement adoption has been delayed in most public institutions because there are not enough people with the proper training and expertise to implement it. An institution's ability to experiment with new technologies is directly linked to the amount of human capital it has available. There is a need to maintain employee competency by ensuring that they are taught on relevant problems so that they can understand the legal frameworks and networks of their suppliers in the performance of their company using a computerized procurement system (Muguro, 2014). It might be that people are obstructing the path' (Beth et al., 2013).

According to Daugherty et al. (2010), organisations will need to leverage the human factor more effectively to increase supply chain efficiency. Many companies have been focusing on investments and technological advancements in recent years. Managers and operators in the supply chain should be the focus of the next wave of improvements and investments. Eprocurement relies on training employees in procurement techniques and e-procurement tools to take advantage of new technology and modifications to old procurement procedures (World Bank, 2013). Once the operational features of the e-Procurement system are understood by end users, they may immediately reap the benefits (CGEC, 2012).

Thus, training and identifying the skills needed by all employees involved in procurement should be top priorities for public sector organizations (ECOM, 2012). To be successful in implementing e-procurement, it is vital that employees have the power to shape the process by which a company accepts and utilizes it. E-procurement may not succeed unless there is a strong human component in the corporate environment.

2.4.2 Inadequacy of Legal Framework

Any business transaction, public or private, must adhere to a legal framework. It outlines the duties and responsibilities of the parties involved in business transactions with the aim of achieving the mutually agreed-upon objectives. Kheng and Al-Hawandeh (2012) found that the laws governing (business-to-business) B2B commerce, crossing over to e-procurement, are still undeveloped. For instance, questions concerning the legality and force of e-mail contracts, role of electronic signatures, and application of copyright laws to electronically copied documents are still unresolved. The Public Procurement Authority (PPA) recognize that the existing PPA 2005 and PPDR 2006 legal framework in Ghana may not have adequately covered aspects of e-procurement transaction (PPA., The long -term policy framework for Public Procurement 2019). The weakness in this framework therefore may inhibit the adoption and growth of e-procurement initiatives.

Legal framework is a basis of any business transaction whether in Public sector or private businesses. It defines the obligations and responsibilities of the partners transacting business with the objectives of fulfilling each other's desired goals. Kheng and Al-Hawandeh (2002) found that the laws governing B2B commerce, crossing over to e-procurement, are still undeveloped. For instance, questions concerning the legality and force of e-mail contracts, role of electronic signatures, and application of copyright laws to electronically copied documents are still unresolved.

In an effort to create order in public procurement, PPA through the support of the Ghana Government and the Public Financial Management Reform (PFMR) Programme, has since its establishment in 2007 endeavoured to implement a new legal and regulatory regime to guide public procurement. Key achievement towards implementing a new legal and regulatory framework in public procurement is evident in the many guidelines PPA has developed to guide procurement practices and pricing of common user items. The guidelines include Public Procurement Market Price Index, General and Disposal Manual, Procurement Manual for Works, Procurement Manual for Information and Communication Technology, Procurement Manual for Insurance Services, Procurement Manual for Non- Intellectual Services, among others.

Furthermore, an important accomplishment by the PPOA can be seen in the Authority's action to develop and implement an e-procurement strategy. The strategy has made it possible to post tenders online thus ensuring transparency and accountability in public procurement. Moreover, e-procurement has also enhanced access to public procurement by vulnerable groups (Kheng and Al-Hawandeh, 2012). The Authority has also enhanced access to public procurement information by developing a modern and interactive website which provides important information to the public and stakeholders on public procurement. In addition, stakeholders' consultative forums are held annually to share information on how to improve the public procurement system. Further, contract awards worth GHC 5million and above reported by the procuring entities get posted on the Authority's website as are reports on finalized procurement reviews (Kheng and Al-Hawandeh, 2012).

2.4.3 Inadequate Technological Infrastructure

The e-procurement problem is around the development and deployment of information systems. One of the most important aspects of e-procurement deployment is the integration of

the customer's information infrastructure and its relationships to suppliers, according to Rajkumar (2011). Croom (2011) examined how IOS was adopted in a previous study. Email, internet sites, money transfer, and EDI were all on the top of the list. Electronic money transfers, which are a safe and low-cost alternative to check payments, are supported by major banks and are frequently used in connection with email and internet services. On the other hand, electronic data interchange (EDI) is only cost-effective for high-volume transactions and communication between companies with similar business structures. To handle direct supply chains, such as those for components and materials used in manufacturing or saleable items sold by retailers, EDI is frequently used. The cheap cost per unit, the benefits of high-speed transmission, and the sunk cost of investment are all elements that are considered as likely to continue EDI, or at least incorporate it into an Internet-EDI framework for the administration of certain high-frequency exchange supply chains.

In a recent analysis, IDC (2013) found that adoption of e-procurement systems remained sluggish, noting that system infrastructure challenges such as software integration (including discussion of XML-related potential) were hindering implementation. According to Kheng and Al-Hawandeh (2012), a study on the adoption of e-procurement in Singapore found considerable investment in hardware, software, and employee training to be prohibitive from the perspective of Singaporean enterprises. The implementation of e-procurement relies heavily on technological infrastructure, without which the integration of public procurement institutions would be impossible.

2.4.4 Security of Procurement Transaction Data

Several recent studies have also looked into difficulties faced by firms in launching eprocurement. Data security and confidentiality concerns have been identified as one of the main obstacles to the widespread adoption of electronic procurement by Huber et al. (2014) in a survey of 102 international active e-marketplaces and procurement service providers. Three

dimensions were identified by Saeed and Leith (2013) in their study of e-procurement risks: transaction risks resulting from wrong products purchased due to incomplete or misleading information; second security risks resulting from unauthorized penetration of trading platforms; and third privacy risks arising from inappropriate information collection and information transmission. Yen and Ng (2012) found that both buyer and seller firms in their sample considered the lack of adequate security measures to protect data as one of the prohibitive and discouraging factors in the implementation of e-procurement.

Individual end users and entire business units will naturally resist any change in business processes that poses uncertainty in security and privacy of their transactions. Organizations keep their business information secret as a protective mechanism to ward off competition and remain competitive in the business environment. Public sector organizations on the other hand have limits to the amount and nature of information to be shared with other third parties. The Public procurement legal framework in Ghana legislated on confidentiality of public procurement process. The use of web technology has brought a myriad of data security challenges in internet transactions because of cybercrimes. The growth of internet has nevertheless brought serious challenges to business due to data hacking, internet fraud, Cyber vandalism, and virus and malware attacks (Huber et al., 2014).

2.5 Impact of E-procurement on Firm Performance

The term "firm performance" refers to the process by which an organization's leaders and board of directors' implement and oversee a system for assessing the organization's present performance and based on that data, devise strategies for improving the organization's operations. It refers to an organization's actual output or outcomes compared to its expected outputs (or goals and objectives). There are three distinct areas of outcomes for a business including financial performance (profits, returns on assets and investment), product market

performance (sales and share of market) and shareholder return (total shareholder return, economic value added) (Richard et al., 2019).

E-procurement deployment has proven to be beneficial for many firms, according to previous research. Electronic procurement systems play an essential role in B2B purchasing by facilitating the buying process and giving the information necessary to make better purchasing decisions (Osmonbekov et al., 2012). Companies may minimize transaction costs, enhance internal procurement efficiency, and promote supplier collaboration by using web-based eprocurement systems in B2B purchasing transactions (Barbieri & Zanoni, 2015).

Organizational and inter-organizational benefits of procurement technology may be divided into two basic groups. E-procurement systems, according to prior research, can improve procurement efficiency and effectiveness at the corporate level through automation of procurement procedures, reengineering of internal processes, and improved coordination across organizations (Osmonbekov et al., 2012). There are several studies that have shown that the use of e-procurement may expedite the order fulfilment cycle time, reduce inventory levels, and decrease procurement expenses. Barbieri and Zanoni (2015) claimed that there are three distinct categories for the benefits of e-procurement: hard benefits (such as price savings, process cost reductions, and individual time freed up through more efficient processes), soft benefits (such as individual time freed up through more efficient processes), and intangible benefits (such as cultural change, financial approval for all spending, and high visibility of supplier performance) (Lin & Shaw 2018). Using an e-procurement system can reduce timeto-market cycles, reduce material and transaction costs, and reduce stock levels (Presutti, 2013).

Using e-procurement can reduce the time and cost of the purchasing cycle, improve budgetary control, eliminate administrative errors, increase the efficiency of buyers, lower prices by

standardizing products and consolidating purchases, improve the payment process, and improve information management (Chaffey, 2014). Using a Web-based e-procurement system not only improves the operational processes of the buyer organization, but also improves the order fulfilment process of the supplier organization and enhances the management of the relationship between the buyer and the supplier. The primary goal of the order fulfilment process is for the buyer to get quality items at the appropriate time and location, which is what the supplier should be able to deliver (Lin & Shaw 2018).

Increasing the supplier's ability to see trends in order demand will increase the supplier's ability to fulfil orders. Buyers and suppliers must work together to improve order fulfilment performance. For example, Toyota's suppliers have access to the company's inventory and sales data. Toyota's suppliers can plan and manage their operations more efficiently when they have access to this information; as a consequence, Toyota's just-in-time (JIT) delivery strategy can be successfully implemented (Chopra & Meindl 2011).

Information on sales predictions, manufacturing schedules, inventory levels, and product specifications may be transmitted across trade partners via web-based e-procurement. Components that vary by company, commodity, scenario, and environment must be taken into account when devising an e-Procurement purchasing strategy aimed at increasing internal customer satisfaction. If suppliers are involved early in the buyer design process of the Eprocurement system, they can contribute their expertise in the following areas: material specifications, tolerances, standardization, order sizes, process ethanol's in supplier manufacturing, packaging, and transportation, via a web-designed interlink. Another factor to think about while establishing a strategy is the number of parallel sources of supply that should be utilized, as stated by Dobler and Burt (2016).

When it comes to purchasing, a firm has the option of purchasing all its goods from a single supplier, known as single sourcing, or from numerous vendors, known as dual or multiple sourcing. Different strategic approaches are best suited to different types of circumstances. Single source is suitable when, according to Dobler and Baurt (2016). As a result of economies of scale, bottler prices can be reduced, but quality is essential. It's advantageous to have sway over a supplier. Just-in-time manufacturing necessitates tight quality control and coordination, which necessitates a single point of contact for all logistics. This simplifies the supply chain and lowers freight costs, while also reducing total system inventory. It also improves supplier commitment, increases interdependence, and reduces risk sharing, and speeds up time to market.

While Dobler and Burt (2016) claim that it is acceptable to source from two or more sources, we disagree. To ensure that the buyer is protected from shortages, strikes, or other emergencies, to maintain competition and provide a back-up source; to meet local content requirements for international manufacturing locations; more also to meet customer volume requirements, avoid lethargy and complacency on the part of the single source supplier when the customers are a small player in the market for a specific item, when technology is uncertain, and in areas where suppliers tend to leapfrog each other.

According to Croinin- Harris (2014), a company's sales department and buying department are its two primary points of contact with the outside world. Thus, these two departments have a significant impact on the public's opinion of the company's operations. Several studies have found that the buying department's ethical behavior has a significant impact on the rest of the company's behavior in a comparable circumstance, according to Makau (2014). (Internal customers). As a result, the buying department must assure ethnically diverse behavior. Ethics

policies should be developed and enforced, along with regular training and education, to make sure that everyone is adhering to them.

Purchasers, as defined by Heinritz et al., (2011), are corporate agents who have been granted the ability to commit funds by their owners or managers. An individual buyer may only spend a certain amount of money before the general manager has given his or her permission to do so. Further, the authors argue that authority should be equated with responsibility and the ability to fulfil that duty. By limiting the amount of money that a purchaser may sign for, managers are able to control costs, according to Heinritz et al (11). One buyer may have the authority to sign transactions up to that amount, while a senior purchaser may have that authority, and the CEO may have the right to sign deals that are more than that amount. There may be numerous levels of authority.

2.6 Theoretical Framework

The theories discussed in this chapter include Resource Based Theory and Technology Acceptance Model (TAM).

Technology Acceptance Model: The Theory of Reasoned Action, developed by Ajzen and Fishbein (1980), is the basis of the Technology Acceptance Model (TAM). The Technology Acceptance Model (TAM) asserts that 'Perceived Ease of Use (PEOU) will have an impact on PU: when people find a technology "easy to use," they see it as valuable. There are three components in TAM: "attitude toward using (ATT)," "behavioral intention to use (BI)," and "actual use (AU)" that provide links between PEOU and PU. PEOU and PU, according to TAM, both have an impact on how people view technology. According to this theory, people will have a more positive attitude toward a technology if they find it useful and simple to use. An individual's level of conscious intention to engage in a certain future activity is characterized as "Behavioral Intention (BI)" in the fourth and final component (Davis, 1989).

TAM asserts that BI is directly influenced by PU, ATT, and ATT. If a technology is deemed useful (PU) by users, they are more likely to employ it. A positive attitude toward a particular technology can lead to a user's desire to use it. User behavioral intention (BI), according to TAM, has an impact on how people utilize technology (AU). People utilize technology if they want to. Previous studies have revealed that TAM is the most important, generally used and highly predictive model of IT adoption. TAM will be used in this investigation (Venkatesh & Bala, 2008).

Davis (1989) proposed that perceived ease of use and perceived usefulness are two key factors influencing the intended use of an information system, although the perceived ease of use often has an insignificant impact on the intended use of experienced users. On the e-Procurement analysis, the users' perceived ease of use level can be studied by conducting a study on the end users to know whether they perceive that using the system is free of effort (Nguyen and Barrett, 2006). This in turn will derive the attitude and behavior intention of a person towards using the system. Hadri and Rendha (2011) in study show that perceived usefulness positively related to the behavioral intention of using the e-procurement system. Perceived usefulness is a belief that using information technology will enhance the job performance of users or will help the users in doing their job.

Theory of Reasoned Action (TRA) Theory: This theory has been used by many researchers in the field of technology adoption. TRA believes that there are two factors that will influence an individual in trying, and eventually adopting, an innovation (Sadeghi & Farokhian, 2011). These are an individual's attitude towards the behaviour and subjective norms. The attitude towards carrying out the behaviour is the result of the person's beliefs. During his lifetime an individual accumulates beliefs which are formed from personal experiences and from information given by other people (Sadeghi & Farokhian, 2011). However, not all these beliefs

will have an impact on attitude and only those beliefs which will influence the individual's performance matter. On the other hand, subjective norms are the beliefs of what other people will think about the behaviour (Sadeghi & Farokhian, 2011). Alternatively, subjective norms include the social pressure that an individual feel to perform or otherwise the behaviour.

2.7 Review of Empirical Literature

Kagendo (2012) appears to show that Kenya's legal system has evident limitations when it comes to electronic procurement. There are no regulations governing Electronic Procurement, even though the necessary modifications focus on the broader procurement arena. Laws around the world aren't keeping up with the pace of technological change in business, and this is especially true in Kenya.

Eadie, Perera, and Heaney (2010) conducted research to identify and analyze the factors that influence and hinder electronic procurement in the construction business in the United Kingdom. Electronic Procurement was the subject of a focus group discussion to identify potential drivers and impediments. Five professionals in the field of Electronic Procurement participated in the focus group. The focus group provided the information for the questionnaires, which were then distributed through the internet (Eadie et al., 2010). This study found that improved communication is one of the key factors driving the adoption of Electronic Procurement. In the UK construction industry, the decrease in administrative expenses was another key driver of e-procurement. There were also two obstacles to implementing eprocurement. The first hurdle was ensuring the safety of transactions conducted via Electronic Procurement. Secondly, the legal structure that governs Electronic Procurement is unsure of how it will be implemented.

An investigation was conducted by Daud, Mohammad, Azmi, and Mohamed (2013) that looked at the reasons why Malaysian contractor businesses adopt e-procurement. The research

looked at how easy respondents thought Electronic Procurement would be to use, how they felt about its utility, and whether they planned to use it. Workers at Malaysian construction firms completed one of 178 questionnaires that were sent out to them. According to the findings of the research, managers and employees in the Malaysian construction sector believe that electronic procurement is advantageous and are thus committed to implementing it despite the difficulties (Daud et al., 2013).

In Kenya, Makau (2014) conducted research to examine the problems that face the implementation of electronic procurement in the public sector. Electronic Procurement would have a significant positive impact on public sector organizations by increasing openness, increasing efficiency, and decreasing costs, as found in this study. The Nairobi Water and Sewerage Company was responsible for conducting the research. A total of 86 people were chosen at random from among the company's 203 workers to participate in the survey. Questionnaires were used to collect the data. Both quantitative and qualitative methodologies were employed in the study's completion. To display the data, pie charts, tables, and bar graphs were used. E-procurement adoption in the public sector faces four hurdles, according to the research. Electronic Procurement adoption is hampered by issues such as technological difficulties, lack of IT expertise among employees, and a lack of management support.

2.8 Conceptual Framework

The conceptual framework is an analytical tool that is used to get a comprehensive understanding of a phenomenon. It can be used in different fields of work and is most used to visually explain the key concepts or variables and the relationships between them that need to be studied.

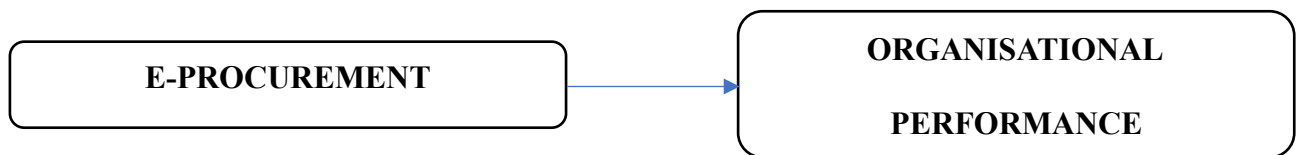
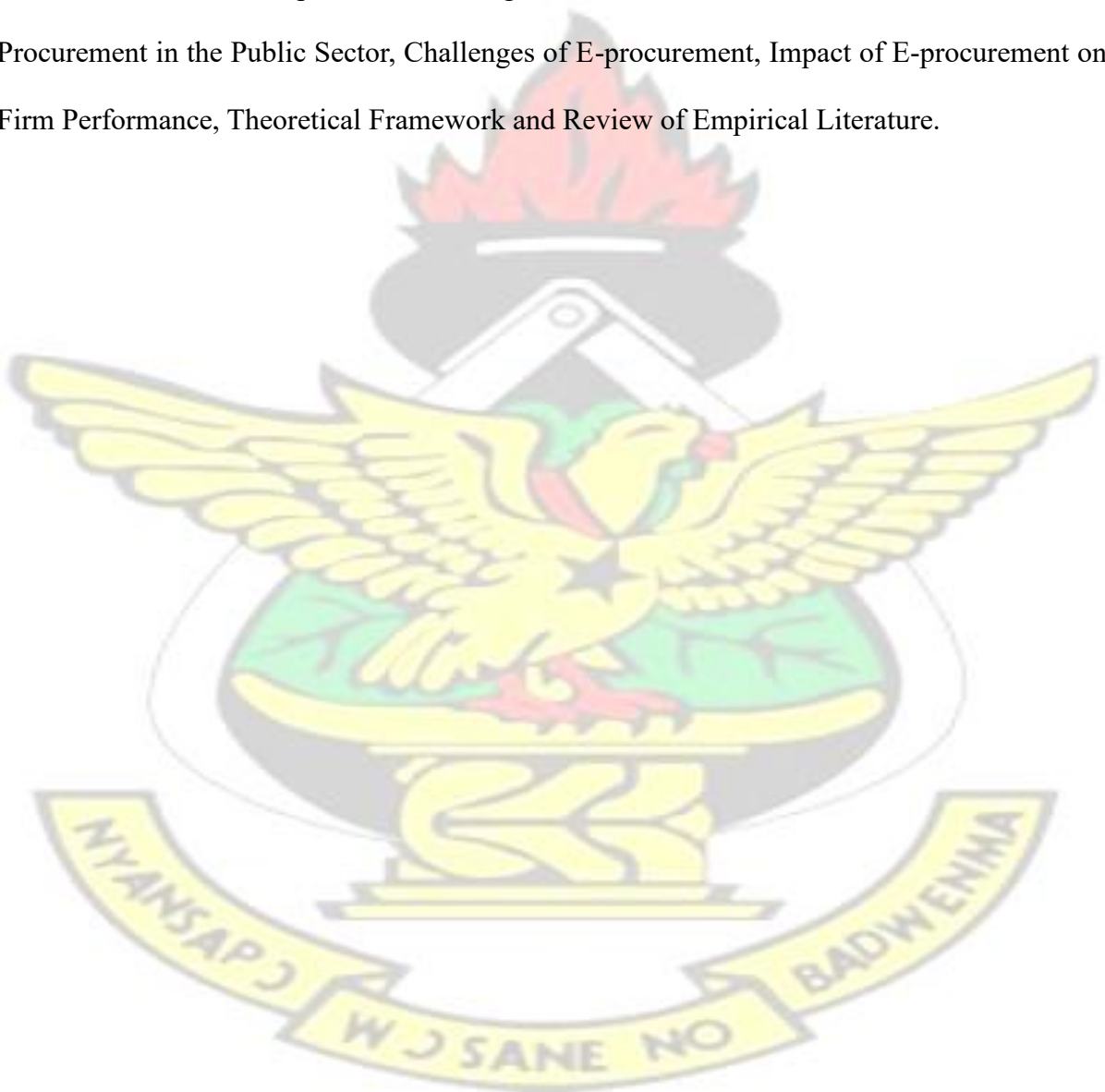


Figure 2.1: Conceptual Framework

2.9 Chapter Summary

The chapter looked at various topics around e-procurement. The topics discussed in this chapter included Overview of E-procurement, Stages of E-Procurement, GHANEPS, Benefits of E-Procurement in the Public Sector, Challenges of E-procurement, Impact of E-procurement on Firm Performance, Theoretical Framework and Review of Empirical Literature.



CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This section outlines the research methods and instruments used in the study. According to Yin (2013), a research methodology defines what the activity of research is, how to proceed, how to measure progress, and what constitutes success. He further asserted that, research methods are keen for every research because it provides a detailed plan that helps to keep researchers on track, making the process smooth, effective, and manageable. This chapter of the study will specifically cover the research design, profile of Western Regional Health Directorate, population and sample size, sampling technique, data collection instrument, data collection procedure and data analysis.

3.1 Research Design

Research design is a plan that promotes systematic management of data collection (Creswell, 2013). It dictates what is needed to answer your research questions. There are three basic research designs that can be successfully matched to given problems and research objectives. These are, exploratory, descriptive, and explanatory (Blumberg, Cooper & Schindler, 2014).

Exploratory: Exploratory research is usually unstructured, "informal" research that is conducted to learn more about the overall nature of the research topic. When a researcher doesn't know much about an issue and needs more knowledge, or wants fresh or more recent information, exploratory research is generally used. Exploratory research aids in the diagnosis of the problem's dimensions, ensuring that further study is focused. It aids in the determination of research priorities. Exploratory research is used for a variety of purposes, including gathering background information, defining terminology, clarifying issues and hypotheses, and determining study priorities (Clough & Nutbrown, 2012).

Descriptive: Descriptive research is conducted to answer who, what, where, when, and how questions – but not why. Rather than explaining a topic, a descriptive survey focuses on watching, describing, and documenting elements of it as it unfolds naturally. The design gives a more realistic representation of what happened at a particular point in time (Anderson et al., 2017). According to Bell and Waters (2014), a descriptive study attempts to describe or define a subject, often by creating a profile of a group of problems, people, or events, through the collection of data and tabulation of the frequencies on research variables or their interaction. A descriptive survey research design is also the most useful in a study when the researcher is interested on the situation already existing in the field and no variable would be manipulated (Dawson, 2017). Descriptive survey concentrates mainly at observing, describing, and documenting features of a situation as it naturally occurs rather than interpreting them. The design gives a more realistic representation of occurrences at a point in time.

Explanatory: Explanatory study seeks to understand why and how two or more components of a situation or event are connected. It's really a sort of research design that focuses on thoroughly describing components of a study (Denscombe, 2017).

The research is descriptive in nature since it seeks to determine what is in a moment in time and includes obtaining data that explain occurrences and then organizes, tabulates, displays, and summarizes the data obtained. Furthermore, this study is purely quantitative in nature. A quantitative research approach may take a large and representative sample from the population of interest, quantify the behavior and features of that sample, and seek to generalize about the community (Dawson, 2017). Quantitative research, in contrast to qualitative research, is frequently linked with a logical approach. The most common type of analysis is statistical, and it entails assessing the findings after they have been applied theoretically. Based on the explanations above, the study adopts the descriptive survey approach since it is the best fit for the study.

3.2 Profile of Western Regional Health Directorate

The Western Regional Health Directorate (RHD) is responsible for policy dissemination, stakeholder dialogue, capacity-building, coordination of planning and implementation of health policies and programmes in the region. The Departments under the RHD provide technical support, monitoring and supervisory functions of health services delivered at the district, sub-district, and community level in the region. Under the RHD, there are 14 Metro / Municipal/ District Health Directorates headed by Metro / Municipal /District Directors of Health Service who provide supervision, technical and management support as well as champion the implementation of health policies and programmes in the districts and subdistricts within the region. There are 88 health sub-districts in the region.

Health services in the region are provided by a network of government, CHAG, private and quasi-government health facilities. There are 614 health facilities made up of 36 Hospitals, 55 Health Centres, 109 Clinics, 398 functional CHPS compounds 16 Maternity Homes in the region. As the body responsible for health services in the region, the RHD maintains close links with all other agencies of the Ministry of Health, the local government system, traditional authorities, and other stakeholders in health including development partners, and civil society in the region.

The Western Regional Health Directorate (RHD) is headed by Dr. Yaw Ofori Yeboah, the Regional Director of Health Service. He is assisted by four Regional Deputy Directors comprising Deputy Director Public Health, Deputy Director Clinical Care, Deputy Director Health Administration and Support Services and Deputy Director Finance. Under each Deputy Director are administrative and technical staff with the responsibility of coordinating health programmes/ projects, and technical/ administrative units of the RHD.

3.2.1 Mandate of The Regional Health Directorate (RHD)

The Regional Health Directorate (RHD) represents the administrative apex of health services delivery within the region. The mandate is to provide and prudently manage comprehensive and accessible health service with special emphasis on primary health care at regional, district and sub-district levels in accordance with approved national policies. The RHD also works with headquarters, health partners, and other stakeholders to increase access to health services, through the provision of health infrastructure, human resources, logistics/health commodities, public health, and clinical care interventions.

3.3 Population and Sample Size

Frankel and Wallen (2010), states that the population is a group to which results of the study are intended to apply. The population of the study were all employees of Western Regional Health Directorate who are directly or indirectly involved with the procurement process at the Directorate. They are fifteen (15) in number. A research sample refers to a set of respondents selected from a larger population for a survey (Gastel & Day, 2017). Sampling on the other hand is the selection of a few units in the universe or a section of the population to represent the whole population and make conclusions for the entire population. The two main advantages of sampling are that the cost is lower and data gathering is faster. Looking at the small number of the population, all fifteen (15) employees will be sampled out for the study.

3.4 Sampling Technique

According to Creswell (2013), there are two distinct sampling approaches to selecting respondents, namely: probability-based samples and non-probability-based sampling. Probability and non-probability sampling procedures are the two categories of sampling techniques. Non-probability sampling, in contrast to probability sampling, involves objective input from the researchers and is fully decided by chance, whereas probability sampling

incorporates a random selection process of who should be included (Bryman & Bell, 2011). Purposive sample was chosen as the sampling technique. Purposive sampling was chosen because the researchers had certain characteristics in mind and such characteristics had to do with on-the-job experience and exposure as well as years of service. Since the sample is known to the researcher, non-probability sampling is faster and more cost-effective than probability sampling in obtaining replies. Respondents react more rapidly than those chosen at random because they are highly motivated to engage.

3.5 Data Collection Instrument

The main data collection instrument that was used was a questionnaire which contained mostly structured questions, relating to each objective of the study. Amedahe (2012), defines questionnaire as consisting of a list of questions or statements relating to the aims of the study, research questions to be verified and answered to which the respondents are required to answer by writing, ticking, marking, or circling the response necessary. The questionnaire will be made up of only close-ended questions. Closed-ended questions are questions that can only be answered by selecting from a limited number of options, usually multiple-choice, 'yes' or 'no', or a rating scale (e.g. from strongly agree to strongly disagree) (Clough & Nutbrown, 2012). Closed-ended questions give limited insight but can easily be analyzed for quantitative data. The closed ended items will enable the study to obtain specific responses from the respondents.

3.6 Data Collection Procedure

Questionnaires will be personally administered by the researcher. Respondents will be allowed sufficient time to complete the questionnaire. The respondents will be given the questionnaires to fill after the researcher has explained to them the purpose of the study. The goal is to assist respondents comprehend the significance of the study and express their own opinions on the questionnaire. The respondents will be encouraged to fill the questionnaires on the spot. Also,

the researcher intends to use not more than one week in gathering all the data. Respondents will be asked to check the right response to close-ended questions on the questionnaire. The surveys will be broken down into parts to capture the key topics outlined in the study's objectives. The first portion looks at the demographics of the respondents, while the other sections focus on the study's objectives.

There are two main sources from which data can be collected. These are primary sources and secondary sources (Bell & Waters, 2014). The study made use of both primary and secondary data. Primary data refers to the firsthand data gathered by the researcher himself while secondary data means data collected by someone else earlier (Bryman & Bell, 2011). Primary data will be obtained from respondents through the administration of questionnaires during the field work. Secondary data pertaining was obtained from journals, articles, books, reports, publications, electronic books and from the internet. Secondary data is crucial for any researcher because it allows the researcher to know what has been done in the area of interest and the procedures that were used to come out with those findings (Sekaran & Bougie, 2010).

3.7 Data Analysis

The raw data obtained from research is useless unless it is transformed into information for the purpose of decision making. The data analysis will involve developing summaries as well as the use of tables and charts to make meaning out of the raw data. Consequently, the following steps will be taken to analyze the data for the study. The data will be edited to detect and correct, possible errors and omissions that are likely to occur, to ensure consistency across respondents. The data will then be coded to enable the respondents to be grouped into limited number of categories. Statistical Package for Social Sciences (SPSS.v.21) will be used in the processing of primary data that will be gathered. The study will make use of regression and correlation analysis.

CHAPTER FOUR

FINDINGS AND ANALYSIS OF DATA

4.0. Introduction

The purpose of this quantitative study was designed to evaluate the implementation of eProcurement in the Western Regional Health Directorate of Ghana. It gives information on the responses obtained from the various questions posed to the respondents via the questionnaires.

4.1. Demographic Data of Respondents

4.1.1. Gender of Respondents

The gender composition of the respondents is shown in Table 1 below. The table provides the gender information which shows that 85% of the respondents were male while 15% of them were female. The survey shows that majority of the respondents were male.

Table 1: Gender Composition

Gender	Frequency	Percentage
Male	17	85%
Female	3	15%
Total	20	100%

Source: Field Survey, 2023

4.1.2. Age Group of Respondents

Table 2 below shows the age distribution of the respondents. Out of the total respondents (20), 55% representing the majority were between the ages of 36-45 years, while 25% said they are between the ages of 26-35 years. On the other hand, 3 persons representing 15% said they were above 46 years while a minority of 5% said they were below 25 years. Thus, most of the respondents were between the ages of 36-45 years.

Table 2: Age Group of Respondents

Age Group	Frequency	Percentage
Below 25 years	1	5%
26 – 35 years	5	25%
36 – 45 years	11	55%
Above 46 years	3	15%
Total	20	100%

Source: Field Survey, 2023

4.1.3. Number of Years with Directorate

Table 3 below reveals the number of years the respondents have been working with the directorate. The findings show that majority (50%) have been working with the directorate for 11 years and above whiles 20% said 3 to 6 years. Also, 15% said they have been with the directorate for 0 to 3 years whiles another 15% said 7 to 10 years. Thus, most of the respondents said they have been working with the directorate for more than 11 years.

Table 3: Number of Years with Directorate

Response	Frequency	Percentage
0 – 3 years	3	15%
3 – 6 years	4	20%
7 – 10 years	3	15%
11 years and above	10	50%
Total	20	100%

Source: Field Survey, 2023

4.2. Current E-Procurement Processes

4.2.1. Knowledge on E-Procurement Processes at the Directorate

When asked whether they (the respondents) know the e-procurement processes undertaken at the directorate, majority of the respondents representing 75% said yes, they are aware whiles 15% said they somehow have knowledge about it. However, 10% representing the minority

said no, they do not know the e-procurement processes undertaken at the directorate. Thus, most of the respondents were aware of the e-procurement processes undertaken at the directorate.

Table 4: Knowledge on E-Procurement Processes at the Directorate

Response	Frequency	Percentage
Yes	15	75%
No	2	10%
Somehow	3	15%
Total	20	100%

Source: Field Survey, 2023

4.2.2. Determinants of the E-Procurement Processes at Directorate

The respondents were asked the main determinants of the e-procurement processes at the directorate. The study gathered that majority (40%) said the nature of services offered by organizations determines the e-procurement process while 30% said e-procurement is determined by the availability of financial resources at the directorate. On the other hand, 25% representing 5 persons said the market structure of the suppliers while a minority of 5% said the type of management determines the e-procurement process. Thus, most of the respondents asserted that the nature of services offered by organizations is the main determinant of the eprocurement processes at the directorate.

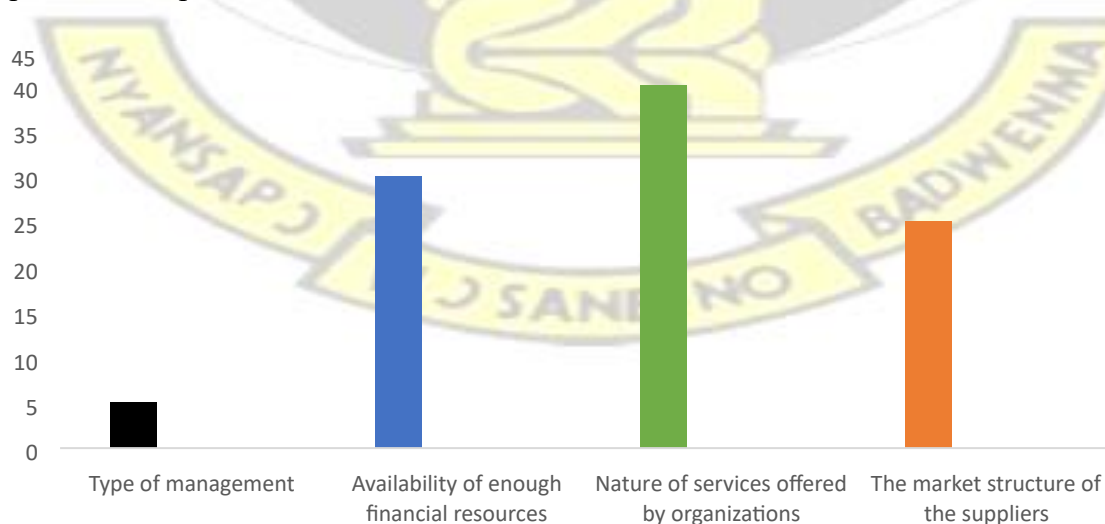


Figure 2: Determinants of the E-Procurement Processes at Directorate Source: Field Survey, 2023

4.2.3. Procurement Methods in Place at Directorate

When asked the procurement methods in place at the directorate, majority (50%) said national competitive tendering whiles 35% said Request for Quotations (RFQ). On the other hand, 5% representing 1 person said two-staged tendering whiles another 5% said international competitive tendering. Also, another 5% stated restricted tendering as a procurement method in place at the directorate. Thus, most of the respondents asserted that the procurement method in place at the directorate is national competitive tendering.

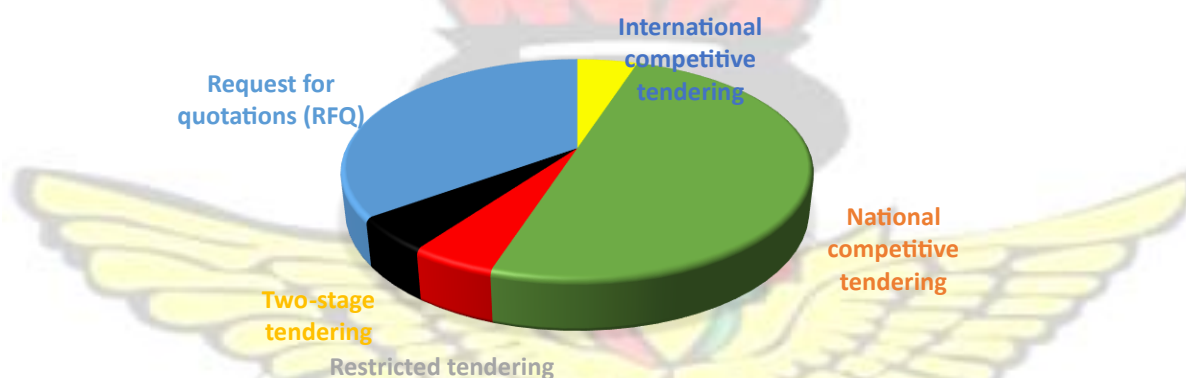


Figure 3: Procurement Methods in Place at Directorate Source: Field Survey, 2023

4.2.4. Awareness of GHANEPS Platform

The respondents were asked whether they are aware of GHANEPS platform. The study gathered that, 90% representing the majority said they are aware of the platform whiles the minority (10%) said they are not aware of the platform. Thus, most of the respondents were aware of the GHANEPS platform.

Table 5: Awareness of GHANEPS Platform

Response	Frequency	Percentage
Yes	18	90%
No	2	10%
Total	20	100%

Source: Field Survey, 2023

4.2.5. Directorate on the GHANEPS Platform

The question further sought to know whether the directorate is on the GHANEPS platform or not. From the study, most of the respondents representing 80% said yes, the directorate uses the GHANEPS platform while the minority (20%) said no. Thus, most of the respondents asserted that the directorate is on the GHANEPS platform.

Table 6: Directorate on the GHANEPS Platform

Response	Frequency	Percentage
Yes	16	80%
No	4	20%
Total	20	100%

Source: Field Survey, 2023

4.2.6. Effectiveness of E-Procurement Process at the Directorate

When asked how effective the e-procurement process is at the directorate, 55% representing the majority said the process is somewhat effective while the minority (45%) said the process is very effective. Thus, most of the respondents believe the e-procurement processes at the directorate is somewhat effective.

Table 7: Effectiveness of E-Procurement Process at the Directorate

Response	Frequency	Percentage
Very effective	9	45%
Somewhat effective	11	55%
Total	20	100%

Source: Field Survey, 2023

4.2.7 Level of Satisfaction with E-Procurement Process

The question posed sought to know how satisfied they (the respondents) are with the e-procurement process at the directorate. The study gathered that, 55% representing the majority are satisfied with the e-procurement processes while 25% said they are highly satisfied with the process. On the other hand, a minority of 20% said they are fairly satisfied with the

e-procurement process at the directorate. Thus, most of the respondents were averagely satisfied with the e-procurement process at the directorate.

Table 8: Level of Satisfaction with E-Procurement Process

Response	Frequency	Percentage
Highly satisfied	5	25%
Satisfied	11	55%
Fairly Satisfied	4	20%
Total	20	100%

Source: Field Survey, 2023

4.2.8. Opinion on E-Procurement Process

The respondents were asked their opinions about the e-procurement process at the directorate. The majority (60%) said the e-procurement processes at the directorate is good whiles 35% said the process is very good. However, a minority of 5% said the process is very bad, it should be stopped. Thus, most of the respondents opined that the e-procurement processes at the directorate is good.

Table 9: Opinion on E-Procurement Process

Response	Frequency	Percentage
Very good	7	35%
Good	12	60%
Very bad, it should be stopped	1	5%
Total	20	100%

Source: Field Survey, 2023

4.2.9. Technology Tools Used for E-Procurement Processes

The respondents were asked the technology tools used for e-procurement processes at the directorate. The study gathered that, majority of the respondents representing 60% said the directorate uses e-tendering for the process whiles 15% said the directorate uses e-invitation. On the other hand, another 15% representing 3 persons said e-award and e-contract are the technology tools used while a minority of 10% said e-noticing. Thus, most of the respondents

asserted that the technology tools used for e-procurement process at the directorate is the etendering.

Table 10: Technology Tools Used for E-Procurement Process

Response	Frequency	Percentage
E-noticing	2	10%
E-invitation	3	15%
E-tendering	12	60%
E-award and e-contract	3	15%
Total	20	100%

Source: Field Survey, 2023

4.3. Benefits of e-Procurement at the Western Regional Health Directorate

4.3.1. Benefits of e-Procurement

The question sought to know the benefits of e-procurement at the directorate. The study gathered that; majority (40%) believe there is a reduction in administrative cost whiles 30% said there is an increased efficiency in the procurement of items. However, 20% representing 4 persons said e-procurement helps in reducing the time and effort required to complete a purchase order whiles 5% said there is cost reduction. Also, another 5% said there is a higher expenditure under supervision when using e-procurement. Thus, the reduction of administrative costs was identified as the main benefit of e-procurement at the directorate.

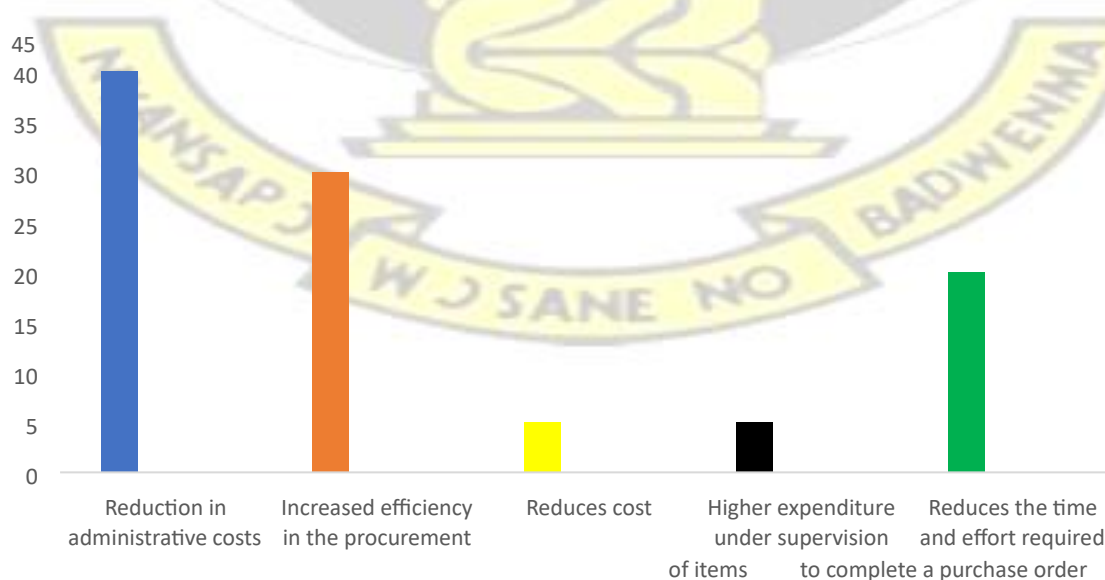


Figure 4: Benefits of e-Procurement Source: Field Survey, 2023

4.4 Relationship Between E-procurement and Organizational Performance

4.4.1 Regression Analysis of E-procurement and Organizational Performance

The regression analysis provides information on the relationship between e-procurement and organizational performance. Table 11 presents the model summary of the variables involved in this study. The R value of 0.873 shows the regression coefficient of e-procurement and organizational performance. The regression coefficient shows a high relation between eprocurement and organizational performance. The R^2 value of 0.763 showed the coefficient of determination between e-procurement as well as organizational performance. The coefficient of determination showed that 76.3% variation in organizational performance is caused by eprocurement.

Table 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.873 ^a	.763	.760	.204

a. Predictors: (Constant), e-procurement, organizational performance

Table 12 represents the analysis of variance. From the table, the sig. figure of 0.000 indicate that e-procurement processes are significant to organizational performance.

Table 12: ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	13.086	1	13.086	314.776	.000 ^b
Residual	4.074	98	.042		
Total	17.160	99			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), E-procurement

Table 13 represents the effect (B), relationship (Beta) and significance (Sig.) of e-procurement and organizational performance. The B value of 0.815 showed that e-procurement has a positive relationship with organizational performance. This means that as organizations utilizes e-procurement processes, it influences and improves their performance. The beta value of 0.873 showed that there is a positive and strong correlation between e-procurement and organizational performance. The significant value of 0.000 showed that e-procurement processes is significant to performance

Table 13: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.185	.062		2.997	.003
E-procurement	.815	.046	.873	17.742	.000

a. Dependent Variable: Organizational performance Sig. <0.05

4.5 Challenges of E-Procurement Processes

In Table 14, the challenges faced during the E-procurement process is reviewed and discussed. The respondents stated that the first challenge with the e-procurement process is support from stakeholders (M= 3.10; SD=1.49) while resistance to adoption (M= 3.03; SD=1.15) was the second challenge. Furthermore, availability of supporting infrastructure and facilities (M= 2.62; SD=1.31) and security and authentication issues (M= 2.36; SD=1.54) were stated as the third and fourth challenges respectively.

Table 14: Technological Challenges to E-Procurement Processes

Response	Mean	SD
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Availability of Supporting Infrastructure and Facilities	2.62	1.31
Security and Authentication issues	2.36	1.54
Support from all Stakeholders	3.10	1.49
Resistance to Adoption	3.03	1.15

Source: Field survey, 2022

4.6 Discussion of Findings

The first objective sought to identify the e-procurement process in place at Western Regional Health Directorate. The study revealed that the Western Regional Health Directorate is using the GHANEPS platform for its e-procurement processes. Similarly, according to Boateng (2020), due to the importance of electronic procurement within the public procurement space, it has become a priority to ensure that GHANEPS' implementation is executed efficiently to enable the nation reap all its benefits. GHANEPS supports processes of procuring Goods, Works, Consultancy, Non-Consultancy, and disposal of assets. The system supports various public procurement procedures, including user registration, tender notification, tender preparation and submission, online tender evaluation, contract awarding, creation and management of catalogues, creation and management of framework agreements, auctions and payments.

The second objective sought to assess the benefits of e-procurement to Western Regional Health Directorate. The study identified reduction in administrative cost, increased efficiency, reduction in the time and effort required to complete a purchase order as the major benefits of e-procurement to Western Regional Health Directorate respectively. Similarly, Tiago (2019) asserted that e-procurement provides several benefits, including reduced costs, reorganized processes, increased contract fulfilment, increased spending under oversight, and many more. E-procurement decreases both the time and effort needed to complete a purchase order as well

as the time and effort needed to fulfil purchases. Also, Ronchi (2010) emphasized that eprocurement system may save costs in four areas: order cost, administrative cost, order leadtime cost, and capital opportunity cost.

The third objective sought to determine the challenges of e-procurement at Western Regional Health Directorate. The study revealed that, support from stakeholders, resistance to adoption, availability of supporting infrastructure and facilities and security and authentication issues were the challenges associated with e-procurement at the directorate. Similarly, Oketch and Moronge (2016) assessed the determinants of e-procurement implementation in Kenyan State Corporations within the Ministry of Finance. The Study concluded that lack of employee competence hinders smooth adoption of e-procurement in the public sector and also, the inadequate legal framework was a challenge to e-procurement adoption. In addition, Owusu (2014) assessed the readiness of public procurement entities in Ghana for e-procurement. The Study identified some challenges which hinder the smooth implementation of e-procurement in Ghana. Some of the challenges identified were as follows; end-user uptake and training, supplier adoption, lack of e-procurement implementation strategy, costly technical solutions, and lack of management support.

The fourth objective sought to establish the relationship between e-procurement and organizational performance. The study identified a positive relationship between eprocurement and organizational performance. Similiarly, Magutu (2013) carried out a study on e-procurement strategies, technology, and performance of large-scale manufacturing firms in Kenya which established that when e-procurement strategies are well implemented, the company will benefit from them and as a result, the organization will be able to save on costs and eventually make high profits. Also, Rodovilsky and Hedge (2014) emphasized that use of e-procurement strategies in procurement leads to improved operational performance.

According to Chang and Wong (2010), engaging in e-procurement improves firm performance, including efficiency, sales performance, customer happiness, and relationship growth.

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CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter is the concluding part of the study. It outlines the summary of findings, the researcher's conclusions, and recommendations.

5.1. Summary of Findings

The general objective of this study is to evaluate the implementation of e-procurement in the Western Regional Health Directorate of Ghana. Specifically, the study sought to:

1. Identify the e-procurement process in place at Western Regional Health Directorate.
2. Assess the benefits of e-procurement to Western Regional Health Directorate.
3. Determine the challenges of e-procurement at Western Regional Health Directorate.
4. Establish the relationship between e-procurement and organisational performance. The

study was purely quantitative and was descriptive in nature. The population of the study were all employees of Western Regional Health Directorate who are directly or indirectly involved with the procurement process at the Directorate. They are fifteen (15) in number. Looking at the small number of the population, all fifteen (15) employees were sampled out for the study. Purposive sample was chosen as the sampling technique. A questionnaire was chosen as the data collection instrument. Statistical Package of Social Sciences (SPSS.v.21.0) was used to analyse the data gathered.

The first objective sought to identify the e-procurement process in place at Western Regional Health Directorate. The study revealed that the Western Regional Health Directorate is using the GHANEPS platform for its e-procurement processes. The second objective sought to assess the benefits of e-procurement to Western Regional Health Directorate. The study identified reduction in administrative cost, increased efficiency, reduction in the time and effort required to complete a purchase order as the major benefits of e-procurement to Western Regional Health Directorate respectively. The third objective sought to determine the challenges of e-procurement at Western Regional Health Directorate. The study revealed that, support from stakeholders, resistance to adoption, availability of supporting infrastructure and facilities and security and authentication issues were the challenges associated with e-procurement at the directorate. The fourth objective sought to establish the relationship between e-procurement and organizational performance. The study identified a positive relationship between e-procurement and organizational performance.

5.2. Conclusion

E-procurement is an important part of doing business in today's competitive environment, and that the role of e-procurement plays in institutions cannot be over emphasized. Despite its importance, it is faced with many challenges which need to be tackled to make the procurement unit of institutions more vibrant as their activities go a long to impact on the performance of the whole organization or institution. For this reason, the e-procurement method has been adopted to replace the traditional procurement method to address most of the challenges in this unit. The study revealed that there was a positive relationship between e-procurement and organisational performance. The study concludes that the Western Regional Health Directorate is using the GHANEPS platform for its e-procurement processes and that the e-procurement is duly implemented at the directorate.

5.3. Recommendations

The following recommendations were made:

1. There should be a strong commitment on the part of government in the key area of eprocurement infrastructure development in the country.
2. Proper policies, legislations and regulations should also be put in place to safe guide the whole system of e-procurement, in that e-procurement comes with own security issues.
3. To embrace the e-procurement, sufficient training, education, and workshop should be organized for procurement practitioner for them to sharpen their skills and appreciate the real benefits of e-procurement.



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APPENDIX: QUESTIONNAIRE

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

AN EVALUATION OF THE IMPLEMENTATION OF E-PROCUREMENT IN THE WESTERN REGIONAL HEALTH DIRECTORATE OF GHANA

This is a questionnaire designed to evaluate the implementation of e-procurement in the Western Regional Health Directorate of Ghana. You are assured that all information provided will be used for only academic purposes and will be kept strictly confidential. Please your cooperation and honesty will be deeply appreciated. Thank you.

Section A: (Kindly tick your response)

- i. Gender
☐ Male ☐ Female
- ii. Age
☐ Below 25 years ☐ 26- 35 years ☐ 36 – 45 years ☐ Above 46 years
- iii. For how long have you been working with the Directorate?
☐ 0-3 years ☐ 3-6 years ☐
☐ 7-10 years ☐ 11 years and above

Section B: Current E-Procurement Processes

1. Do you know the e-procurement processes undertaken at the Directorate?
☐ Yes ☐ No ☐ Somehow
2. What are the main determinants of the e-procurement processes at the Directorate?
☐ Type of management ☐ Availability of enough financial resources
☐ Nature of services offered by organizations ☐ The market structure of the suppliers
☐ Others (please specify).....
3. What are the procurement methods in place at the Directorate? (tick as many as apply)
☐ International Competitive Tendering ☐ National Competitive Tendering
☐ Restricted Tendering ☐ Two-Stage Tendering
☐ Singles Source ☐ Request for Quotations (RFQ)
☐ Others (please specify).....
4. Are you aware of the GHANEPS platform?
☐ Yes ☐ No
5. Is the Directorate on the GHANEPS platform?
☐ Yes ☐ No

6. How effective is the e-procurement process at the Directorate?
☐ Very Effective ☐ Somewhat Effective ☐ Not Effective
7. Are you satisfied with the e-procurement process in place at the Directorate?
☐ Highly Satisfied ☐ Satisfied ☐ Fairly Satisfied ☐ Not at all Satisfied
8. What is your opinion on the e-procurement process in place at the Directorate?
☐ Very good ☐ Good ☐ Bad, it should be removed ☐ Very bad, it should be stopped
9. What are the technology tools used for the e-procurement process at the Directorate?
☐ E-noticing ☐ E-Invitation ☐ E-tendering
☐ E-Evaluation ☐ E-award and e-contract ☐ E-executing of the Contract
☐ E-evaluation and auditing

Section C: Benefits of e-Procurement to Western Regional Health Directorate

10. What are some of the benefits of e-procurement? (tick as many as apply)
- ☐ Reduction in administrative costs
☐ Increased efficiency in the procurement of items.
☐ Reduces cost
☐ Greater contract fulfilment,
☐ Higher expenditure under supervision
☐ Reduces the time and effort required to complete a purchase order,
☐ Others (please specify).....

Section D: Relationship Between E-procurement and Organizational Performance

Please indicate (by ticking) to what extent you agree or disagree with the following statements

No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
11	E-procurement ensures sales grow through the proper management of inventory levels.					
12	E-procurement delivers dependability in (on-time delivery, order fill rate, frequency of delivery, and delivery speed) performance					

13	E-procurement helps the organisation save cost which translates into higher profit margins					
14	E-procurement helps increase market share by improving sales efficiency					
15	E-procurement improves customer satisfaction					
16	E-procurement improves information and knowledge sharing					
17	E-procurement ensures organisational flexibility by improving the firm's ability to adapt to changes in the business environment					
18	E-procurement improves product quality and service delivery					

Section E: Challenges of E-Procurement

Please indicate (by ticking) to what extent you agree or disagree with the following statement

No	Statements	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
19	Support from all Stakeholders					
20	Availability of Supporting Infrastructure and Facilities					
21	Technology Adoption					
22	Resistance to Adoption					
23	Security and Authentication issues					
24	Availability of Financial Resources					
25	Human Resource Capacity					

THANK YOU