

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

KNUST SCHOOL OF BUSINESS

**E-PROCUREMENT AND ORGANIZATIONAL PERFORMANCE: THE
MODERATING ROLE OF INFORMATION TECHNOLOGY CAPABILITY**

BY

ABDUL-LATIF IBRAHIM

(BSc. Accounting)

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REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE
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DECLARATION

"I hereby declare that this submission is my own work toward the Master of Science in Procurement and Supply Chain Management degree and that, to the best of my knowledge, it does not contain any material previously published by another researcher that has been accepted for the award of any other degree of the University, except where appropriate acknowledgement has been made in the text."

Abdul-Latif Ibrahim

(PG9458121)

.....
Signature

.....
Date

Certified By

Dr. Emmanuel K. Anin

(Supervisor)

.....
Signature

.....
Date

Certify By

Prof. David Asamoah

(Head of Department)

.....
Signature

.....
Date

DEDICATION

This thesis is dedicated to my family.

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My gratitude also goes to my parents and siblings for their immense support during this journey. My sincere thanks also go to my supervisor, Dr. Emmanuel K. Anin, who played an instrumental role in helping me complete this thesis successfully. Finally, my gratitude goes to all the respondents who provided responses to my questionnaires and making this project a success.

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ABSTRACT

The rapid growth of internet usage has compelled firms to adopt technology tools in their business practices. To this end, e-procurement has been long recognised as a key driver of procurement practices that allows firm to create value and improve organisations performance outcomes. While e-procurement has been conceptually linked to organisational performance an understanding of how e-procurement can influence organisational performance remains limited. The study aimed to investigate the effect of e-procurement on organizational performance in the context of IT capabilities. The study specifically sought to investigate the extent to which e-procurement

practices affect organizational performance, as well as the effect of IT capability on organizational performance and the moderating role of IT in the relationship between e-procurement and organizational performance. The study analyzed the literature on all the constructs and identified and formed hypotheses. The RBV theory was used as the theoretical lens for the study. A crosssectional survey design was used in the study. Data was obtained from 153 businesses in the service, manufacturing, and other industries using a questionnaire. The data was analyzed using descriptive and inferential statistical methods. The study found that IT capability positively and significantly moderates the relationship between E-procurement and organizational performance and that the effect is stronger at high levels of IT capability. Additional finding indicates that IT capability positively moderates the E-procurement-organizational performance link and thus represents an organizational resource that can facilitate the implementation of e-procurement practices to enhance organizational performance. The research recommends that businesses that want to improve their performance should make it a priority to implement e-procurement across all their business operations. It is further recommended that businesses should make investments in the development of superior IT capabilities to boost their performance because the researchers discovered a positive relationship between IT capability and organizational performance.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

As the input phase of organizational activities, the procurement process is one of the primary drivers of the supply chain (Suhaidi, 2021). The basic purpose of procurement (Bhadaoria & Karande, 2020; Ali, 2018) is to deliver the correct goods at the right time, place, and for the greatest price. In order to cut administrative expenses and stay current with market conditions, every firm must maintain an efficient and effective procurement process in a competitive marketplace. Firms that use effective procurement methods can buy goods and services at the greatest possible price, quality, quantity, and timing (Jayawardhena & Jayaratne, 2019). One key factor that is recognised as a driver of procurement operational excellence is electronic procurement.

The notion of electronic procurement is attracting attention among procurement scholars and practitioners (Faheem & Siddiqui, 2019). Most organizations, including public entities, are investing in e-procurement systems that allow for e-sharing, e-advertising, e-submission, e-evaluation, e-contacting, e-payment, e-communication, and e-checking and monitoring (Mapanga & Garidzirai, 2021; Rotich & Okello, 2015; Sijaona, 2010).

Suhaidi (2002) defines e-procurement as a digital transaction process that involves the use of the internet and technology tools to purchase products and services. It refers to the process of automating the procurement process in order to increase efficiency and value for money (Suhaidi, 2021). E-procurement increases transparency and fairness in the tendering process by granting all providers access to the same information, operating under the same timeframes, and being evaluated using the same criteria. E-procurement plays a crucial role and has an impact on how an organization achieves its operational and strategic goals (Oginga, 2021; Cyfert et al., 2021; Oh,

Yang & Kim, 2014; Croom & Brandon-Jones, 2005). Thus, e-procurement is crucial in enhancing operational success and accordingly organisational performance. It is therefore not surprising that e-procurement is attracting interest among both practitioners (Nawi et al., 2016; Oginga, 2021; Cyfert et al., 2021)

While recognising e-procurement and its influence on performance outcomes, it is important to recognise the role of information and technology (IT) capabilities in driving e-procurement practices. Referred to as the firms' ability to mobilize and deploy IT-based resources to improve business process in a cost-effective manner (Karimi et al., 2007), IT capability allows firms to develop supply chain relationships and cost savings by providing real-time information for transaction processing, delivery tracking and other value-adding services to improve operational efficiency (Kristoffersen et al., 2021; Chege et al., 2020). In particular, IT resources are more important to a company's value, which includes growth prospects, intangible assets, and innovation, among other things (Chege et al., 2020). Firms with strong IT capabilities typically outcompete their rivals (Kristoffersen et al., 2021).

Although e-procurement and IT capability have been conceptually linked to firm performance, such relationship requires an empirical validation to inform practice. Accordingly, this study is set out to examine the extent to which e-procurement influences organisational performance and whether IT capability conditions such relationship.

1.2 Statement of the Problem

In today's dynamic worldwide competitive business environment, technology-based innovation has become vital for enterprises to give cost-effective overall solutions to their clients and better consumer loyalty through unique ideas and tactics (Kristoffersen et al., 2021; Chege et al., 2020).

Organizations have been forced to change their focus away from traditional business approaches and toward automated paperless business processes such as e-procurement and e-supply chain innovation in order to increase performance as information and communication technology (ICT) has grown (Candela & Ulises, 2022; Laryea & Ibem, 2016). Businesses use e-procurement to create value and strengthen relationships with their business partners, particularly in small and medium-sized firms. Traditionally, most businesses spend one-third of their earnings on purchasing goods and services. Non-value-added processes are time-consuming, making it difficult for corporate customers to receive high-value or high-volume products (Azanlerigu & Akay, 2015). Traditional purchasing methods have been plagued by issues such as inefficient purchasing, redundant and disconnected processes, and purchases from non-strategic sourcing sources, to name a few (Rai et al., 2006). In Ghana, inadequate technological infrastructure has been recognized as a hurdle to e-procurement adoption in terms of public sector system integration.

The rapid growth of internet usage has compelled firms to adopt technology tools in their business practices. To this end, e-procurement has been long recognised as a key driver of procurement practices that allows firm to create value and improve organisations performance outcomes (Rizki, 2019; Lewis-Faupel et al., 2016).

While e-procurement has been conceptually linked to organisational performance (Candela & Ulises, 2022; Laryea & Ibem, 2016), an understanding of how e-procurement can influence organisational performance remains limited.

In addition, IT capability plays an important role in the implementation of e-procurement. IT serves as key enabler of e-procurement (Kumar & Ganguly, 2020) as it facilitates fast and accurate procurement processes. Thus, IT capability takes on significance value in enhancing eprocurement practice and its performance benefits (Kumar and Ganguly, 2020). Despite this recognition, the

contingency role of IT capability in the link between e-procurement and organisational performance lacks theoretical specification and empirical examination. In an attempt to address this gap, the current study seeks to develop and test a model that argues that eprocurement directly influences organisational performance and that such performance consequences of e-procurement is conditional upon differences in levels IT capability.

1.3 Research Objectives

The general objective of the study was to examine the impact e-procurement on organizational performance under the condition of IT capability. Specifically, the study is guided by the **following specific objectives**:

1. To examine the extent to which e-procurement practices affects organizational performance.
2. To assess the effect of IT capability on organizational performance.
3. To investigate the moderating role of IT in the link between e-procurement and organisational performance.

1.4 Research Questions

1. Does e-procurement have an impact on organizational performance?
2. Does IT capabilities have an impact on corporate performance?
3. Is the relationship between e-procurement and organizational performance moderated by IT capability?

1.5 Significance of the Study

This study offers theoretical and practical contributions in respect of e-procurement practices.

Theoretically, the study extends procurement literature by showing how e-procurement drives organisational performance. The study also extends the resource-based view theory to procurement research to enhance

procurement scholarship. Furthermore, by examining the moderating role of IT capability, the study further contributes to procurement literature by showing when the performance benefit of e-procurement can be maximized.

Managerially, the study informs practices by providing evidence to show the importance of automating the procurement processes and when the adoption of e-procurement systems become more or less beneficial. The findings are expected to guide policy decision regarding how to design and implement e-procurement system to improve value for money.

1.6 Summary of Methodology

Based on the purpose of the study, an explanatory research design with survey strategy is utilised to examine the effect of e-procurement practices on performance under the condition of IT capability. Firms within the Northern Region constitute the population of the study. A sample of 100 procurement officers were selected using purposive sampling technique. The study relied on primary data using questionnaire instrument. Descriptive and inferential statistics were employed to analyse the data with the aid of PROCESS MACRO in SPSS.

1.7 Scope of the Study

This study examined the effect of the relationship between e-procurement and organizational performance with a moderating role of IT capability. E-procurement focuses on the extent to which a firm automates its procurement system (Hofmann, 2018), while IT capability depicts the extent to which a firm is able to deploy IT in its procurement processes (Hofmann, 2018). organizational performance refers to how a firm can meet its operational needs (Devaraj et al., 2012). Geographically, the study focused on firms within the Northern Zone (Northern, North-East, Upper East, Upper West, and Savannah Regions) of Ghana. The geographic scope was chosen because it is the largest zone in Ghana and would provide representative of the population.

1.8 Limitations of the Study

While the study explores the performance consequences of E-procurement under levels of IT capability, the study, as with others, has some inherent limitations and as such should be evaluated in that light. First, the study could not include certain key factors such as supplier collaboration and top management support. For example, effective implementation of E-procurement system requires the collaboration of suppliers and top management commitment to allocate resources such as financial resources to offer training and secure IT infrastructure. As such, such variables may play contingency roles in the analysis of E-procurement and organisational performance outcomes. Future studies may consider these to ascertain if more insight may emerge. Second, the study could have adopted mixed approach, ie. Qualitative and quantitative methods to gain a deeper understanding of the phenomena being studied. However, due to time constraints, the study could not apply this approach. Future study may consider this to improve the rigor of the outcome.

1.9 Organization of the Thesis

The research is divided into five chapters. The first chapter introduced the study by looking at the study's history, problem statement, objectives, research questions, significance of the investigation, scope, constraints of the study, and study organization. The second chapter also examines important literature on e-procurement, IT capacity, and organizational performance. Chapter three deals with the methodology used for the study and the profiling of the study organization. Chapter four presents the empirical results obtained during the study. Lastly, chapter five also deals with the summary, conclusion and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter captured the review of related literature. The researcher touched on the definitions of e-procurement, information technology capability and organizational performance, as well as the thematic areas of the specific objectives which were also addressed by presenting various perspectives by different scholars. To ensure consistency and quality of presentation, the study highlighted. The Resource-Based View theory was used for the study and hypotheses were also developed.

2.2 CONCEPTUAL REVIEW

2.2.1 Defining the Concept of Procurement

The acquisition of goods and services for the direct benefit or use of governments, corporations, or individuals at the lowest possible total cost of ownership, in the right quantity and quality, at the right time, and in the right place is referred to as procurement (Atkinson, 2003). Thus, procurement depicts the overall process of acquiring goods, services and works through purchasing, lease, rental, hire-purchase or other legal means of contracting (Devaraj *et al.*, 2012). Procurement practices include: planning, sourcing and contract management. identification of needs. sourcing and tendering This is typically done through a contract. As a result, one of the main objectives of procurement is to provide consumers with the finest service at the most affordable price while preserving the cost structure of the government (Jeppesen, 2010). Both economic and social gains can be reaped by procurement, however, the latter are typically seen as the indirect positive effects of cost reductions and environmental improvements (Wickenberg, 2004). Furthermore, as a method of implementing public policy, it has a significant impact on the economy as well as a direct impact on people's everyday lives (Jeppesen, 2010). When public entities acquire

commodities, works, and services with public monies, this is referred to as public procurement (World Bank, 1995a). Public procurement includes everything from small commodities or services like clips or cleaning services to huge commercial operations like the creation of infrastructure like highways, power plants, and airports.

The annual value of governmental procurement for goods, projects, and consulting services is 600 million US dollars, or nearly 10% of the nation's GDP (World Bank, 2003). Public procurement is therefore a crucial responsibility of governments in both developed and developing nations since large-scale financial outflows have a big impact on their economies and need for prudent management (Thai, 2001). Thus, achieving the government's economic, sociopolitical, and other goals depends on the efficient management of public procurement functions. After personal emoluments, public procurement accounts for 50%–70% of the national budget, 14% of GDP, and 24% of imports in Ghana. Therefore, public procurement affects the nation's social and economic conditions (World Bank, 2003a; Adjei, 2006). The Public Procurement Act of 2003 (Act 663) defines public procurement as the acquisition of goods, works, and services for the direct benefit or use of governments, corporations, or individuals at the lowest total cost of ownership, in the right quantity and quality, at the right time, and in the right place (PPA Module, 2007). It is important to note that, in contrast to private procurement, public procurement is a business activity carried out within a political framework that must take into account efficacy, national interest, accountability, and integrity (Jeppesen, 2010).

2.2.2 Importance of Procurement

Finding, negotiating, and acquiring goods, services, or works from an outside source is the process of procurement, which is frequently done through tendering. Every organization, whether public, commercial, or quasi-owned, benefits and recognizes the importance of procurement, according to

a UN insight on the subject. Regardless of how big the organization is or isn't, purchases do have some relevance for the company. Departmental choices frequently have ramifications for procurement that may affect the overall cost of carrying out the decision (Jeppesen, 2010). According to the United Nations, private sector procurement is considered as a strategic activity that works to increase the profitability of the organization. Procurement, according to the public procurement authority, will help to streamline procedures, cut raw material prices and costs, and uncover better sources of supply. Legislation requires openness, transparency, and nondiscriminatory conduct at higher levels of expenditure (PPA manual). According to EU public procurement legislation, opening up public procurement to competition and ensuring the free flow of goods and services within the EU are the two main goals of this legislation. Pay (salaries and wages) and non-pay (all other expenses) are the two categories into which expenditures are broken down within an institution. In order to ensure that the best value for money is given when this investment is committed, procurement is concerned with managing a sizeable proportion of nonpay expenditure (Anderson, 2000). In the business sector, procurement is viewed as a strategic job that aims to increase an organization's profitability. The simplification of processes, the lowering of raw material costs and prices, and the determination of the best supply source all seem to be aided by procurement. Private sector procurement is regarded as a profit center that aids businesses in maximizing earnings by lowering material prices, claims Jeppesen (2010). Hospitals waiting for medications, teachers waiting for textbooks, and cities waiting for supplies, according to the World Bank (2014), would have been a serious blow. Additionally, a significant amount of money would have been lost in the absence of effective procurement. (PPA 2003) asserts that procurement must be reliable to achieve its goals. The level outlined in ACT 663 should be used as a guideline when accounting for services and works. Organizations guarantee that accountability is promoted throughout their operational demands. Public institutions are held accountable for the acquisition

of commodities, works, and services to guarantee that the resources allotted were used effectively (Public Procurement Manual) In addition, there would be a lack of transparency and corruption affecting citizens resulting in losses when people such as Entity are not held accountable for their actions. Corruptions are estimated at billions of dollars every year. In the Middle East and North Africa (MENA) region; all these factors come into play very strongly. Public procurement accounts for 15-20% of domestic products.

2.2.3 Procurement Challenges

Many developing nations have implemented reforms aiming at improving the transparency and efficiency of the procurement system, as well as enhancing the accountability of public procurement authorities. However, reforming governmental procurement procedures has proven difficult (Jeppesen, 2010). Lack of adequate procurement skill levels in procuring organizations is the single biggest barrier to the development of an effective procurement system (Jeppesen, 2010). Due to the dearth of qualified members, particularly in rural areas, many District Assemblies are unable to establish Tender Committees or Tender Review Boards (Atkinson, 2003). Public procurement has been plagued by mismanagement, corruption, and vendor tricks. The lack of qualified procurement workers is one of the main causes of problems with public procurement (Thai, 2010). There used to be a common misconception that basic training was sufficient, but there is now evidence to suggest that training is only one component of becoming a successful procurement expert (Atkinson, 2003). The most effective procurement professionals combine knowledge, solid relationship management, communication skills, and the capacity to think laterally (Guinipero and Handfiled, 2004). The combination of unpredictable application of current laws and lax enforcement generates vast opportunity for system abuse, frequently with complete impunity (Atkinson, 2003). Public bodies will go to tremendous lengths to seem to be formally in

accordance with procedural and other norms while seriously undermining the purpose and spirit of such limitations. Role conflicts between councilors and contract committees, as well as interference in the procurement and disposal process by some politicians and technical staff, were found to have already occurred as a result of delayed orientation of key stakeholders in the new procurement reforms/laws to stakeholders, service procedures, and particularly local government councilors. The effective implementation of Uganda's procurement reforms is severely hampered by the lack of full-time operational procurement units in local government (Nsugaba, 2006). According to Nsugaba (2006), there are no set standards for funding, paying a contract committee allowance, or running a procurement unit. When the contract committee was established in Uganda, the Poverty Monitoring Fund's funding for the local government tender board was slashed by more than 90% (Nsugaba, 2006). Local government income receipts have been declining, making it difficult to fund procurement reforms. As a result, people in charge of the procurement process have low morale (Nsugaba, 2006). The local government faces the issue of attracting qualified service suppliers (Atkinson, 2003). Also, inadequate capacity in effective procurement planning has led to delays in submitting requirements from users, delays in procurement, and led in some instances demand for emergency procurement (Atkinson, 2003).

2.2.4 The Concept of E-procurement

E-procurement is the practice of electronically procuring items and services needed for an organization's operations. The procedure involves identifying and defining user needs, contract sourcing, contract search, trigger payment, and support post-supply evaluation (Nani & S. Ali, 2020). According to Osei-Tutu et al. (2019), e-procurement refers to using electronic tools across the entire purchasing process, from requirement identification to payment and possibly contract administration. It is also known as using electronic communications and transaction processing by

government organizations to make purchases or submit bids for public works projects (Peris et al., 2013; Baily et al., 2008). E-procurement is a type of e-business capability that employs information technology and purchasing resources to process purchasing orders, exchange information with suppliers, and support purchasing decisions (Sánchez-Rodríguez et al., 2019; Devaraj et al., 2007; Ordanini & Rubera, 2008). E-procurement has a direct impact on business performance, efficiency, and effectiveness, as well as the complete organizational value chain. It also has an influence on business process transformation by simplifying and streamlining the total procurement process of products and services; decreasing red tape and administrative costs; and enhancing transparency by making the company more sustainable-oriented (Belisari, Binci & Appolloni, 2020). E-procurement is a buyer-side e-commerce software that enables customers to find, assess, and select suppliers as well as carry out transactions online. With the aid of such a tool, buyers can interact with their suppliers throughout the purchasing process and share ordering and logistical information (Truong, 2019; Truong et al., 2012). According to Saastamoinen et al. (2018), electronic procurement is the use of integrated (usually web-based) communication technologies for all or a portion of the purchasing process. This can include steps like user need identification, search, sourcing, negotiation, ordering, receipt, and post-purchase review. Eprocurement is the digitalization of the entire public procurement process, from the sourcing stage (pre-award: before the provider is selected) through to the purchasing stage. The electronic method is used by governments to tender for public projects and purchase products and services. Eprocurement often calls for the deployment of an inter-organizational information system that automates the procurement process in order to increase the effectiveness, quality, and transparency of government procurement (Adjei-Bamfo et al., 2020). The reproduction of procurement activities over the internet is known as e-procurement. It is concerned with any technological advancement that makes it simpler to order goods and services online and automates the procurement process. E-

procurement comprises deliberate reconfiguration and integration of the business processes of the customer and supplier in order to enhance transaction efficiency and effectiveness (Belisari, Appolloni & Cerruti, 2019). It goes beyond simply making purchases online. According to Juwono (2020), the goal of E-Procurement is to include anti-corruption measures into public procurement (Neupane et al., 2014). Electronic procurement is described as the use of electronic commerce, often known as e-commerce, to purchase products and services. It often entails the use of various electronic technologies, such as the Internet, to automate and simplify the procurement process in an organization, from the beginning stages through the payment stage (Jain, Abidi & Bandyopadhyay, 2018). In order to execute procurement processes, such as finding and choosing suppliers or service providers, placing orders, fulfilling orders, and making payments for goods and services, e-procurement refers to the systems, apps, tools, and procedures that are employed (Aduwo et al., 2020). Adoption of e-Procurement is positively and significantly correlated with organizational context, industry and top management support, information technology infrastructure, information technology expertise, business-to-business (B2B) knowledge, perceived indirect benefits, perceived success of competitors, and trading partner readiness (Premathilaka & Fernando, 2020).

2.2.5 E-procurement Categories

2.2.5.1 E-Tendering

Employing technology to contact suppliers with questions about information and prices and then receive their answers (De Boer et al., 2002). E-tendering has been used in several organizations to make the procedure very viable and hassle-free. From the beginning step, i.e., the publication or advertisement of the tender document, supplier selection, the evaluation stage, negotiation, and other pertinent stages of the cycle are done and completed online or via the internet. Systems and

software have been constructed to improve this process, and interfaces on the internet have been made to facilitate tendering without having to meet clients in person.

According to McConnell (2009), the hotel industry uses e-procurement systems to issue tenders to suppliers to find the best supplier of raw materials like food and other products that are required for customer satisfaction. The phase of the e-procurement system process that involves the union of e-submission and e-access is facilitated by e-tendering in various organizations. This union typically develops in organizations as a result of the electronic dissemination of requests for proposals for the supply of materials within the organization and contract notice during the phase of e-noticing (Gunawardhana & Karunasena, 2012).

2.2.5.2 E-Sourcing

Using internet technology, e-sourcing is the process of finding new suppliers for particular types of purchasing requirements (Knudsen 2003). In the current supply chain, businesses have created very effective contemporary methods for connecting with suppliers, identifying suppliers to award contracts to, and continuing to provide or provide buyers with their requirements. By leveraging the internet in general or the B2B information exchange marketplace, e-sourcing allows for the discovery of new potential suppliers as well as providers who can meet customers' requests (Ofunya et al., 2015).

2.2.5.3 E-Information

E-information is the collection and dissemination of buying data via the internet to both internal and external parties. Today, as opposed to the past, when information was distributed physically and through numerous ways, it is distributed and received both internally and externally through means of the internet (Beor et al., 2001). To conduct business effectively, buyers and suppliers both require pertinent information. Suppliers may also require information from buyers, therefore

communication between the two parties is necessary. By transmitting and evaluating information online, e-information has greatly facilitated this process (Harink et al., 2002). Additionally, it entails managing information about the suppliers' quality certifications, financial standing, or other distinctive qualities (Francis et al., 2015).

This calls for uniform standards. The adoption of eXtensible Markup Language (XML) as the basis for standards appears to be gaining support (S&A, 2003). The communication's content and the general data types are both specified by the XML standard (KPMG, 2001). Birks et al. (2001) highlight a standard for formatting electronic catalogs as a key issue in the definition of eProcurement needs. The World Bank (2003) asserts that designing an e-Procurement system in an open environment facilitates system changes and allows compatibility with other systems. The DOF (2001) claims that another aspect that will affect the success of the implementation and acceptance of e-Procurement in government agencies is the ease with which procurement-related data may be transferred both inside the agencies and between their systems.

2.2.5.4 E-Invoicing

The procedure known as "e-invoicing" involves an entity receiving invoices from suppliers electronically and sending those invoices to its customers, who then make and receive electronic payments through bank automated clearing (Doherty et al., 2013). Because both parties can easily track the invoicing process and the order approval process while also making it simpler to monitor when the invoice is issued, the purpose of the e-invoicing system in companies is to assure efficiency in enhancing the buyer-supplier relationship. 2015's (Akibate)

2.2.5.5 E-Awarding

In the hotel sector, e-awarding is an additional e-procurement technique used to award raw materials through an evaluation and award process that honors the best offer. The e-awarding

module seeks to improve the efficiency of the e-procurement system by enabling electronic review of submitted bids using the evaluation formula and awarding criteria of an organization (Doherty et al., 2013). Additionally, the e-giving module creates a setting where electronic auctions can be used in government offices, especially when the mechanism for creating market opportunity permits it.

The proper integration of an organization's e-awarding of tenders with the e-notification module, which enables the publication and generation of contract award notices, is a crucial factor that promotes effectiveness and efficiency in tender evaluation and contract awarding (Moon, 2005). One keyway that e-awarding enhances procurement performance is the capacity to download electronic data, which saves time and guarantees that tendering methods are consistent throughout the organization by providing a specified criterion.

2.2.6 The Role of E-Procurement

Due to the growing trend of acquiring inputs and other raw materials from outside the organization, electronic procurement, often known as "e-procurement," has developed into a crucial strategy in the majority of organizations' e-business plans (Deloitte Consulting, 2001). Currently, basic procurement capabilities are increasingly becoming a firm expense. More and more companies are understanding the requirement of incorporating Internet-based technologies into their order process due to the benefits of lower transaction costs, better opportunities for competitive sourcing, and improved inter-organizational coordination.

In most cases, internal customer satisfaction through the use of the E-Procurement function can help a company remain competitive in ways other than only by reducing costs. Several of these are listed by Van Weele (2005), including these: e-procurement can save quality expenses by ensuring that chosen vendors deliver goods and services that comply with strict quality standards.

By ensuring that the purchased components do not result in complaints about the user department or the finished product to the customer, e-Procurement can help save quality costs. Due to the idea of product variation, product standardization can be improved internally while using eprocurement. By establishing predetermined product standards, this can be accomplished by reducing the diversity of suppliers and/or parts. Suppliers contribute to product design and innovation of later invention in the industry, or the results of intensive connections between suppliers and user departments in any firm. By actively fostering it, e-Procurement can aid in accelerating and sustaining innovation, improving product and user satisfaction, and promoting this kind of communication.

E-Procurement has improved supplier merging or connecting for multi-organizational procedures as well as procurement automation for internal organizational processes.

2.2.7 Benefits of E-Procurement

Implementing an e-Procurement system has a number of benefits, such as increased transparency, contract awards, online bid submission, and more tenderer involvement due to better information and quicker access to opportunities. A 2013 Asian Development Bank (ADB) study supports this. Other advantages include, among other things, speedier procurement operations due to an online system, improved tools to combat corruption and fraud, and fewer printing of physical copies to maintain track of business transactions (Premathilaka & Fernando, 2020). Companies that go into e-procurement technology have been recognized with major benefits. Lower administrative costs, quicker order fulfillment cycles, lower inventory levels and product pricing, and the ability to collaborate and plan with business partners on new technologies are just a few of these advantages (Yang, Fu, and Zhang, 2021; Davila, Gupta, and Palmer, 2003). Five key topics in e-procurement

were identified by Belisari, Binci, and Appolloni (2020): changes in overall acquisition costs, organizational features, governance structure modifications, system definition, and implementation management. The motivations behind e-procurements, according to Hallikas, Immonen, and Brax (2021), are price reductions in tendering, shortened material sourcing times, decreased administrative costs, decreased staffing levels in procurement, gaining a competitive edge, improved communication, improved decision-making and market intelligence, and shortened operating and inventory costs.

2.2.8 Barriers to E-Procurement

The following problems, according to Chen et al. (2022), prevent the adoption of e-procurement: A few of the issues are transaction security, a lack of supplier e-procurement solutions, high technology costs, a lack of a legal framework, a lack of technical expertise, a lack of knowledge of E-procurement, a lack of identified real business benefits, a lack of data exchange standards, and a lack of business relationships with suppliers. Brandon-Jones and Kauppi (2018) highlighted several obstacles to e-procurement, including: Due to the nature of the legal institutions involved, a number of specific regulations and standards have been created for e-procurement applications that incorporate audit, accountability, and compliance standards with national and international laws to ensure supply competition and transparency in contract awarding; cost/benefit concern: arises when the costs outweigh the benefits. Incompatibility with external parties (supply chain/business partners); absence of suppliers' strategies and readiness to adopt new technologies like e-procurement. External parties lack the necessary skills to communicate electronically. High cost of new IT infrastructure and software investments: The company cannot afford to make excessive investments in the new IT infrastructure and software needed to execute e-procurement. The declared purposes, goals, and context of the e-procurement application are not in line with

other organizational and administrative decisions and are not connected to the organization's processes, which results in insufficient business processes to support e-procurement; Insufficient IT infrastructure of suppliers and business partners: The supply chain's external stakeholders lack a sufficient IT foundation that is compatible with the e-procurement system. Inadequacies in the legal framework supporting e-commerce, a lack of organizational focus, a lack of top management support to move towards e-commerce, ignorance of national/global taxation regimes related to e-commerce, organizational reluctance to transition from "bricks" to "brick-and-clicks," a lack of bodies, and other factors are also strategic barriers to e-procurement. The three main categories of e-procurement impediments include organizational challenges, human resource-related obstacles, and external impediments (Jayawardhena & Jayaratne, 2019).

2.3 Organizational Performance

The assessment of an employee's behavior in connection to particular tasks or responsibilities inside an organization is known as organizational performance (Kalogiannidis, 2021). The results or actual outputs of an organization make up its performance, which can be measured against its desired outputs, objectives, and goals. Aspects of organizational success include financial performance (return on investments, profits, etc.), shareholder return (economic value added, total shareholder, etc.), and performance on the product/service market (market share, sales, etc.) (Al Khajeh, 2018). Efficiency, efficacy, and financial success are examples of more "traditional" dimensions, whereas social results and customer responsiveness are examples of more "governance"-related notions (George et al., 2019). The change in an organization's financial situation is measured by financial performance. It may also be defined as the financial results of management choices and the implementation of those decisions by organization members. Meanwhile, non-financial gains to owner-managers would include employee and environmental

lifestyle perks such as work location, employment length, and social connections (Hanaysha & Alzoubi, 2022).

Employers can collect data on performance on a monthly, quarterly, semi-annual, or annual basis to give them the knowledge they need to suggest methods to improve a particular business sector. As a result, it is possible to define employee performance as the history of outcomes obtained for each job function over a specific amount of time. According to Austin-Egole, Iheriohanma, and Nwokorie (2020), employee performance evaluation is a thorough assessment of a worker's performance that is done by watching them work over a set period of time and reviewing all the objective manuscripts or documents pertinent to how they have performed in order to determine how well they have met the objectives. Depending on the company, organizational performance may encompass factors like customer service, cost management, quality, productivity, and asset management. They may therefore be either objective or subjective as a result. Objective measurements of organizational success can be found in accounting metrics like return on equity, return on investment, profit margin, market share, or cash flow from operations, as well as financial market metrics like earnings per share, stock price, and market value/capitalization (Durst, Hinteregger & Zieba, 2019). The process of ensuring that organizational resources are used effectively can also be referred to as OP. It includes any actions or activities carried out by managers at all organizational levels in order to assess how well an organization has accomplished its goals (Shabbir & Gardezi, 2020). Human resources, organizational productivity (quality, customer satisfaction), financial accounting (return on assets), and financial markets (difference between market and book value of firm's assets) are some categories of performance indicators (Odiri & Ideh, 2021). In other words, organizational performance is a notion to assess a company's

accomplishment or a business activity carried out. It is the aspect utilized to gauge a company's effective plan that has been implemented (Mashudi et al., 2021).

2.3.1 Defining the Concept of Organizational Performance

Organizational performance is one of the most important constructs in management study. The term "organizational performance" probably has as many definitions as there are studies that have used it. Researchers frequently refer to a wide range of evaluations of transactional efficiency and input/output efficiency as performance (Stannack, 1996).

According to Daft (2000), an organization's performance may be summed up as its capacity to use resources to effectively and efficiently accomplish its goals. According to Luo et al.'s (2012) metaanalysis of organizational performance, it should be measured in terms of economics and operations: The economic performance is examined in terms of earnings, sales, shareholder return on investment, and other financial factors. On the other hand, operational performance focuses on observable indicators like customer satisfaction and loyalty, the firm's social capital, and the competitive advantage supplied by competencies and resources. Organizations place a greater value on non-financial or intangible assets than financial ones, such as customer relationships, services, quality, and performance (Kaplan and Norton, 2001).

Organizational performance is the ultimate dependent variable of interest for academics who are interested in just about every area of management. In order for academics and managers to evaluate specific actions done by businesses and managers, where firms stand in comparison to their rivals, and how organizations change and function over time, it is imperative that this be measured. Its frequent use as a dependent variable demonstrates its applicability as the deciding factor.

he literature describes three fundamental methods for gauging organizational success. For example, Hawawini et al. (2003); Hillman & Keim (2001); Roberts & Dowling (2002); Spanos, Zaralis, & Lioukas (2004) all chose a single metric because they believed there to be a relationship between that metric and performance. To compare analyses with distinct dependent but identical independent variables, the researcher uses a wide range of diverse measures in the second technique (e.g., Baum & Wally, 2003; Contractor, Kundu, & Hsu, 2003; Miller, 2004; Peng, 2004). According to Cho & Pucik (2005) and Goerzen & Beamish (2003), the third technique comprises the researcher aggregating dependent variables and assuming convergent validity based on the correlation of the measures.

For the purpose of this study, the relationship between the various constructs (organizational creativity, innovation and network ties) will be studied on their effect on organizational performance.

2.3.2 Determinants of organizational performance

According to Pang and Lu (2018), six financial factors—turnover growth rate, profitability, profits per share, return on assets, average yearly profitability per employee, and the proportion of firm assets per employee—were found to be the most important predictors of organizational performance from the perspective of human resources. Organizational alignment includes things like organizational capabilities, industry structure, organizational resources, leadership, organizational effectiveness, productivity, efficiency, flexibility, and creativity. Other examples of organizational alignment include sales growth, profitability, goal achievement, good service quality, use of public funds, statistical measures, market share, and social responsibility. Three performance axes influence an organization's long-term viability: market, financial, and operational performance. Financial performance: The main objective of businesses when it comes

to improving organizational performance is to achieve higher financial growth performance, which can be achieved by enhancing supply chain capabilities through interorganizational information systems (Gupta et al., 2020). Market performance can be attained through innovation, which has a multiplicative impact on market orientations and organizational learning, claim Gupta, Rudd, and Lee (2014). When operational performance actually meets or surpasses expectations, the firm's setup is considered to be operationally efficient. Building a strong predictive capability helps the business take full benefit of big data analytics, which boosts organizational performance and enhances supply chain performance by illuminating the structure (Gunasekaran et al., 2017).

2.3.3 Operational Performance

The idea of performance management in organisations has become widely accepted and adopted throughout the world, Salem (2003). Because of this theory, operational performance is a common phenomenon in business research for couple of years. All organisations are very sensitive when it comes to their performance in the market of their expertise. From various researchers such as Wickland & Shepherd (2003); Walter, Ave & Ritter (2006); Hughes & Morgan (2007); Brye & Swinney (2008), they all agreed on the fact that several studies in just about any area of management have treated organisation performance as the definitive, dependent variable of concern. Operational performance is all about the work performed in the organisation and the results derived from these operations.

Operational performance is the coordination of various business units inside a company to guarantee that they are all working toward the same primary objectives. Indicators of effectiveness, efficiency, and environmental responsibility include cycle time, productivity, waste reduction, and regulatory compliance are used to evaluate operational performance. However, several academics

have noted that assessing performance has been a contentious topic in both organizations and management research, including Lenz (1980) and Machuki & Aosa (2011). Both performance management and performance measurement go hand in hand. Performance management refers to the holistic process of managing and increasing the added value of operations of an organisation. Performance measurement, on the other hand, describes key indicators, methods and processes that are necessary for measuring these performances successfully.

In many business organisations, the financial analysis to measuring performance is what they mostly use and focus to measure their organisation operational performance. Chakarathy (1980) argued that the single analysis use of performance measurement is not acceptable and can lead to inaccurate measurement. Also Machuki & Aosa (2011) commented that such combination addresses concerns when addressing financial indicators alone. Some of the financial indicators of performance measurement include profit, sales, return on assets (ROA), etc. This research agrees with these scholars and that non-financial indicators or methods are valuable and equally important. Some non-financial indicators or methods for measuring performance include customer satisfaction, employee satisfaction etc.

Mitchel (2002) asserted three key goals for non-financial approaches of performance monitoring. They include motivation to achieve performance objectives, influence and impact of the external environment, and capacity to achieve desired performance. In this context, motivation refers to how employees understand and integrate the company's objective and connect it to culture, strategy, and reward. The influence and impact of the business environment, on the other hand, relates to the organization's functional ability to deliver against its established goals, whereas

organizational capacity refers to the functional ability of the organization to deliver against its defined goals.

2.4 Information Technology Capability

To support business operations and improve IT environmental competence, IT capacity refers to IT resources that can be used to share capabilities and services (Cooper & Molla, 2012). According to Guo et al. (2021) IT capability describes a company's capacity to acquire, use, combine, and reconfigure IT resources to support business operations and strategy. IT capability is the ability of a firm to acquire, manage, and deploy IT resources to support its business operations and plans (Chen et al., 2020). The ability of the company to mobilize and deploy resource-based IT by fusing existing resources with new resources is referred to as its IT capacity. The company's capabilities and performance have a construct with complicated linkages. Furthermore, information systems assist businesses to improve their performance by allowing them to customize items for higher quality while managing organizational resources (Marsudi & Pambudi, 2021). The capacity of a company to produce economic value via the use of its IT assets and know-how is referred to as its information technology capability. A firm's IT competence includes IT infrastructure, human IT resources such as technical and management IT skills, and IT-enabled intangibles such as knowledge assets, customer orientation, and synergy (Chae, Koh & Park, 2018). Ping et al. (2018) defined IT capacity as an organization's ability to gather, integrate, and deploy IT-based resources. IT capabilities may assist businesses in collecting and analyzing information and knowledge in a fast and correct manner.

Even though IT capability is seen as a type of strategic resource, its involvement in supporting the business strategy process is subject to both internal and external influences, such as market volatility, and the significance of institutional variables is frequently overlooked (Wei, Xu & Liu,

2021). Information Technology Capability (ITC) is one of the sub-constructs of the collective capabilities dimension of strategic agility, which refers to the organization's capacity to effectively use its information infrastructure and resources to derive value and enhance performance, according to Arokodare, Asikhia, and Makinde (2020). It refers to how well a business utilizes and comprehends IT to handle information internally. IT is also used to control hardware, software, services, management practices, and management talents in order to increase performance and compete (Lin, 2007). Arora and Rahman (2017) argue that IT expertise produces favorable benefits in terms of return on sales, product margins, valuation, and increased capital market. ICT capability, as defined by Qosasi et al. (2019), refers to an organization's capacity to strategically use information and communication technology functions or applications in their business activities, including the use of e-mail, websites, e-commerce, web conferencing, intranets, extranets, and other tools of a like nature (Parida et al., 2016).

The two ways to describe IT talents are as follows. First, internal use of technology-based systems and corporate competencies are linked to IT skills. The definitions that are most frequently used limit IT-related abilities to IT or business roles, meaning that these functions are indirectly in charge of creating all business value from information technology (BVIT). All functional departments and stakeholders must participate in order for BVIT to be created. By enabling IT to successfully select, put together, integrate, deploy, and use IT resources, as well as work with other business skills, IT capabilities are incorporated into the process of creating enterprise IT value (Srimarut & Mekhum, 2020). IT capability has been characterized as a company's ability to use IT-based resources in conjunction with other organizational resources and competencies to fulfill its business goals (Dubey et al., 2019).

Information technology competency, as defined by Yusof et al. (2020), refers to IT Capability, which is made up of three crucial elements: IT operations, IT objects, and IT knowledge. Physical IT infrastructure, human IT in terms of technical and administrative skills, and intangible IT in terms of knowledge assets are the three areas into which IT capabilities can be classified. The ability of a business to exchange and manage data, services, networks, and applications is referred to as IT infrastructure competency. Second, a company's ability to maintain and improve business objectives by predicting and employing IT resources is referred to as having an IT business spanning capacity. Third, a proactive IT stance refers to the organization's capacity to foster IT innovation and look for new opportunities to boost IT efficacy (Chen & Cates, 2018). The idea of IT objects denotes software, IT-based hardware, software, human resource assistance, and network components since nothing is feasible and new product creation is impossible without human intelligence engagement. Information technology expertise is defined as the extent to which a company is equipped with technical information on topics such as IT-based information systems. Technical operations in IT are also seen as a sign of technical knowledge that will impact technical operation or competence. As a result, work performance will improve, which will have an indirect and favorable impact on the success of new product development. All of this, however, is only achievable with capable operatives. IT capabilities were broken down into four sub-dimensions by Bakan and Sekkeli (2017): IT infrastructure, IT business experience, IT relationship resources, and IT people resources. Businesses can provide business applications including servers, networks, laptops, customer knowledge, help desks, and other services thanks to IT infrastructure. The capacity of a company to combine its business plan with its IT strategy is referred to as IT business knowledge. IT relationship resources refer to a company's ability to leverage IT resources and integrate IT activities into business divisions. The most crucial element of the IT asset base is the

human resources, which both serve as a strategic organizational resource and as a crucial organizational capability.

2.4.1 Information Flow and Performance

Particularly in the wake of greater globalization and outsourcing, which have had and will continue to have a substantial impact on supply chain operations, information sharing has the potential to significantly improve how multinational firms and their partners conduct business. By exchanging information about inventory levels, forecasting data, and sales patterns, businesses can reduce cycle times, expedite order fulfillment, save millions of dollars in excess inventory, and improve forecast accuracy and customer service (Mehrotra, 2011).

Information exchange can be advantageous for almost all primary categories of business operational activity. Let's start with the development chain process, where information exchange can take place with both internal and external partners during the product design phases and during product life cycle management activities. The growth of customer experience initiatives, as well as the effectiveness and efficiency of customer service operations, can benefit from information exchange in the customer chain processes (Mehrotra, 2011).

Knowledge sharing has significant psychological challenges that must be solved. There is frequently a sincere and justified worry that exchanging knowledge across organizational boundaries might put companies at a competitive disadvantage. Such barriers can be lessened by creating efficient business policies, agreements, and business plans that a company can use to establish standards and guidelines for information sharing among supply chain partners. The anxiety associated with information sharing will eventually be reduced by doing this, which will also increase productivity and open up new prospects for all parties involved. By utilizing existing technological solutions to carry out the process in a regulated and safe manner, information

exchange may be done most successfully and with the least amount of disruption for all parties concerned (Mehrotra, 2011).

Although collaborative planning, forecasting, and replenishment methods, solutions, and data interchange between organizations are available in the supply chain process, very few companies actually use them successfully to achieve a competitive edge. Currently, retailers and manufacturers operate in separate silos and use different types of planning data, which presents challenges for firms trying to apply these workflows. This leads to unneeded response times, expenditures, and inventory as a result of forecast mistake. For instance, retailers run the danger of stock outs, material shortages, missed sales, and subpar customer support. Contrarily, manufacturers are burdened by inventory expenses and obsolescence, which lower margins. In order to facilitate information sharing with extended supply chain partners, JDA and SAP both offer sophisticated and rich workflows (Mehrotra, 2011). As a result, purchasing costs are reduced, freight is delivered faster, and supplier negotiating skills are improved.

In order to achieve forecast analysis and collaborative workflows on the planning side and firm order collaboration with vendors on the procurement execution side, a large apparel, footwear, and golf equipment manufacturer implemented key features of a collaborative supply planning and procurement execution tool. The gains were double-sided. By sharing mid- to long-term predictions with suppliers, publishing near-term requisition forecasts, and obtaining supply commitments from them, material shortages and stock-outs at the component level are decreased. Additionally, the procurement and manufacturing planning activities were synced and tightly integrated, allowing planners to instantly replan globally in reaction to changes in execution. On the other side, Intelligent Buyer-Supplier clearance procedures allowed the corporate procurement group to quickly identify and address supplier fulfillment bottlenecks, leading to the benefits of

decreased procurement costs at multiple levels that were previously discussed. By using a single system to control various replenishment plans and a variety of communication channels with their supplier network, the global buying group also improved the efficiency of their execution (Mehrotra, 2011).

Due to limited visibility into supplier planning and operational limitations, manual order processing, spreadsheet dependence, and fax/phone communication with suppliers used to drain not only the corporate procurement budget but also produce out-of-date worldwide operational plans. Similar to this, international companies can connect with their supply chain partners using technology to share information and collaborate as a single unit. All of this can be done with the ultimate goal of gaining a better understanding of end-user behavior and swiftly adapting the supply chain to market changes, so that producers only create goods as demand dictates and retailers store and sell them to end-users, drastically lowering their own inventory levels and associated costs. Long-term information exchange will improve cash flow and profitability at each link in the supply chain, ultimately resulting in happier customers (Mehrotra, 2011). It will also increase supply chain responsiveness.

2.5.0 Theoretical Review

The theoretical review refers to establishing what theories already exist and how it applies in explaining the relationships between the concepts being studied (Bharadwaj, 2000). The study was anchored on the Resource-Based View (RBV) theory.

2.5.1 The Resource-Based View (RBV) Theory

The resource-based view (RBV) asserts that companies contain resources, some of which provide them a competitive advantage and some of which improve long-term performance. A business that owns (or controls) valuable, limited resources and can take advantage of them will temporarily have an advantage over its competitors. If the company is able to prevent resource imitation,

transfer, or substitution, this advantage can be maintained for lengthy periods of time (Barney 1991). Similar to this, it contends that exceptional organizational resources are a source of competitive market share advantage and may boost business performance (Arokodare et al., 2020; Barney, 1991). Improved company performance can arise from a firm's ability to successfully exploit its IT investments by having a strong IT competency (Bharadwaj 2000, Kyobe 2004, Wade and Hulland 2004). Within the scope of this study, it is possible to infer that when a company has a strong IT capability, electronic procurement of commodities becomes efficient, and organizational performance improves. Thus, when an organization's IT skills improve, more commodities are procured, and organizational performance improves.

2.6 Empirical Review

An empirical review is an academic review that focuses on summarizing and analyzing the findings of empirical research studies (Boote & Beile, 2005).

2.6.1 The Relationship between E-Procurement and Organizational Performance

According to earlier studies, organizational and technological elements such as top management support and organizational preparedness have a significant impact on e-procurement, which in turn affects company performance (Marei, 2022). Sánchez-Rodríguez et al. (2019) came to the conclusion that factors like the new system's complexity, lack of integration with other systems, including systems from suppliers, and lack of flexibility to match the current purchasing process have a negative effect on e-procurement. The information also leads us to the conclusion that strategic purchasing is essential to the development of e-procurement in SMEs, offering a potential remedy. Additionally, this study discovered that e-procurement has a favorable effect on both procurement and business performance. It can therefore be said that the performance benefits derived from e-procurement go beyond the short-term improvements in procurement process

performance to boost an organization's business performance, significantly enhancing the procurement function of SMEs.

E-procurement is favorably correlated with the effectiveness of County Governments' supply chain operations in Kenya, according to Waithaka and Kimani's findings from 2021 on the impact of eprocurement practices on supply chain performance. In their study on the e-procurement practices and performance of large manufacturing enterprises in Nairobi County, Miyoko, Marika, and Litondo (2019) found that significant manufacturing organizations use a variety of E-procurement approaches to enhance their financial performance. The procurement strategies of e-bidding, etendering, e-purchasing, and e-sourcing are a few. Implementing an e-procurement system has other effects on the performance of commercial state corporations, such as improved information flow and accountability in all activities and processes undertaken, according to Oppong's (2020) study on electronic procurement and organizational performance among commercial state corporations.

E-procurement deployment in a corporation has a substantial impact on organizational performance. Masudin et al. (2021) discovered this result while researching the influence of eprocurement adoption on firm performance (José and Camilo, 2020).

According to Rodriguez et al. (2019), there is a strong correlation between top management support, IT challenges, and strategic purchasing and e-procurement in SMEs. The results also showed a connection between corporate success and e-procurement and procurement process performance.

The results of Kumar and Ganguly's (2020) study highlighted the significance of information transparency and supply chain coordination in enhancing business financial performance through external e-procurement adoption. The results also demonstrated that supply chain coordination

affects the relationship between the spread of external e-procurement and corporate financial success. According to the results of Mafini, Dhurup, and Madzimore's (2020) investigation into eprocurement, supplier integration, and supply chain performance in South African small and medium-sized enterprises, the other three elements of e-procurement—namely, e-sourcing, eevaluation, and e-informing—were statistically insignificant in influencing supply chain integration. A favorable and strong linear association between supplier integration and the physical and intangible aspects of supply chain performance (SCP) was also demonstrated by the study.

In a study assessing the impact of the use of e-procurement system on procurement practices and performance of public hospitals in Ghana, Sarpong et al. (2018) discovered a positive correlation between hospital procurement performance and the use of e-procurement system. Although many academics have contributed to the study of e-procurement and performance outcomes, it is still unclear how and when e-procurement affects business performance.

2.7 Conceptual Framework

A conceptual framework includes key concepts, variables, relationships, and assumptions that guide the academic inquiry (Holosko, 2006). Technology is the new normal in today's business world. Organizations are finding new ways to do things efficiently with the use of technology to create a long-lasting value for their stakeholders as well as make decisions that are vital for the organization's development. Companies are continuously competing in their industries. Every organization wants to increase performance by adopting IT capability that can be used to procure goods which is not imitable. Figure 2.1 can be explained with the RBV. Blending previous literature in the study, a conceptual framework is developed to indicate the effect of e-procurement as the independent variable on organizational performance behaviors as the dependent variable IT capability playing a moderating role.

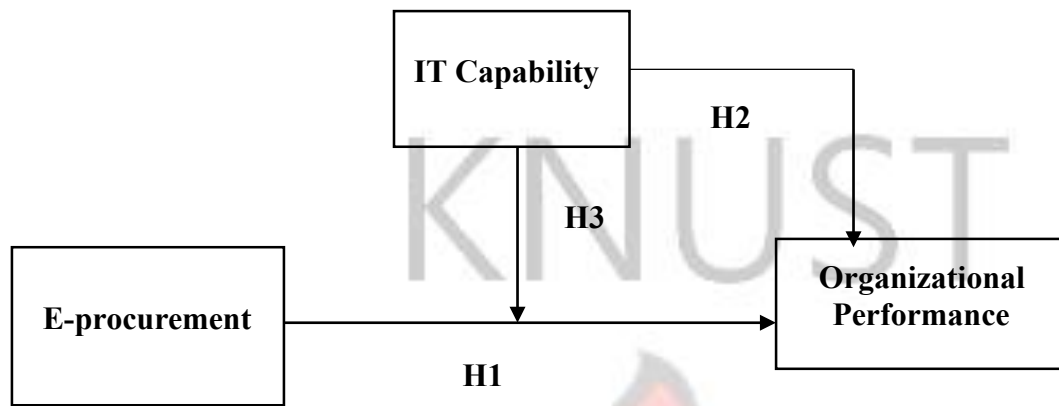


Figure 2.1: Conceptual Framework

2.8 Hypothesis Formulation

2.8.1 The Nexus between E-Procurement and Organizational Performance

E-procurement depicts the extent to which firms deliver its procurement services and needs through the adoption of IT resources (Sarpong et al. 2018). The study argues that E-procurement systems may drive organisational performance. First, E-procurement improves efficiency and effectiveness in the procurement process. For example, buyers and suppliers can share key information in real time and improve procurement planning and specification development. This reduces procurement lead time save cos (Kumar and Ganguly, 2020; Mafini, Dhurup, and Madzimore, 2020, Sarpong et al. 2018). E-procurement also allows firms to have wider access to the supply market, thereby improving competition, the quality of procured items and ultimately performance. A core argument of RBV is that organisations performance is a function of the resources it possesses (performance (Arokodare et al., 2020; Barney, 1991). Such resources may be tangible and intangible. From the lens of RBV, E-procurement represents a kay intangible resource that firms can leverage to automate and deliver procurement needs with efficiency. Accordingly, it is argued that an adoption of E-procurement system is expected to drive organisation performance. Prior

studies support this proposition (Kumar and Ganguly, 2020; Mafini, Dhurup, and Madzimure, 2020, Sarpong et al. 2018). Therefore, it is hypothesized that:

H1: There is a positive relationship between electronic procurement and organizational performance.

2.8.2 The Link between Information Technology Capability and Organizational Performance

The further proposes that IT capability may improve firms 'operational excellence and drive performance outcomes. IT capabilities indicates the IT infrastructure, resources and skills a firm has to deliver its activities (Cooper & Molla, 2012). Prior studies indicate that IT capability facilitates firm operations and allows firm to be agile efficient. In particular, IT capabilities enables firms to improve delivery obligations, operational activities and save cost. It also enhances organisations; capacity to respond to customer needs, improve customer satisfaction and firm performance (Guo et al., 2021; Chen et al., 2020). Furthermore, IT capability also facilitates lean practices and enables firms to access to wider market (Marsudi & Pambudi, 2021). From the RBV, It capability an important organisational resources that enhances firms operations and competitive advantage. Drawing from the RBV line of reasoning, it is argued that IT capabilities is likely to enhance organisational performance. This expectation is supported by prior evidence (Guo et al., 2021; Chen et al., 2020). It is, therefore, argued as follows:

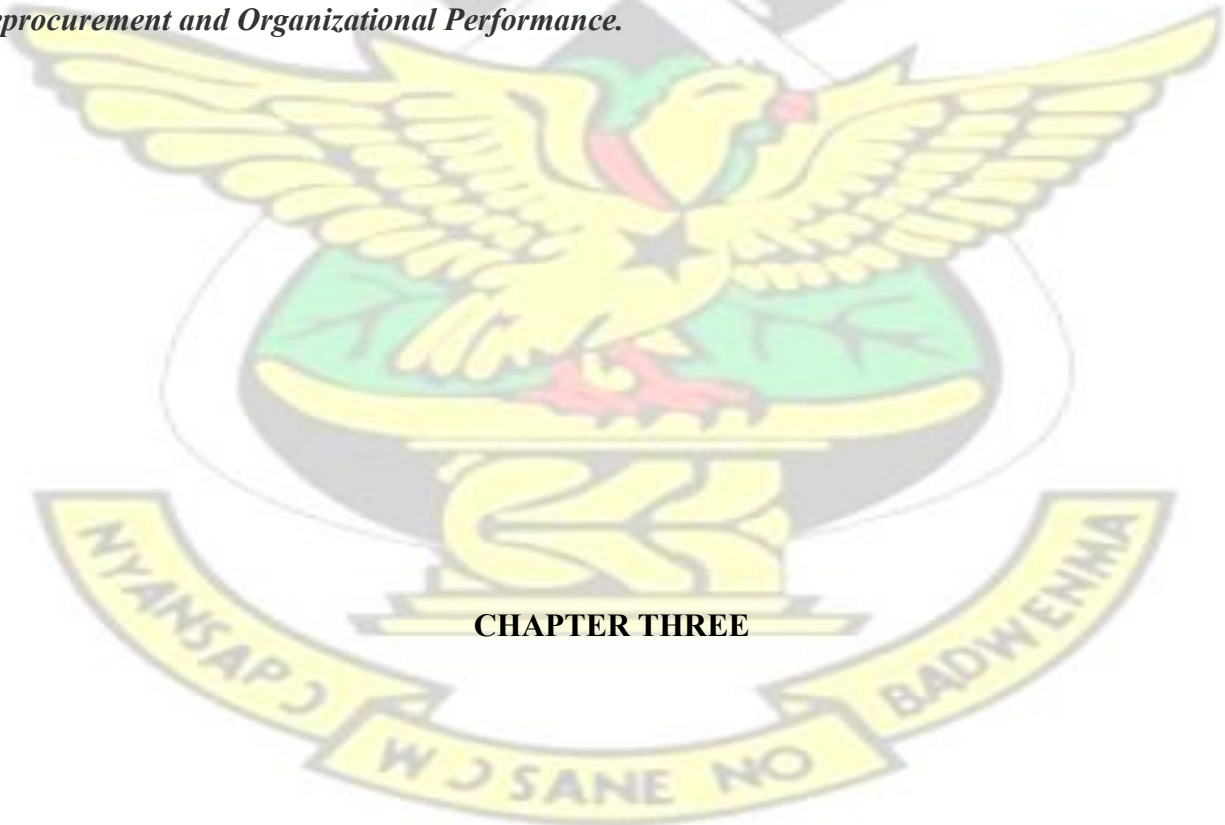
H2: There is a positive relationship between Information Technology Capability and Organizational Performance.

2.8.3 The moderating role Information Technology Capability in the nexus between e-

procurement and organizational performance

Information technology capability reflects the extent to which a firm has the IT resources and skills to execute its functions such as e-procurement (Kasemsap, 2018). From the RBV logic, IT capability represents a key organisational resource that can facilitate the implementation of Eprocurement practices (Shin et al., 2019). Accordingly, it is argued that at high levels of IT capability, the benefit of e-procurement on organisational performance is expected to be more salient. Thus, the study takes the view that the role of e-procurement on organisational performance enhances when the organizations' IT capability is high. This expectation is supported by prior research (Shin et al., 2019; Oh et al., 2014). This leads to the final hypothesis as follows:

H3: Information Technology Capability positively moderates the relationship between eprocurement and Organizational Performance.



CHAPTER THREE

RESEARCH METHODOLOGY AND ORGANIZATIONAL PROFILE

3.1 Introduction

There are two sections in this chapter. The study's data collecting and analysis procedures, including the research design, population, sampling strategies, data sources, data collection techniques, and data analysis tools, were all covered in the first section. The research setting was the main topic of the chapter's second section.

3.2 Research Design

According to Stone-Romero and Peniel (2016), a research design is the inquiry plan, structure, and strategy meant to address research questions, manage variation, and offer the glue that holds the research together. According to Al-Ababneh (2020; Izogo and Abara, 2015), research methods can be categorized into seven different categories: experiment, survey, case study, action research, grounded theory, ethnography, and archival analysis. None of these research methods is thought to be superior to the others. The study used a cross-sectional survey design and a quantitative methodology. The use of questionnaires to collect data from a sample or the complete population in order to explain a population's attitudes, beliefs, behaviors, or traits is known as survey design (Tanny, 2018). An important aspect of every research is the time frames within which the researcher will be complete the study. Considering time frames of this study, cross-sectional design is more appropriate (Yousefi Nooraie, et al., 2020; Izogo and Abara, 2015).

3.3 Population of the Study

Population is a whole group, for which some information is needed. Population includes targeted individuals from which a researcher attempts to obtain information (Banerjee & Chaudhury, 2010).

A researcher recognizes a population interested in providing the researcher with data and those of interest. The study's overall population is the larger group of participants (Asiamah, Mensah and Oteng-Abayie, 2017). They added that the target population is a representation of the general population that meets the requirements of the study and that if the participant follows these conditions, he or she is included. Per the aforementioned definitions, and given that the unit of analysis is the organisation, firms within Northern Zone of Ghana constituted the target population of the current study.

3.4 Sampling Technique and Sample Size

Several sampling technique exists in research literature to facilitate the selection of segment of the population for the study (Ben-Shlomo, Brookes and Hickman, 2013).

The methods of probability sampling and non-probability sampling are distinguished by Saunders et al. (2012). In contrast to non-probability sampling, which hides the probability of population members being chosen, probability sampling discloses the likelihood of selecting members of the population. For this investigation, the non-probability sampling method was used. The sample method used was purposeful sampling. The researcher can choose volunteers with adequate knowledge of the topic at hand using this selection approach. The current study concentrated on heads of procurement in Ghana's Northern Zone. In selecting the respondents, the study used purposive sampling techniques as this allows for selecting respondents who can offer relevant information ((Andrade, 2021; Etikan, Musa and Alkassim, 2016).

According to Saunders et al. (2009), the quality of any research is often impacted by the suitability of technique and instrumentation alone, as well as the appropriateness of the sample employed. The sample size of a study is determined by a variety of factors. According to Israel (1992), some of these variables include "the purpose of a study, population size, the risk of selecting a bad

example, and the allowable sample error." Singh (2006) asserts that there is no one set guideline or standard for determining the right sample size for a particular study. However, several writers have stated that the type of statistical analysis, tool, or techniques to be used in determining the optimal sample size should be taken into consideration (Pallant, 2007; Field, 2009; Hair et al., 2014). Since the suggested model was estimated using ordinary least squares (OLS) regression analysis, the study adopted Hair et al.'s (2014) advice to select observations that were appropriate for the investigation. According to Hair et al. (2014), a sample size of 100 is appropriate when using multiple OLS regression analysis to discover significant R-square. The study followed Hair et al. (2007)'s advice on sample size. After accounting for concerns with non-response and erroneous data, 150 companies were chosen as the study's target group.

3.5 Data Collection Method

Every research project needs primary and secondary data, respectively. The primary data consists of information that was initially gathered from an individual or group of individuals. Typically, it can be gathered by observation, surveys, or interviews. As opposed to primary data, secondary data is information that has been gathered by another person or group (Bryman and Bell, 2007). The study relied on primary data because using secondary data would have been inappropriate given the study's objective and purpose. The researcher created a survey, and procurement professionals who were purposefully chosen to take part in the study provided the primary data.

Questionnaires were the main tool utilized to gather data for this investigation. A questionnaire is defined as "all the techniques of data collection in which each participant is asked to respond to the same set of questions in a predetermined order" by Saunders et al. Self-administered and interviewer-administered questionnaires are the two categories Sanders et al. (2009) divide questionnaires into. Self-administered questionnaires were employed in this investigation. The

used questionnaires were of the closed variety. The main research constructs (e-procurement, IT capacity, and firm performance) were measured using a thorough literature study. To operationalize the constructs under inquiry, the researcher referenced previously published literature. All the constructs were measured using a seven-point Likert scale, ranging from 1= Strongly Disagree to 7= Strongly Agree (see appendix).

The questionnaire was grouped into two sections of which constituted questions used in previous research. The first section focused on the socio-demographics of employees and the firm characteristics, while the second section focused on the three variables in the study (e-procurement, IT capability and organizational performance). Permission to carry out the study was obtained from the organization with the aid of an introductory letter from KNUST. Also, the consent of all the respondents was sought, before questionnaires were given to them to fill.

3.5.1 Measures

The study adopted a validated scale for the literature for the constructs. The main constructs include E-procurement and turnover intentions. The constructs comprised 14, 9 and 10 items respectively. *E-procurement* as an independent variable was measured using a validated instrument adopted from (Sánchez-Rodríguez, Martínez-Lorente & Hemsworth, 2019; BrandonJones, 2006). Some of the items used in the measures included; *“To what extent has your company been able to effectively utilise the following t following over the last 3 years; Electronic ordering to suppliers, Electronic payment to suppliers, Provide online materials inventory information to our suppliers, Provide specific online information about product specifications that our suppliers must meet, Provide online production planning information to suppliers”*. The Cronbach alpha value was 0.865 and 0.94 respectively. Each item was measured on a five-point scale from 1= **“Not at all”** to 7= **“To the greatest extent”**.

ICT Capability was measured using a validated instrument adopted from Boiral & Paille (2012). The constructs measured 5 items which include; *To what extent has your company been able to meet its performance target over the last 3 years; My firm has IT systems for business process, My firm is able to automate its business transaction, My firm invests in IT resources.* The Cronbach alpha value for turnover intentions was 0.84. The respondents indicated the extent to which they agreed with each item, using a Likert-type scale ranging from 1= “Not at all” to 7= “To the greatest extent”.

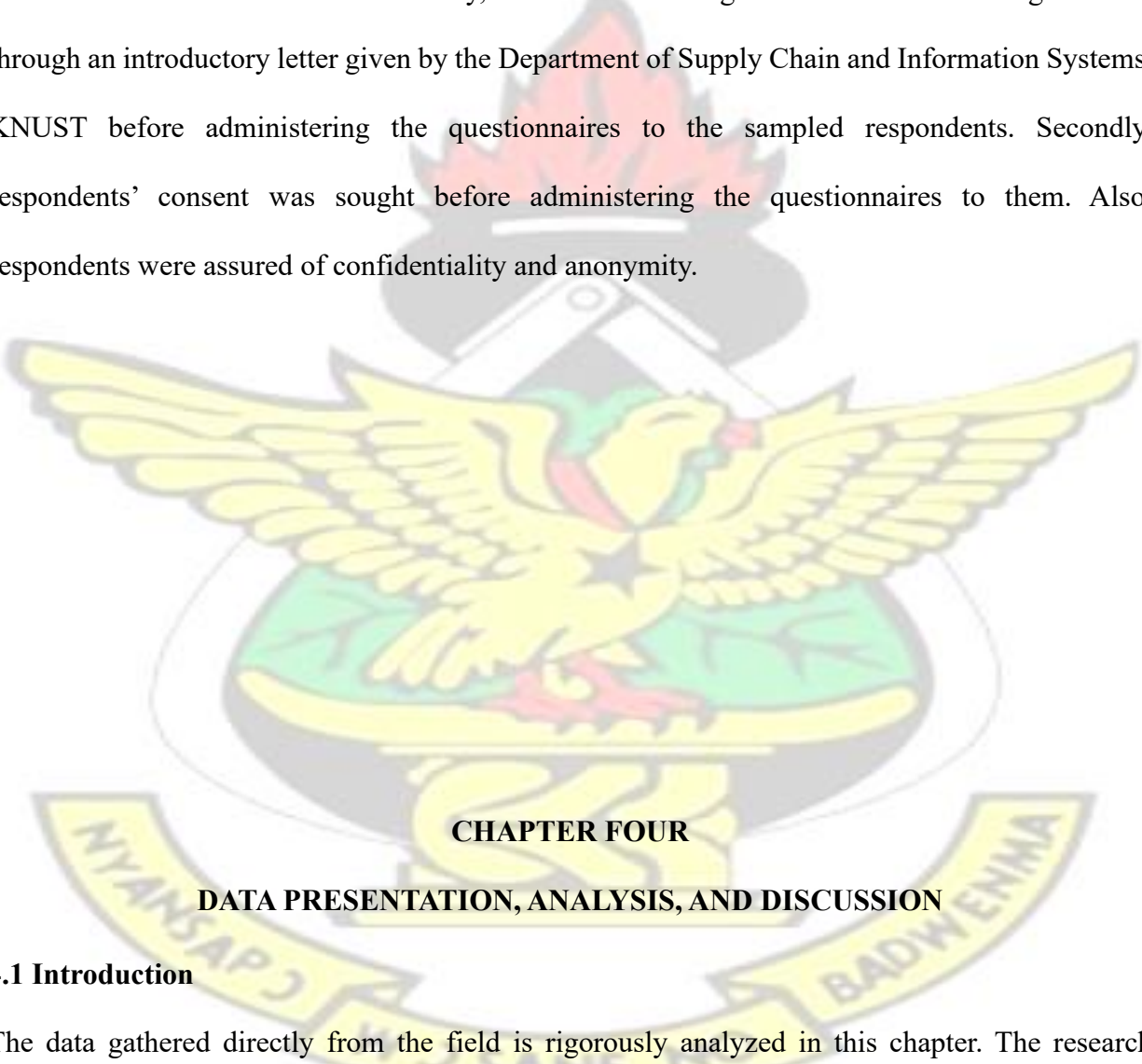
Organizational Performance was measured using a validated instrument adopted from Sardana et al (2020). The constructs measured 5 items which include; *To what extent has your company been able to meet its performance target over the last 3 years; overall productivity, Company's overall production unit costs, Increased profitability.* The Cronbach alpha value for turnover intentions was 0.84. The respondents indicated the extent to which they agreed with each item, using a Likert-type scale ranging from 1= “Not at all” to 7= “To the greatest extent”.

3.6 Data Analysis

With the help of SPSS software, formerly known as the Statistical Packages for Social Sciences, this study uses descriptive and inferential (regression) statistics to analyze the data. Through coding, responses from a study's population are transformed into figures using the SPSS software. Particularly, the data was examined using statistical methods built into SPSS. Regression analysis utilizing PROCESS MACRO was one of the descriptive and inferential statistical techniques used by Preacher & Hayes (2008) to analyze the data. In order to validate the data, the study also performed confirmatory factor analysis (CFA) in LISREL 8.5.

3.7 Ethical issues

Ethical issues were considered when conducting this research. Ethics according to Sanders et al (2009) as cited in Saunders et.al (2009) is defined as the “norms or standards of behaviour that guide the moral choices about our behaviour and our relationship with others”. In conducting research, the researcher must follow rules that guide established by the research ethic committee of Graduate School of KNUST. Firstly, the researcher sought the consent of the organization through an introductory letter given by the Department of Supply Chain and Information Systems, KNUST before administering the questionnaires to the sampled respondents. Secondly, respondents’ consent was sought before administering the questionnaires to them. Also, respondents were assured of confidentiality and anonymity.

The logo of KNUST (Kwame Nkrumah University of Science and Technology) is a large, faint watermark in the background. It features a yellow eagle with spread wings perched on a green shield. Above the eagle is a red torch. Below the eagle is a yellow banner with the text 'NYANSAPƆ ƆƆƆ SANE KNUST BADWENMA'.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND DISCUSSION

4.1 Introduction

The data gathered directly from the field is rigorously analyzed in this chapter. The research methodology was the foundation for the analysis and discussion. The analysis will pay particular attention to determining how much e-procurement practices impact organizational performance,

as well as how IT capabilities affect performance and how IT functions as a moderator in the link between e-procurement and performance. A sample of 153 instances formed the basis for the analysis. The demographic data of the respondents and the firms is where this chapter's numerous sections begin. The subsequent sections analyze the survey's results, which are presented as tables for ease of comprehension.

4.2 Respondent and Firm Characteristics

The results as presented in Table 4.1 below provides information on the respondent and firm characteristics. First, results on industry type show that the majority of the firms that were studied are into services, representing 69.3%. 17% were into manufacturing. The results on the gender of the head of the procurement unit indicated that the majority were males, representing 77.5%. Similarly, the majority of the respondents were males, constituting 66.4%. Furthermore, the results show that about 82% of the respondents were between 30 – 49 years. A few of the respondents were between 20 – 29 years (4.6%) and 50 years or more (13.7%). This means that the majority of the respondents were young adults. In terms of respondents' level of education, the study found that 45.6% have acquired their first degree, 22.1% have acquired their Diploma or HND and 14.1% have acquired their second degree or more. This shows that almost all the respondents have had formal education. With regard to respondents' positions, the data indicated that 74.8% are middle managers, 15% are top managers and 10.2% are supervisors. Finally, the study found that on average, a firm had been in existence for 13 years with about 25 employees.

Variables	Categories	Count	N %	Mean	Std Dev.
Industry Type	Service	106	69.3		
	Mining/Extraction	1	0.7		
	Agricultural/Agribusiness	14	9.2		

	Manufacturing	26	17.0	
	Others	6	3.9	
Gender of head of the procurement unit	Male	34	77.5	
	Female		22.5	
Gender of Respondent	Male	101	66.4	
	Female	51	33.6	
Respondent Age	to 29 Years	7	4.6	
	to 39 Years	56	36.6	
	to 49 Years	69	45.1	
	or More	21	13.7	
Education Level	Secondary School or Related Certificate	27	18.1	
	Diploma/HND	33	22.1	
	First Degree	68	45.6	
	Second Degree or More	21	14.1	
Respondent position	Supervisor	13	10.2	
	Middle (manager, e.g., head of department)	95	74.8	
	Top (e.g., CEO, Managing director)	19	15.0	
Firm Age			13.42	8.83
<u>Firm Size</u>			<u>24.46</u>	<u>43.69</u>

Table 4.1: Respondent and Firm Characteristics

Source: Field Study (2023)

4.3 Measurement Model Analysis

Confirmatory factor analysis was used to check for the psychometric properties of the data using

LISREL 8.5. The main constructs in the study were E-procurement, IT capability and organizational performance. At the designing stage of the questionnaire, E-procurement was measured with five (5) indicators. IT capability was measured with four (4) indicators, and organizational performance was measured with five (5) indicators. The indicators for all constructs passed validity and hence none of them was dropped in the final analysis. Thus, all the items were retained for each construct.

The CFA table below provides the list of the items for each construct including their respective standardized factor loadings, the Cronbach Alpha (CA), Construct Reliability (CR) and Average Variance Extracted (AVE). All the factor loadings were positive and significant. Likewise, the CA, CR and AVE were all above the minimum thresholds of 0.7, 0.6 and 0.5 respectively. Finally, the CFA model fit indices were good and acceptable (Chi-Square = 102.02; $df = 74$; $X^2/df = 1.38$; $P\text{-value} = 0.02$; $RMSEA = 0.05$; $GFI = .91$; $CFI = .98$; $SRMR = .05$; $NNFI = .97$). The indicators and the constructs demonstrated both convergent and discriminant validity; hence, the data can be said to be valid and appropriate for further analysis.

Table 4.2: Confirmatory Factor Analysis

Constructs	Codes	Items	Loadings	T-values	CA	CR	AVE
Organizational Performance	OPERF1	Overall productivity	0.78	Fixed	.90	.90	.67
	OPERF2	Company's overall production unit costs	0.80	10.40			
	OPERF3	Increased profitability	0.84	11.05			
	OPERF4	Return on investment (ROI)	0.80	10.31			
	OPERF5	Improved service delivery	0.80	10.40			
IT Capability	ITCAP1	My firm has invested in IT systems for business process	0.88	Fixed	.93	.93	.74
	ITCAP2	My firm is able to automate its business transaction	0.86	14.26			
	ITCAP3	My firm utilizes e-tools for its operations	0.86	14.37			
	ITCAP4	My firm has the human resource capacity to implement IT services for our businesses	0.89	15.27			
E-Procurement	EPRO1	Electronic ordering to suppliers	0.75	Fixed	.85	.85	.54
	EPRO2	Electronic payment to suppliers	0.82	9.69			
	EPRO3	Provide online materials inventory information to our suppliers	0.82	9.66			
	EPRO4	Provide specific online information about product specifications that our suppliers must meet	0.63	7.47			
	EPRO5	Provide online production planning information to suppliers	0.64	7.49			

Model Fit Indices

Chi-Square = 102.02; Df = 74; $X^2/Df = 1.38$; P-value = 0.02; RMSEA = 0.05; GFI = .91; CFI = .98; SRMR = .05; NNFI = .97

Source: Field Study (2023)

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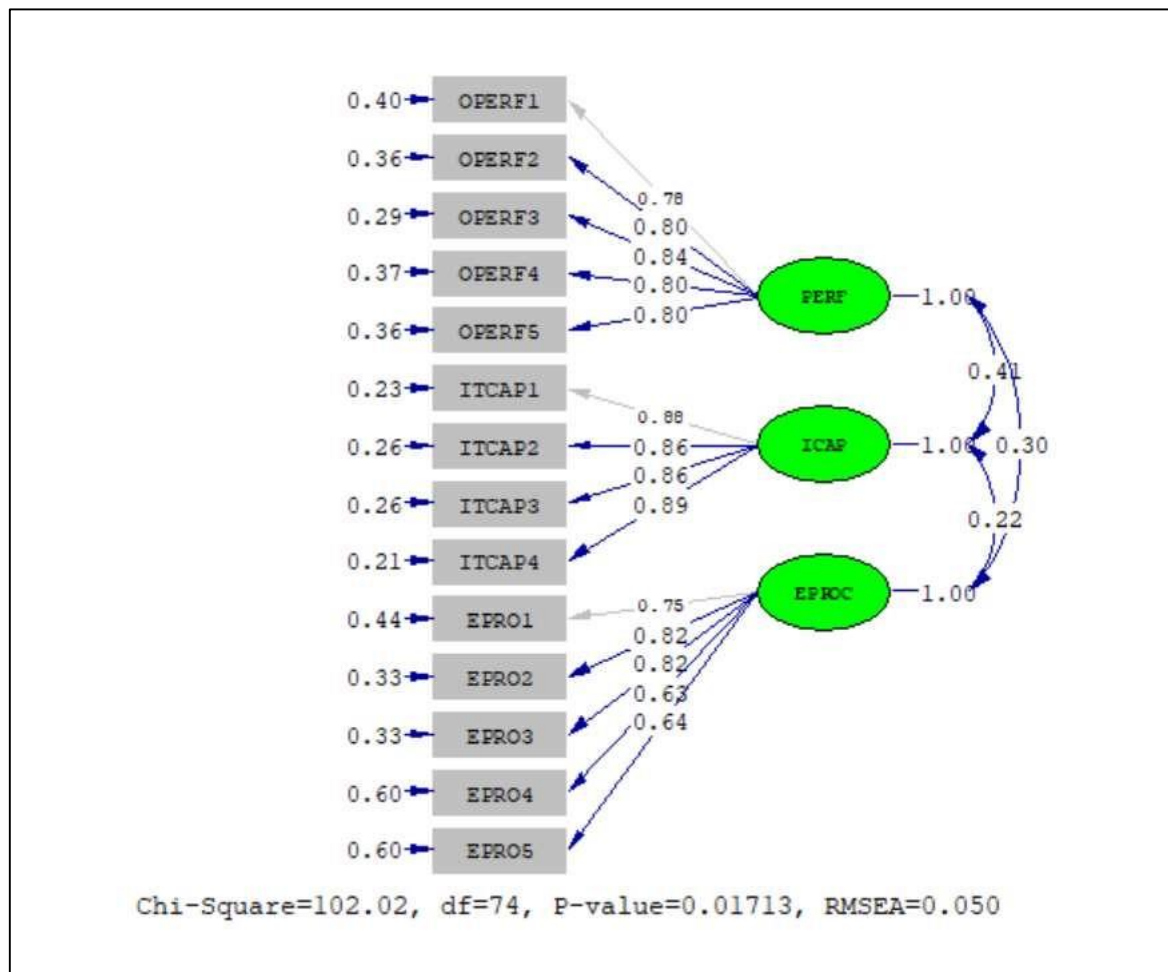


Figure 4.1: CFA Model

Table 4.3: Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Dev.
Organizational Performance	153	1.00	6.80	3.7503	1.47938
IT Capability	153	1.00	7.00	4.5654	1.47896
E-Procurement	153	1.20	6.40	4.1490	1.20580

Source: Field Study (2023)

4.5 Correlation Analysis

This section of the analysis presents the correlation analysis results. As presented below, the results showed that there is a significant relationship between E-procurement and IT capability ($r = .194$; $p < 0.05$) and organizational performance ($r = .267$; $p < 0.01$). Similarly, IT capability had a significant relationship with organizational performance ($r = .386$; $p < 0.01$).

Table 4.4: Correlation Results

Variables	1	2	3	4	5	6
1. E-Procurement	1					
2. IT Capability	.194*	1				
3. Organizational Performance	.267**	.386**	1			
4. Industry Type (Service = 1, Others = 0)	.061	.005	-.124	1		
5. Firm Age	.151	.035	.096	.028	1	
6. Firm Size	.028	.001	.026	-.205*	.238**	1

*. $p < .05$ level (2-tailed); **. $p < 0.01$ level (2-tailed)

Source: Field Study (2023)

4.4. Descriptive Statistics and Correlation Analysis

This section of the analysis presents the descriptive and correlation analysis results. As presented below, the results showed that E-procurement had a mean score of 4.149 with a standard deviation of 1.206. This means that firms that were studied scored high on E-procurement. IT capability had a mean score of 4.565 with a standard deviation of 1.479. This means that firms that were studied scored high on IT capability. Finally, the organizational performance had a mean score of 3.750 with a standard deviation of 1.479. This means that the firms' performance was moderate.

Table 4.3.2: Descriptive Statistics and Correlation Results

Variables	1	2	3	4	5	6
7. E-Procurement	1					
8. IT Capability	.194*	1				

9. Organizational Performance	.267**	.386**	1			
10. Industry Type (Service = 1, Others = 0)	.061	.005	-.124	1		
11. Firm Age	.151	.035	.096	.028	1	
12. Firm Size	.028	.001	.026	-.205*	.238**	1
Mean	4.149	4.565	3.750	-	-	-
Standard Deviation	1.206	1.479	1.479	-	-	-

*. $p < .05$ level (2-tailed); **. $p < 0.01$ level (2-tailed)

Source: Field Study (2023)

The correlation results as presented above show that there is a significant relationship between Eprocurement and IT capability ($r = .194$; $p < 0.05$) and organizational performance ($r = .267$; $p < 0.01$). Similarly, IT capability had a significant relationship with organizational performance ($r = .386$; $p < 0.01$).

4.5 Hypotheses Testing

The study's hypotheses were tested using PROCESS MACRO model 1. The results have been presented in Table 4.4. Specifically, the study found that none of the control variables had a significant effect on organizational performance. Results of the direct effect showed that Eprocurement has a significant positive effect on organizational performance ($\beta = .226$, $t = 2.454$). This means that positive changes in E-procurement will result in positive changes in firms' performance. Hypothesis 1 is therefore supported. Also, the results showed that IT capability has a significant positive effect on organizational performance ($\beta = .372$, $t = 4.976$). This means that positive changes in IT capability will result in positive changes in firms' performance. Hypothesis 2 is therefore supported.

Lastly, in the third hypothesis (H3), the study argued that IT capability will significantly moderate the relationship between E-procurement and organizational performance. The interaction effect results showed that IT capability positively and significantly moderates the relationship between E-procurement and organizational performance ($\beta = .134$; $t = 2.221$). Interestingly, the effect is

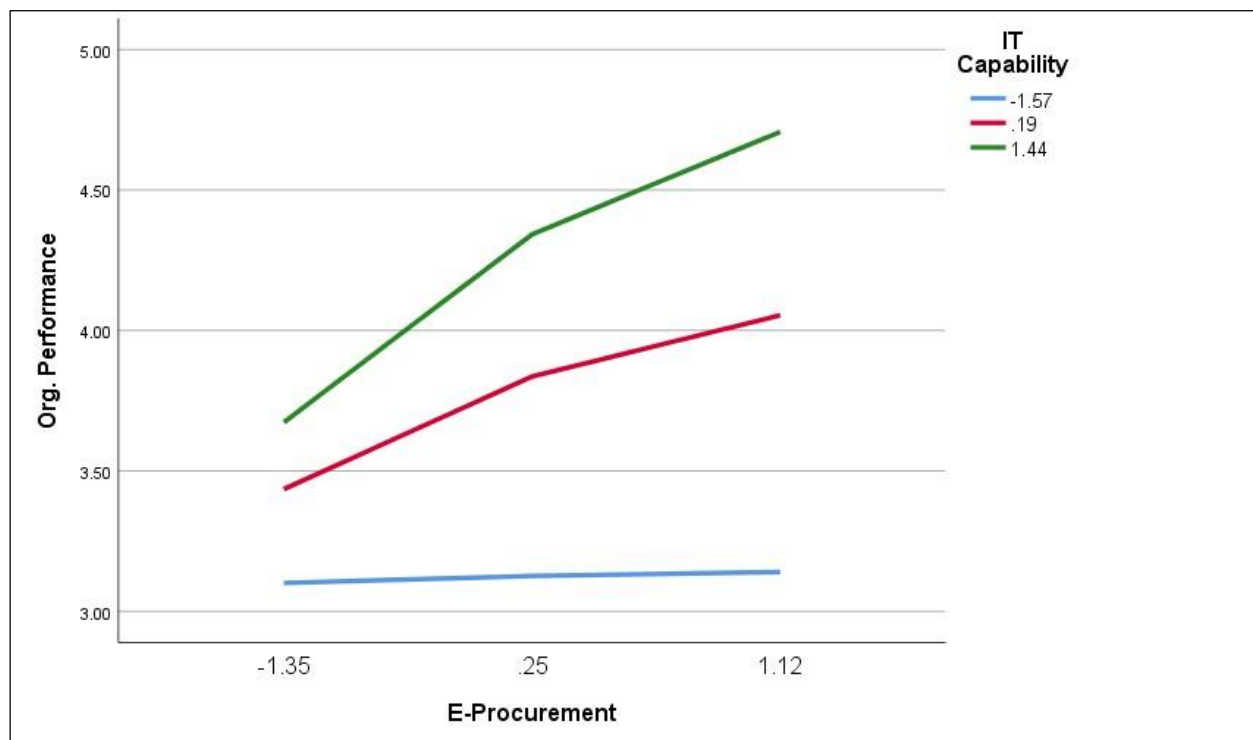
stronger at high levels of IT capability ($\beta = .418$; $t = 3.475$). This means that changes in Eprocurement can significantly predict organizational performance at higher levels of IT capability. Therefore, in the context of E-procurement, a high level of IT capability is key to driving firms' performance.

Table 4.4: Hypotheses Results

Predictor	Outcome: Organizational Performance	
	β (t)	Hypothesis
Constant	3.583 (6.898) **	
Controls		
Industry Type (Service = 1, Others = 0)	-.403 (-1.684)	na
Firm Age (log)	.516 (1.233)	na
Firm Size (log)	-.125 (-.471)	na
Direct Effects		
E-Procurement (EPRO)	.226 (2.454) *	Supported
IT Capability (ITCAP)	.372 (4.976) **	Supported
Interaction Effect		
EPRO*ITCAP	.134 (2.221) *	Supported
EPRO*Low ITCAP	.016 (.113)	
EPRO *High ITCAP	.418 (3.475) **	
Model Fit		
R	48.6%	
R ²	23.6%	
R ² Change	2.6%	
F	7.511**	
F Change	4.934*	

Source: Field Study (2023)

Note: Hypotheses are evaluated at T-values > 1.96 in parenthesis



Source: Field Study (2023)

Table 4.5: Summary of Hypothesis Results

Hypothesis	Prediction	Result	Remarks
H1 E-procurement has a positive relationship with organizational performance	+	+(p<.05)	Supported
H2 IT capability has a positive relationship with organizational performance	+	+(p<.01)	Supported
H3 IT capability positively moderates the relationship between E-procurement and organizational performance	+	+(p<.05)	Supported

Source: Field Study (2023)

4.6 Discussion of Results

The primary goal of the study is to assess how e-procurement affects organizational performance in the context of IT capability. Study objectives included determining the degree to which

eprocurement practices impact organizational performance, evaluating the impact of IT capability on performance, and examining the moderating role of IT in the relationship between eprocurement and organizational performance.

The study's primary goal was to determine how much e-procurement methods have an impact on organizational performance. According to the study, e-procurement significantly improves organizational performance. This implies that improvements in E-procurement will lead to improvements in businesses' performance. This outcome is consistent with earlier research findings in the literature. As an illustration, Sánchez-Rodríguez et al. (2019) discovered that eprocurement has a positive impact on both procurement and business performance. They also discovered that the performance gains derived from e-procurement extend beyond the immediate gains in procurement process performance to increase a firm's business performance, adding significant value to the procurement function of SMEs. The performance of the e-procurement and procurement process was found to be positively correlated with company performance by Rodriguez et al. (2019). The findings of Waithaka and Kimani (2021) showed a good relationship between e-procurement and the effectiveness of supply chain operations in Kenya. Miyoko, Marika, and Litondo (2019) discovered that important manufacturing organizations employ many E-procurement techniques to improve their financial performance in Nairobi County. In Ghana, Sarpong et al., (2018) found that e-procurement system usage has a positive relationship with hospital procurement performance.

The second objective of the study sought to assess the effect of IT capability on organizational performance. The results of the study showed that IT capability has a significant positive effect on organizational performance. This means that positive changes in IT capability will result in positive changes in firms' performance. This result confirms previous findings in the literature. For

instance, Wamba and Akter's (2019) research on the agility and capabilities of supply chain analytics for data-rich environments discovered that both IT capacity and human capital investment significantly affect the overall value-creation performance of banking businesses. Information technology capabilities on firm performance, future firm performance, and firm value are all positively and significantly influenced by IT capabilities, with firm value having a higher significance level than firm performance and future firm performance, according to Kasemsap's (2018) research on the role of information systems within enterprise architecture and their impact on business performance. Similarly, Hidayatullah & Ardianto (2019) discovered that IT competence has a significant influence on firm performance in their study on the strategy of IT capabilities to promote innovativeness for firm performance.

Lastly, the study argued that IT capability will significantly moderate the relationship between Eprocurement and organizational performance. The interaction effect results showed that high levels of IT capability positively and significantly moderate the relationship between E-procurement and organizational performance. This means that changes in E-procurement can significantly predict organizational performance at higher levels of IT capability. Congruent with the RBV theory, IT capability represents an organizational resource that can facilitate the implementation of eprocurement practices (Shin et al., 2019). It is therefore not surprising that at high levels of IT capability, the benefit of e-procurement on organizational performance becomes more salient. This finding collaborates with prior research (Shin et al., 2019; Oh et al., 2014).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The summary of the analysis of the field data gathered through primary data collection is the main topic of this chapter. Aside from the introduction, this chapter is divided into three sections. A overview of the findings is given in the first section, including information on the sociodemographic traits of the respondents and the study's goals. The results' conclusion is presented in the second section. The recommendations based on the findings are presented in the third and final part.

5.2 Summary of Findings

This section presents a summary of the findings. It specifically summarizes the results on the respondent and firm characteristics. First, results on industry type show that most of the firms that were studied are into services. The results on the gender of the head of the procurement unit indicated that the majority were males. Similarly, most of the respondents were males. Regarding respondents' positions, the data indicated that most of the respondents were middle level managers. The subsections below are a summary of the findings of the specific objectives.

5.2.1 E-Procurement and Organizational Performance

The study's primary goal was to determine how much e-procurement methods have an impact on organizational performance. According to the study, e-procurement significantly improves organizational performance. This implies that improvements in E-procurement will lead to improvements in businesses' performance. This outcome is consistent with earlier research findings in the literature.

5.2.2 IT Capability and Organizational Performance

The study's second goal was to determine how IT capacity affected organizational performance.

The study's findings demonstrated that IT capacity significantly improves organizational effectiveness. This implies that improvements in IT competence will lead to improvements in business performance. This outcome supports earlier research findings.

5.2.3 The Moderating role of IT Capability

Lastly, the study argued that IT capability will significantly moderate the relationship between Eprocurement and organizational performance. The interaction effect results showed that high levels of IT capability positively and significantly moderate the relationship between E-procurement and organizational performance. This means that changes in E-procurement can significantly predict organizational performance at higher levels of IT capability.

5.3 Conclusion

The goal of the study was to determine how e-procurement, in the context of IT capacity, affected organizational performance. Study objectives included determining the degree to which eprocurement practices impact organizational performance, evaluating the impact of IT capability on performance, and examining the moderating role of IT in the relationship between eprocurement and organizational performance. All of the constructs' literature was evaluated for the study, and theories were created and put forth. The study's theoretical framework was the RBV theory. Companies in the service, manufacturing, and other areas provided the information. According to the study, the effect is higher at high levels of IT competence. IT capability positively and considerably moderates the association between electronic procurement and organizational performance. The study, therefore, concludes that congruent with the RBV theory, IT capability represents an organizational resource that can facilitate the implementation of e-procurement practices to enhance organizational performance.

5.4 Recommendations

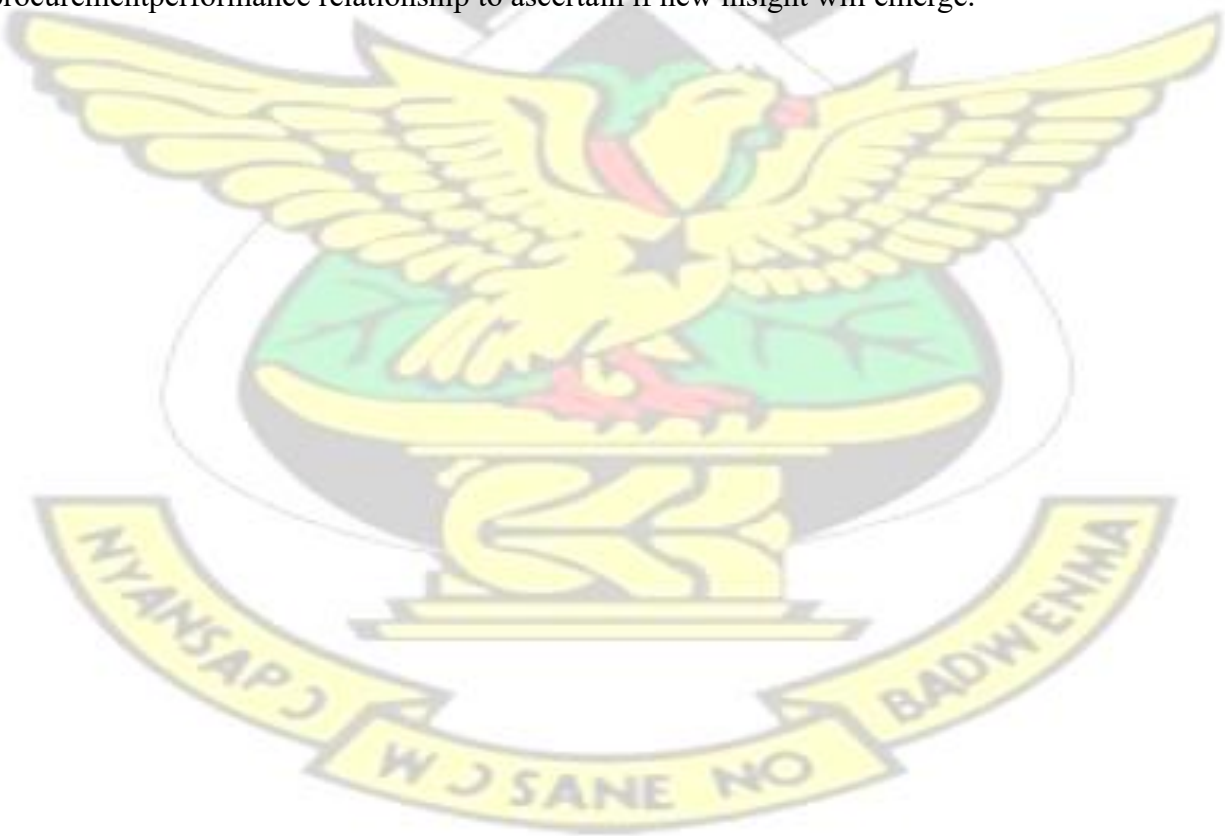
To begin, the research recommends that businesses that want to improve their performance should make it a priority to implement e-procurement across all their business operations. This will make it easier for companies to engage in various activities that will ultimately result in improved performance. The finding that there is a significant positive association between e-procurement and organizational performance suggests, on the other hand, that the failure of the management of organizations to embrace e-procurement practices may affect their performance negatively.

Second, the study recommends that businesses should make investments in the development of superior IT capabilities to boost their performance because the researchers discovered a positive relationship between IT capability and organizational performance. This recommendation is based on the findings of the study. For instance, businesses should seek out and keep talented and experienced IT managers, and those managers should simultaneously work to establish an acceptable level of proficiency across all IT skills. This will allow the businesses to achieve superior performance.

In conclusion, the findings showed that companies can't just improve their performance by engaging in electronic procurement operations. They need to take other steps. Rather, the economic benefits they may be able to acquire are heavily dependent on the way they may leverage IT capability to increase performance. Thus, managers should make every effort to ensure that information technology capabilities are implemented in crucial parts of the company. To accomplish this goal, IT managers should maintain close communication with business executives who are responsible for making decisions on IT investment and deployment.

5.5 Suggestions for Future Studies

This study examined how organizational performance was affected by public-sector procurement. Like other studies, the study has some limitation that provides avenue for future studies. First, the study used a cross-sectional survey approach. While cross-sectional data has been extensively applied in procurement research, the use of longitudinal data would have yielded results from which strong causal inferences could be made. It is suggested that future research should utilise longitudinal data where the predictors and the outcome variables can be collected at different times to help address the issues of causality. Second, the study could not account for other potential contingency factors that may explain e-procurement-performance relationship. Future research may consider top management commitment as a potential moderator in the e-procurementperformance relationship to ascertain if new insight will emerge.



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**APPENDIX KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES INSTITUTE OF DISTANCE
LEARNING DEPARTMENT OF SUPPLY CHAIN AND INFORMATION SYSTEM**

QUESTIONNAIRES

I, Abdul-Latif Ibrahim wish to introduce myself to you as a Master of Science student of the Supply Chain and Information System Department of the School of Business, Kwame Nkrumah University of Science of Technology, Kumasi, Ghana. Presently, I am carrying out a research study titled, **“The Effects of E-Procurement on Organizational Performance with a moderating role of IT Capability”** in partial fulfillment for the award of second degree by the University. It is my wish, therefore to solicit your candid opinion by answering the questions below. Any information you give would be kept as confidential as possible as data is needed for academic purpose only. The questionnaire has specific instructions to follow and scales to use to indicate your responses.

From your personal experiences and your knowledge of your company, kindly provide responses that represent the reality concerning the issues being studied in this research. Although some statements appear quite similar, they are also unique in many ways, **so kindly do well to respond to each statement**. The questionnaire will take about **15 minutes** to complete.

Thank you once again.

Please, indicate your consent for participation here ☐ *I agree* ☐ *I disagree* **PART A: PERSONAL DATA (DEMOGRAPHICS) Please tick [✓] to indicate your choice**

1. Which of the following best describe your firm-industry?
☐ Service ☐ Mining/Extraction ☐ Agricultural/Agribusiness ☐ Manufacturing
☐ Other.....
2. On average, how long has your firm existed?.....Years
3. On average, how many employees does your firm have?.....
4. What is the gender of head of the procurement unit in your organisation?
☐ Male ☐ Female

Section B: Respondent's Background

Kindly tell me about yourself in terms of

1. Gender ☐ Male ☐ Female
2. Age (years) ☐ 20 to 29 ☐ 30 to 40 ☐ 40 to 49 ☐ 50 or more
3. Education level ☐ Secondary school or related Certificate ☐ diploma/HND
☐ 1st Degree ☐ 2nd Degree or more
4. Number of years working in this firm.....Years
5. Managerial level ☐ Supervisor ☐ Middle (manager, e.g. head of department) ☐ Top (e.g. CEO, managing director)

Section D: Questions

Please use the scale anchors provided at the right-hand side of this table to rate their respective statements.

<i>To what extent has your company been able to effectively utilise the following t following over the last 3 years? (E-procurement)</i>	<i>Not at all</i>							<i>To the greatest extent</i>						
1.Electronic ordering to suppliers	1	2	3	4	5	6	7							
2.Electronic payment to suppliers	1		3	4		5	6	7						

3. Provide online materials inventory information to our suppliers	1	2	3	4	5	6	7
4. Provide specific online information about product specifications that our suppliers must meet	1	2	3	4	5	6	7
5. Provide online production planning information to suppliers	1	2	3	4	5	6	7
<i>To what extent has your company been able to meet its performance target over the last 3 years? 1= "Not at all" to 7= "To the greatest extent"</i> Large companies in our industry. (Organisational performance)	<i>Not at all</i>			<i>To the greatest extent</i>			
Overall productivity	1	2	3	4	5	6	7
Company's overall production unit costs	1		3	4	5	6	7
Increased profitability	1	2	3	4	5	6	7
Return on investment (ROI)	1		3	4	5	6	7
Improved service delivery	1	2	3	4	5	6	7

<i>To what extent has your company been able to meet its performance target over the last 3 years? 1= "Not at all" to 7= "To the greatest extent"</i> Large companies in our industry. (IT Capability)	<i>Not at all</i>			<i>To the greatest extent</i>			
My firm has IT systems for business process	1	2	3	4	5	6	7
My firm is able to automate its business transaction	1		3	4	5	6	7
My firm invests in IT resources	1	2	3	4	5	6	7
My firm utilises e-tools for its operations	1		3	4	5	6	7
Our internet service and e-mail allow us to offer service and maintain communication across office hours, and geographical distances	1	2	3	4	5	6	7
My firm has human resource capacity to implement IT services for our businesses.	1	2	3	4	5	6	7