

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**

**COLLEGE OF HUMANITIES AND SOCIAL SCIENCES**

**SCHOOL OF BUSINESS**

**KNUST**

**EFFECT OF SUPPLIER SELECTION ON PROCUREMENT PERFORMANCE OF  
ORGANIZATIONS IN GHANA**

**BY**

**CHARWETAY MARY**

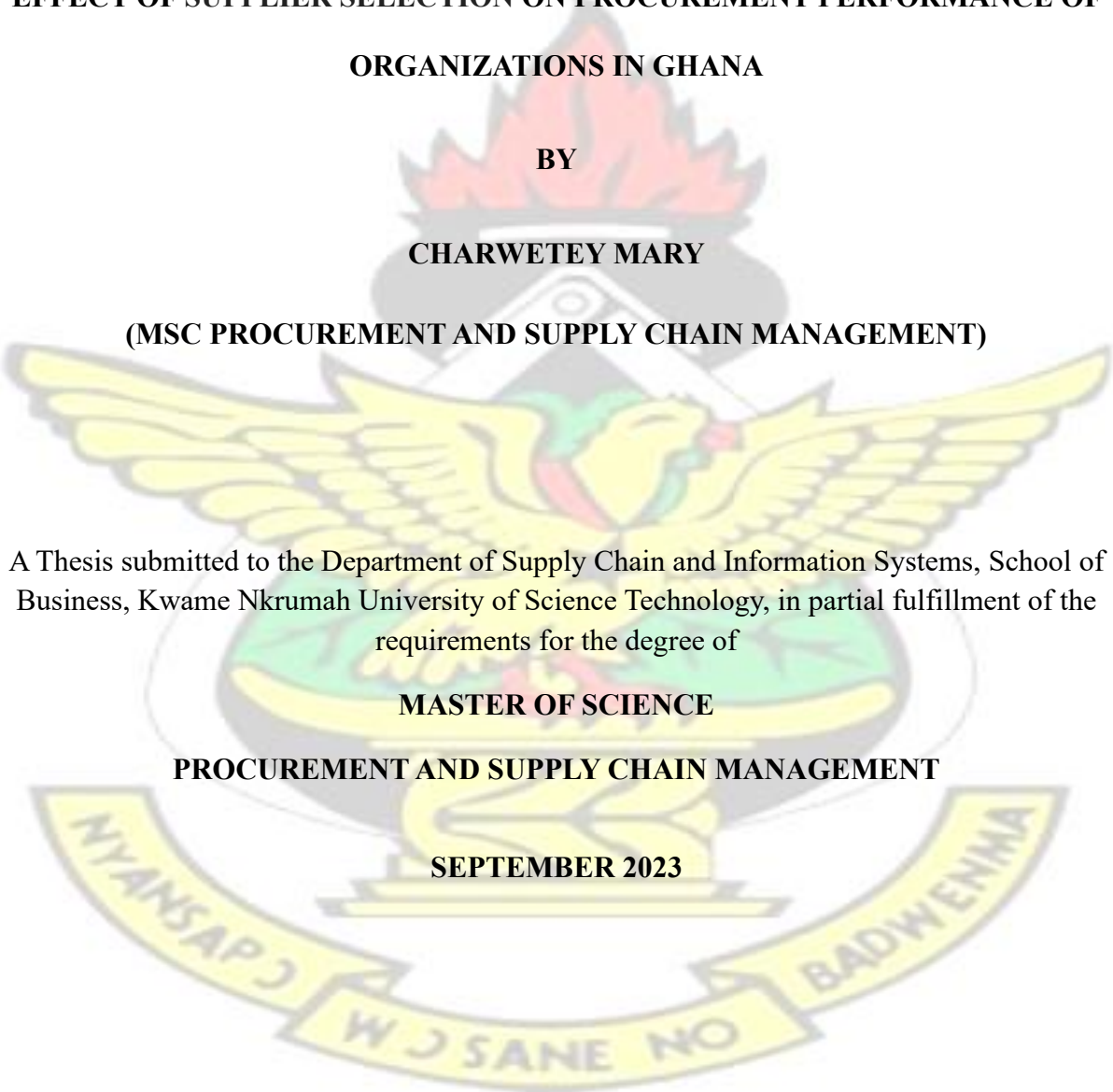
**(MSC PROCUREMENT AND SUPPLY CHAIN MANAGEMENT)**

A Thesis submitted to the Department of Supply Chain and Information Systems, School of Business, Kwame Nkrumah University of Science Technology, in partial fulfillment of the requirements for the degree of

**MASTER OF SCIENCE**

**PROCUREMENT AND SUPPLY CHAIN MANAGEMENT**

**SEPTEMBER 2023**



## DECLARATION

I, Mary Charwetey, hereby make a declaration of this dissertation as my own work submitted towards the attainment of a Master of Science in Procurement and Supply Chain Management and that, to the best of my knowledge, there are no traces of materials previously published by another person nor contains materials accepted for the award of any other University degree, except where due acknowledgement has been made in the text.

Mary Charwetey

(PG9454621)

Signature

Date

Certified by:

Dr. Emmanuel K. Anin

(Supervisor)

Signature

Date

Certified by:

Prof. David Asamoah

(Head of Department)

Signature

Date

## **DEDICATION**

This thesis is dedicated to my siblings and parents.

# KNUST



## ACKNOWLEDGMENTS

I would like to thank the Almighty God for His grace, favor and blessings. My gratitude also goes to my parents and siblings for their immense support due this journey. My sincere thanks also goes to my supervisor, Dr. Emmanuel K. Anin who played an instrumental role in helping me complete this thesis successfully.



## ABSTRACT

The study attempted to investigate the moderating role of supplier collaboration in the relationship between supplier selection (strategic and operational supplier selection) and procurement performance in the Ghanaian Public sector. The study employed quantitative methodology and adopted both descriptive and explanatory research designs. The study population comprised all public procurement departments in the various Ministries, departments, and Agencies. The study found that supplier selection and supplier collaboration positively and significantly affect procurement performance. Also, the results demonstrated that at the mean level, supplier collaboration inversely and significantly moderates the relationship between supplier selection and procurement performance, however, the effect turned out to be positive at low levels of supplier collaboration. Conclusively, the study has yielded significant findings about the complex interplay among supplier collaboration, supplier selection, and procurement performance. The results of this study emphasise the intricate characteristics of these connections, providing insight into the importance of supplier collaboration as a moderating element. The study recommends that companies should consider diversifying their levels of supplier collaboration by embracing a varied approach that is tailored to the unique requirements of certain procurement categories or projects.



## TABLE OF CONTENT

<b>DECLARATION</b> .....	<b>i</b>
<b>DEDICATION</b> .....	<b>ii</b>
<b>ACKNOWLEDGMENTS</b> .....	<b>iii</b>
<b>ABSTRACT</b> .....	<b>iv</b>
<b>TABLE OF CONTENT</b> .....	<b>v</b>
<b>LIST OF TABLES</b> .....	<b>viii</b>
<b>LIST OF FIGURES</b> .....	<b>ix</b>
<b>CHAPTER ONE</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>1</b>
1.1 Background to the Study .....	1
1.2 Problem Statement .....	3
1.3 Objectives of the study .....	5
1.4 Research Questions .....	6
1.5 Significance of the Study .....	6
1.6 Overview of Methodology .....	7
1.7 Scope of the study .....	8
1.8 Limitations of the Study .....	8
1.9 Organization of the Study .....	8
<b>CHAPTER TWO</b> .....	<b>9</b>
<b>LITERATURE REVIEW</b> .....	<b>9</b>
2.1 Introduction .....	9
2.2 Conceptual Review .....	9
2.2.1 Supplier Selection.....	9
2.2.2 Procurement Performance .....	10

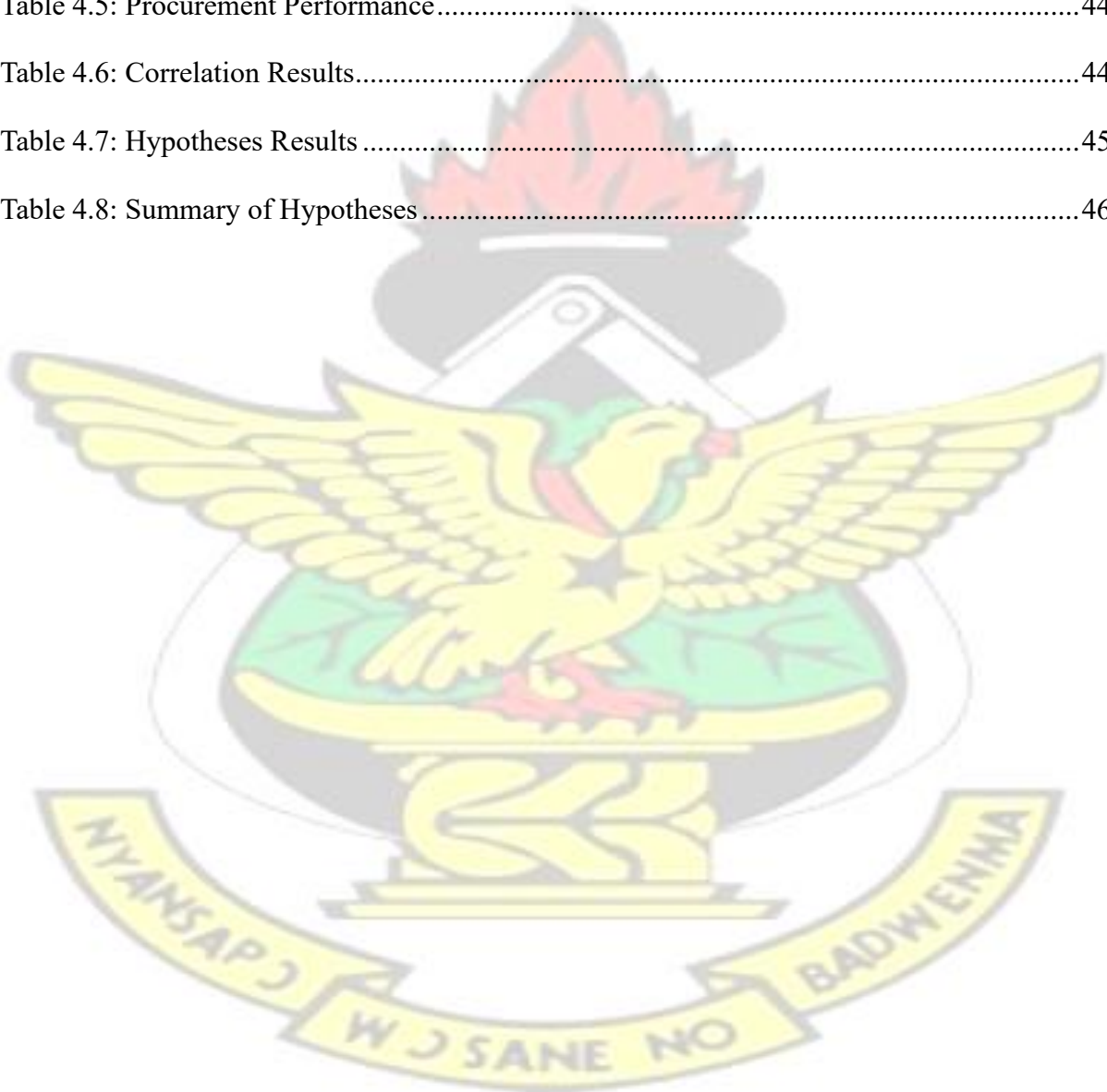
2.2.3 Supplier Collaboration.....	11
2.3 Theoretical Review .....	13
2.3.1 Stakeholder theory .....	13
2.4 Empirical Review .....	14
2.4.1 Effect of Supplier Selection on Procurement Performance of Organizations in Ghana .....	14
2.5 Conceptual Framework .....	25
<b>CHAPTER THREE .....</b>	<b>26</b>
<b>RESEARCH METHODOLOGY AND ORGANISATIONAL PROFILE .....</b>	<b>26</b>
3.1 Introduction .....	26
3.2 Research Approach and Design.....	26
3.3 Population.....	28
3.4 Sample Size and Sampling Technique .....	28
3.5 Data Type and Instrument .....	30
3.6 Data Collection.....	32
3.7 Method of Data Analysis.....	34
3.8 Validity and Reliability .....	34
3.8.1 Validity.....	34
3.8.2 Reliability .....	35
3.9 Ethical Consideration .....	36
<b>CHAPTER FOUR.....</b>	<b>38</b>
<b>DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS .....</b>	<b>38</b>
4.1 Introduction .....	38
4.2 Demographic Characteristics of Respondents.....	38
4.3 Measurement Analysis .....	40

4.4 Descriptive Statistics .....	42
4.4.1 Supplier Selection.....	43
4.4.2 Supplier Collaboration.....	43
4.4.3 Procurement Performance .....	44
4.5 Correlation Analysis.....	44
4.6 Hypotheses Testing.....	45
4.7 Discussion of Results .....	47
<b>CHAPTER FIVE .....</b>	<b>49</b>
<b>SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS .....</b>	<b>49</b>
5.1 Introduction .....	49
5.2 Summary of Findings.....	49
5.2.1 Supplier Selection and Procurement Performance .....	49
5.2.2 Supplier Collaboration and Procurement Performance.....	49
5.2.3 The moderating role of supplier collaboration .....	50
5.3 Conclusions .....	50
5.4 Recommendations .....	51
5.4.1 Suggestion for further research.....	52
<b>REFERENCES.....</b>	<b>54</b>
<b>APPENDIX.....</b>	<b>62</b>



## LIST OF TABLES

Table 2.1 Summary of Empirical Review .....	20
Table 4.1: Demographic Characteristics of Respondents .....	39
Table 4.2: CFA Results.....	41
Table 4.3: Supplier Selection.....	43
Table 4.4: Supplier Collaboration .....	43
Table 4.5: Procurement Performance.....	44
Table 4.6: Correlation Results.....	44
Table 4.7: Hypotheses Results .....	45
Table 4.8: Summary of Hypotheses .....	46



## LIST OF FIGURES

Figure 2.1: Conceptual Framework .....	25
Figure 4.1: CFA Model .....	42
Figure 4.2: Moderation Plot.....	46



# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

The role government procurement constitutes as stimuli for development has been an issue of particular interest over the past decade (Odero and Ayub, 2017; Liu et al., 2019; Patrucco et al., 2019; Raj et al., 2020). Public procurement provides varied contributions among countries, regions as well as sectors to underlying operations in health, environment, ICT, defence or infrastructure etc (Lember et al., 2014; Edquist, 2015; 2016; Maria et al., 2019). Procurement therefore plays an integral role in any establishment whether public or private. According to OECD (2017) procurement constitute approximately 15% - 20% GDP of developed economics. Governments in both developed and developing economies attach significant attentions to issue of procurement. Owing to this, various governments across the globe has attempted to reform and implement sound procurement policies and practices in the effort to enhance value for many when procuring goods and services required to meet public needs (Osei-Tutu et al., 2010; Hazarika and Jena, 2017; Kinuthia et al., 2019). Unfortunately, public procurement outcomes or performance remain challenged despite various procurement reforms in developing economies especially Sub Sahara Africa which Ghana is no exception (Schapper et al., 2006; Basheka and Bisangabasaija, 2010; Uyarra et al., 2014; Hazarika and Jena, 2017).

Efficiency and effectiveness remain two important measure of procurement performance. According to Anane and Kwarteng (2019), effective procurement occurs when previously defined goals and objectives regarding the acquisition of goods and services in any organization are met. This term connects actual and planned performance, which is used to decide. Following that, effective procurement connects planned and real obtained resources to achieve established goals and objectives. Achieving efficiency in public procurement is not just an issue of the buying entity but a joint effort of the supplier and buyer. This demonstrates that both the

buyer and supplier are two important entities in ensuring efficiency in public procurement. However, achieving efficiency and effectiveness in procurement cannot be within using appropriate supplier selection methods.

In achieving efficiency and effectiveness in procurement, a supplier's capabilities must first be evaluated. This is done through a variety of actions known as supplier selection (Koufteros et al., 2012; Kariuki et al., 2018). As businesses become more dependent on their suppliers, supplier selection remains essential (Amoako-Gyampah et al., 2019). The capabilities of these suppliers play a crucial role in enhancing the buyer's own capabilities and performance, hence contributing to their growth. Based on prior scholarly investigations (Durmi, 2019; Amoako-Gyampah et al., 2019), supplier selection emerges as the foremost supply management method in attaining product quality. The capacity of a buyer or firm to enhance its own capabilities in a strategically important area, such as quality, through the utilization of supplier capabilities in quality, may be contingent upon not only its ability to select a qualified supplier in the quality domain, but also its ability to effectively integrate the supplier into the firm's operations and network (Manyega and Okibo, 2015). In doing this, the buying organization must consider both strategic and operational issues surround the supplier. Strategic supplier selection and operational supplier selection are two essential ways of achieving enhanced procurement management. Prior studies (Zunk et al., 2020; Woschank et al., 2022) have advanced that to provide a consistent and affordable supply of the goods and services needed for the manufacturing process, one of the most crucial functions in an organization is the strategic supplier selection. Particularly, key suppliers are crucial to the company's core capabilities, long-term sales strategy, and operations planning strategy when they work closely with the organization (Durst, 2011; Zunk & Koch, 2014; Zunk et al., 2020). Again, Cho et al. (2021) and Shen and Yu (200) also indicated that operational supplier selection also remains key especially when dealing supplier of essential products that drives the core activities of the



organization. The discussion above clearly shows that achieving superior procurement performance cannot be at the expense of Strategic supplier selection and operational supplier selection. Although quite enough is documented on the role of supplier selection in procurement literature (Manyega, 2015; Manyega and Okibo, 2015; Kumar et al., 2018; Van der Westhuizen et al., 2020; Schramm et al., 2020; Yan et al., 2020). It is unclear how strategic supplier selection and operational supplier selection may influence procurement performance in the Ghanaian public sector. This study is therefore conducted to examine how supplier selection influence procurement performance in Ghana.

## **1.2 Problem Statement**

As stated earlier, procurement consumes significant part of government budget, hence improving procurement performance will lead to a great savings as well as enhancing service delivery in the public sector. The procurement functions in the public sector especially in Africa have been ineffective and inefficient characterized by massive corruption (Cherop, 2016). Extant literature (Damoah et al., 2018; Rasul et al., 2018; Jacob and Lawan, 2020; Muhwezi et al., 2020; Gray, 2021) argues that the poor procurement performance in the public sector could be traced to poor supplier selection, poor contract management, poor planning, resolve allocating staff completely, corruption and conflict of interest. Additionally, World bank (2001) identified corruption and poor supplier selection as major obstacle to public procurement performance. Despite varied interventions to curb the poor procurement performance especially in public sector organizations in emerging economies, the situation in Ghana continues worsening. Hence therefore has been several calls on both industry and academia to look for a lasting remedy to remedies the poor procurement issues in the public sector. In response, strategic supplier selection and operational supplier selection have emerged as essential strategies in procurement management that could be useful in enhancing procurement performance.



Strategic and operational supplier selection are not new in procurement management (Shen and Yu, 2009; Koufteros et al., 2012; Kariuki et al., 2018; Durmić, 2019; Cho et al., 2021; Van der Westhuizen and Ntshingila, L., 2020). Despite the growth of discourse on strategic and operational supplier selection, to the best of the researchers' knowledge no studies so far has been conducted to examine how strategic and operational supplier selection may influence procurement performance. Additionally, Woschank et al. (2022) also indicated the lack of empirical evidence to support the claim of strategic supplier selection in enhancing supplier performance. Apart from the lack of clear understanding of regarding how strategic and operational supplier selection may influence procurement performance, earlier studies lack empirical and theoretical support. Though managers in public sector organizations takes strategic and operational supplier decisions, it remains unclear which could be more useful in achieving procurement performance in the public sector. This study seeks to fill the theoretical gap by examining how strategic and operational supplier selection may influence procurement performance through the resource-based view perspective. The author views the ability of procurement managers to make strategic and operational supplier choices remain essential internal resources that organizations may ride on to achieve superior procurement performance. Recent literature calls for further empirical studies in respect of supplier selection in driving procurement performance (Erboz et al., 2021; Phan et al., 2020; Pati et al., 2016). Again, the mixed outcome could be due to the use of varied dimensions of integration, meanwhile, limited studies have looked at the extent to which the various dimension of supplier selection may independently and in combination drive procurement performance. This poses many challenges to managers in the quest to take decisions regarding procurement performance. To close this gap, this study focuses on two dimensions of supplier selection. It is against such bedrock that this study investigates the extent to which these dimensions of supplier selection will enable organizations to generate higher procurement performance.

Being among few attempts to examine the phenomena, this study makes a important contribution to procurement literature. The direct relationship supplier selection (strategic and operational supplier selection) and procurement performance which has not yet been empirically validated is explored in this study and further expands the theoretical lens of procurement literature on how procurement officers may take decisions to enhance procurement in the public sector.

Previous research studies have seldom investigated the influence of these collaborations on purchasers' capacity to generate value for downstream customers and, consequently, their procurement performance. The present study aims to fill this research vacuum by focusing on enhancing procurement performance. However, it fails to acknowledge the significance of supplier collaboration in generating downstream consumer value. This study highlights the significance of supplier collaborations in enhancing procurement performance. It also emphasizes that such collaborations play a crucial role in enhancing the effectiveness of supplier selection in generating procurement performance.

### **1.3 Objectives of the study**

The main objective of this study is to investigate the moderating role of supplier collaboration in the relationship between supplier selection (strategic and operational supplier selection) and procurement performance in the Ghanaian Public sector. Based on gaps identified and discussed in the problem statement three specific objectives were put forward. These objectives include.

- i. To examine the effect of supplier selection on procurement performance
- ii. To examine the influence of supplier collaboration on procurement performance.
- iii. To examine the moderating role of supplier collaboration in the relationship between supplier selection and procurement performance

#### **1.4 Research Questions**

- i. What is the effect of supplier selection on procurement performance?
- ii. What is the influence of supplier collaboration on procurement performance?
- iii. What is the moderating role of supplier collaboration in the link between supplier selection and procurement performance?

#### **1.5 Significance of the Study**

The study is conducted basically on the effect of supplier selection (strategic and operational supplier selection) on public procurement performance, the moderating role of stakeholder orientation with evidence from Ghanaian Public Sector. The outcome of this study will make significant practical and theoretical contributions. The nature of the study is such that it is categorized into two folds with regards to its benefit to the public procurement and its conceptuality. First and foremost, the nature of the study will benefit these organizations by contributing immensely towards how these organizations will come out with policies that will ensure that unethical issues that confront them are addressed with respect to the recommendations that will be made available in the studies. Again, this study will also contribute to firms with institutional frameworks that by far will ensure that relational issues relating to procurement performance can be resolved in these frameworks.

Theoretically, the study adds to literature in academia especially in Sub Sahara Africa by providing direction on procurement performances among procurement professionals of diverse cultural orientation. This study is an attempt to fill the chasm. Resource Based View and Principal Agency theory will be employed to understand the phenomena in Ghanaian context. The existing body of literature consistently demonstrates that the majority of research pertaining to procurement or buyer-supplier relationships has mostly focused on organisations operating within the private sector. Nevertheless, there is a scarcity of empirical research of this kind in developing countries located in Africa. This study recognises the significance of

investigating this gap, particularly in Ghana, where it is acknowledged that more than 50% of the national budget is allocated.

## **1.6 Overview of Methodology**

The study employed a positive research approach which made use of quantitative methodology. Again, the study also adopted both descriptive and explanatory research designs. Combining these two designs enabled the researcher to describe the study variables in the Ghanaian context and explore the relationship among the variables at the aggregate level. The study population comprised all public procurement departments in the various Ministries, departments, and Agencies. A sample of One hundred and fifty public institutions will be included in the study. After selecting the organization, the researcher will further use used purposive sampling method to select individuals who are directly involved in the subject under investigation (procurement managers and officers). The study conducted an extensive literature review to help to discover the academic writings supporting the relevant topic and the research hypotheses. Again, the study used primary sources of data to validate the results produced in the literature through field survey using questionnaires adopted from previously validated instruments. After the data collection, the primary data that has been gathered from the field will be vetted for accuracy and reliability. The questionnaires that have been adequately filled will be coded into excel for analysis. This study will employ two data analysis approaches i.e., descriptive and inferential analysis using multivariate data analyzes such as Structural Equation Modelling (SEM) and factor analyzes in order to fulfil set objectives in chapter one. Descriptive analysis will be based on information provided by respondents concerning their organization (demographical data), which include profile of the organization and the respondents. The essence of the descriptive analysis is to test for normality, and this included frequencies, percentages, means, skewness and kurtosis statistics. The motive of this analysis is to ensure



that data gathered are suitable for covariance based-SEM analysis. It is done to check for missing data, outliers, and data distribution (Hair et al., 2017). Inferential analysis will be used to test the hypothesis in the study.

### **1.7 Scope of the study**

The scope sets the context and boundaries of the research. Contextually the study focused on procurement units of public sector organizations across the country. Though procurement performance is affected by several factors, this study focuses on the effect of supplier selection on public procurement performance with evidence from the Ghanaian Public Sector.

### **1.8 Limitations of the Study**

The study has some limitations. Though prior studies recommend the use of single respondent in a study of this nature, however, in practice no single person controls or manages the entire SC, this study therefore is limited by using a single respondent. Additionally, including a mediator in the relationship would be more robust and valid in contexts specific to service delivery or the public sector. It would have been useful to employ a longitudinal research design in understanding the relationship. Though the study had no issues of common method bias despite using a single respondent, it is important that future studies consider multiple respondents from each firm.

### **1.9 Organization of the Study**

The study is structured into five chapters. Chapter one focuses on the introduction including the background, the research problem, objectives, and questions, significance and scope of the study, overview of the research methodology and limitations. Chapter two presents a review of relevant literature on the subject matter. Chapter three elaborates on the research methodology. Chapter four presents the analysis and discusses the result. Chapter five summarizes the result, making the necessary conclusions and recommendations.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Chapter two (2) of this study is divided into four (4) main sections. The chapter provides information organized under conceptual review, theoretical review, empirical review, and the research framework.

#### **2.2 Conceptual Review**

This section provides definitions of variables and how they have been used in the study. The research work consists of two (2) variables (Supplier Selection and Procurement performance). However, these variables have been operationalized in the subsequent sections below.

##### **2.2.1 Supplier Selection**

Supply chain (management of networks, decision-making, scheduling, etc.) came to existence in the 80s of the last century (Bocewicz et al., 2021; Banaeian, et al., 2015) and the recent trend in the structure of a supply chain has been complicated and globalized however firms in the supply chain depend on their suppliers. Supplier selection influences the integration of the supply chain relationship thus an effective and careful supplier selection is a criterion for purchasing and procurement managers in many firms to enhance their organizational performance. According to El Mokadem (2017), supplier selection refers to the actions taken to select suppliers based on their capacity to fulfill an organization's demand. Zimmer et al. (2016), defines supplier selection as a procedure for firms to find and evaluate appropriate suppliers and their supply chains with the aim to choose the best options, which performs along an organization's set goal and targets. Supplier selection according to (Van and Ntshingila, 2020) is identifying and distinguishing suppliers who are able to work and continuously meet a firm's demand. In this study, supplier selection is defined as choosing suppliers who provide vital information (tangible and intangible) for future efficiency gains and enhanced

competitiveness, at existing levels of resources and technology (Krop and Iravo, 2016). The supplier selection process consists of several tasks (Zimmer et al., 2016) and is also known to reduce procurement costs (Mohammaditabar and Ghodsypour, 2016). Related studies have shown that choosing the right suppliers results in product innovation and also affects production processes. (Yoon et al., 2018). Also, the task of choosing suppliers helps to create operational and strategic standards that enable buying firms to integrate external resources with internal stakeholder goals. (Nair et al., 2015). Thus, firms can predict outcomes in their procurement processes when there is a clear and aligned supplier selection criteria that create well-defined roles for the supplier.

### **2.2.2 Procurement Performance**

The existence or survival of most organizations is dependent on their purchasing practices, therefore failure to optimize procurement activities would end up in serious financial and operational outcomes.

According to Kariuki et al. (2018) procurement is the process of getting products from a supplier to the final destination. Procurement refers to buying goods or services and ensuring the efficient running of an organization (Osei-Tutu et al., 2019). Performance on the other hand is the effective accomplishment of an organization's goals and targets. Thus, procurement performance is simply an effective and efficient process of acquiring goods and services (Kakwezi and Nyeko, 2019).

Studies have shown that the elements of procurement performance can be measured based on efficiency and effectiveness (Mugenyi et al., 2020). However, procurement performance can be evaluated in diverse ways like cost, time, and accuracy. Also, it features other factors like proper procurement strategy, well-coordinated management information, and focused procurement efforts (Smith and Conway, 1993). Related studies have confirmed that high procurement costs push firms to select their suppliers carefully (Jia et al., 2021), and also firms

tend to have fewer suppliers with those with whom they have established long-term relationships (Obaid et al., 2022). Abioro (2021) relates procurement performance with effectiveness and efficiency. Osuga et al. (2015) revealed that procurement performance is connected to reduced costs and improves the operational goals of an organization. Also, Rotich et al. (2021) claim that procurement performance is associated with effectiveness and efficiency in procurement operations. Therefore, from the above definitions, a firm's procurement performance is measured based on two basic dimensions that is efficiency and effectiveness and this goes a long way to influence their decision-making in terms of choosing the right suppliers.

### **2.2.3 Supplier Collaboration**

According to Dyer and Singh (1996), the relational view of the firm posits that robust collaborative partnerships frequently entail assets that are specific to the relationship, extensive interactions, and the integration of complementary capabilities. These factors create an environment in which partners can exchange knowledge and generate relational rents. According to existing literature, it has been observed that companies engaging in collaborative collaborations want to improve their competitive position by gaining access to and utilising the resources and knowledge of their partners (Hamel, 1991; Noordhoff, Kyriakopoulos, Moorman, Pauwels, and Dellaert, 2011). Furthermore, existing literature on supply chain management has demonstrated that establishing partnerships with suppliers facilitates the exchange of knowledge and best practises between the involved parties (Cheung, Myers, and Mentzer, 2010). Moreover, empirical studies have provided evidence that engaging in collaborative efforts with supply chain partners yields several benefits, including but not limited to the development of new products, improved operational efficiency, and the creation of knowledge (Cao and Zhang, 2011; Flynn, Huo, and Zhao, 2010). Nevertheless, the primary focus of this research area mostly centres on examining the influence of supplier collaborations



on the operational performance of firms, while neglecting to explore the implications of these collaborations on firms' utilisation of marketing competencies (Flynn et al., 2010). The degree to which a firm engages in supplier collaboration can be determined by the level of information sharing, joint planning, and cooperative problem-solving activities (Cai, Yang, and Hu, 2009; Cheung et al., 2010). The dissemination of information by suppliers regarding products, production, and processes plays a crucial role in enabling buyers, specifically manufacturers, to formulate and execute efficient production strategies, ensure timely production of items, minimise inventory levels, and enhance delivery performance (Flynn et al., 2010). According to Mishra and Shah (2009), suppliers have the potential to offer valuable insights into a firm's new product development, including the identification of design and manufacturing issues. According to Cheung et al. (2010), the process of joint planning and problemsolving enables the supplier and buyer to leverage their respective knowledge and skills, fostering the development of trust between the two parties. The continuous engagement and collaborative efforts between suppliers and buyers facilitate a comprehensive comprehension of the strengths, limitations, and potential areas for enhancement in collective endeavours, ultimately resulting in enhanced operational performance. By acquiring a comprehensive comprehension of the operational aspects of the buyer (manufacturer), the supplier can effectively increase and broaden their supply services. Consequently, this enables the buyer to improve their services for downstream clients. According to Cao and Zhang (2011), the buyer's acquisition of operational advantages is expected to lead to enhanced market performance by enabling prompt responses to client demands and the introduction of more innovative products or services. The collective findings from prior studies indicate that the collaboration between firms and their suppliers can be a valuable means of accessing external knowledge, which can be utilised to enhance both the operational and market performance of enterprises (Mahmood, Zhu, and Zajac, 2011).

## 2.3 Theoretical Review

In this section, the research work discusses the theory that forms the basis to investigate the “effects of supplier selection on procurement performance of Organizations in Ghana”. In this research, the theory relevant to the study is the stakeholder theory.

### 2.3.1 Stakeholder theory

The Stakeholder theory focuses on relationships between stakeholders, such as customers, employees, and communities affecting company performance. Previous studies have shown that the stakeholder theory is a strategy mostly used by top executives in organizations. According to Freeman (1984) a stakeholder is “any group or individual who affects or is affected by the achievement of an organization’s objectives” (Sarkis et al., 2011). “An organization’s success is dependent on how well it manages the relationships with key groups like customers, employees, suppliers, communities, shareholders, and others that affect the realization of its set goals” (Freeman and Philips, 2002; Ditlev-Simonsen and Wenstop, 2013). This theory, however, means a firm’s decisions and performance depend on collaborative efforts with its stakeholders. (Matos and Silvestre, 2013). Diverse stakeholders bring about innovation in an organization’s decisions. Thus, the growth of an organization depends on effective management of stakeholder relationships (Clarkson, 1995; Post et al., 2002; Alvarez-Gil et al., 2007). Therefore, we would conclude by saying managers and the top-executive in organizations are held responsible when making decisions to identify the right suppliers for their operation just to satisfy the stakeholder’s demand (Hill and Jones, 1992; Alvarez-Gil et al., 2007).

Reuter et al. (2012) examined the impact of stakeholder influence on sustainability and cost while making supplier selection decisions. Park et al. (2014) examined the impact of stakeholder pressure on Corporate Social Responsibility (CSR) practices. Results gathered demonstrate that the primary (consumers, internal managers, employees, and business



collaborators) and secondary (governments, media, local community, and NGOs) stakeholders have a direct influence on firms' supplier selection which enhances performance. This study concludes by arguing that with stakeholders in mind, firms are able to position themselves strategically to select their suppliers based on some key criteria that fall within a firm's set goals and targets and the end results guarantee market value and firm performance.

## **2.4 Empirical Review**

This study looked at various empirical studies in supplier selection and procurement performance as discussed below.

### **2.4.1 Effect of Supplier Selection on Procurement Performance of Organizations in Ghana**

Woschank et al. (2022) examine the impact of systematic supplier evaluation in firms. The study employed a questionnaire-based survey technique to gather information, with a sample size of 206 purchasing managers. The study employed descriptive statistics and structural equation modeling techniques to analyze data. Findings reveal that process formality in the SSSP has a direct impact on supplier performance. Future studies should conduct this research again focusing on group process SSSP and measure the performance of the whole supply network.

Mousavi and Mousavi (2022) investigate the impacts of stakeholders on an organization's performance. Data was collected using questionnaires, and a sample size of 181 manufacturing companies was obtained through the simple random sampling method. The research applied the structural equation modeling (SEM) technique and descriptive statistics to analyze data. Results indicate that the role of stakeholders has a direct impact on a firm's performance. The study recommends further studies consider the component analysis and regression analysis to measure the validity and reliability of stakeholder pressure as a variable.

Masudin et al. (2022) conducts a study on the concept of sustainable purchasing in supplier selection. The study employed a systematic literature review to collect data obtained from 220 articles. Data was analyzed based on bibliometric analysis using Publish or Perish software, VOSviewer, and Spreadsheet. Results reveal that supplier selection in terms of cost savings and environmental protection affects procurement performance. The research advises future studies to consider other information search tools to collect the required data.

Sarıçam and Yılmaz (2021) examine supplier evaluation and strategic sourcing. The study applied a real case study approach to collect quantitative data and primary data using expert group meetings. A sample size of 11 staff which comprises of managers, technicians, and merchandisers, was considered. The study employed DEA, AHP, and TOPSIS to analyze data. Findings show that supplier selection based on important criteria has a direct effect on performance. Future studies can conduct the same research in other fields and also focus on other supplier selection criteria

Jia and Gao (2021) conduct a study on suppliers' corporate social responsibility (CSR) practices on performance. The study collected data from secondary sources obtained from 1,294 Chinese businesses. Findings show that CSR in supplier-customer relationships affects performance.

Cherono and Keitany (2021) conduct a study on supplier selection and supply chain performance. Primary data was collected using structured questionnaires. The study used a stratified random sampling technique based on departments as the sample size. The methodology used to analyze data was descriptive and multiple regression analysis. Findings gathered from the study indicate supplier selection practices influence supply chain performance. Future research may consider variables like quality and cost and examine how it influences supply chain performance.

Makhitha (2020) examines the effects of supplier selection on performance. Data was collected using survey, with a sample size of 105 retailers in South Africa obtained through convenience sampling. Findings gathered from the study show that supplier selection criteria based on supplier innovation, cost, and quality have a direct effect on performance.

Wachiuri (2019) investigates the effects of supplier selection criteria on an organization's performance. The study implemented a cross-sectional survey research technique to collect data using questionnaires. The sample size was 187 state corporations in Kenya made up of procurement managers using the census approach. Data was analyzed using descriptive, regression, and correlation analysis. Results show that quality, competence, financial viability and supplier capacity directly affect an organization's performance. Future research should repeat the same study in other international state corporations and private institutions to get a comprehensive understanding of the topic and also generalize its findings.

Vijayakumar et al. (2019) conduct a study on factors to consider in a supplier's evaluation and the buyer-supplier long-term relationship. A cross-sectional research approach was used to gather information through questionnaires with a sample size of 288 respondents. The study used descriptive statistics, and confirmatory factor analysis to analyze data. According to the study, results demonstrate that quality, delivery, and service criteria have a direct impact on a buyer-supplier long-term relationship.

Sikhumbuzo (2019) examines the effects of procurement and supplier evaluation on supply chain Performance. Data was gathered based on reviews of existing literature. Results indicate that product quality and services in relation to supplier selection directly affect performance.

Mutiso and Ochiri (2019) investigate the effects of supplier selection criteria on procurement performance. The study collects data using questionnaires and interviews, a sample size of 168 respondents. The research work analyzed data using descriptive statistics which involves mean, standard deviation, frequencies and percentages. The study results reveal that a supplier's

quality, financial status, technical expertise, and profile have a direct effect on procurement performance. Future works may conduct the same studies in other government agencies in order to generalize the findings.

Makhitha (2019) examines supplier relationship marketing practices and performance.

A convenience sampling technique was applied to gather information using questionnaires with a sample size of 116 small retailers. The study employed descriptive statistics to analyze data using SPSS version 25. Also, regression analysis was used to test the validity and reliability of the variables. Results gathered from the study indicate that Information sharing influence the performance of suppliers in their marketing activities. Further research may examine the relationship between small retailers and their customers.

Günay et al. (2019) examine supplier evaluation on new product design. An industrial case study approach was applied to gather information using a mathematical model from a bicycle manufacturer in the US. Data was analyzed using quantitative analysis. Findings indicate that an increase in low-cost suppliers and a decrease in supplier evaluation have no effect on new product designs. The author advises future work to consider lead time as an area in their research.

Giuffrida and Rovigatti (2019) examine the role of supplier evaluation and contract enforcement on procurement performance. The study gathered secondary information obtained from the Federal Procurement Data System (FPDS) in the United States. The sample size was made up of 247,353 contracts and 33,731 firms involved in public construction contracts.

Descriptive and quantitative analysis was used to analyze data. Results demonstrate performance bonding has a direct effect on supplier selection in terms of delay and extra cost.

Ochien (2018) examines the effects of supplier management on firm performance. The study applied a census survey to gather information using questionnaires. The sample size was 125 respondents made up of heads of the procurement and logistics operations. The research work



employed descriptive statistics to analyze data, also correlation and regression analysis was used to test the variables. The results show supplier management has a direct effect on performance. The research advises buying firms to collaborate with suppliers to streamline their procurement process.

Kariuki et al. (2018) examine the effects of supplier evaluation on purchasing performance. The research work employed a stratified sampling technique to gather data using questionnaires, sample size was 100 employees. Also, the study employed SPSS (Statistical Packages of Social Sciences) version 2.1 to analyze data. According to the study, results show that a supplier's quality adherence affects performance. The research suggests suppliers must be trained to be capable in their business activities.

Mogikoyo et al. (2017) investigate criteria to consider in supplier selection and supply chain performance. Data was collected using questionnaires with a sample size of forty (40) respondents. The stepwise regression analysis (OLS) was employed to test the link between the variables. Results from the study demonstrate that a supplier's financial capabilities, physical security, supply chain experience, organizational culture, training programs, and human resource management policies, supplier relationships, and cost efficiency directly impact its supply chain performance. Future studies should examine other supplier selection criteria like a supplier's automation and service delivery and its effect on supply chain performance and also focus on areas like the manufacturing and service industries.

Waweru (2015) examines the link between supplier evaluation criteria and supply chain performance. A descriptive survey research design was applied to gather information using questionnaires. The total sample size was 44 active NGOs in Kenya obtained through the proportionate random sampling technique. Multiple regression analysis was employed to analyze data. Results reveal careful supplier evaluation criteria have a direct influence on an organization's supply chain.



Odhiambo (2015) examines the role of supplier evaluation and procurement performance. Data was gathered from primary sources using questionnaires, with a sample size of 150 senior and middle-level staff from the Procurement, Finance, Administration, and Operations departments obtained through the stratified random sampling technique. Quantitative analyses was used to analyze data. Results from the study show that service levels, financial performance, supplier profile, quality assessment, and cost have a direct impact on procurement performance. Further works may repeat the same research in other countries and also consider large sample size.

Chemjor (2015) investigates the criteria for supplier assessment and procurement performance. The research work used questionnaires to gather primary information from respondents, a simple random sampling technique was employed and the total population was 187 respondents. Data was analyzed based on quantitative analysis. Findings show a direct link between supplier selection criteria and procurement performance. Further works need to investigate best practices that affect procurement performance in government institutions.

Shiati et al. (2014) investigate the factors of supplier selection and its effects on firm performance. Data was gathered using questionnaires and interviews. The research used descriptive statistics and regression analysis to analyze data. According to the study, it was found that the quality of supplies and supplier cost has a direct influence on a firm's performance.

Njeru et al. (2014) conducts a study on how supplier management contributes to effective purchasing practices. Data was collected using questionnaires, with a sample size of 160 respondents. Also, the study used descriptive analysis and multiple regression analysis to analyze data. Results from the study demonstrate that elements of supplier management like supplier development, supplier collaboration, supplier appraisal techniques, supplier selection strategies, and supplier relationship management affects effective purchasing practices.

**Table 2.1 Summary of Empirical Review**

Author/Year	Country	Purpose	Theory	Method	Findings	Future studies
Odhiambo (2015)	Nairobi	To conduct a study on the role of supplier selection on procurement performance	Stakeholder theory, Human Capital, Internal Control and Technology Diffusion Theory	Quantitative	Results from the study show that service levels, financial performance, Supplier profile, quality assessment, and Cost criteria in supplier selection have a direct impact on procurement performance.	Further works may repeat the same research in other countries and also consider large sample size.
Mutiso and Ochiri (2019)	Kenya	To investigate the effects of supplier selection criteria on procurement performance.	Social Development Theory	Quantitative	The study results reveal that a supplier's quality, financial status, technical expertise, and profile have a direct effect on procurement performance	Future works may conduct the same studies in other government agencies' in order to generalize the findings.
Chemjor (2015)	Kenya	To conducts a study on criteria for supplier assessment and procurement performance	Goal-Setting Theory and Expectancy Theory	Quantitative	Findings show a direct link between supplier evaluation criteria and procurement performance	Future studies need to focus on the best practices that affects procurement performance in government institutions.
Kariuki et al. (2018)	Kenya	To examines the impact of supplier selection on procurement performance	Not stated.	Quantitative	According to the study, results show that Suppliers' quality adherence has an impact on procurement performance.	The study recommends that suppliers should be trained to be capable in their business activities.
Ochien (2018)	Kenya	To examines the effects of supplier	Resource Based theory and	Quantitative	Results show that supplier management has a direct effect on performance.	The research advises buying firms to collaborate with

		management on firm performance	Transaction Cost Economics theory			suppliers to streamline the procurement process
Njeru et al. (2014)	Kenya	To conducts a study on how supplier management contributes to effective purchasing practices.	Resource Based View Theory and Transaction cost economics theory	Quantitative and Qualitative	Results from the study demonstrate that elements of supplier management like supplier development and supplier collaboration, supplier appraisal techniques, supplier selection strategies, supplier relationship management etc. affects effective purchasing practices.	Not clearly stated
Cherono and Keitany (2021)	Kenya	To examine the impact of supplier selection on supply chain performance	Transaction cost theory and Contingency theory	Quantitative	The results show that supplier selection practices has a direct impact on supply chain performance	Future research may consider variables like quality and cost and examine how it influences supply chain performance
Mousavi and Mousavi (2022)	Iran	To investigate the impacts of stakeholder pressure on firm performance, the mediating role of corporate social responsibility, sustainable supplier selection, and marketing capabilities.	Resource-based view and stakeholder theory	Quantitative Results indicate that corporate social responsibility and marketing capability has a significant relationship between stakeholder pressure and firm		The study recommends further studies consider component analysis and regression analysis to measure the validity and reliability of stakeholder pressure as a variable.

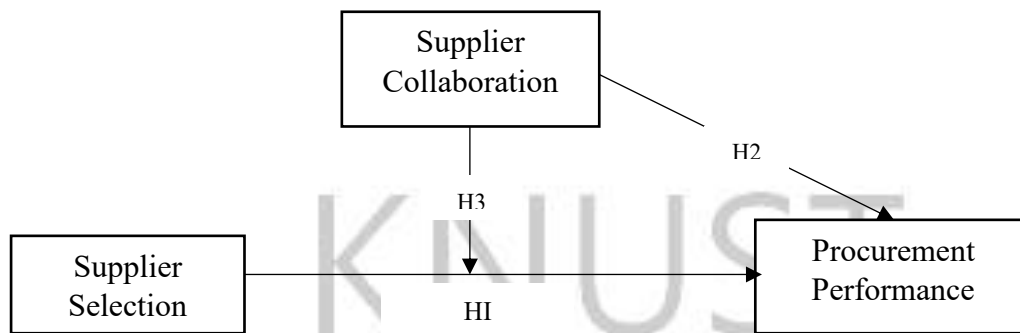
				performance whiles supplier selection has no relationship.		
Günay et al. (2019)	USA	To conduct a study on the influence of supplier selection on new product design	Not stated.	Quantitative	Findings indicate that an increase in process cost of low-cost suppliers, and a decrease in supplier selection have no effect on new product designs	The author advises future work to consider lead time as an area in their research
Vijayakumar et al (2019)	Malaysia	To conduct a study on how supplier selection criteria contribute to a buyer-supplier long-term relationship.	Not stated.	Quantitative	results demonstrate that supplier quality, performance delivery, and supply service criteria have a direct impact on a buyer-supplier long-term relationship.	
Masudin et al. (2022)	China	To conducts a study on the concept of sustainable purchasing in supplier selection.	Not stated.	Quantitative and Qualitative	Results reveal that supplier selection in terms of cost savings and environmental protection affects procurement performance	The research advises future studies to consider other information search tools to collect the required data
Sikhumbuzo (2019)	South Africa	To conducts a study on strategic sourcing and supplier selection on Supply Chain Performance.	Institutional Theory	Qualitative	Results indicate that supplier selection based on the quality of products and services directly affects performance	Not clearly stated.
Woschank et al. (2022)	Austria	To examine the impact of the strategic supplier selection process (SSSP) in manufacturing firms.	Grounded theory	Quantitative	Findings reveal that process formality in the SSSP has a direct impact on supplier performance	Future studies should conduct this research again focusing on group process SSSP and also consider the performance of the entire supply network



Sarıçam and Yilmaz (2021)	Turkey	To carry out a study on supplier selection and performance evaluation.	Not stated.	Quantitative	Findings show that supplier selection based on important criteria has a direct effect on performance.	Future studies can conduct the same research in other fields and also focus on other criteria or input and output parameters
Giuffrida and Rovigatti (2019)	United States	To examine the role of supplier selection and contract enforcement on procurement bonding.	Not stated	Quantitative	Results gathered from the study demonstrate performance bonding have direct effect on supplier selection in terms of delay and extra cost.	
Jia and Gao (2021)		conduct a study on suppliers' corporate social responsibility (CSR) practices on performance.	Not stated	Not stated	. Findings show that the strategic role of CSR in supplier-customer relationships affect performance.	
Makhitha (2020)	South Africa	To examines the effects of supplier selection on performance	Not stated.	Not stated	Findings gathered from the study show that supplier selection criteria based on supplier innovation, cost, and quality have a direct effect on performance	Not Stated
Waweru (2015)	Kenya	To examines the link between supplier selection criteria and supply chain performance.	Analytic Hierarchy Process (AHP) Theory and Multiple Attribute Utility Theory	Quantitative	Findings gathered from the study reveal that careful supplier selection criteria has a direct influence on an organization's performance	
Shiati et al. (2014)	Kenya	To investigate the determinants of	Not stated.	Quantitative	Findings show that the quality of supplies and	

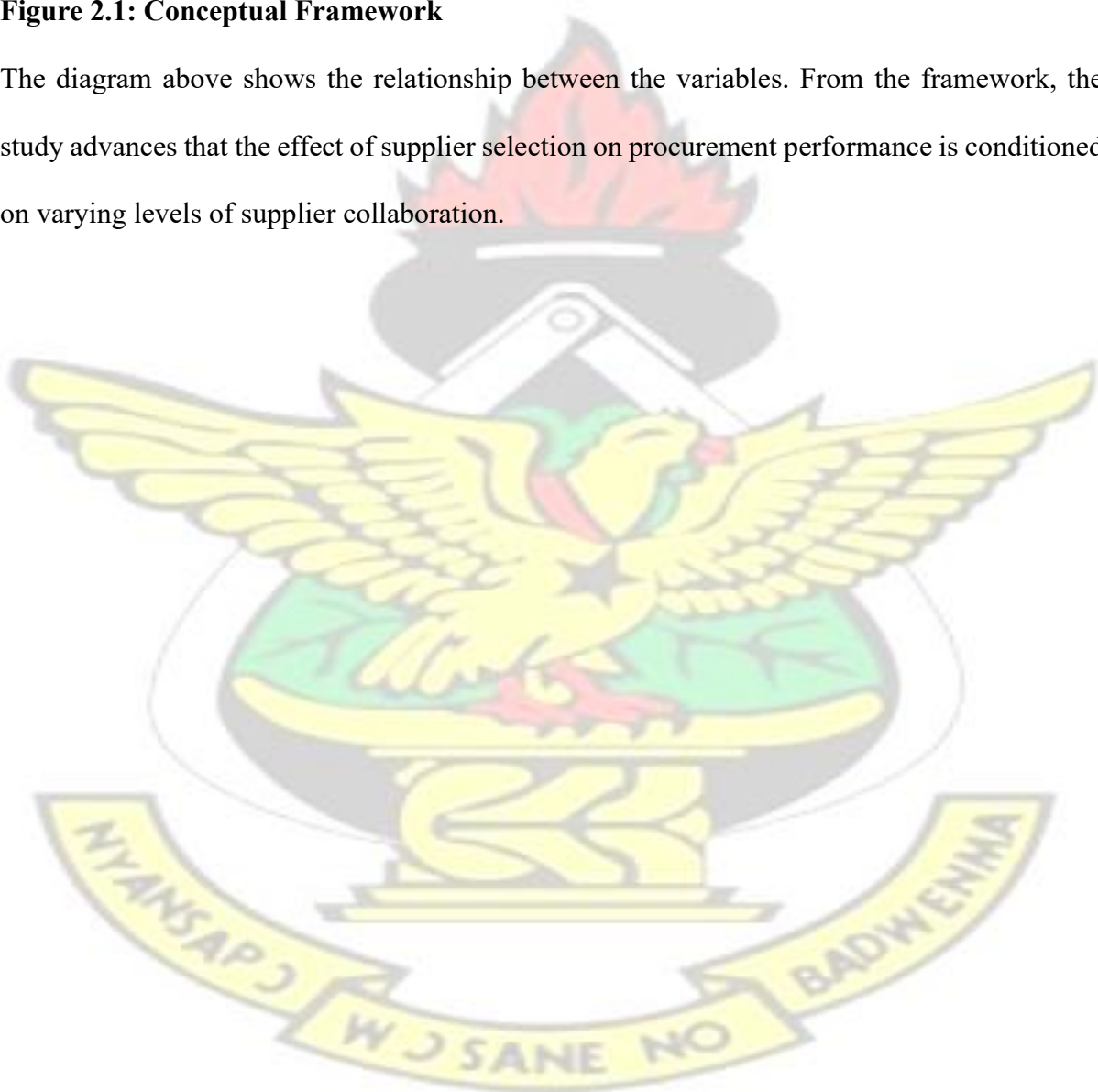
		supplier selection and its effects on firm performance.			supplier cost has a significant effect on firm performance.	
Wachiuri (2019)	Kenya	To conducts a study on the effects of supplier selection criteria on an organization's performance	Grey system theory, Multiple attribute utility theory, Lean supplier competence model and Rough set theory	Qualitative and Quantitative	Results gathered from the study show that supplier quality commitment, supplier competence, supplier financial viability and supplier capacity have a direct effect on an organization's performance.	
Mogikoyo et al. (2017)	Kenya	To investigate criteria to consider in supplier selection and supply chain performance.	Not stated.	Quantitative	Results from the study demonstrate that a supplier's financial health and autonomy, physical security, supply chain experience, perfect cultural fit, training programs and human resource management policies, supplier relationships and cost efficiency have a direct impact on a supply chain performance.	Future studies should examine other supplier selection criteria like a supplier's automation and service delivery and it's the effect on supply chain performance and also focus on areas like the manufacturing and service industries
Makhitha (2019)	South Africa	To conduct a study on supplier relationship marketing practices and performance	Not Stated	Quantitative	Results gathered from the study indicate that Information sharing influence the performance of suppliers in their marketing activities	Further research may examine the relationship between small retailers and their customers.

## 2.5 Conceptual Framework



**Figure 2.1: Conceptual Framework**

The diagram above shows the relationship between the variables. From the framework, the study advances that the effect of supplier selection on procurement performance is conditioned on varying levels of supplier collaboration.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY AND ORGANISATIONAL PROFILE**

#### **3.1 Introduction**

This chapter provides an overview of the methodologies and approaches utilized by the researcher for data collection, data cleansing, and data analysis, employing suitable analytical techniques. This study examines various aspects like the research design, population selection, sampling strategy and size, data collection methods, data analysis procedures, validity, and reliability considerations, as well as a summary of the chapters.

#### **3.2 Research Approach and Design**

In terms of data collection, measurement, and analysis, the research design refers to how a study will be carried out. The authors, Larbi and Gyedu (2021), assert that the establishment of circumstances for data collection and analysis is designed to achieve a harmonious equilibrium between the study's objectives and the efficiency of the organization. The development of such planning and evaluation methodologies aims to optimize research efficiency, hence maximizing the acquisition of knowledge. The primary objective of research design is to efficiently gather a comprehensive set of available data while minimizing resource expenditure in terms of effort, time, and financial resources (Liyanage, Kumara, & Withanawasam, 2016).

The study employed the cross-sectional descriptive survey design where deductive reasoning is applied for the quantitative data (Liyanage et al., 2016). Deductive reasoning is used to make logical conclusions after the analysis. The deductive approach is a method where the researcher uses theories as basis to investigate that would be used to determine the result of a theory (Owusu-Ansah & Poku, 2012). The deductive method is usually made of quantitative techniques. The quantitative technique uses a survey questionnaire where data are normally collected from respondents. Researchers who utilize quantitative approaches collect and



analyze numerical data to understand, forecast, and/or control occurrences. It provides an in-depth insight into the specific testable study and focuses on examining the relationship between variables (Quansah, Ankoma-Sey & Asamoah, 2019).

The survey method is employed for the quantitative study because it examines a sample of the population to produce a quantitative or numeric depiction of attitudes, practices, and opinions. Through face-to-face questionnaire administration, primary data was acquired in the quantitative research design. Usage of the survey method was efficient and economical; it brings many advantages to the researcher; For instance, it is economical compared to interviewing, authorizes secrecy, and could produce additional truthful answers, besides it has the possibility of eliminating prejudice owing to wording questions differently with diverse respondents (Kothari, 2012; Durepos and Wiebe, 2019).

Subsequently, the use of the quantitative technique was employed to help in understanding the underlying reasons of respondents to issues of investigate how supplier selection (strategic and operational supplier selection) influence procurement performance in the Ghanaian Public sector.

The present study employed a quantitative methodology to inform the selection of sample methodologies, the design of research tools, and the subsequent analysis. According to Ragab and Arisha (2018), a quantitative study refers to a research approach that seeks to elucidate a particular phenomenon by gathering numerical data, which is subsequently analyzed using statistical techniques. When doing research, scholars employ various methods of inquiry, such as experiments and surveys, to collect data using predetermined instruments. This data is typically quantitative in nature, yielding statistical information (Anderson et al., 2018; Ragab and Arisha, 2018). The selection of the quantitative research approach was based on its ability to generate precise and quantifiable data that can be extrapolated to a wider population

(Jayasingha & Suraweera, 2020). In addition to this, it is advantageous to employ this approach for the purpose of assessing and confirming pre-existing theories on the mechanisms and causality behind various phenomena, through the systematic examination of hypotheses formulated prior to the gathering of empirical evidence. Quantitative research is commonly perceived as a logical method of inquiry (Ragab & Arisha, 2018).

The research study's objectives align well with the positivist research philosophy, which serves as the foundational philosophy for quantitative research, as indicated by the methodologies. Following this, the research utilized quantitative methodologies for data gathering in a singular investigation, aligning with the specific characteristics of the study. This study uses the existing RBV and PAT as underpinning theories in the hypotheses development. Its purpose is to assess theoretically formulated hypotheses regarding the impacts of a collection of study variable constructs, as well as to use reliability and validity to appraise the results and generalize them. Proceeding to this, the investigator will optimize the principles of positivism philosophy from the epistemological standpoint.

### **3.3 Population**

The population consists of a diverse array of individuals or subjects, from whom it is necessary to select a representative sample (Quansah et al., 2019). The comprehensive assemblage of all units of analysis that a researcher intends to evaluate for a certain study is commonly denoted as the target population (Babbie, 2015). Prior to commencing a research endeavour, it is imperative to ascertain the target population of the study. The population of the study comprised of senior managers including procurement officers, stores managers, warehouse managers and entity tender committee members.

### **3.4 Sample Size and Sampling Technique**

The term "sample size" is used to denote the quantity of individuals or objects that are to be incorporated in the research investigation (Saunders & Rojon, 2011). The determination of

sample size for a particular study is influenced by various aspects, regardless of whether the researcher employs a qualitative or quantitative methodology (Malhotra & Birks, 2007). The determination of an appropriate sample size is a crucial aspect in research, although there is no universally prescribed procedure for its selection (Seng, 2018). A sample of one hundred and fifty (150) were targeted from respondents whose work are related to procurement and their opinion solicited using google forms. These scholars argue that employing larger sample sizes increases the chances of mean, standard deviation, percentages, and other statistics reflected in the actual estimates of the population. At the end of the data collection, the current study was able to receive 101 responses from the target respondents. This number is presumed to be a suitable sample size based on the explanations as well as cues from previous studies (Hair et al. 2018; Sekaran and Bougie, 2019; Shumilova and Cai 2015).

After establishing the sample size, the researcher is now tasked with identifying the appropriate sampling technique for the study. The ideal scenario for any researcher would involve the collection of data from every individual within a given group. This scenario can only be realized when the researcher is conducting studies using limited sample sizes. However, in cases where the population of interest is large, the feasibility of employing a census approach becomes limited. The process of accessing potential participants is characterized by significant costs, time requirements, and complexities. Due to the challenges, research investigations that involve large populations, including the present study, have relied on sampling techniques to choose a representative sample from the target population (Malhotra, 2010). The process of picking enough components from a larger population or constituents to use the data acquired from these sampled parts to make correct judgments and inferences about the overall population is known as sampling (Hair et al., 2009). In the literature, there are two types of sampling procedures: probability and non-probability sampling. In the case of study research, non-probability sampling is regularly used. While probability sampling is routinely employed



in surveys and experiments, case study research frequently uses non-probability sampling. Despite this, when the sample population is exceedingly big, some researchers continue to utilize non-probability sampling in quantitative studies (Saunders et al, 2009). Each element in the sample frame has an equal chance of being chosen in probability sampling, whereas in non-probability sampling, the opposite is true (Sekaran, 2003). As a result, valid inferences about the target population are difficult to make when nonprobability sampling is used. Even though non-probability sampling frequently relies on personal judgments and samples obtained using this technique may not always be a true reflection of the population, generalizations about the population can still be made (Malhotra, 2010). Non-probability sampling procedures include quota, purposive, snowball, and convenience sampling. Purposive sampling entails the deliberate selection of participants based on the researcher's discernment of their possession of pertinent information. This study used the purposive sampling technique to draw managers from public sector organizations in Ghana. The study employed purposive sampling to collect relevant information from employees who are well knowledgeable about the phenomena under inquiry.

### **3.5 Data Type and Instrument**

Two main sources of data exist in any research, this includes primary data and secondary data. While primary data refers to first-hand information gathered by the research for the research, secondary data deals with already existing data gathered for a different purpose. The choice of the data source in any research is dependent on the nature of the objective of the study. Considering the nature of this study, primary data is more suitable to be able to test the hypotheses proposed in Chapter two. The choice of primary data is justified by the quest to gather first-hand information on the views of factors that affect employability in Ghana. Data used in this study was therefore gathered using a well-structured questionnaire.



Sekaran (2003) asserts that data can be obtained through diverse methodologies in different contexts. Various methods of data collection are employed in academic research, including interviews conducted by electronic means, telephone conversations, and face-to-face interactions. Surveys, which can be administered either physically or electronically, are another commonly used approach. Additionally, researchers may utilise observations captured through video or audio recordings. Furthermore, motivational strategies are employed as part of the data collection process (p. 221). Although all of the methods for obtaining data are important, the survey questionnaire method was selected as the most appropriate for collecting data in this study. This decision was based on the study's specific goal and objective, which is to assess the connections between variables using a quantitative approach.

The researchers will employ a structured questionnaire as a means to gather information from the participants. This study focuses on the use of primary data, which will be obtained through the administration of a questionnaire. The questionnaire has been structured into two distinct sections. The initial section encompasses the demographic data of the participants. The subsequent section comprises inquiries pertaining to the variables employed in this research endeavour. The items utilised in the questionnaire were obtained from questionnaires that have been previously verified.

During the survey, participants will be required to select a numerical value ranging from 1 to 5 that most accurately reflects their opinions on each statement. The instruments utilised for assessing the structures are provided in the appendix. While the items have been previously validated and tested in prior studies, this study aims to further assess the validity and reliability of the items through various approaches to ensure the ultimate findings are dependable. In order to promote engagement, every questionnaire was accompanied by a cover letter from the researcher that provided clarification on the objective of the study and requested the

participation of respondents. Additionally, the cover letter assured the confidentiality of the chosen participants and provided a brief introduction to the research project.

### **3.6 Data Collection**

The survey method is a widely employed technique for collecting data on the perceptions, judgements, and qualities of a large population (Malhotra & Birks, 2007). According to the positivist ideology, surveys serve the fundamental objective of generating systematic observation through the utilisation of structured research questions, hence facilitating uniformity and standardisation (Bryman & Bell, 2015). Surveys are commonly regarded as the most suitable method for researchers seeking to gather primary data on a population that is too extensive to be physically examined or observed.

Babbie (2004) posits that the survey method involves the researcher's selection of a representative sample that closely resembles the wider population. Additionally, this strategy relies on the utilisation of meticulously designed standardised questionnaires to ensure uniformity in respondents' responses. The survey approach is considered to possess a notable advantage, as highlighted by Malhotra and Birks (2007) and Saunders et al. (2009), due to its utilisation of standardised metrics. The data typically consists of quantitative variables and may be readily analysed and evaluated using various statistical methodologies (Creswell, 2014). Utilising a questionnaire as a means of data collecting offers several advantages, including enhanced ease and clarity in tabulation and data analysis, as well as a degree of reliability (Smith & Albaum, 2005).

The survey method is commonly employed in studies that aim to address inquiries pertaining to the "what" aspect (Yin, 2009). Additionally, this method enables researchers to evaluate multiple variables and employ diverse statistical analyses to examine the findings (Wimmer & Dominick, 2011). Sekaran (2003) asserts that the utilisation of a survey questionnaire for data

collection is deemed more effective when the researcher demonstrates a proficient ability to accurately identify the constructs pertinent to the study, along with employing precise measures for the variables being investigated. Consistent with Sekaran's theoretical framework, this research employed a survey methodology to gather data, aiming to obtain direct responses from managers regarding their perceptions of the variables included in the research model.

The survey method is commonly employed in research studies to address inquiries of the "what" nature (Yin, 2009). Additionally, this method enables researchers to evaluate multiple variables and employ diverse statistical analyses to examine the obtained data (Wimmer & Dominick, 2011). Sekaran (2003) asserts that the utilisation of a survey questionnaire as a data collection method is seen more effective when the researcher demonstrates a proficient ability to accurately identify the constructs pertinent to the study, along with employing precise measures for the variables being investigated.

To test the study's hypotheses, the researcher develops a survey with a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to measure all the study variables. The analysis relies on both a theoretical framework and several scholarly articles for the adoption of the study measurement items and the analysis of the results (Hosain, Mustafi, & Parvin, 2021; Ljubica & Cvelbar, 2016; Magnier & Crie, 2015; Lindh, Olsson & Williams, 2016). This study takes guidance from questions used in other related studies to suit Ghana's circumstances because they have been validated and tested for their reliability. All measures in this study adopted Likert scale questions because it makes questions easy and simple for respondents to answer as well as it eases the researcher during analysis and gives reliable and quantifiable results. A google form was developed and a link sent to the participants who partake in the study in Ghana.



### **3.7 Method of Data Analysis**

The selection of a data analysis method is a crucial aspect of research, since it significantly impacts the quality of the derived findings, conclusions, and recommendations. As a quantitative investigation, this study utilized various quantitative methodologies to analyze the data to achieve the objective stated in the first chapter. Following the data collection process, the gathered information was consolidated with Google Forms and subsequently transferred to Microsoft Excel for meticulous examination and subsequent analysis. The analysis utilized Statistical Package for Social Sciences (SPSS) version 21. The analysis involved the utilization of the SPSS for tasks such as generating frequency tables, constructing charts, and doing descriptive analysis. The relationships between the variables were evaluated through the utilization of PROCESS MACRO regression analysis.

### **3.8 Validity and Reliability**

#### **3.8.1 Validity**

A crucial aspect of research is ensuring that the instrument created to assess specific concepts actually and accurately measures the concept. The validity, according to Ringle & Ting, (2018), relates to the extent to which an instrument assesses its intended emphasis. The validity of the research instrument will be examined through face, content, convergent, and discriminant validity (Henseler, Ringle, & Sarstedt, 2015). For content validity, the important issue according to Kerr and Churchill (2001), is the methodology used to develop the questionnaire. Content validity was assessed through a thorough examination of the previous empirical and theoretical work of investigated constructs. The face validity of the questionnaire was assessed through the pretest exercise of the questionnaire with selected managers as well as the supervisors' expert review of the applicability and suitability of the questionnaire to achieve the study's intended objectives.



To ascertain the distinctiveness of the conceptions and their ability to accurately reflect various phenomena, the establishment of both convergent and discriminant validity was undertaken (Khalid et al., 2012; Kothari, 2012). Convergent validity refers to the degree of association between two or more items that are measuring the same construct. According to Hair et al. (2011, 2014), to establish the convergent validity of the reflective measurement model using PLS-SEM, it is necessary for a researcher to assess the average variance extracted (AVE), which should ideally be equal to or greater than 0.50. In this study, we will investigate the discriminant validity, which pertains to the extent to which the measurements of one construct are distinguishable from the measurements of another construct. Specifically, we will analyze two measures of the Fornell-Larcker Criterion and cross-loading, as discussed by Henseler et al. (2015). The Fornell-Larcker Criterion posits that the latent construct exhibits a higher degree of shared variance with its assigned indicators compared to other latent variables within the structural model. From a statistical perspective, it is also possible to assert that each latent construct must exhibit a higher average variance extracted (AVE) compared to the shared variance (squared correlation) of any other latent construct. This condition ensures that discriminant validity is achieved, as indicated by the cross-loading value, where the indicator loading of the corresponding latent construct should surpass its loading with other constructs, as stated by Hair et al. (2011).

### **3.8.2 Reliability**

Reliability pertains to the consistent and stable nature of an instrument's ability to frequently and predictably measure a given idea (Mohajan, 2017). This can also be seen as the ability to reproduce a study or its findings. According to Khalid et al., (2012), reliability measurement refers to the degree to which a measurement is free from random error, resulting in consistent outcomes. In order to assess the reliability of the instruments, the present study will employ

the methodology described by Hair et al. (2012), which includes two tests of reliability: internal consistency and indicator of dependability. The researchers employed the Composite Reliability test, instead of Cronbach Alpha, to determine the priority of variables based on their reliability during model estimation. This approach was deemed more suitable for Partial Least Squares Structural Equation Modelling (PLS-SEM), as it acknowledges that not all variables possess similar levels of dependability. A range of Composite dependability values between 0.7 and 0.9 signifies an acceptable level of dependability for the measures.

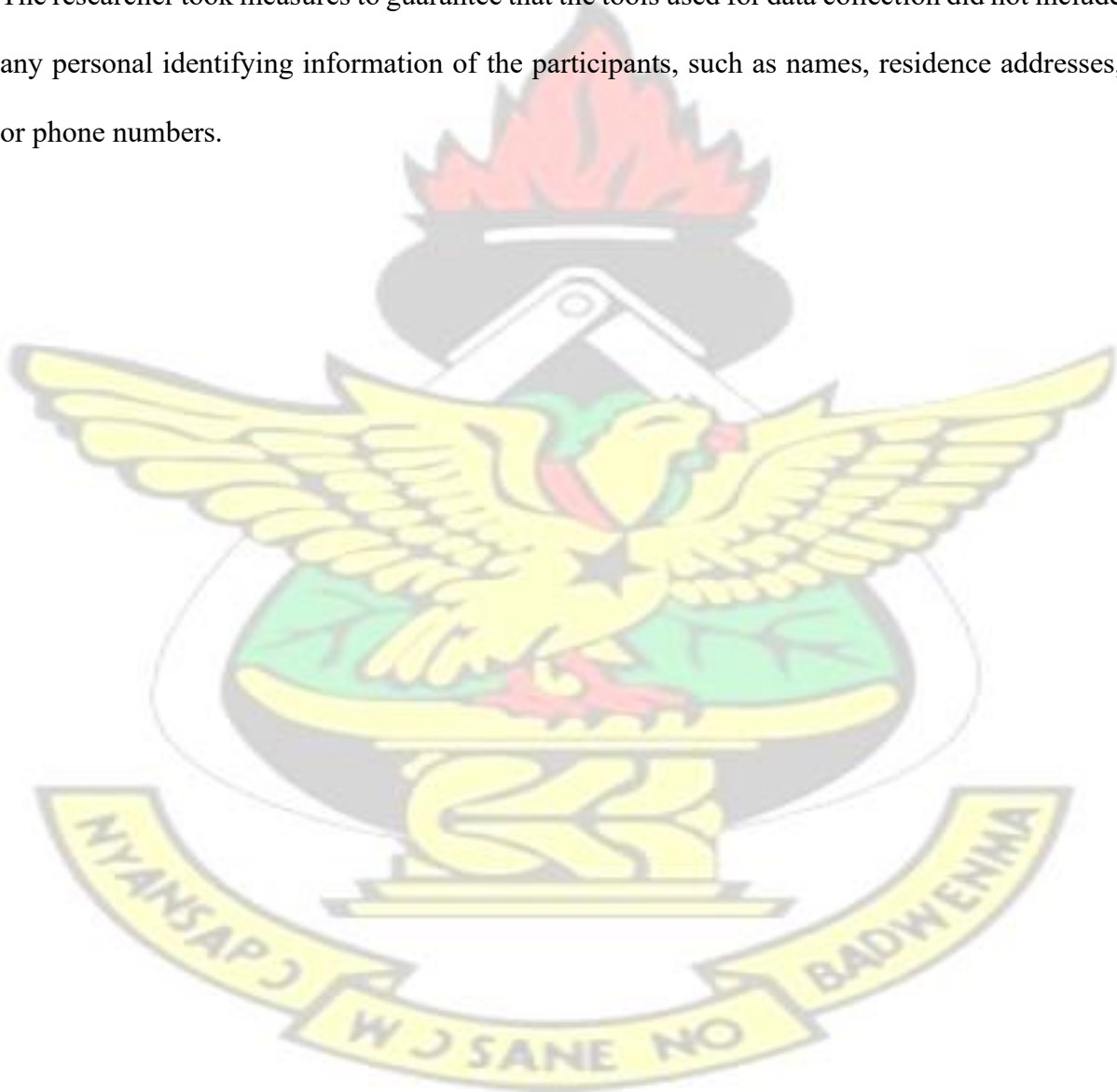
### **3.9 Ethical Consideration**

Ethical considerations encompass the fundamental principles that are imperative to adhere to when undertaking any form of study (Singh et al., 2015). Fleming and Zegward (2018) assert that it is imperative to address and outline the ethical concerns pertaining to informed consent, potential harm, confidentiality, and anonymity, as well as conflicts of interest in any research endeavour. A comprehensive strategy for effectively managing these ethical considerations should be articulated and implemented.

The data gathering process adhered to ethical standards, with the initial consideration being the acquisition of informed consent. Prior to their participation, all participants in the study were provided with comprehensive information regarding the study's purpose and thereafter given the opportunity to make an educated decision regarding their willingness to take part. The study exclusively included participants who provided voluntary consent to participate, ensuring their inclusion in the data collection process. Nevertheless, participants who expressed discomfort in disclosing details regarding their respective jobs were granted an exemption from the research. Regarding this matter, the individuals' involvement in this research was entirely voluntary, granting them the freedom to discontinue their participation in the data gathering procedure at any given point.

The data-gathering procedure was also directed by an additional ethical criterion, namely, the preservation of secrecy about the obtained information. The researcher implemented stringent measures to safeguard the confidentiality and security of the data collected from the respondents via questionnaires, ensuring that no unauthorized individuals were granted access to the information.

Ensuring the confidentiality of participants was a crucial aspect of the data collection process. The researcher took measures to guarantee that the tools used for data collection did not include any personal identifying information of the participants, such as names, residence addresses, or phone numbers.



## **CHAPTER FOUR**

### **DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS**

#### **4.1 Introduction**

This chapter presents the results based on the analysis of data gathered from the respondents. The chapter highlights the respondents' characteristics, measurement analysis, descriptive statistics, correlation results and finally the hypotheses testing using PROCESS MACRO in SPSS version 25. The results are further discussed with the literature. Initially, the researcher distributed 150 questionnaires through google forms and received 101 completed responses for the analysis. The response rate, therefore, stood at 67.3%.

#### **4.2 Demographic Characteristics of Respondents**

Table 4.1 presents the demographic characteristics of the respondents. As displayed, the results show that most of the respondents were females, representing 53.5% while the remaining 46.5% were males. The results on the age of the respondents indicated that most of them were between 31 – 40 years, representing 56.4%, followed by 23.8% who were between 18 – 30 years. 12.9% were between 41 – 50 years and 6.9% above 50 years. In terms of the level of education, most respondents have a diploma, representing 39.6%. This is followed by those with bachelor's degrees (27.7%), master's and PhD (10.9%). JHS and SHS constituted 19.8%. The results show that almost all the respondents have formal education. The results on the position of the respondents indicated that 18.8% were business owners, 7.9% were business owners and managers at the same time, 16.8% were managers and 14.9% were production managers. Further, the data showed that most of the respondents have their firms been in operation for 1 – 5 years, representing 38.6%, followed by those of 6 – 10 years, representing 29.7%. 18.8% indicated their firms have been in operation for 11 – 15 years whilst 12.9% have been in operation for 16 years and above.



**Table 4.1: Demographic Characteristics of Respondents**

Variables	Categories	Count	%
Gender	Male	47	46.5
	Female	54	53.5
Age	18 – 30	24	23.8
	31 – 40	57	56.4
	41 – 50	13	12.9
	Above 50	7	6.9
Level of Education	JHS	4	4.0
	SHS	16	15.8
	Diploma	40	39.6
	Bachelor's degree	28	27.7
	Graduate Studies (Masters/PhD)	11	10.9
	Others	2	2.0
Position	Business Owner	19	18.8
	Business Owner & Manager	8	7.9
	Manager	17	16.8
	Production Manager	15	14.9
	Others	42	41.6
Years of operations	1 – 5	39	38.6
	6 – 10	30	29.7
	11 – 15	19	18.8
	16 and above	13	12.9
No. of employees	Less than 5	20	19.8
	5 – 29	15	14.9
	30 – 99	17	16.8
	More than 100	49	48.5
Type of Ownership	Fully locally owned	66	65.3
	Fully foreign-owned	23	22.8
	Jointly Ghanaian & foreign-owned	12	11.9

**Source: Field Survey, 2023**

Table 4.1 further shows the number of employees the firms have. The results show that 48.5% have more than 100 employees, 16.8% have between 30 – 99 employees, 14.9% have between 5 – 29 employees and 19.8% have less than 5 employees. Finally, results on type of ownership reveal that 65.3% are fully locally-owned, 22.8% are fully foreign-owned and 11.9% are jointly Ghanaian and foreign-owned.

### 4.3 Measurement Analysis

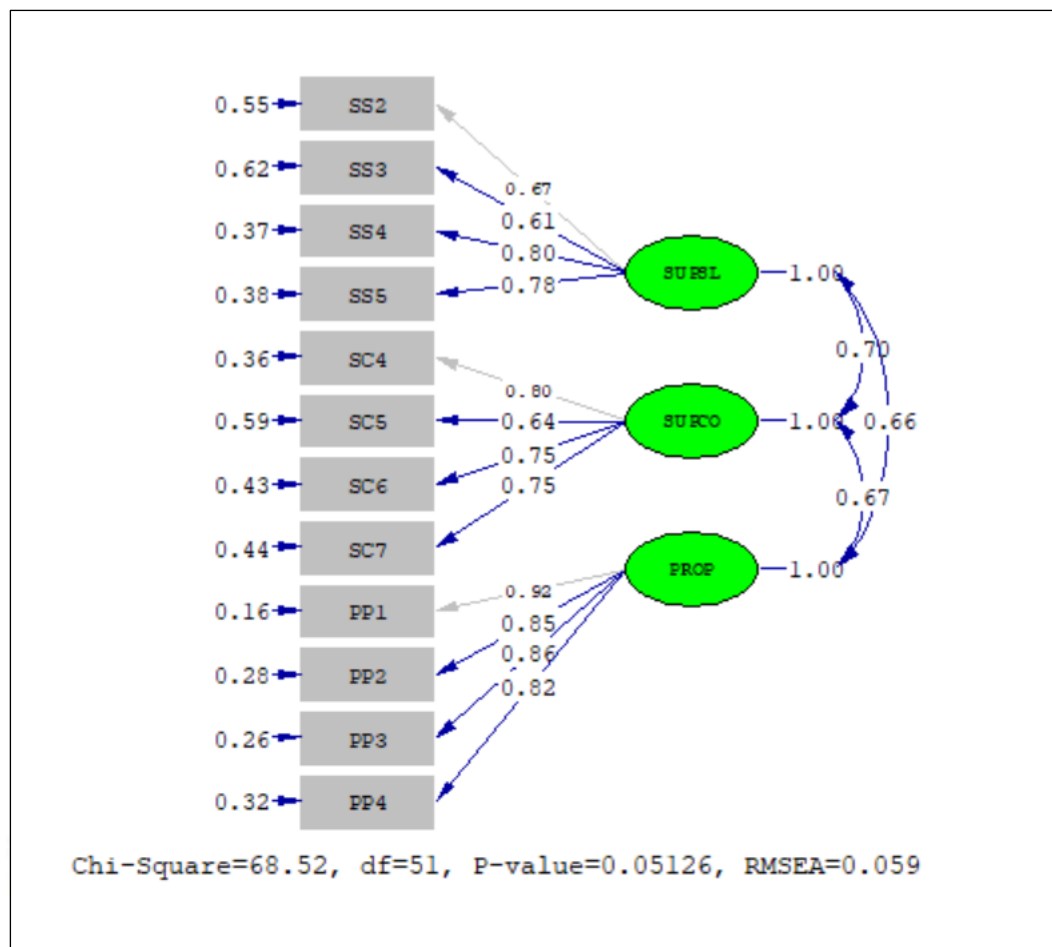
Confirmatory factor analysis was used to check for the psychometric properties of the data using LISREL 8.50. The main constructs in the study were supplier selection, supplier collaboration and procurement performance. At the designing stage of the questionnaire, supplier selection was measured using ten (10) indicators, supplier collaboration was measured with seven (7) indicators, and procurement performance was measured with four (4) indicators. The indicators for all constructs were taken through a purification process by which some items were dropped, and others retained. For example, six (6) items were dropped from the ten indicators for supplier selection, hence the construct was finally measured with four items. Similarly, three (3) items were dropped from the seven indicators of supplier collaboration, hence the construct was finally measured with four items. Finally, all the items for procurement performance were retained without deleting any.

The CFA table below provides the list of the items that were retained in the analysis 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 = 68.52; Df = 51;  $\chi^2/Df$  = 1.34; P-value = 0.05; RMSEA = 0.06; GFI = .90; CFI = .96; SRMR = .05; NNFI = .95). 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: CFA Results**

<b>Constructs and Measures</b>	<b>Estimate</b>	<b>T-value</b>
<b><i>Supplier Selection: CR = .810; AVE = .598; CA = .800</i></b>		
We select supplies based on cost performance	0.67	<b>Fixed</b>
We select suppliers who have the backup capacity for demand changes	0.61	5.29
We select suppliers who have the flexibility of providing uninterrupted delivery of supply in a changing business environment	0.80	6.51
Supplier competence and capabilities contribute to operational efficiency and resilience performance	0.78	6.46
<b><i>Supplier Collaboration: CR = .826; AVE = .612; CA = .824</i></b>		
Our firm and its suppliers focus on joint efforts with a feeling of “we are in this together”	0.80	<b>Fixed</b>
We engage our suppliers in joint decisions for our mutual goals	0.64	6.33
We involve key suppliers in the product design and development stage	0.75	7.52
There is a strong consensus in our firm that supplier involvement is needed in product design/development	0.75	7.45
<b><i>Procurement Performance: CR = .921; AVE = .745; CA = .920</i></b>		
Our organization has delivery at the right time	0.92	<b>Fixed</b>
Our organization has delivered the right quantity	0.85	12.27
Our organization has delivery at the right price.	0.86	12.64
Our organization delivery is at the right quality	0.82	11.42
<i>Chi-Square = 68.52; Df = 51; <math>\chi^2/Df = 1.34</math>; P-value = 0.05; RMSEA = 0.06; GFI = .90; CFI = .96; SRMR = .05; NNFI = .95</i>		

**Source: Field Survey, 2023**



**Figure 4.1: CFA Model**

*Source: Field Survey, 2023*

#### 4.4 Descriptive Statistics

This section of the analysis presents the descriptive statistics of the variables in the study; namely, supplier selection, supplier collaboration and procurement performance. All the questions that were asked under each variable were measured on a five-point Likert scale format where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The interpretation of the average scores for each of the variables is based on this Likert scale format.



#### 4.4.1 Supplier Selection

Supplier selection was measured using four (4) items. All the items had a mean score above 4.00 which suggests that on average, a participant in the study agreed to the set of items that were used to measure the construct.

**Table 4.3: Supplier Selection**

Items	Min	Max	Mean	Std. Dev
We select supplies based on cost performance	1	5	4.15	.921
We select suppliers who have the backup capacity for demand changes	1	5	4.09	.918
We select suppliers who have the flexibility of providing uninterrupted delivery of supply in a changing business environment	1	5	4.29	.779
Supplier competence and capabilities contribute to operational efficiency and resilience performance	1	5	4.24	.789
<b>Composite mean</b>	<b>1</b>	<b>5</b>	<b>4.19</b>	<b>.676</b>

*Source: Field Survey, 2023*

#### 4.4.2 Supplier Collaboration

Supplier collaboration was measured using four (4) items. All the items had a mean score above 3.70 which suggests that on average, a participant in the study agreed to the set of items that were used to measure the construct.

**Table 4.4: Supplier Collaboration**

Items	Min	Max	Mean	Std. Dev
Our firm and its suppliers focus on joint efforts with a feeling of “we are in this together”	1	5	4.09	.884
We engage our suppliers in joint decisions for our mutual goals	1	5	3.92	.891
We involve key suppliers in the product design and development stage	1	5	3.94	.858
There is a strong consensus in our firm that supplier involvement is needed in product design/development	1	5	3.76	1.021
<b>Composite mean</b>	<b>1</b>	<b>5</b>	<b>3.93</b>	<b>.741</b>

*Source: Field Survey, 2023*

#### 4.4.3 Procurement Performance

Procurement performance was also measured using four (4) items. All the items had a mean score above 4.00 which suggests that on average, a participant in the study agreed to the set of items that were used to measure the construct.

**Table 4.5: Procurement Performance**

Items	Min	Max	Mean	Std. Dev
Our organization has delivery at the right time	1	5	4.12	.941
Our organization has delivered the right quantity	1	5	4.30	.867
Our organization has delivery at the right price.	1	5	4.20	.928
Our organization delivery is at the right quality	1	5	4.15	.984
<b>Composite mean</b>	<b>1</b>	<b>5</b>	<b>4.19</b>	<b>.836</b>

*Source: Field Survey, 2023*

#### 4.5 Correlation Analysis

This section presents the correlation analysis results. The results indicated that supplier selection positively relates to supplier collaboration ( $r = .567$ ,  $p < 0.01$ ) and procurement performance ( $r = .579$ ,  $p < 0.01$ ). This means that as supplier selection is enhanced, supplier collaboration and procurement performance will also be enhanced. Also, supplier collaboration had a positive and significant relationship with procurement performance ( $r = .573$ ,  $p < 0.01$ ). This means that as supplier collaboration is enhanced, procurement performance will also be enhanced.

**Table 4.6: Correlation Results**

Variables	1	2	3	4	5
1. Supplier Selection	1				
2. Supplier Collaboration	.567**	1			
3. Procurement Performance	.579**	.573**	1		
4. Firm Age	-.005	.028	.073	1	
5. Firm Size	-.276**	-.091	-.167	.228*	1

*Notes:* \*\*  $p < .01$ ; \*  $p < .05$  (2-tailed).

*Source: Field Survey, 2023*

#### 4.6 Hypotheses Testing

To test the study's hypotheses, the researcher employed PROCESS MACRO model 1. Explicitly, the results showed that supplier selection positively and significantly affects procurement performance ( $\beta = .310$ ;  $SE = .137$ ;  $p < .05$ ). This means that positive changes in supplier selection will result in positive changes in procurement performance. Hypothesis 1 is therefore supported. Also, the study found that supplier collaboration has a significant positive effect on procurement performance ( $\beta = .377$ ;  $SE = .106$ ;  $p < .01$ ). This means that positive changes in supplier collaboration will result in positive changes in procurement performance. Hypothesis 2 is therefore supported.

**Table 4.7: Hypotheses Results**

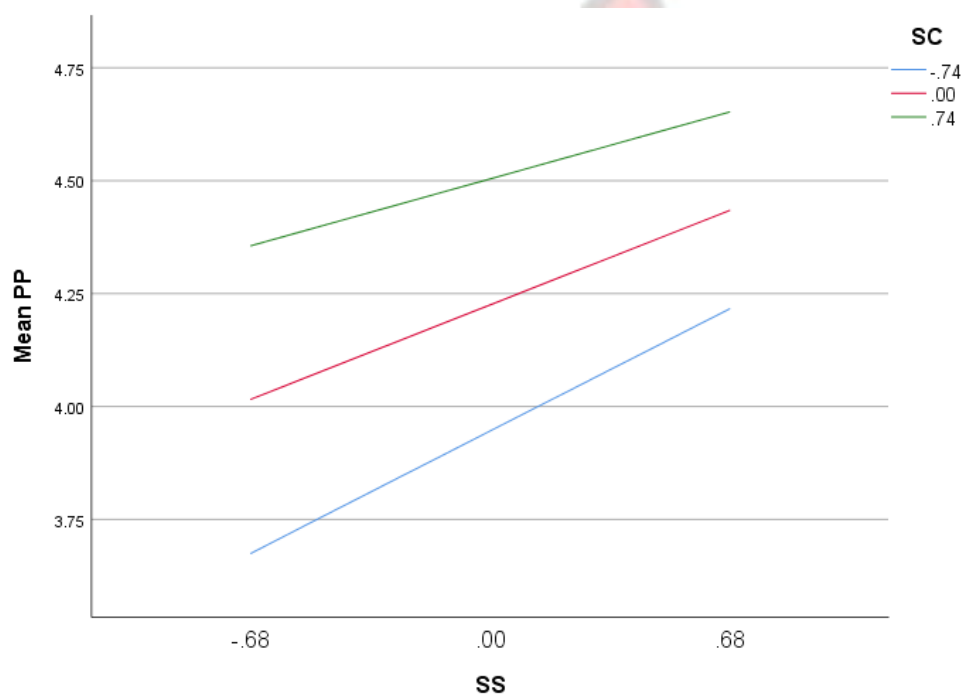
Variables	Procurement Performance	Hypothesis
<b>Controls</b>		
Firm Age	.133 (.140)	N/A
Firm Size	-.147 (.145)	N/A
<b>Direct Effects</b>		
Supplier Selection (SS)	.310 (.137) *	Supported
Supplier Collaboration (SC)	.377 (.106) **	Supported
<b>Interaction Effect</b>		
SS*SC	-.122 (.062) *	Supported
SS*low SC	.400 (.121) **	
SS*high SC	.220 (.165)	
<b>Model Fit Indices</b>		
R <sup>2</sup>	.453	
F	15.704 **	
R <sup>2</sup> Change	.022	
F Change	3.876 *	

*Notes:* \*\*  $p < .01$ ; \*  $p < .05$  (2-tailed)

*Source:* Field Survey, 2023

The study further hypothesized that supplier collaboration positively moderates the relationship between supplier selection and procurement performance. The results showed that at the mean

level, supplier collaboration inversely and significantly moderates the relationship between supplier selection and procurement performance ( $\beta = -.122$ ,  $SE = .062$ ;  $p < .05$ ), however, the effect turned out to be positive at low levels of supplier collaboration ( $\beta = .400$ ,  $SE = .121$ ;  $p < .01$ ). This means that at decreasing levels of supplier collaboration, supplier selection will have a significant positive effect on procurement performance. There is therefore evidence to support hypothesis 3.



**Figure 4.2: Moderation Plot**

*Source: Field Survey, 2023*

**Table 4.8: Summary of Hypotheses**

Hypothesis	Prediction	Results	Evaluation
H1: Supplier selection positively influences procurement performance.	+	+	Supported
H2: Supplier collaboration positively influences procurement performance.	+	+	Supported
H3: Supplier collaboration positively moderates the relationship between supplier selection and procurement performance.	+	+ (-1SD)	Supported

*Source: Field Survey, 2023*



#### 4.7 Discussion of Results

This section of the chapter discusses the results with the literature and also in line with the specific objectives.

The first objective of the study sought to examine the influence of supplier selection on procurement performance. The results showed that supplier selection positively and significantly affects procurement performance. This means that positive changes in supplier selection will result in positive changes in procurement performance. This confirms previous findings in the literature. For example, Masudin et al. (2022) found that supplier selection in terms of cost savings and environmental protection affects procurement performance. Sariçam and Yilmaz (2021) concluded that supplier selection based on important criteria has a direct effect on performance. Cherono and Keitany (2021) found that supplier selection practices influence supply chain performance (Makhitha, 2020). The rationale underlying this finding is that companies that allocate time and money towards enhancing supplier selection procedures might provide positive procurement results, including reduced costs, enhanced quality, and more dependable supplier partnerships.

The second objective of the study sought to examine the influence of supplier collaboration on procurement performance. The study found that supplier collaboration has a significant positive effect on procurement performance. This means that positive changes in supplier collaboration will result in positive changes in procurement performance. This confirms previous findings in the literature. For example, Njeru et al., (2014) in their study demonstrated that elements of supplier management like supplier development, supplier collaboration, supplier appraisal techniques, supplier selection strategies, and supplier relationship management affects effective purchasing practices. The logic behind this result is based on the notion that establishing strong collaborations with suppliers can result in enhanced communication, risk management, cost minimization, quality enhancement, innovation, and

operational efficiency. These various elements all help to enhance the effectiveness and efficiency of the procurement process, ultimately benefitting the overall performance and competitiveness of the organization.

The last objective of the study sought to examine the moderating role of supplier collaboration in the relationship between supplier selection and procurement performance. The results demonstrated that at the mean level, supplier collaboration inversely and significantly moderates the relationship between supplier selection and procurement performance, however, the effect turned out to be positive at low levels of supplier collaboration. This means that at decreasing levels of supplier collaboration, supplier selection will have a significant positive effect on procurement performance. The findings indicate that when collaboration levels are moderate to high, the impact of supplier selection on procurement performance is reduced. Conversely, when collaboration levels are low, the significance of choosing appropriate suppliers becomes more prominent. The result emphasizes the intricate nature of the connection between these factors and emphasizes the necessity for a sophisticated approach to supplier management and procurement strategies, contingent upon the extent of collaboration with suppliers.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS**

#### **5.1 Introduction**

This chapter details the summary of the findings of the study according to the results. It also provides a conclusion as well as captures the recommendations of the study.

#### **5.2 Summary of Findings**

The study attempted to investigate the moderating role of supplier collaboration in the relationship between supplier selection and procurement performance in the Ghanaian Public sector. This section presents the summary of the results based on the specific objectives of the study.

##### **5.2.1 Supplier Selection and Procurement Performance**

The first objective of the study sought to examine the influence of supplier selection on procurement performance. The results showed that supplier selection positively and significantly affects procurement performance. This means that positive changes in supplier selection will result in positive changes in procurement performance.

##### **5.2.2 Supplier Collaboration and Procurement Performance**

The second objective of the study sought to examine the influence of supplier collaboration on procurement performance. The study found that supplier collaboration has a significant positive effect on procurement performance. This means that positive changes in supplier collaboration will result in positive changes in procurement performance.

### **5.2.3 The moderating role of supplier collaboration**

The last objective of the study sought to examine the moderating role of supplier collaboration in the relationship between supplier selection and procurement performance. The results demonstrated that at the mean level, supplier collaboration inversely and significantly moderates the relationship between supplier selection and procurement performance, however, the effect turned out to be positive at low levels of supplier collaboration. This means that at decreasing levels of supplier collaboration, supplier selection will have a significant positive effect on procurement performance.

### **5.3 Conclusions**

The study attempted to investigate the moderating role of supplier collaboration in the relationship between supplier selection (strategic and operational supplier selection) and procurement performance in the Ghanaian Public sector. In conclusion, the study has produced noteworthy results on the intricate dynamics between supplier collaboration, supplier selection, and procurement performance. The findings of this research underscore the complex nature of these linkages, offering valuable insights into the significance of supplier collaboration as a moderating factor.

A noteworthy finding at the average level of supplier collaboration was the presence of a significant negative moderating effect between supplier selection and procurement performance. This suggests that, on average, the act of supplier selection may not yield immediate improvements in procurement performance, provided there is a sufficient level of supplier engagement. This finding underscores the possible challenges that businesses may face when seeking to improve procurement outcomes in a collaborative supplier environment.



Nevertheless, the study has shown an intriguing aspect of this interaction. When there is a limited amount of supplier collaboration, the impact of supplier selection on procurement performance is found to be positive. This suggests that in situations where engagement with suppliers is restricted, the deliberate selection of suppliers can have a more significant and advantageous effect on procurement performance. This discovery emphasises the strategic significance of supplier selection in scenarios where there may be a lack of collaboration or insufficient development in this aspect.

The findings, therefore, emphasize the importance for organisations to carefully evaluate the extent of supplier collaboration as a critical element in their procurement strategies. The selection of suppliers continues to be a crucial aspect of achieving success in procurement. However, the level of efficacy in supplier selection can be influenced by the extent of collaboration with suppliers. Organisations must customise their methods to supplier management in accordance with the existing level of cooperation, acknowledging that distinct techniques may be necessary in contexts characterised by moderate collaboration as opposed to low collaboration.

#### **5.4 Recommendations**

The following recommendations are provided based on the results.

The study recommends that companies should consider diversifying their levels of supplier collaboration. It is essential for firms to acknowledge that supplier collaboration does not adhere to a universal solution. Alternatively, it is suggested that organizations embrace a varied approach that is tailored to the unique requirements of certain procurement categories or projects. In instances where supplier collaboration is limited, it is advisable to prioritize supplier selection factors that place emphasis on cost, quality, and reliability. In categories characterized by a strong potential for collaboration, it is advisable to give priority to suppliers

who are capable of actively engaging in joint product development, cost reduction endeavours, and innovation.

Furthermore, it is important for organizations to classify their suppliers into distinct groups according to their respective capacities and inclination to engage in collaborative efforts. This can be achieved by discerning providers who have a willingness to engage in collaborative efforts and have a proven history of successful collaborative ventures. Firms can contemplate other measures, such as implementing stringent performance monitoring mechanisms and establishing explicit contractual agreements, to address the needs of individuals who exhibit lower levels of collaboration.

Additionally, it is imperative for organizations to uphold a policy of open and transparent communication with their suppliers to effectively convey their expectations for collaborative efforts. It is good for organizations to effectively articulate their procurement objectives and elucidate the advantages of collaboration to cultivate a more cohesive and cooperative relationship with suppliers.

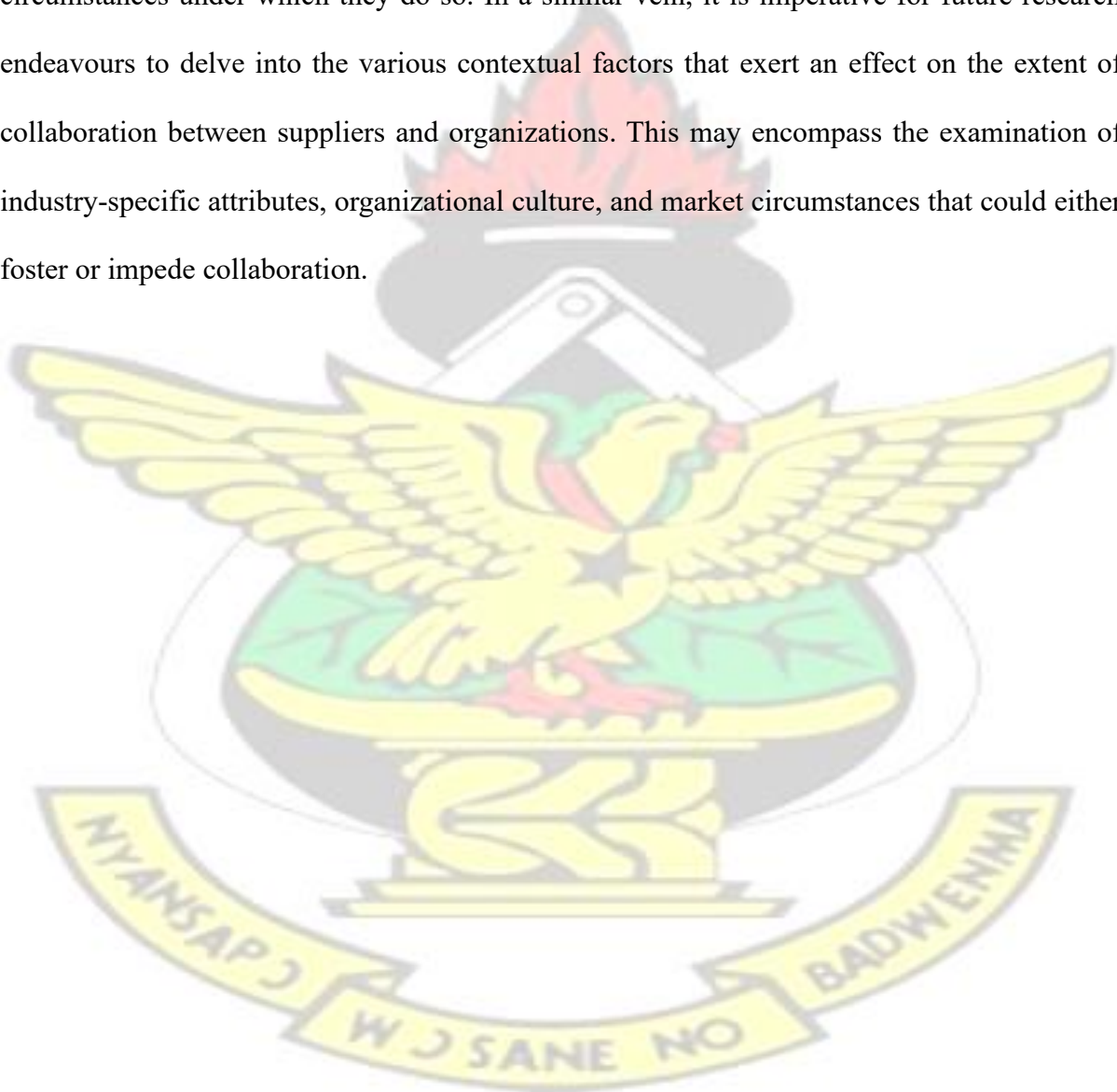
Ultimately, it is important for organizations to establish and execute a comprehensive Supplier Relationship Management (SRM) initiative to cultivate and strengthen connections with critical suppliers. To enhance the efficacy of partnerships, it is advisable for firms to invest more resources towards strengthening collaborations with suppliers with whom they have established a historical rapport.

#### **5.4.1 Suggestion for further research**

This study enhances the existing literature in the field of supply chain management by emphasising the complex and diverse characteristics of supplier relationships. Further investigation is warranted to explore in greater detail the precise mechanisms and contextual variables that impact the interaction between supplier selection, and procurement performance.

The insights will hold significant value for organisations aiming to enhance the efficiency of their supply chain operations within a constantly changing business environment.

Furthermore, it is recommended that future studies delve into the diverse facets of supplier collaboration, encompassing elements such as the exchange of information, joint planning activities, and collaborative efforts towards process improvement. This will aid in the identification of the facets of collaboration that exert the most substantial influence and the circumstances under which they do so. In a similar vein, it is imperative for future research endeavours to delve into the various contextual factors that exert an effect on the extent of collaboration between suppliers and organizations. This may encompass the examination of industry-specific attributes, organizational culture, and market circumstances that could either foster or impede collaboration.



## REFERENCES

- Abbas, B.A.H., Abd Ali, M.F. and Abas, T.A., 2021. The Mediating Effect Of Supply Chain Flexibility And Agility Between Partnerships With Supplier, Customer Relationship, Variety Management Strategy And Manufacturing Excellence in General Company For The Automotive Industry of Babylon/Alexandria. *Multicultural Education*, 7(8).
- Abioro, T.A., 2021. Public Procurement Corruption and Service Delivery in Nigeria and South Africa. In *Public Procurement, Corruption and the Crisis of Governance in Africa* (pp. 249-267). Palgrave Macmillan, Cham. B
- Álvarez-Gil, M.J., Berrone, P., Husillos, F.J. and Lado, N., 2007. Reverse logistics, stakeholders' influence, organizational slack, and managers' posture. *Journal of business research*, 60(5), pp.463-473.
- Banaeian, N., Mobli, H., Nielsen, I.E. and Omid, M., 2015. Criteria definition and approaches in green supplier selection—a case study for raw material and packaging of food industry. *Production and Manufacturing Research*, 3(1), pp.149-168.
- Bartai, D.K. and Kimutai, G., 2018. Role of e-requisition on procurement performance of North Rift County assemblies in Kenya. *International Academic Journal of Procurement and Supply Chain Management*, 3(1), pp.44-57.
- Bhagwat, R., & Sharma, M. K. (2007). Performance measurement of supply chain management: A balanced scorecard approach. *Computers & Industrial Engineering*, 53(1), 43-62.
- Brush, C. G., Greene, P. G., & Hart, M. M. (2001). From initial idea to unique advantage: The entrepreneurial challenge of constructing a resource base. *The Academy of Management Executive*, 15(1), 64-78.



- Caniëls, M. C., & Gelderman, C. J. (2005). Purchasing strategies in the Kraljic matrix—A power and dependence perspective. *Journal of Purchasing and Supply Management*, 11(2-3), 72-82.
- Chemjor, R.K., 2015. *Supplier evaluation criteria and procurement performance in parastatals in Kenya* (Doctoral dissertation, University of Nairobi).
- Chen, I. J., Paulraj, A., & Lado, A. A. (2010). Strategic purchasing, supply management, and firm performance. *Journal of Operations Management*, 28(2), 137-152.
- Cherono, N.N. and Keitany, P., 2021. EFFECT OF THE SUPPLIER SELECTION ON SUPPLY CHAIN EFFICIENCY IN COUNTY GOVERNMENT OF NANDI. *International Journal of Supply Chain Management*, 6(1), pp.64-73.
- Christopher, M., & Lee, H. (2004). Mitigating supply chain risk through improved confidence. *International Journal of Physical Distribution & Logistics Management*, 34(5), 388-396.
- Clarkson, M.E., 1995. A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of management review*, 20(1), pp.92-117.
- Croom, S. R., Romano Jr, P., & Giannakis, M. (2000). Supply chain management: an analytical framework for critical literature review. *European Journal of Purchasing & Supply Management*, 6(1), 67-83.
- Ditlev-Simonsen, C.D. and Wenstøp, F., 2013. How stakeholders view stakeholders as CSR motivators. *Social responsibility journal*.
- El Mokadem, M., 2017. The classification of supplier selection criteria with respect to lean or agile manufacturing strategies. *Journal of Manufacturing Technology Management*.
- Freeman, R.E. and Philips, R.A., 2002. Stakeholder Theory: a liberalization defense. *Business Ethics Quarterly*, 12(3).
- Freeman, R.E., 1984. *Strategic Management: A Stakeholder Approach*. Pittman, Marshfield.

- Giuffrida, L.M. and Rovigatti, G., 2019. Supplier selection and contract enforcement: Evidence from performance bonding. *Journal of Economics and Management Strategy*.
- Giunipero, L. C., & Eltantawy, R. A. (2004). Securing buyer–supplier relationships: the role of dependence and collaborative practices. *The Journal of Supply Chain Management*, 40(4), 4-13.
- Günay, E.E., Kremer, G.E.O. and Park, K., 2019. Effect of supplier selection regulations on new product design. *Procedia Manufacturing*, 39, pp.1337-1345.
- Handfield, R. B., Pannesi, R. L., & Ragatz, G. L. (2013). Trust-based sourcing and supply management: The role of trust in achieving sustainability. *Journal of Purchasing and Supply Management*, 19(1), 3-14.
- Hartford Kantis, H., Federico, J., & Palma, M. (2004). The creation of small and medium-sized enterprises: The Mexican case. *Small Business Economics*, 22(3-4), 319-339.
- Hill, C.W. and Jones, T.M., 1992. Stakeholder-agency theory. *Journal of management studies*, 29(2), pp.131-154.
- Jia, M., Stevenson, M. and Hendry, L., 2021. A systematic literature review on sustainability-oriented supplier development. *Production Planning and Control*, pp.1-21.
- Jia, X., Li, W. and Gao, W., 2021. The effect of supplier CSR practices on sales performance with major customers in B2B markets. *International Journal of Logistics Research and Applications*, pp.1-21.
- Kariuki, J.G., Makokha, E.N. and Namusonge, G.S., 2018. Influence of Supplier Selection on Procurement Performance in Technical Institutions in Trans-Nzoia County in Kenya.
- Krop, E. and Iravo, M.A., 2016. Effects of supplier selection on performance of procurement function in public sector: A case of West Pokot County government. *International academic journal of procurement and supply chain management*, 2(2), pp.51-73.

- Luzzini, D., Ronchi, S., & Pigni, F. (2015). Supplier involvement in new product development: A multiple-case study in the automotive supply chain. *Journal of Purchasing and Supply Management*, 21(4), 293-307.
- Makhitha, K.M., 2019. Supplier relationship marketing practices and small retailer performance in South Africa. *Cogent Business and Management*, 6(1), p.1672490.
- Makhitha, K.M., 2020. THE IMPACT OF SUPPLIER SELECTION ON THE RELATIONSHIP MARKETING PERFORMANCE OF INDEPENDENT RETAILERS IN SOUTH AFRICA. *Academy of Entrepreneurship Journal*, 26(3), pp.1-14.
- Masudin, I., Umamy, S.Z., Al-Imron, C.N. and Restuputri, D.P., 2022. Green procurement implementation through supplier selection: A bibliometric review. *Cogent Engineering*, 9(1), p.2119686.
- Matos, S. and Silvestre, B.S., 2013. Managing stakeholder relations when developing sustainable business models: the case of the Brazilian energy sector. *Journal of Cleaner Production*, 45, pp.61-73.
- McKenna, S., & Easterby-Smith, M. (2012). Exploring firm size and capital structure: The Australian evidence. *International Review of Finance*, 12(2), 201-218.
- Mogikoyo, L.K., Magutu, P.O. and Dolo, A.B., 2017. The link between supplier evaluation attributes and supply chain performance of government owned entities: Perspectives from commercial state corporations in Kenya. *Noble International Journal of Economics and Financial Research*, 2(1), pp.1-20.
- Mohammaditabar, D. and Ghodsypour, S.H., 2016. A supplier-selection model with classification and joint replenishment of inventory items. *International Journal of Systems Science*, 47(8), pp.1745-1754.

- Mojaki, L.M. and Chukwuere, J.E., 2021. An evaluation of selected supply chain management elements in department of community safety and transport management in Mahikeng. *HOLISTICA–Journal of Business and Public Administration*, 12(3), pp.13-38.
- Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2019). Purchasing and supply chain management. Cengage Learning
- Morrisette, S. (2019). Small Business Challenges: 10 Problems Small Businesses Face.
- Mousavi, M.D. and Mousavi, M.D., 2022. The Effect of Stakeholder's Pressure on firm Market Performance and the Mediating Role of Corporate Responsibility, Sustainable Supplier Selection, and Marketing Capability. *Corporate Reputation Review*, pp.1-13.
- Mugenyi, L.N., Kibati, P. and Nzioki, P.M., 2020. The effect of adoption of Integrated Financial Management Information Systems on the sustainability of NGOs in Nairobi County.
- Mutuku, D.M., Agusioma, N.L. and Wambua, J., 2021. Assessment of the Influence of Selected Procurement Practices on the Performance of Devolved Government Units in Kenya: A Case of Machakos County Government. *International Journal of Business Management, Entrepreneurship and Innovation*, 3(3), pp.18-31.
- Njeru, S.E., Arasa, R., Ngugi, P. and Kahiri, J., 2014. Influence of supplier management on the implementation of effective procurement practices in tertiary public training institutions in Kenya.
- Obaid, F.O. and Ali, M., 2022. A Strategy Model for Enhancing E-Government Procurement in UAE. *Tropical Scientific Journal*, 1(2), pp.100-108.
- Ochieng, B.E., 2018. Influence of Supplier Management on Performance of Retail Chain Stores in Nairobi City County, Kenya. *Journal of International Business, Innovation and Strategic Management*, 2(4), pp.102-119.



- Osei-Tutu, E., Kissi, E., Osei-Tutu, S. and Desmond, A., 2019. Evaluating critical factors for the implementation of e-procurement in Ghana.
- Park, B.I., Chidlow, A. and Choi, J., 2014. Corporate social responsibility: Stakeholders influence on MNEs' activities. *International Business Review*, 23(5), pp.966-980.
- Ponomarov, S. Y., & Holcomb, M. C. (2009). Understanding the concept of supply chain resilience. *The International Journal of Logistics Management*, 20(1), 124-143.
- Post, J.E., Preston, L.E. and Sachs, S., 2002. Managing the extended enterprise: The new stakeholder view. *California management review*, 45(1), pp.6-28.
- Reuter, C., Goebel, P. and Foerstl, K., 2012. The impact of stakeholder orientation on sustainability and cost prevalence in supplier selection decisions. *Journal of Purchasing and Supply Management*, 18(4), pp.270-281
- Rotich, J.C., Keitany, P. and Sang, H.W., 2021. Ethical principles and procurement management in selected public secondary schools in Kericho county, Kenya.
- Sarıçam, C. and Yilmaz, S.M., 2022. An integrated framework for supplier selection and performance evaluation for apparel retail industry. *Textile Research Journal*, 92(17-18), pp.2947-2965.
- Sarkis, J., Zhu, Q. and Lai, K.H., 2011. An organizational theoretic review of green supply chain management literature. *International journal of production economics*, 130(1), pp.1-15.
- Shiati, M.M., Kibet, Y. and Musiega, D., 2014. Determinants of supplier selection on the performance of public institutions in Kenya: Case of Kakamega County, Kenya. *International Journal of Management Research and Reviews*, 4(5), p.542.
- Sikhumbuzo, K.P., 2019. Effect of Strategic Sourcing and Supplier Selection on Supply Chain Performance of Textile and Apparel Industries in South Africa. *Journal of Procurement and Supply Chain*, 3(3).

- Swink, M., Narasimhan, R., & Wang, C. (2007). Managing beyond the factory walls: Effects of four types of strategic integration on manufacturing plant performance. *Journal of Operations Management*, 25(1), 148-164.
- Van der Westhuizen, J. and Ntshingila, L., 2020. The effect of supplier selection, supplier development and information sharing on SME's business performance in Sedibeng. *International Journal of Economics and Finance*, 12(2), pp.290-304.
- Van Weele, A. J. (2018). Purchasing and supply chain management: Analysis, strategy, planning and practice. Cengage Learning EMEA.
- Vijayakumar, Y., Rahim, S.A., Ahmi, A. and Rahman, N.A., 2019. Investigation of supplier selection criteria that leads to buyer-supplier long term relationship for semiconductor industry. *International Journal of Supply Chain Management*, 8(3), pp.982-993.
- Wachiuri, E.W., 2019. *Influence of supplier evaluation criteria on the performance of state corporations in Kenya* (Doctoral dissertation, JKUAT-CO HRED).
- Wagner, S. M., Bode, C., & Koziol, C. (2019). The role of supplier resilience in supply chain risk management. *Journal of Purchasing and Supply Management*, 25(4), 100553.
- Waweru, L., 2015. Supplier selection criteria and supply chain performance in non-governmental organisations in Kenya. *European journal of business and management*, 7, p.18.
- Woschank, M., Dallasega, P., Zunk, B.M. and Pacher, C., 2022. Strategic supplier selection: the importance of process formality in non-automated supplier selection decisions. *Cogent Engineering*, 9(1), p.2094853.
- Yoon, J., Talluri, S., Yildiz, H. and Ho, W., 2018. Models for supplier selection and risk mitigation: a holistic approach. *International Journal of Production Research*, 56(10), pp.3636-3661.

Zimmer, K., Fröhling, M. and Schultmann, F., 2016. Sustainable supplier management—a review of models supporting sustainable supplier selection, monitoring and development. *International journal of production research*, 54(5), pp.1412-1442.

Zsidisin, G. A., Ellram, L. M., Carter, J. R., & Cavinato, J. L. (2005). An analysis of supply risk assessment techniques. *International Journal of Physical Distribution & Logistics Management*, 35(3), 210-232.



## APPENDIX

### SURVEY QUESTIONNAIRE

Dear Sir/ Madam,

My name is Mary Korlekie a postgraduate student at the Kwame Nkrumah University of Science and Technology, Kumasi, Department of Supply Chain and Information Systems. This survey instrument has been designed to enable me to carry out research on the topic: **“Effect of Supplier Selection on Procurement Performance: The Moderating Role of Supplier Collaboration”**. Any information provided will be used for academic purposes ONLY. There are no risks associated with your participation, and your responses will remain confidential and anonymous.

#### SECTION A: RESPONDENT’S BIOGRAPHY AND COMPANY PROFILE

When completing this questionnaire, please tick [☐] in the applicable box or provide an answer as applicable.

Please answer the following questions:

1. Gender: Male ☐ Female ☐
2. Age  
18-30 years ☐ 31-40 year’s ☐ 41-50 years ☐ Above 50 years ☐
3. Level of Education  
Junior High School ☐ Senior High School ☐ Diploma ☐ Bachelor Degree ☐  
☐ Graduate Studies (Master / Ph.D.) ☐ Others ☐ For Others, Please specify:.....
4. Your Position in the Firm  
Business Owner ☐ Business Owner & Manager ☐ Manager ☐ Production Manager ☐ Others ☐  
☐.....
5. How many years has your firm been in operation?  
1 - 5 years ☐ 6 - 10 years ☐ 11 – 15 years ☐ 16 years and above ☐
6. How many employees are in the firm?  
Less than 5 employees ☐ 5 – 29 employees ☐ 30 – 99 employees ☐ More than 100 ☐
7. Type of ownership:  
[ ☐ ] Fully locally owned [ ☐ ] Fully foreign-owned [ ☐ ] Jointly Ghanaian & foreign-owned



## SECTION B: Supplier Selection

	In this section, we are trying to measure the effect of supplier selection (strategic and operational supplier selection) influence procurement performance. Please indicate the degree of your agreement with the following statements. Using the Likert scale, where 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree					
Item	Supplier Selection	1	2	3	4	5
SS1	We select supplies based on quality performance					
SS2	We select supplies based on cost performance					
SS3	We select suppliers who have the backup capacity for demand changes					
SS4	We select suppliers who have the flexibility of providing uninterrupted delivery of supply in a changing business environment					
SS5	supplier competence and capabilities contribute to operational efficiency and resilience performance					
SS6	Able to handle sudden changes in order volume or specifications					
SS7	Able to manage financial risks that could affect your ability to meet supply commitments					
SS8	had major supply disruptions in the past					
SS9	Have environmental sustainability measures in place (Recycling, waste reduction, energy efficiency, etc)					
SS10	incorporated technological advancements and innovation into your operations					

	<b>supplier collaboration</b>					
SC1	Our firm and its suppliers share responsibilities for the successes and failures of our working relationships					
SC2	Our firm considers it as the most normal thing that business partners try to cooperate as much as possible					
SC3	our firm prefers close cooperation with suppliers over working independently					
SC4	Our firm and its suppliers focus on joint efforts with a feeling of “we are in this together					
SC5	We engage our suppliers in joint decisions for our mutual goals					
SC6	We involve key suppliers in the product design and development stage					
SC7	There is a strong consensus in our firm that supplier involvement is needed in product design/development					

### SECTION C: Procurement Performance

In this section, we are trying to measure the **Procurement Performance**. Please indicate the degree of your agreement with the following statements. Using the Likert scale, where 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree

Procurement Performance	1	2	3	4	5
Our organization have delivery at the right time					
Our organization have delivery at the right quantity					
Our organization have delivery at the right price.					
Our organization have delivery at the right quality					

**Thank you for participating in the survey.**

