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**INSTITUTE OF DISTANCE LEARNING**

**DEPARTMENT OF SUPPLY CHAIN AND INFORMATION SYSTEMS**

**TOPIC**

**An Evaluation of Militating Factors Against the Application of the Public Procurement Act**

**2003 Within the Volta River Authority (VRA): A Public Service Managers Perspective**

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## DECLARATION

I, Mabel Anorkor Pearce-Pearson, hereby declare that this submission is my own work towards the Masters of Procurement and Supply Chain Management and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any degree of the University, except where due acknowledgement has been made in the text.

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I appreciate my Husband, my family, lecturers and all friends who gave me their full support, love and support throughout the period of the program

God bless you all.



## DEDICATION

The project is dedicated to the Almighty God for His grace and my family for their support and guidance throughout my life.

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## ABSTRACT

The position of procurement has not received the recognition it deserves in emerging economies, with most competitive factors, such as the World Bank, World Trade Organization (WTO), International Trade Organization (ITO), United Nations Conference on Trade and Development (UNCTD), and many more, paying insufficient attention to its application. This could be interpreted as a complete lack of understanding of the importance of procurement status to the development of any society. As a result of critically observing similar studies that had been conducted in relation to the issue under consideration, it was apparently definite that little had been done regarding the implementation of the Public Procurement Act, 2003, Act, 663, and the challenges public service managers face when applying the Act. As a result, there is a keen interest in assessing the issues confronting public service managers in the application of the public procurement Act 2003, Act 663 as amended Act 2016, Act 914 with the Volta River Authority (VRA) and analyzing the policies that can be championed to maximize procurement practices, primarily at the Volta River Authority, Ghana. The study selected a sample of 150 categories of procurement professionals at the VRA. A survey questionnaire was developed and distributed to procurement professionals at various stations of VRA in Ghana. A quantitative approach was adopted, and a structural equation model was applied to data analysis. The results of the study revealed that to a large extent, (1) procurement officials significantly have a positive attitude towards the application of the Act, 2003 (2) the Act, 2003 provides a relatively added advantage to public institutions for its application, (3) intentions towards the application of the Act, 2003 are shaped by the official's position and experience. (4) Perceived behavioural control has a negative effect on the Act's application. These results reinforce existing literature (Sait et al., 2004; Fishbein and Ajzen, 2005 Moon and Kim, 2001, Venkatesh and Davis 2000). Also, in terms of intention to apply the Act, the section of procurement managers who were considered for the study have a negative application attitude.

It was therefore concluded that it is the responsibility of the public service's stakeholders to manage the difficulties as minimally as possible, even to the point of fully informing every stakeholder. This



would go a long way toward assisting the Ghanaian public service in maintaining responsiveness, familiarity with the Public Procurement Act, and usage or application of the Act appropriately.

KEYWORDS: public procurement Act, procurement officials, perceived behavioural control, application attitude, mitigating factors.

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## TABLE OF CONTENT

DECLARATION .....	i
ACKNOWLEDGEMENTS .....	<a href="#"><u>ii</u></a>
DEDICATION .....	iii

ABSTRACT .....	1
TABLE OF CONTENT .....	vi
LIST OF TABLES .....	xii
LIST OF FIGURES .....	xiii
CHAPTER ONE .....	1
1.0 INTRODUCTION .....	1
1.1 Background of the Study .....	1
1.2 Statement of the Problem .....	4
1.3 General Objectives .....	6
1.3.1 Specific Objectives of the Study .....	7
1.4 Research Questions .....	7
1.5 Significance of the study .....	7
1.6 Scope of the Study .....	8
1.7 Summary of Methodology of the study .....	8
1.8 Limitations of the study .....	11
1.9 Ethical Considerations .....	11
1.0 Organization of the study .....	12
CHAPTER TWO .....	14
2.0 Introduction .....	14
2.1 Conceptual Review .....	15
2.1.1 Brief History of Procurement. ....	15
2.1.2 Public Procurement in Ghana. ....	18
2.1.3 The Public Procurement Act 2003, Act 663 . ....	20
2.1.4 The Public Procurement Authority .....	22
2.1.5 Legal Background of Public Procurement in Ghana .....	23
2.2 Theoretical Framework of Procurement Processes .....	26
2.2.1 The Theory of Planned Behaviour (TPB) .....	26
2.2.1.1 Perceived Behaviour Control Theory .....	26

2.2.1.2 Attitude Towards Application Theory. ....	26
2.2.1.3 Subjective Norm Theory. ....	26
2.2.1.4 Relative Advantage Theory.....	27
2.2.1.5 Structural Atmosphere .....	27
2.2.1.6 Individual Effectiveness.....	28
2.2.1.7 Environmental Context .....	28
2.2.1.8 Government Support .....	28
2.3 Empirical Review of Public Procurement.....	30
2.3.1 The Procurement Role in the Public Sector .....	30
2.3.1 The Procurement Process .....	<a href="#">31</a>
2.4 Procurement for Public Procedure. ....	33
2.4.1 Procurement .....	33
2.4.2 Tendering .....	<a href="#">34</a>
2.4.3 Contract .....	35
2.4.4 Monitoring and .....	36
2.4.5 Appeal and .....	36
2.5 Procurement .....	37
2.5.1 Professionalism and Transparency in Public Procurement .....	37
2.5.2 Value for Money and competitiveness in Public Procurement .....	<a href="#">39</a>
2.5.3 Accountability, Fairness and Efficiency in Public Procurement .....	39
2.5.4 Effectiveness and .....	40



2.5.5	Ethical Standards in Public Procurement	41
2.5.6	Technology and Procurement	42
2.6	Conceptual Framework	43
2.6.1	Elements of the Conceptual Framework	45
2.6.2	Buyer's Knowledge of the Laws	46
2.6.3	Top Management Support	46
2.6.4	Political Interference	47
2.6.5	Declared Competence	48
2.6.6	Organisational Motivations	48
2.6.7	Contractor/Supplier Resistance	49
2.6.8	Compliance with Ghana's Act	663
2.7	Summary of Literature Review	50
CHAPTER THREE		51
METHODOLOGY OF THE STUDY		51
3.1	INTRODUCTION	51
3.2	Research Methodology	51
3.3	Research Philosophy	52
3.3.1	Epistemology	52

3.3.2 Ontology .....	53
3.3.3 Axiology.....	53
3.3.4 Research Philosophy adopted for this Study .....	53
3.4 Research Approaches .....	54
3.3.1 Deductive. ....	54
3.3.2 Inductive. ....	54
3.3.3 Abductive. ....	54
3.3.4 Research Approach adopted for the Study.....	54
3.4 Research Strategies .....	55
3.4.1 Research Strategies adopted for the Study.....	56
3.5 Research Design.....	56
3.5.1 Research Design adopted for the Study .....	58
3.6 Time Horizons .....	59
3.6.1 Longitudinal. ....	59
3.6.2 Cross-Sectional. ....	59
3.6.3 Time Horizon Position for the Study. ....	59
3.7 Research Process Design .....	59
3.7.1 Unit of Analysis. ....	60
3.8 Data Analysis Methods .....	60

3.8.1	Source of Data.....	61
3.8.1.1	Types of Data.....	61
3.8.2	Questionnaire Development.....	62
3.8.3	Data Collection Method adopted.....	62
3.9	Population and Sample Frame.....	63
3.9.1	Sampling Technique and Sample Size.....	64
3.9.2	Sampling Technique.....	64
3.9.2.1	Probability Sampling.....	64
3.9.2.2	Non-Probability Sampling.....	65
3.9.2.3	Sampling Technique adopted for this Study.....	66
3.9.2.4	Determination of Sample Size.....	66
3.10	Data Processing and Analysis.....	68
3.10.1	Entering and Organisation of Data.....	68
3.10.2	Data Presentation using Tables and Figures (Descriptive Statistics).....	68
3.10.3	Fatcor Analysis.....	69
3.10.4	Relative Importance Index (RII).....	70
3.10.5	One-Sample T-Test.....	70

3.10.6 Covariance-Based Structural Equation Modelling for Framework Development .....	70
3.10.7 Data Reliability and Validity .....	71
3.10.7.1 Data Validity .....	71
3.10.7.2 Data Reliability .....	72
3.10.7.3 Pilot Test .....	73
3.11 Ethical Considerations .....	73
3.12 Chapter Summary .....	74
CHAPTER FOUR .....	75
DATA PRESENTATION, ANALYSIS AND DISCUSSIONS .....	75
4.0 Introduction .....	75
4.1 Response Rate .....	75
4.2 Demographic Characteristics of Respondents .....	75
4.3 Factors Mitigating the Application of the Procurement Act 2003.....	77
4.3.1 Attitude towards the application of the Procurement Act, 2003 .....	77
4.3.2 Subjective norm .....	79
4.3.3 Perceived Behavioral Control .....	80
4.3.4 Intention to apply the Procurement Act 2003 .....	82
4.4 Strategies to enhance the application of the Procurement Act, 2003 .....	84



4.3.6	Summary of findings on on factors mitigating the application of the Procurement Act, 2003 by Public Procurement Managers in Ghana .....	85
4.5	Model Evaluation and Theory Testing .....	86
4.5.1	Measurement Model Analysis .....	86
4.5.1.1	Scale Reliability Test .....	86
4.5.1.2	Exploratory Factor Analysis (EFA) .....	87
4.5.1.3	Confirmatory Factor Analysis (CFA) .....	87
4.5.1.4	Assessment of Common Method Bias.....	88
4.5.1.5	Structural model analysis and results .....	93
4.5.1.6	Evaluation of theories and findings.....	94
CHAPTER FIVE.....		100
5.0	Introduction .....	100
5.1	Summary of Findings .....	100
5.1.1	The Procurement Process and Procedures, Principles and methods observed in VRA .	100
5.1.2	Various Challenges faced by the Procurement Managers at VRA .....	101
5.1.3	Strategies put in place to enhance Procurement Practices at VRA .....	102
5.2	Conclusion .....	102
5.3	Recommendations .....	103
REFERENCES .....		109
<b>Appendix</b> .....		114
LIST OF TABLES		
Table 2.1: Procurement Act 2003 Legal Background .....		25
Table 3.1: Classification of respondents and sample selection .....		63
Table 3.2 Computing suitable sample size for model estimation .....		67
Table 4.1: Demographic Characteristics of Respondents .....		76
Table 4.2: Attitude towards the application of the Procurement Act, 2003.....		78



Table 4.3: Subjective norm towards the application of the Procurement Act, 2003 .....	80
Table 4.5: Perceived Behavioural Control towards the application of the Proc. Act, 2003 ....	81
Table 4.5: Intention to apply the Procurement Act, 2003 .....	<a href="#">82</a>
Table 4.6: Relative advantage as a strategy in Procurement Practices .....	<a href="#">84</a>
Table 4.7: Scale Reliability .....	<a href="#">86</a>
Table 4.8: Inter.item Correlation and Descriptive Statistics .....	<a href="#">89</a>
Table 4.9: CFA Results .....	<a href="#">90</a>
Table 4.10: Inter-Construct Correlations and Descriptive Statistics .....	93
Table 4.11: Legal Procurement Documents.....	<a href="#">96</a>
Table 4.12: Procurement Principles applied in Ghana .....	<a href="#">97</a>

#### LIST OF FIGURES

Figure 1.1: Conceptual Diagram of thesis organisation. ....	<a href="#">13</a>
Figure 2.1: Theoretical Framework .....	29
Figure 2.2: Procurement Process .....	33
Figure 2.3: Procurement Principles.....	37
Figure 2.4: Conceptual Framework .....	45

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 BACKGROUND OF THE STUDY**

Procurement now includes contract management, and it is thought to be a substitute action during the asset's useful life disposal (Waters, 2007). As a result, the procurement mark is reasonably important because it necessitates a considerable measure of general requirements for goods, works, and services in order to pursue its development goal (Waters, 2007). Experts such as (Arrowsmith, 2001; Thai, 2001) have agreed that “the procurement system benefits numerous groups and civilizations, businesses, and governments.”

Thus, a successful procurement plan is characterized by a “greater value-for-money attitude, responsibility, and transparency in the filing of procurement financial statements. These are important for poverty reduction and utility” (Weele, 2010). As a result, numerous groups in the development sequence of action must carefully consider how to assist these critical supports of high-quality regulators. To enable these “highquality control supports, procurement managers in public institutions must be active in carrying out their tasks and responsibilities” (Onyinkwa et al., 2013).

Surprisingly, since public funds are used to acquire goods, works, and services, the conduct of public service procurement managers has become a subject of open discussion and deliberation, and has been subject to a set of laws that have been modified, reorganized, and resolved. Managers all around the world “employ public procurement methods and implementation tools to address a wide range of developmental challenges, including budget implementation, service delivery, the socioeconomic environment, human rights, and a variety of other issues” (Abunyewah et al., 2013). All these tasks can be carried out by procurement managers at various phases of the procurement process (World Bank, 2016a; Onyinkwa et al., 2013).

However, in Ghana, public procurement was carried out in the context of various judicial tools.

The District Tender Board Regulation, 1995 (L.I. 1606), the Ghana National Procurement Agency Decree 1976 (SMCD 55), and the Ghana Supply Commission Law, 1990, PNDCL 245 are among the procurement-related laws (Azanlerigu & Akay, 2015). Similarly, the Ghana National Procurement Agency (GNPA) and Ghana Supply Company Limited (GSCL) were the primary agents in charge of procuring all government goods in Ghana (Anvuur & Kumaraswamy, 2016).

Thus, procurement managers' sole responsibility is to “successfully and professionally acquire goods, works, and services to achieve the best possible value for money for the best conceivable blend of the right quality and quantity, at the right place, price, time, and source of production, and in the right condition” (Kipkemoi, 2017). Nonetheless, individuals face several challenges when they go through these processes and procedures (Benslimane et al., 2015; Caldwell et al., 2009).

Furthermore, between the 1990s and the early 2000s, public service procurement managers had a direct role in the creation of security institutions, according to (OseiOwusu et al., 2014). They said that “procurement managers oversaw locating the items their organizations needed at the lowest feasible cost while keeping fundamentals like item quality and other critical numbers in mind” (Osei-Owusu et al. 2014).

Furthermore, while many emerging economies, such as Ghana, have identified a way to provide critical information and assistance to procurement professionals through improved structures, the processes and procedures remain cloaked in privacy, fraud, wastefulness, and difficulty, wasting enormous amounts of government resources (Onyinkwa et al., 2013).



Interestingly, since the publication of the Public Procurement Law 2003 (Act 663) in 2003 and its implementation in 2004, there have been several citizen perspectives on the execution of government tenders. (Musanzikwa, 2013). Almost every important government project in the sector, notably the PDS Energy Concession in 2017 and its suspension in 2019, has aroused criticism. 2019 (Ubhi, Ajay). As a result, procurement experts in energy generating and distribution organizations are overburdened with responsibilities that must be discussed (Musanzikwa, 2013). As a para-energy entity, the Volta River Authority (VRA) has various procurement blocks that are similar to the country's procurement challenges. The paper analyzes and examines the specific issues that Volta River Authority public service managers experience when executing the Public Procurement Act 2003 (Act 663).

Similarly, empirical studies have established the importance of public procurement in national growth (Asampana & Akanferi, 2015; Agboyi et al., 2014; Sumaila et al., 2016). For example, public institutions in Ghana take the procurement law as a model, meticulously following the stages of the procurement procedure for public expenses (Asampana & Akanferi, 2015). Numerous reports on existing authority structures have documented procurement ethics as vital issues in inspiring good practice (Osei-Afoakwa, 2015). Senzu et al. (2017) conclude that the current procurement system in place at various public institutions in Ghana is superior to the one in place prior to the passage of Act 663.



## 1.2 STATEMENT OF THE PROBLEM

Most competitive factors, including the World Bank, World Trade Organization (WTO), International Trade Organization (ITO), United Nations Conference on Trade and Development (UNCTD), and many others, have not given procurement the attention it deserves in emerging economies (Asampana et al., 2015). This could be construed as a complete ignorance of the significance of procurement status to the evolution of any society (Harper et al., 2016).

Prior to 2002, however, procurement applications were handled by the finance unit. Throughout those times, procurement was simply based on a basic invoice comparison, with the supplier with the most economically advantageous invoice being asked to supply without consideration for quality or documentation of the process and procedures (VRA Annual Audit Report, 2004). Based on the recommendations of the Public Accounts Committee, Ghana established a Procurement Unit in the Service's headquarters in 2000 to regulate all procurement processes.

Despite numerous procurement variations and the implementation of the Public Procurement Act 2003 (Act 663) to remove all uncertain blocks to the smooth application of procurement architecture in Ghana, “the work of public procurement managers has frequently been marked by a variety of difficulties and challenges ranging from supply chain management issues, logistics, financial to allowable inhibitions (Mensah et al., 2012).” In addition, it appears that there is a lack of practical and human resource capacities to strengthen the institution in terms of allocating scarce resources, supervising, auditing, and controlling actual spending (World Bank, 2017).

Furthermore, procurement managers are frequently chastised by the public for “payoff or inducement, profligacy, acquisition postponements due to red-tapism, lack of equality, lack of transparency, corruption, financial malfeasance, and collecting ten percent (10%) of any given contract awarded to suppliers (Pimenta et al, 2016).” There are significant

indicators that little research on this subject has been undertaken, and VRA, as a public organization, may be confronting all of the aforementioned challenges.

Again, studies have investigated the subject of utility administration suppliers in the Volta River Authority (VRA) and revealed that, for public sector procurement to be good, transparency and accountability must be prioritized (Adu-Amoah and Campion 2012). According to Yin (2016), “macroenvironmental elements such as the ecological system, economic factors, political, legal, and social-fiscal mechanisms make the application of viable procurement difficult.” As a result, empirical evidence exemplifies that procurement procedures in Ghanaian institutions, for instance, encounter several issues, including unethical and dishonest methods. Similarly, Patrick, Mamati, and Jonathan (2010) investigated the impact of competitive procurement in secondary schools on procurement practices in Ghanaian public institutions. Likewise, Opoku (2019) discovered in her research that “changes in procurement applications in public institutions result in extensive but statically relevant gains in their performance.”

Regrettably, Opoku (2019) failed to mention the status of the Public Procurement Act 2003, Act 663 in the procurement activities of public institutions in her effort. Following that, Benon et al. (2019) revealed in their study, "Compliance to Public Procurement Reforms in Developing Countries," that "practically all dominant and local government entities conform to the institution of procurement structures are extremely insufficient in the application of Uganda's Public Procurement and Disposal Act (PPDA Act, 2003)." Strangely, Benon et al. (2019) left a gap by not addressing to some extent, the issues faced by procurement officers in the application of these procurement processes.

Similarly, Novixoxo (2018) observed the “Public Procurement Act, 2003 application in the public sector in Ghana, as well as its impact on accountability, fairness,

nondiscrimination, and transparency of public sector officers in her survey0.” Novixoxo (2018) defined her objectives as “regulating the Procurement Act, 2003 procedures, evaluating the fiscal perspectives of procurement entities in Ghana, and determining the potential of procurement staff in Ghana's procurement sector.” Accordingly, Novixoxo (2018), like the other authorities surveyed, did not acknowledge the difficulties that the Procurement Act, 2003, Act 663, was causing public service managers/staff.

As a result of censoriously observing similar studies that had been conducted in relation to the issue under consideration, it was apparently definite that little had been done regarding the implementation of the Public Procurement Act, 2003, Act, 663, and the challenges public service managers face when applying the Act. As a result, there is a keen interest in assessing the issues confronting public service managers in the application of the public procurement Act 2003, Act 663 as amended Act 2016, Act 914 with the Volta River Authority (VRA) and analysing the policies that can be championed to maximize procurement practices, primarily at the Volta River Authority.

### **1.3 GENERAL OBJECTIVES**

The survey's overarching goal is to identify the challenges that procurement managers in the Volta River Authority face (VRA).

#### **1.3.1 SPECIFIC OBJECTIVES**

The specific objectives of this study are:

- 1.To critically identify and assess the procurement processes, procedures and methods observed in the VRA.



2. To analyze the effects of the Public Procurement Act 2003 (Act 663) on procurement practices and service delivery.
3. To ascertain the various challenges faced by the procurement managers in the VRA.
4. To appraise the strategies to enhance procurement practices in VRA.

#### **1.4 RESEARCH QUESTIONS**

The study will respond to the following questions:

1. What are the procurement processes, procedures and methods used in VRA?
2. What are the effects of the Public Procurement Act 2003 (Act 663) on procurement practices and service delivery?
3. What are the various challenges faced by the procurement managers in the VRA and how to address them?
4. What are the appropriate strategies to be put in place to enhance procurement practices in VRA?

#### **1.5 SIGNIFICANCE OF THE STUDY**

This study would be greatly appreciated by the VRA's numerous stakeholders. The findings and recommendations of this research would be extremely beneficial to the VRA's management by confirming that public funds due to the authority are used for the intended purpose and also managing the procurement unit's actions. Furthermore, the findings and recommendations of the analysis would assist government and policy architects in identifying and implementing an appropriate audit activity plan for public service procurement practitioners to certify seamless application of the Act.

The study would benefit and regulate the government and policy planners in their public resource arrangements, thereby assisting future users of any development

projects and keeping them up to date on some of the challenges that public service managers face.

As a result, the study would be pursued in order to broaden the knowledge base of potential future researchers or academicians.

## **1.6 SCOPE OF THE STUDY**

There are various public institutions in the country where procurement managers operate, but this study focuses on the Volta River Authority. Much research on public procurement modifications, public procurement acts, and procurement specialists have been conducted in both developed and developing countries, which is commendable. Regardless, this research focuses on examining challenges encountered in the Volta River Authority's execution of the Public Procurement Act 2003, as revised by Act 2016, Act 914. Again, the Public Procurement Act of 2003 divides procurement into three categories: goods, works, and services, but due to time and cost constraints, this study will focus on goods procurement.

## **1.7 SUMMARY OF METHODOLOGY**

The methodology segment of this will be carried out with caution, considering the standard research philosophies in use (epistemology, ontology, axiology, pragmatism etc.) 2004 (Kothari). These research philosophies will influence research selection as well as the method and research technique to be used. The pragmatic study philosophy, for example, will be advocated for this assessment. This precise philosophy will be implemented based on the validation of (Tashakkori and Teddlie, 1998) that the pragmatic research philosophy is best when choosing between positivist and interpretivist approaches.



As a result, from one point of view, it is critical to involve yourself in research through interpretivist philosophy, whereas from another point of view, you must avoid manipulating the outcomes in order to discover genuine value evidence (positivist) (Creswell et al., 2019). For The most pulsating feature of pragmatism is the research question, and the research question should be such that either a positivist or interpretivist method would be appropriate (Tashakkori and Teddlie, 1998).

Obviously, given the philosophical stance of this research, both inferential and inductive research methods should be appropriate for this study. It is also stated that using case studies and surveys as the research strategy would aid in understanding the study's objectives (Collis and Hussey, 2013). Because (Wilson, 2014) speculates that for a pragmatic research philosophy, the right research method could be either qualitative, quantitative, or a combination of both as it becomes appropriate in responding to the research questions, the mixed methods approach to research (quantitative and qualitative research approach) will also be used for this study.

The population for this study is presumed to include VRA employees who are associated with public procurement practices. As a result, it will include, but not be limited to, the personnel of the VRA procurement unit and other related units, the VRA's local suppliers, and VRA procurement committee members from Takoradi, Accra, Tema, Akuse, and Akosombo offices.

The study's data will be gathered from both primary and secondary sources. Secondary data will be collected from existing related literature on procurement procedure challenges, benefits of public procurement activities, procurement principles governing compliance, competence, and openness in public procurement, and procurement procedure baselines. Google Books, Google Scholar, Microsoft Academics, Emerald, Worldwide Science, Scopus, Wolfram Alpha, Refseek, and the Educational Resources Information Center, in addition to the library and other

resources as well as KNUST BrightSpace will be a valuable resource for articles, reports, journals, and research publications on the topic being studied. The collected data will be accurately grouped based on their relevance, affinity, and importance. Extraneous ones will be rejected, while related ones with relevant data to the issue under consideration will be reviewed and characterized.

Based on proximity and risk, the disclosed variables from the literature review will be conclusively merged into closed-ended questionnaires and administered to the target population in person and digitally (via Google survey). The questionnaire items will be constructed in such a manner that they will give answers to the study's strategic objectives after analysis. According to Chen and Jin (2013), the most used technique in quantitative research is a questionnaire survey.

The primary data for the study will be analyzed using the most acceptable tools of analysis, such as Descriptive Statistics (Means, Frequencies, and Standard Deviations), One-sample t-test, Principal Component Factor Analysis, and Relative Importance Index.

The Cronbach's Alpha Coefficient test will be performed to examine the scale's reliability and the internal consistency of the variables. Content-related validity measurement will also be used to assess the study's internal and external validity. Statistical Packages for Social Sciences (SPSS) and structural equation modeling will be used for the analysis.

## **1.8 LIMITATIONS OF THE STUDY**

Each study may have some fathomable limitations. The limitations of this study are related to the time given as the deadline for submission of the final work of the study,

which is extremely short tied with other difficult tasks. Budgetary constraints are another gravitas in the study's conduct. Because this study is still in its early stages, any limitations that are discovered will be noted and added to this section before final submission.

## **1.9 ORGANISATION OF THE STUDY**

This thesis will be organized methodically while adhering to the policies and procedures for undertaking master's theses at KNUST. The thesis will essentially consist of five key chapters: Introduction to the Study, Literature Review, Research Methodology, Data Analysis and Discussion of Results, and Study Conclusions and Recommendations. Even so, several headings, sub-headings, and sub-subheadings from the concepts that become quintessential to existing and expressing in each main chapter under each chapter.

Moreover, the thinking will be discussed in detail, and care will be taken not to produce subheadings that are not useful to readers, as well as not to disrupt the flow of the content. Following the chapter one is the literature review section (Chapter two), in which various models on procurement procedures challenges, benefits of public procurement activities, procurement principles inhibiting compliance, competence and sincerity in public procurement, and limit for procurement procedures would be offered and well produced, with a definite determination to achieve the specific objectives of the study. In addition, effort will be directed toward characterizing how data will be collected, what data will be collected, and how collected data will be analysed - the third chapter.

The study's methodology will be the following chapter after the literature review. Following chapter three is chapter four - Data Analysis and Discussion of Results. This chapter will present the analysis of the data collected from the field survey in its

totality, as well as an evident discourse of the analysis and tools that will be used, as well as discussions of the results that will be obtained from the analysis. Following that, the conclusions and recommendations and directions for future research will be presented in the last main chapter- Chapter 5.

## **CHAPTER TWO LITERATURE REVIEW**

### **2.0 INTRODUCTION**

This chapter provides a thorough, rigorous analysis of the body of research on An Evaluation of Militating Factors Against the Application of the Public Procurement Act 2003 Within the Volta River Authority (VRA): A Public Service Managers Perspective. In the order of reviews, a conceptual study into green infrastructure considerations using an inductive approach was successful. To provide a comprehensive assessment of the application of the procurement Act 2003, the procurement processes/procedures and method will be addressed. The theoretical foundations of this study will be presented, which prompts a review of the framework for assessing the effects of the public procurement Act 2003 on procurement practices and service deliver and conceptualizing the application of the procurement Act 2003.



In this phase of the study, the existing literature on the procurement policies or processes will thoroughly be reviewed empirically. Through the conceptualization of the procurement principles, the study will offer a critical perspective on the subject. After that, the study will look at relevant literature to ascertain the various challenges faced by procurement managers. Procurement principles that guide the application of the procurement Act as well as the crucial strategies to enhance the procurement Act 2003 application will also be offered. Using VRA as a case study, the author then will conceptualize a framework for this study. Some of the challenges faced by procurement managers in the application of the Public Procurement Act 2003 will be scaled up in the conceptual framework.

## **2.1 CONCEPTUAL REVIEW**

### ***2.1.1 Brief History of Procurement***

Buying products, services, and infrastructure with tax dollars is known as procurement. It denotes buying done by or with the backing of the government. Each step of the planning, sourcing, contracting, contract administration, storing, distribution, disposal, and evaluation (Kilonzo, 2018) process is essential to a successful procurement. The demand for consistent activities and documentation, the wall of owners and directors in private sector organisations, and the requirement for open sector selection and functions to be simple (Callender, 2017) might all be factors in the development of such rules.

Prior to recent technological advancements, repetitive belief system regarded procurement as the technique of organisational operation of purchasing the products, works, and services needed to suit the right wants of supervisors, as stated by Callender (2017). Rules, laws, plans, and agreements were all part of the standard operating procedures. Incorporating supply work and allowing the



administration to monitor spending, procurement specialists serve as a fiscal and operational middleman between directors and their material requirements (Hu et al., 2019). Commanding and, in some situations, controversial role due to its practical control over acquisition" (Korda et al., 2010) is how Korda et al. describe the role of procurement.

Experts like (Korda et al., 2010) point to the importance of contemporary commercial and administrative standards in defining the state of procurement today. As an illustration, Monczka et al. (2014) suggested that the evolution of procurement can be broken down into distinct phases: a rise around the middle of the nineteenth century, a period of recognition leading up to World War II, a period of dramatic growth in education in purchase during that War, and a period of stalled development following the War. However, the field of materials management has lately seen a period of genuine change due to globalisation, structural change, and an increase in production configuring administration. Reference: Monczka et al., 2014.

According to Huang (2020), the criteria for procurement procedures shifted in the late 1980s due to shifts in commonly held beliefs and methods. Similar to Oliver and Webber's (1982) supply chain model, Michael Porter's (1990) value chain approach acknowledged the significance of procurement. These shifts were barely evident until the power of computers was connected to the explosion in purchasing. Experts in the procurement process started being seen as key innovators in the supply chain. Intelligent supply directors saw an opening to work together with their supply chains during the procurement process, thanks to shared ideas like comprehensive quality management, customer service, supplier performance management, and just-in-time delivery and inventory management. To meet supervisory thoughts and broaden the procurement procedure, procurement professionals have begun to see the full stressed-out huge organisation and have consequently begun to direct with other key business skills.

When it comes to procurement reform, developing nations often have to strike a compromise between several opposing interests, as stated by Wittig and Jeng (2005). Recognising these interests is crucial in order to help them pursue them. Oftentimes, the basic goal of change campaigns is

external, such as conditions made as a proportion of financing or permission from donor organisations. Getting rid of the conditional nature of the agreement is the next logical step in the implementation process. While these changes might theoretically strengthen the country's integration into the global exchange system or trade network, they might not be the most efficient means of achieving the gains that have been discussed in confidence.

According to Wittig and Jeng's (2015) research findings, standardising the procurement processes that contributors must follow more extensively will make it easier to hire reasonably genuine experienced procurement personnel. It's not uncommon for donors to insist on having their every want catered to. While authors can set their own guidelines, concerns of authority will decide how long such changes stick around (Huang, 2020). The universal allocation of responsibilities necessitates the existence of independent states (Huang, 2020).

When users of help agree to predetermined criteria in order to receive funds, they forego a measure of autonomy. Even if you're making a profit, it's important to accurately describe the state of your house. Understanding, documenting, and assessing, in concert with neighbours, how changes in global responsibilities have benefited the local economy is the responsibility of the client nation. It is our responsibility to aid them in keeping track of and explaining their success (e.g., how employing temporary employees from outside the area or nation saved 'X' amount of money that might have been used to build 'Y' new schools).

To promote steady development of domestic infrastructure projects, the ITC assisted the Ghanaian government in updating its procurement environment. The World Bank funded the establishment of the Ghana Public Procurement Authority (GPPA) to serve as a central hub for public spending and development. The World Bank and the government of Ghana conducted a Nation Procurement Appraisal Survey in 2002, finding that the country was lacking in four essential components necessary for a healthy procurement environment.

- “A sufficient set of approaches and measures (regulations/codes);
- A physically strong or solid and successful procurement establishment.

- An adequate number of capable and dedicated procurement staff; and
- An administrator and adjudicator to ensure compliance.

A Country Procurement Assessment Report (CPAR) was created at the end of the survey, suggesting changes to the procurement framework.

This report recommended, among other things, measures to strengthen best practices, such as:

- a sound broad procurement policy to sustain the nation's capacity to convey administrations; and
- a viable public sector procurement framework to impact both small scale and macroeconomic effectiveness.
- procurement procedures that ensure objectivity, justice, and transparency or precision in contract award.

These are critical elements in avoiding bribery accusations while also increasing respect for public institutions and government competency; and

- sound acquisition practices to attract and assimilate outside venture and participate in the development of global exchange”.

The idea and developing vision of updating Ghana's procurement system to meet worldwide standards for both commercial and public sector procurement was supported by these and other considerations. Because of this, Ghana may serve as a springboard for national and worldwide progress in the areas of social and economic growth and good governance between developed and developing nations.

### ***2.1.2 Public Procurement in Ghana***

After Ghana won its independence from its colonial masters on March 6, 1957, many professional organisations emerged. Numerous endowments were established for the purpose of facilitating expert participation and recognition among procurement and supply chain professionals. The Chartered Institute of Purchasing and Supply (CIPS) in the United Kingdom is just one example of such an organisation; others include the International Federation of Purchasing and Materials



Management (IFPMM), which was founded in 1974 when the European Federation of Purchasing and the International Federation of Purchasing merged. The establishment of quality and shortage specialist bodies across the whole procurement and supply chain. To better advance their new profession on a local, regional, national, and international scale, professionals have formed a wide variety of organisations (Callender, 2017).

Since its independence, Ghana has amassed a wealth of knowledge and expertise in public procurement under both civilian and military administrations. Public procurement was viewed as an integral aspect of the colonial administration process under the previous policy in place before to 1957. The Public Works Department (PWD), Crown Agents, the Ghana National Construction Corporation (GNCC), the Ghana Supply Commission (GSC), the Ghana National Procurement Agency (GNPA), the Architectural and Engineering Services Corporation (AESC), and the Central, Regional, and District Tender Boards have all been charged with overseeing the country's procurement system since colonial times.

Crown Agents (1998) claims that there was no overarching policy in Ghana for buying materials and services. The bulk of the purchasing process was guided by circulars that standardised standards developed by a caucus inside the Ministry of Finance. Enrollment requirements, contractual work arrangements, and financial constraints were not consistently updated, and contractor categories were declared overly wide and out of date. All Government and World Bank managed projects in the nation are now required to use the services of the Architectural and Engineering Services Corporation (AESC) and the Crown Agents. Several administrative directives, legislative instruments, the constitution, and financial circulars were implemented to fix the problems with Ghana's open procurement framework.

The National Procurement Agency and the Ghana Supply Commission, both of which had a public interest in cross-border procurement but failed in their oversight duties, provide compelling evidence that the legislation is not being enforced as intended. Due to the lack of a legal body to carry out supervision, the procurement structure was distinguished by a murky permissible structure, the



absence of coordinated measures and rules, and the need for an imperceptible institution and managerial display in the management of the open procurement.

There was also a lack of an independent petition authority that could address complaints from distressed tenderers and provide remedial actions, as well as a lack of clearly defined responsibilities and obligations of various procurement organisations. Not having the ability to make open possession declarations or conduct independent inspections to ensure competent accountability was also a problem.

### ***2.1.3 The Public Procurement Act 2003, Act 663***

It was not until 1960 that the Ghana Supply Commission Act was signed into law. The Contracts Act (Act 25 of 1960) was also enacted about this period. In 1976, the National Procurement Agency got Decree SMCD 55 from the Supreme Military Council. In 1979, lawmakers also passed the Financial Administration Decree SMCD 221. In 1990, PNDC legislation 245 updated the Ghana Supply Commission Act. These enactments were made with the intention of creating a uniform set of management authorities to regulate public sector procurement strategies (Adjei, 2018). However, the public procurement system still had flaws despite the efforts of many administrations throughout time. Therefore, it became clear that a comprehensive review of public sector procurement practises was required to guarantee operational productivity and institutional capacity to address the many shortcomings.

To address the deficiencies and management constraints of the Ghanaian public procurement system, Act 663 of 2003, the Procurement Law, was enacted. To create appropriate practises, eliminate inefficiencies, and build trust in the acquisition framework, the Ghanaian legislature, in cooperation with its development partners, has selected the public procurement system as an issue requiring urgent scrutiny. After individual remittances, the World Bank (2013) estimates that 5070 percent of

total government spending comes via procurement. Therefore, a country confronting enormous pedagogical issues would benefit greatly from a skilled open procurement mechanism that could guarantee value for money in government expenditure.

As part of a wider Public Financial Management Reform Programme (PUFMARP), the government of Ghana reportedly began extensive activity to alter the Public Procurement System in 1996 (Ministry of Finance, 2003). The initiative aimed to make the country's financial system more transparent. The government of the Republic of Ghana formed the Public Procurement Oversight Group in 1999 to monitor the rollout of a wide-ranging public procurement reform programme.

The reform also reveals some issues and administrative constraints inside the current procurement system in the nation. These include the absence of both a comprehensive open procurement strategy and a complete legal mechanism to guarantee the open procurement structure's reliability. A further problem is the absence of an authoritative entity with the resources, expertise, and authority to craft a sensible strategy for open acquisition (Ministry of Finance, 2003).

The Ministry of Finance (2003) states that successful and efficient public procurement requires standards and procedures to regulate, direct, prepare, and appropriately filter the process. Important challenges were the absence of clearly defined elements and the fact that it was the obligation of many procurement authorities to deal with complaints from unhappy bidders. The organisation was weakened once again since there was no clearly defined capability for procurement committees to use their assigned resources to seek to acquire commodities, goods, and services. An overlook was the absence of a procurement inspection obligation by independent command authorities and chosen specialists to guarantee productive accountability and the lack of authority to dispose of public resources. An all-encompassing Procurement Act, backed by standardised tender documents to endorse managerial, institutional, and institutional causes of action, and a supervisory body to manage the public procurement structure, is increasingly appealing as a means of addressing the many problems and managerial shortcomings that have arisen in public procurement procedures. A detailed public procurement system to promote competition, efficiency, transparency, value for

money, accountability, and equal contact for all nationals to participate in the open procurement procedure was passed by the Ghana Parliament of the fourth republic on the verge of establishing another structure to pursue the use of public procurement as a tool for national improvement and to align the use of procurement-related issues. After the law was signed into law, the Public Procurement Board was established to oversee its implementation.

The District Tender Board Regulations of 1995 (L.I.1606), the Ghana National Procurement Agency Decree of 1976 (SMCD 55), and the Ghana Supply Commission Law of 1990 (PNDCL 245) were all repealed by the Public Procurement Bill. The implementation of the Public Procurement Act (Act 663) of 2003 in response to these and other issues.

#### ***2.1.4 The Public Procurement Authority***

Part I, Sections 1-13 of Act 663 of 2003 (the PPA) created the Public Procurement Board (the Board) as the governing body responsible for public procurement in Ghana. All government entities that spend public money are considered procurement bodies, and this includes ministries, departments, agencies, metropolitan, municipal, and district assemblies (s.14).

To facilitate simultaneous approvals, awarding, and contract administration up to predefined value requirements (s.17), each procurement body has a tender committee. When necessary, the tender committee might seek assistance from other sources. The district, regional, ministerial, or central government level tender review board must be consulted for any acquisition beyond the threshold set by the tender committee. All procurement operations are reviewed by the tender review board to ensure they adhere to the PPA, concurrent permission or disapproval is given to procurement recommendations, complaints are heard, and uncertain topics are sent to the Board (section 20). The Board was set up to handle a variety of public procurement-related tasks in Ghana. The following are among its abilities:



- “Policy: giving information on the public procurement structure and advising the government on all procurement-related matters, for example. It is also responsible for pushing anti-corruption initiatives and creating environmental safeguards.
- Monitoring comprises, for example, checking that the procuring unit complies with the Act and Regulations, advising any necessary corrective steps, and reporting any violations to the appropriate supervision and law authorization organizations.
- Regulation and Standards: for example, recommending regulations and providing tender documents with standards, as well as delaying providers and dealing with grievances and claims.
- Capacity-Building and Expert Improvement: such as organizing procurement improvement and limit building exercises, establishing competency measures, and developing procurement employees.
- Information Administration and Distribution: for example, maintaining a database of potential bidders, gathering and studying public procurement information, and maintaining a website for the distribution of tender notices and additional procurement information”.

In this context, the Public Procurement Authority's mission and vision were spelt out to serve as a compass for the many reform decisions in procurement that obligate procurement managers to carry out their duties without a hitch (PPB, 2016). The PPA idea is a world-class, efficient, visible, and responsible open segment procurement structure in Ghana that prioritises the assurance of high-quality commercial exchanges, guarantees the on-going attainment of best value for money in the purchase of goods, services, and infrastructure, and backs up broad-scale plans for economic growth and improvement. Its goals include standardising the public sector procurement system to enable the efficient and economical use of public assets; ensuring that public procurement is carried out in a reasonable, clear, and timely fashion; and pursuing a competitive Local Industry Supplier (LIS) Programme.”.



### ***2.1.5 Legal Background of Public Procurement in Ghana***

Having a clear legal structure that establishes the principles for transparency, productivity, and instrument of requirement, as well as an institutional plan that ensures consistency in general approach, concept, and usage, are all hallmarks of a robust and well-functioning procurement framework, as stated by the World Bank (2013) and the Public Procurement Act 2003 (Act 663). To improve the legal framework in all contracts, it was also important to create a dedicated team of employees responsible for their implementation and management.

However, many emerging nations' procurement procedures were found to be flawed before independence due to insufficient study and analysis. The Public Procurement Bill was written by the Ministry of Finance in response to these and other problems with the procurement system, and it was finally ratified by Parliament in 2003. The development of a reliable legal framework for public procurement and the advancement of public procurement practises relies heavily on the Public Procurement Law 2003 (Act 663) and its implementation by procurement specialists. The heads of purchasing entities and other public authorities who have been assigned by the government duties for implementing government programmes and using public funds are subject to accountability and responsibility under the Act's procurement provisions.

By streamlining processes between the government and development partners, the Public Procurement Law reduces transaction costs and potential hotspots for dispute. Procurement professionals are held accountable for the timely completion of their work in this context by a number of different procurement reforms. The Public Procurement Act created five key pillars for public procurement in Ghana by defining the legal, institutional, and administrative framework for ensuring fiscal openness and accountability. The five pillars are as follows (World Bank, 2013): a legal and institutional framework, standardised procurement procedures and tender papers, an independent control system, competent procurement workers, and anti-corruption measures. **“Table**

### 3+2.1: Procurement Act 2003 Legal Background

Legal Background	Specifics
Public Procurement Act, 2003 (Act663)	Make available an extensive legal administration to synchronize and protect public procurement.
Public Procurement Manual	Make available practical guidance and step -by- step procedures for undertaking procurement in accordance with the Act.
Standard Tender Documents (STD)	They consist of standard invitation and contract. They consist of standard invitation and contract documents for procurement of all values. There are separate standard tender documents for goods, works and services.
Public Procurement Regulations	They include detailed set of laws and measures for all aspects of the procurement system, the functions of PPA and procurement bodies and the manner of procurement activities.
Guidelines	Set by the Public Procurement Authority (PPA) which offers complementary guidance on disposal, single source procurement, margins of preference, framework contract agreements, public procurement (PP) etc.

**Source: PPA Regulations 2003/PPB (2007) Procurement Training Manual ”**

## **2.2 THEORETICAL FRAMEWORK OF PROCUREMENT PROCESSES**

### **2.2.1 The Theory of Planned Behaviour**

#### ***2.2.1.1 Perceived Behavioural Control Theory***

According to Montalvo (2016), behavioural control is an indicator of whether there are the necessary opportunities and resources for applying advanced activities. According to Yi et al. (2006), perceived behavioural control, which is influenced by the processes and principles required to fully utilize intended applications, accounts for managers' dexterity. The perceived ease or difficulty of carrying out a certain behaviour as conditioned by prior experiences or collected information correlates to this control, according to Ajzen (1991). According to Harrison et al. (1997), perceived behavioural control greatly influenced how quickly Procurement principles are adopted and applied.

#### ***2.2.1.2 Attitude Towards Application Theory***

The beliefs needed to support behaviour inform attitudes. Another way to think of attitudes is as people's good or negative emotions related to engaging in a particular conduct (Ajzen, 1991). Therefore, people will have a favourable opinion of a certain behaviour if they think that engaging in it will primarily produce positive results (Ajzen and Fishbein, 1980). Several studies have thus discovered a strong direct connection between attitude and actual usage of procurement principles, including Celik (2008), George (2002), and Chai and Pavlou (2004). Celik (2008) discovered a substantial relationship between attitude and intention to apply procurement laws in decision making. In both Greece and the USA, attitude was found by Pavlou and Chai (2002) to be a major predictor of procurement principles' intention.

#### ***2.2.1.3 Subjective Norm Theory***

The perceived social pressure to engage in (or refrain from) behaviour is known as a subjective norm (Ajzen, 1991). Small and medium-sized businesses are more susceptible to outside factors that could have a normative impact on behaviour. Therefore, according to Montalvo (2006),



the subjective norm denotes the social pressure or norm set off by the surroundings of an organization. As a result, organizational adoption intention rises as adoption-related environmental stressors rise.

Subjective norm was found to be a significant predictor of intention in a study by Yang and Maxwell (2011) on the variables influencing intention to employ an expert system. In both the USA and Greece, Pavlou and Chai (2002) discovered a substantial relationship between subjective norm and intention. Furthermore, Nor and Pearson (2008) discovered that the subjective norm had a favourable and significant influence on Malaysians' propensity to apply procurement principles.

#### ***2.2.1.4 Relative Advantage Theory***

According to Rogers (2003), relative advantage is comparable to perceived usefulness in that it measures how much an innovation is thought to be superior to the notion it replaces (Wu and Wang, 2005). According to Kendall et al. (2001), organisations benefit from relative advantage in terms of a broader market reach, cheaper applicable expenses, and the significance of conducting future business through the application of open procurement. According to this study, relative advantage refers to how much the application of the Procurement Act can improve competitiveness, lower transaction costs, and ensure value for money. The significant impact of relative advantage on the application of the Procurement Act has been the subject of numerous studies. Relative advantage was noted by Jeon et al. (2006) as a significant factor influencing organisations properly applying the Procurement Act.

#### ***2.2.1.5 Structural Atmosphere***

There is a clear emphasis on structural aspects in many firm-level research, especially those that examine small enterprises (Premkumar, 2013). Owner self-efficacy is the focus of this research.



#### ***2.2.1.6 Individual Effectiveness***

Effectiveness, in the context of the procurement process, may be seen as belief in one's ability to use the principles to bring about the desired conduct. It was written by Peredersen in 2013. Since it is often assumed that managers who have more resolve with respect to the application of the correct method would have positive attitudes towards its application, it plays a vital role in the implementation of the procurement Act. According to Wymer and Regan (2015), an individual's confidence in their ability to regulate their conduct is correlated with their sense of inventiveness. Al-Qirim (2015) found a similar correlation between the number of procurement Act applications submitted by an institution and an individual's standing and power within that organisation.

#### ***2.2.1.7 Environmental Context***

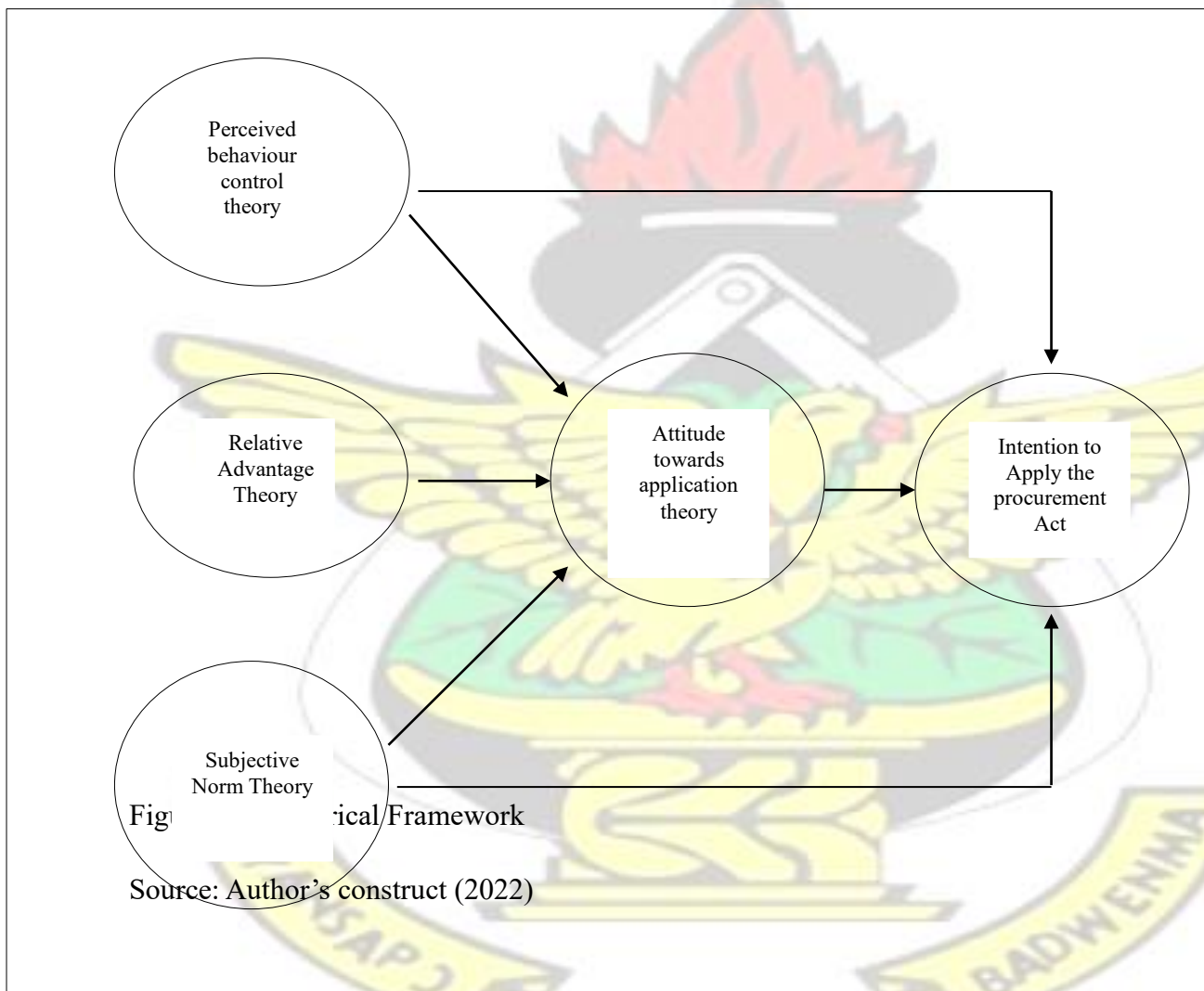
Institutions efforts to implement the Procurement Act may be aided or impeded by external factors. There have been a lot of studies done on the impact of outside pressure on institutions' compliance with the Procurement Act. The impact of government backing on institutions' compliance with Ghana's Procurement Act is examined here.

#### ***2.2.1.8 Government Support***

Academic studies have proven without a reasonable doubt that governments are essential to the successful execution of procurement rules and actions. Studies have shown that governments' involvement in providing the enabling frameworks for the laws' success has greatly enhanced the degree of procurement law applications and usage in advanced economies (Martinsons, 2008; Chan, Al-Hawamdeh, 2002; Dunt, and Harpe, 2002). By passing supportive procurement development laws, Singapore's government, for instance, bolstered the country's procurement framework (Al-Hawamdeh, 2020). Bjorn et al. (2013) argue that government action can be either persuasive or regulatory. Because these elements promote internal organisational preparedness or behaviour control for its execution, he argued that these interventions should centre on knowledge, incentives,

and deployment. In addition, Seyal et al. (2014) found a robust association between governmental encouragement and the use of the Act. Kowtha and Choon (2011) provide evidence that shows how some governments (like Singapore) can increase the potential for development of institutions in the application of law and have alternative policies to aid these institutions in their efforts to flourish and improve the nation's procurement processes.

**Figure 2.1: Theoretical Framework**



## 2.3 EMPIRICAL REVIEW OF PUBLIC PROCUREMENT

### 2.3.1 *The Procurement Role in The Public Service*

Public procurement is governed by legislative supervision and public audit, and historically its primary duty has been to purchase goods and services for the military (Matthews, 2015). Multiple initiatives have been launched to standardise procurement processes throughout the world. Examples of voluntary agreements that expand the application of most-favored-nation and national treatment principles to government purchases undertaken by specified government agencies are the World Trade Organisation (WTO) and the Government Procurement Agreement (GPA).

Procurement is a crucial step in replenishing stock, as stated by Lewis and Roehrich (2009). According to Agaba and Shipman (2007), the overall success of an emergency response can be greatly affected by how well procurement is managed. Many businesses spend a substantial portion of their budget on procurement, making it imperative that this area be managed well. Procurement acts as a hub in the internal supply chain process, turning wants into actual goods and services (Caldwell, Roehrich, & Davies, 2019). Caldwell et al. (2019) state that public procurement helps all three types of customers (inside and outside), as well as participants in crisis programmes and continuing initiatives, and in stock-localized locations.

The purpose of procurement, as stated by Benslimane et al. (2015), is to ensure that the goods and services obtained are of sufficient quality, come from a reliable supplier at a fair price, and can be delivered on time and in sufficient quantity. Following specific procurement strategies can get you six rights, as outlined by Benslimane et al. (2021).

Here are our objectives: Choose reliable sources that offer reasonably priced, high-quality materials, products, and services; arrange for efficient shipping by using capable vendors. continuously explore, assess, and set up supply sources that are both wise and reliable Use methods such as open bidding and direct purchasing, as well as prequalifying and retaining just those suppliers who are capable of meeting your organization's needs. Fewer bids and more focus on important suppliers

Benslimane et al. (2015) looked into the accessibility of novel materials and evaluated tendencies in the commercial sector's pricing and procurement in line with strategic plans.

Principles (Caldwell et al., 2019) identifies three fundamental guidelines for purchasing. The first concept is openness, which stresses the significance of a methodical and accurate procurement process. The third idea is that recipients of money from agents must answer to those agents and must abide by certain rules and regulations. Last but not least, there's the idea of efficiency and effectiveness, which centres on amassing the "six rights" of supply (Caldwell et al., 2019): right price, right time, right quantity, quality services, delivery to all necessary stops, and delivery from the most cost-effective source.

In order to protect shareholder funds, businesses must establish reliable procurement methods. Procurement is an essential part of university management since state-funded colleges employ taxpayer money and hence must be accurately represented. The budget, the frequency of drills, and the complexity of procedures are all elements of procurement. Therefore, purchasing should be seen as an integral part of the company's initial setup and follow the rules of benefit administration.

### ***2.3.2 The Procurement Process***

Traditional purchase control consisted of three phases: the Distinguishing proof phase, the Requesting phase, and the Post-requesting phase, as discovered by Aleman and Guererro (2016). Lysons and Farrington (2016) noted that the drawbacks of the conventional approaches included "a sequence of non-value adding clerical activities, excessive documentation, and excessive time in processing orders both internally and externally, as well as excessive cost on purely clerical work" (p.77). Obtaining demand, soliciting bids, negotiating with suppliers, submitting a request, getting goods, and ultimately making installment payments are all part of the process (Lysons& Farrington, 2016).

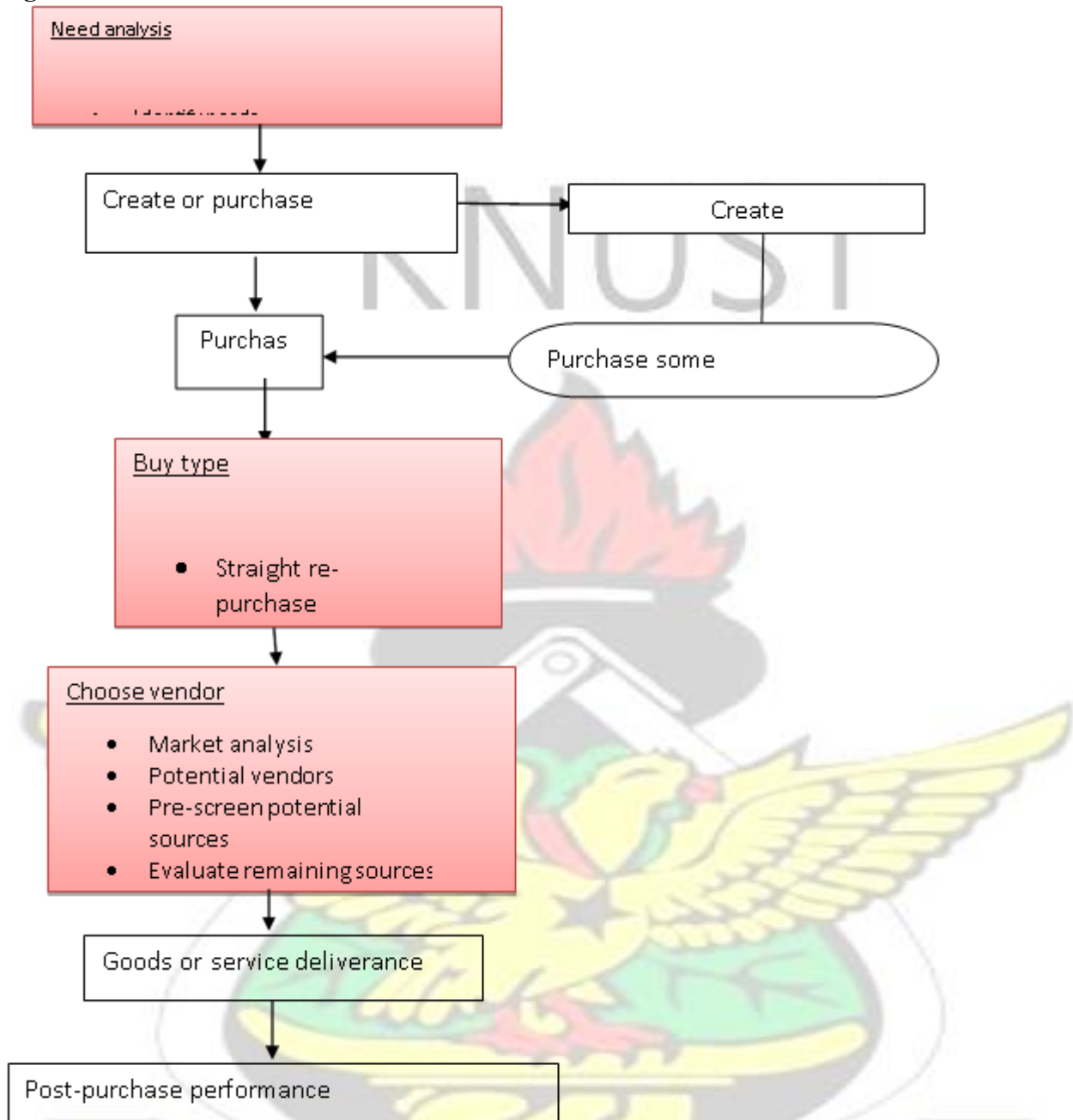
The term "procurement" refers to the entire series of steps required to move a product or service from its point of origin (the supplier) to its ultimate consumer (the client, for example) and back



again (Brenner & Hamm, 1996). The following steps for procurement practise are applicable to the acquisition of both goods and services in contemporary markets, as stated by Coyle et al. (2007). These responsibilities typically cut over functional (within-firm) and organisational (between-firm) borders, necessitating the involvement of all parties to the contract for a successful outcome. As a result of these coordinated efforts, the inventory network benefits from an increase in value for both its buyers and sellers.



**Figure 2.2: Procurement Process**



Source: Coyle et al, (2007)

## 2.4 PROCUREMENT FOR PUBLIC PROCEDURE

### 2.4.1 Procurement Planning

“In general, planning enables organizations to, among other things, decide execution guidelines, set up general course, anticipate and avoid future issues and lessen the risks of vulnerability, distinguish and submit assets toward the achievement of objectives, decide and create execution measures, and

adequately facilitate different exercises in the organization (PPB Manual, 2016)”. Part 3 section 21 of the Public Procurement Act 663 allows for the action of planning. What this means is that acquisition elements must plan their acquisition for the following year by November 30th of the previous year. Their Entity Tender Committees (ETCs) would review and approve the plans, which would then be updated every quarter.

The Public Procurement Bulletin includes a list of those who presented their procurement plans. “In 2010, only 164 bodies out of over 1000 entities across the country presented their annual procurement plans. As of October 2011, only 199 organizations had submitted their plans to the Public Procurement Authority (PPA Procurement Bulletin 2010; 2011)”.

#### ***2.4.2 Tendering Procedure***

“Section 47 of Act 663 specifies the need to promote the expectation of purchasing products and services through International and National Competitive Tendering. If there is no pre-qualification, promotion is required. The goal of promotion is to provide widespread and convenient notice of tendering opportunities in order to attract the most intense competition by illuminating all potential tenderers and to manage the cost of equal opportunities to all qualified and qualified tenderers without discrimination.

Tender documents should be accommodating all qualified tenderers by the acquiring body for reasons of transparency, fairness, and impartiality. Procurement entities must issue tender documents to suppliers and contractors in accordance with the strategies and requirements stated in the advertisement. The price at which the tender document is sold should be sufficient to cover the costs of printing and making the archive available to suppliers and contractors. A sufficient number of tender documents, equal to the number of tenderers, should be made available.

It is an offense to deny any supplier or contractor the opportunity to participate in any tender solely because records supplies are depleted. Tenders should be opened as soon as possible after they close.

The Procurement Unit should ensure that the procedures run smoothly, prepare opening session minutes, and, if necessary, instruct the administrator on procedural issues during the opening session. A Tender Opening Committee is normally composed of at least three people, including the Chairperson. The Chairman of the Tender Opening Committee directs and coordinates the Tender Opening and does not allow tenderers' delegates to interfere with the Board's work. Any complaints by a Tenderer about the tender opening's methodology and decisions should be directed to the Procurement Entity's Head. Section 55 of the Act states that all international and national competitive tenders for the acquisition of goods and works must include the procurement of tender security. Tender security is not required for the procurement of consultant services. The use of security is critical, particularly in international trade where the Buyer may not know the expertise, financial position, and credibility of the tenderer or supplier. As a result, it is common for the buyer to request that the Tenderer's ability to perform in accordance with the guidelines and contractual commitments be backed up by a financial assurance”.

#### ***2.4.3 Contract Management***

“The agreed-upon terms and conditions would be used to draft an official contract report, which would then be signed by both parties. For simpler requirements, a buy request can be used, and contracting might entail filing a cancel request in accordance with an existing system contract. The contract should then be monitored to ensure that the provider and buyer fulfil their obligations under the agreement. Activities could include expediting delivery, planning inspection or cargo dispatching, checking bank guarantees, developing letters of credit, creating plans for product acceptance and establishment, confirming documents, and making payments. To ensure quality, cost, and schedule, works contracts typically require expert supervision by an architect/venture administration group. Contracts for consulting services frequently stipulate that in order for the buyer or customer association to benefit from planning, specialist advice, or responding to studies or reports, they must have an immediate interest in doing so. According to the PPA Yearly Report from



2019, 68% of contracts were fulfilled during the year. This implied contract administration serves as an important general material test”.

#### ***2.4.4 Monitoring and Evaluation***

The administration of the procurement process depends on managing how it is carried out and ensuring its productivity and viability. “It is essential to evaluate how effectively the procurement process has gone, identify any flaws, problems, and related activities to counteract similar problems in the future. Evaluation may include a formal procurement assessment. A crucial aspect of procurement administration and control is procurement checking, which is related to Act 663 compliance and execution outcomes such value for money in terms of value for money, verifiable skill, and set of principles in procurement. This will involve the management of content, PPA personnel, the private sector, oversight organizations that serve as both internal and external reviewers, members of society like NGOs, project recipients, and the media (PPA Yearly Report, 2018)”.

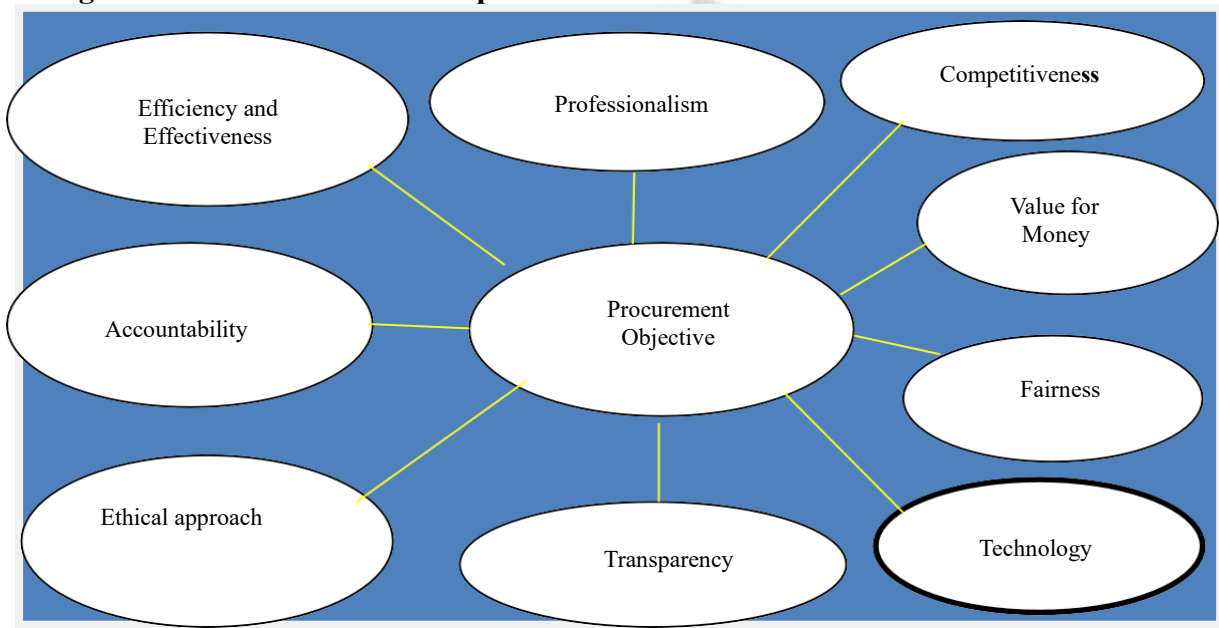
#### ***2.4.5 Appeal and Complaints***

“Any supplier, contractor, or specialist/consultant who asserts to have suffered, or who might suffer misfortune or loss as a result of a breach of an obligation imposed on the procurement substance/entity, may seek audit in accordance with this Part, as per Section 78 of Act 663. The decision-making process for procurement should be properly monitored and documented so that complaints can be looked at within the required time frame. Those involved in the study, indictment, and prosecution of procurement-related crimes may be able to provide examples of situations in which sanctions could not be applied as a result of inadequate or subpar procurement records”.

In Ghana, the Authority established a seven-member Appeals and Complaints Board/Panel in 2017 that included agents/representatives from the private and open/public segments/sectors as well as

legal obtainment/procurement specialists/experts. The Board effectively concluded fourteen (14) cases out of twenty (20) cases at the same time (PPA Yearly report, 2017). The offer and complaint systems gave construction companies the chance to express their disapproval before the procurement process is complete, and additionally after that (Alam, 1995).

**“Figure 2.3: Procurement Principles**



*Source: Arrowsmith, M. (2013), Principles of Public Procurement in the Public Sector, PPB, (2006)”*

## **2.5 PROCUREMENT PRINCIPLES**

### **2.5.1 Professionalism and Transparency in Public Procurement**

Transparency in executive procurement assures domestic and foreign shareholders that contracts are granted fairly and sensibly. Lack of openness and knowledge of rules and procedures in business sectors may operate as barriers to trade and may have a greater negative impact on foreign suppliers than on domestic ones (Arrowsmith, 2003). If workers are not appropriately educated in

procurement-related topics, serious consequences may ensue, including violations of established norms.

According to Adjei, (2016), procurement professionalism refers to the profession in which trained, seasoned, and thoughtful procurement officers make educated decisions regarding the procurement of goods, services, and labour. Adjei (2016) further asserts that the role of procurement experts in the acquisition arrangement in the Ghanaian economy is essential to the advancement of the country's financial situation. The Public Procurement Board acknowledged that it had set important goals to develop procurement professionalism and provide assistance to MMDAs and experts working on open acquisition. By using prepared people in the procurement forms, the Board intends to ensure adherence to moral standards.

“According to Raymond (2018) and Pillary (2004), there are over 500,000 professionals working in procurement in the United States, but only 10% of them are members of a professional organization. The other 90% are completely unaware that procurement is subject to moral and legal standards. Raymond (2008) has linked corruption, which ultimately prevents acquiescence, to the lack of a high level of professionalism in public acquisition. The procurement officials must be ready and aware of all instructions on procurement and related actions (Hui et al., 2011). According to Rossi (2010), a moral code prevents unethical behaviour and gives everyone in the association the confidence to uphold the firm's moral legacy. Transparency in acquisition, however, also refers to opening up the procurement process to suppliers and temporary employees of goods, works, and services. This helps to ensure that partners and interested parties can observe the procurement *modus operandi*.

Adjei (2016) further states that transparency calls for the development of fair and open methods for contracting for products, labour, and services. Simplicity encourages the growth of internal savings and competitiveness, and the general societal division is viewed as a reliable business partner. One of the biggest barriers to bribery is transparency, which also allows the public access to information or intelligence”.

### ***2.5.2 Value for Money and Competitiveness in Public Procurement***

“Value for money refers to the best balancing act between "whole life cost" and "quality" to satisfy client or end-client demand for obtaining goods, works, and services. This concept is often reflected in the price of the thing acquired. The most important standard of procurement is value for money. In the public sector, value for money involves considering commitments made to advance management techniques and needs while achieving the best takings and execution for money being spent (Bauld & McGuinness, 2006). The Public Procurement Board's (PPB) goal is to coordinate the procurement processes across all government agencies in order to ensure the economical, prudent, and effective use of national resources in open acquisition and to verify the acquisition framework's worth-for-cash standard Public Procurement Act (Act, 2003, Act, 663)”. “Competition refers to the active involvement of the personal sector as well as providers in the acquisition process during open access to acquisition data, during the publication of tenders, during audits sourcing, during prequalification, and during the selection of simple techniques in the acquisition frameworks”. The benefits of competition cannot be overstated and include potential investment funds for the nation, improvements in the provider position, and development of domestic businesses within the economy, all of which inevitably lead to financial improvement and a reduction in destitution (PPB, 2006).

### ***2.5.3 Accountability, Fairness and Efficiency in Public Procurement***

“Accountability, fairness, and productivity are the three key pillars that acquisition improvements should focus on in order to achieve a reasonable and responsible acquisition framework that encourages the productive and functional use of government resources As they interact with suppliers, potential bidders, and the general public to win the trust of the various performing artists inside the procurement framework, acquisition experts should be rather flaxen, according to Barrows' (2003) conclusion. According to Thompson (1991), accountability is the process of holding a person or organization entirely responsible for the tasks and responsibilities they are engaged in above which they are granted the right to act.



Thompson (1991) enumerated the benefits of justice and accountability as follows:

- Strengthening of the simple and rational viewpoint.
- Debasement or bribery occurring less frequently; and
- Increasing mutual confidence and adherence to procedures throughout the procurement system”.

#### ***2.5.4 Effectiveness and Efficiency***

Efficiency and effectiveness rank equally among the fundamental ideas guiding public procurement's successful completion of its objectives. They are both components that function well, have solid management, and are attentive to the demands of loyal customers of the offered goods or services. Efficiency and effectiveness are only marginally defined in terms of how important value for money is to the management of the private and public procurement structure (PPB, 2016).

In this view, public competition, procurement reforms, and strong extra reform systems are the best ways to ensure efficiency and effectiveness. Improvement is considered in a broader sense of effectiveness and efficiency when it comes to price and quality assurance that purchases assume more significant roles in the reduction of need (McDonald, 2018). “In Ghana, a strong public procurement is one that conducts purchase activities in a professional and straightforward setting with a clear set of predetermined standards to encourage increased competition, hence energizing effectiveness, and improvement among bidders. There is better use of subsidizing, more appeal to the private sector, and increased customer loyalty (PPA, 2018).

According to Cloete (1998), efficiency and effectiveness in the public sector entail meeting the community's most pressing demands to the greatest extent possible while making the best use of the limited resources that are made available for this purpose. Accordingly, in order to achieve effectiveness and efficiency in the direction of value for money syndrome, public bodies should be contacted by qualified or competent employees capable of putting the public procurement Act 2013 (Act 663) into operation”.

### ***2.5.5 Ethical Standards in Public Procurement***

Another important criterion for government procurement is ethics as defined by morals. Procurement experts adhere to higher moral standards than people in other professions, yet others scarcely understand what is expected of the group. Maintaining moral standards and traits has to do with how an individual's beliefs, actions, and decisions are influenced. It involves leading a particular way of life, especially in the professional sphere.

According to Schapper et al. (2016), the procurement framework identified the following fundamental moral principles and considerations:

- “Acquisition personnel are their association delegates asked to manage providers in comparison to central operators.
- Outstanding moral manner displayed in managing providers and temporary workers.
- Making a good purchaser provider affiliation.
- Acquisition staff typically presented high moral standards differently from other workers (Public Procurement Act 663, 2003). The Public Procurement Act 663, 2003, Section 86, mandates a comprehensive set of accepted rules for acquisition exercises in order to ensure moral behaviour”.

According to the Law, officials and their close family members are prohibited from providing goods and services to their own personal organization due to moral considerations. Authorities are morally bound to withhold any confidential or proprietary information from the public.

Additionally, authorities avoid direct or indirect acknowledgment of any favours or gifts from people or things that have an agreement with their own office, division, or service and keep a strategic distance from conflicts between their own financial interests and bureaucratic commitments (Public Procurement Act 663, 2003).

“According to Section 32(2) of the Procurement Act, (Act 2003, Act 663), a procurement unit may notify any such attempt in its report of processes and immediately inform the Public Procurement Board leading group of any attempt to influence the execution of an agreement or the honouring of a contract. The Act 663 unquestionably contains warnings against corruption between procurement officers and suppliers, contractors, and consultants primarily because corruption raises the cost of procurement to citizens and the procurement's quality. The private departments are nevertheless required to conduct themselves morally and honestly during procurement processes with the Ghanaian legislature”. As a result, the Act mandates that before being allowed to participate in acquisition procedures, bids must sign an official announcement (Public Procurement Act 2003, Act, 663).

#### ***2.5.6 Technology and Procurement***

“E-procurement could be developed simply and technically with little preference for competition. The benefits of e-procurement also include increased agreement consistency, using acquisition spend, extended association officials, and reduced handling costs due to its transparency and productivity improvement. Business e-procurement frameworks with open sector components are lacking, which makes it difficult to monitor consumption on a large-scale financial stage (Saunders, 2007). Another indicator of potential acquisition changes in developing and advanced nations is mechanical progress. E-procurement offers the assurance of cost-cutting, streamlining administrative procedures, and ensuring innovative systems for implementation. Brazil is said to have stimulated notable cost investment funds and increased honest and accountable executive institutions.

E-procurement also supports greater straightforwardness and factual coverage.

In any case, implementing these developments in Ghana will require money to do things like prepare and teach public entity workers as well as upgrade the infrastructure. Ghana could gather and make



available procurement data, including procurement arrangement template, standard tender documents, contract awards, dispute and complaint resolutions, quarterly procurement release or bulletin, and so forth on the web (PPB Training Manual, 2016). (p. 34)”.

Public Procurement Authority (PPA) is working to implement Ghana's e-Government procurement (e-GP) framework considering the myriad benefits of e-procurement. The e-Ghana project, which is supported by World Bank funding, includes the e-Government procurement (e-GP) as one of its frameworks. A series of meetings with representatives from the World Bank, PPA, and e-Ghana kicked off the use of e-GP. The purpose of these meetings was to create a usage plan or agreement for the Ghanaian e-GP foundation. The final Terms of Reference (TOR) to be used for the engagement of an advisor for the orderly improvement of electronic government procurement (eGP) in Ghana were completed by the group in June 2011. In October 28 in the same year, the assessment was completed.

## **2.6 CONCEPTUAL FRAMEWORK**

To evaluate if there are meaningful links between the independent factors and the dependent variable, this article focuses on a few fundamental conceptual foundations of the exploratory materials gathered from the literature that were selected as the study's cornerstone. It examines the factors that have been shown to have the most impact on how the Public Procurement Act of Ghana is implemented and received. The principal-agency paradigm provides the theoretical underpinnings for this investigation. Eisenhardt (1988), Bergen et al. (1992), and Rokkan and Buvik (2003) are only a few of the many authors that have examined the principal-agent theory.

Most of these deals revolve around how a principle and an agent will communicate with one another. The chain of events that occurs when one person (the agent) acts in the best interests of another (the principal) raises doubts about the principal-agent theory. To protect their interests, investors (principals) choose management (agent), and shareholders (principals) designate reserve supervisors (specialists).



In order to implement the Public Procurement Act of 2003 (Act 663), the government of Ghana (Principal) hires PEs and PPAs (specialists) to manage public procurement. By working together with the expert, the principal and the principle's interests are protected (Eisenhardt, 1989; Bergen et al., 1992). When the representative is skilled at making important judgements, this arrangement is ideal; nevertheless, when the principle and the representation have divergent goals, it might backfire. The agreement between the principal and the representative sets the parameters of the relationship. One group (the main) delegates work to another (the representation or the agent), and vice versa, as described by Eisenhardt (1989) in his theory of agency. In agency theory, this kind of relationship is represented by an agreement (Jensen & Meckling, 1976). Agency contacts are developed in a more extensive social context in order to use strategies about shifting motivating factors with the ultimate objective of discouraging self-centered conduct by public sector managers and decreasing organisation expenses.

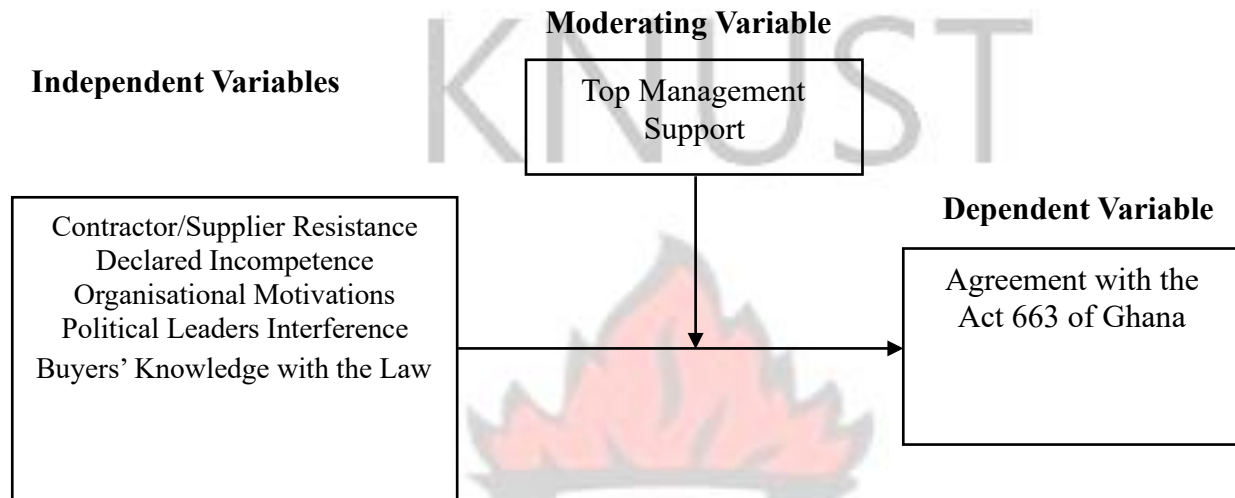
Citizens, governments and their experts, Ministries, Departments, and Institutions, District Assemblies, chosen authorities, the legal system, the legislative branch, the media, and so on all make up the complex network of principal-representative relationships that constitute the political structure of any developing country. Both inside and outside of formal political structures, these people serve essential and specialised responsibilities. Given the framework's modest breadth, it serves as a useful system for measuring use difficulties in determining how much of the public acquisition strategy translates into best practise (Gelderman et al., 2016). The framework included detailed instructions for assessing difficulties with implementation after complying with procurement directives.

### ***2.6.1 Elements of the Conceptual Framework***

The conceptual framework was designed to guide the buyer to compliance with Ghana Act 663 by categorising the buyer's awareness of procurement laws, the top administration's support for the procurement system, the interference of political leaders in procurement procedures, the buyer's self-

reported incompetence in public procurement, the motivation of the organisation, and the resistance of contractors and suppliers.

**Figure 2.4: Conceptual Framework**



**Source: Author's Construct, 2023.**

### **2.6.2 Buyer's Knowledge of the Laws**

According to De Boer and Telgen (1998), a survey indicated that many open organisations were resistant to public acquisition legislation because they were ignorant of their legal responsibility to obey the requirements of public acquisition laws. Further, while entering into a contract, both the principal and the expert are driven only by their own self-interest, with the goals of increasing advantages and usefulness for themselves. Many professionals find it difficult to apply the acquisition laws since they are not entirely clear, which results in various problems.

According to Gelderman et al. (2016), the public will obey the laws if they believe that they are clear. They stated that the simple fact that a public institution's administration is aware of the essential elements of EU regulations and controls may serve as a managerial incentive to comply. Furthermore, it is argued that ambiguity is tolerated to construct the possible outcomes for (UN) conscious resistance. A strong tool for increasing compliance with the orders will be training and preparing public acquisition directors (Gelderman et al., 2016). In this approach, the likelihood that public agents and specialists will agree to the rules will be influenced or increased by both

procurement supervisors and suppliers' acquaintance with the laws. This makes one wonder whether there is a connection between adherence to the rules governing acquisition, their standards, and methods, along with their acceptance and solutions to problems, that, in the end, has a good impact on both Ghana's economy and general public procurement.

### ***2.6.3 Top Management Support***

For formal controls to be successful, they must be developed, agreed upon, and integrated from the top down in an organisation, as stated by Rossi (2020). Since it encourages honesty and responsibility, develops supervision, and lays a firm foundation for preventing bribery, competent management is one of the finest preventative techniques, as mentioned by Hui et al. (2011). An institution's true duty to legitimate acquiescence is evidenced by the devotion of the top administration to moral corporate behaviour (Krawiec, 2013).

Heneghan and O'Donnell (2007) argue that the acquiescence culture of a company must start in the boardroom, with the executive's own individual habits and worldviews serving as a representation of the culture. In a related argument, Obanda (2010) argued that in order to advance credibility, screen procurement processes and procedures, understand implementation challenges and associated risks, and appropriately apply procurement law, acquisition personnel require strong institutional backing at the highest levels of government. The following recommendations urge top-level management to aid in boosting public procurement compliance, sustainable procurement administration developments, and doable service delivery.

### ***2.6.4 Political Interference***

Furthermore, Schapper et al. (2006) provided evidence to support the notion that public acquisition is an inherently contentious move. According to Bolton (2006), supervisors in the open market serve as specialists for specific delegations. However, Pillary (2014) contends that high-ranking bureaucrats and political people abuse their positions for personal gain, undermining the incentive



to maintain fairness. Furthermore, Raymond (2018) stated that political parties and ministers get clandestine government funding. Finally, this disrupts the procurement process and processes, impedes agreement, and eventually leads to numerous Procurement Act implementation challenges.

Lodhia and Burritt (2004), “who argued that social and political variables have a significant impact on public sector reforms, agreed. One of the greatest impediments to the procurement system in developing nations is ministerial engagement in the tender process, in which politicians interfere and influence tender grants. The threat of being suspended or dismissed is routinely used to compel public employees into implementing illegitimate ministerial directions, resulting in noncooperation (Akech, 2005)”. In support of it, Hui et al. (2011) presented the following claim: "Meddling from local lawmakers, entrepreneurs, members of parliament, and exceptionally persuasive senior administration employees has interfered with the acquisition procedures and hindered straightforwardness." Lodhia and Burritt (2004) went on to suggest that political influence outside of the government stifles data, candor, and support without holding the government accountable. The study indicated that political leaders' influence has a detrimental impact on the implementation of the Public Procurement Act of 2003, which requires careful attention to maximize the value of the state's assets.

#### ***2.6.5 Declared Competence***

Sutinen and Kuperan (1999) also stated that the claimed authority tasked with carrying out the policy and instructions is dependent, among other things, “on the ability to understand and agree as a result of good commitment and social influence”. Ghana's reported failure to successfully implement procurement policies in organizing its buy system is also highlighted in the theoretical model. The Public Purchase Act of 2003 (Act 663) establishes a few standards, guidelines, and criteria for ethical and legal conduct during the purchasing process.



These principles and criteria are meant to avoid favouritism, make risk management easier during contract award, and maintain transparency and responsibility throughout the acquisition process and acquisition strategies. However, the laws and directives have been criticized for failing to adhere to worldwide best practices in terms of acquisition methods in both the public and private sectors. The study reveals a causal relationship between policies and directives, legal requirements, moral commitment, and social influence in Ghana's Public Procurement Act 2003 implementation issues and acceptance.

#### ***2.6.6 Organisational Motivations***

Furthermore, organizational driving forces may cause issues with implementation and compliance with procurement rules. Teutemann (1990) adds that administrators in government divisions seek to use up all of their acquisition spending plan in order to avoid future budget cuts. Cost reductions brought about by competitive acquisition procedures during a year, according to these administrators, do not invariably result in a rise in subsequent expenditure plans. Compliance with public procurement legislation is hampered by the absence of procurement professionals in the public sector (De Boer & Telgen, 1998).

According to Gelderman et al. (2016), the internal incentives of the institution may have a higher impact on procurement agreement than is customary. According to Parker and Hartley (2013), military employees do not naturally behave successfully because they do not benefit from productive behavior and suffer losses from poor execution. As a result, government institutions are less likely to comply with public procurement legislation requirements, much alone ensure longterm purchasing practices. Acquisition officers in the public sector are those who follow up on behalf of the principle (the government) to understand the government's procurement goals and targets.

As a result, the representative's goals must be consistent with those of the principal (the government), with the ultimate goal of bringing about positive innovation and cost-effectiveness in government

purchases. According to the findings of the study, organizational driving factors have a role in identifying implementation obstacles and accepting critical arrangements that would promote public acceptance of procurement.

#### ***2.6.7 Contractor/Supplier Resistance***

Recognizing supplier and contractor opposition is critical for complying to acquisition policies and instructions, as well as presenting concrete proof of implementation issues that challenge management delivery proficiency. All disgruntled suppliers are required under Ghana's procurement Act 663 (PPA 2010) to report cases of abuse in order to address noncompliance with the law. Investment from the private sector and adherence to acquisition policies and directives may be affected by the public sector's responsiveness to the complaints of mistreated suppliers and its willingness to take action against open procurers.

#### ***2.6.8 Compliance with Ghana's Act 663***

Finally, the Public Procurement Act of 2003 (Act 663) is often blocked from taking effect due to logistical concerns. When acquisition specialists and suppliers are well-versed in procurement procedures and techniques, sustainable procurement practises, challenges associated with the implementation of procurement law and their effects, principles, and methods, the public procurement system has a better chance of being successfully implemented.

### **2.7 LITERATURE REVIEW SUMMARY**

Based on the research conducted above, it is clear that the Public Procurement Act, 2003 (Act 663) governs the procurement procedures in Ghana. This law created the Public Procurement body as the statutory advisory, planning, and coordinating body on procurement. Businesses in Ghana have voiced a number of concerns with the country's procurement procedures, notably governmental procurement, since their implementation. The review of literature discusses the obstacles that arise

from the political environment, ethical standards issues, and sustainability issues, as well as how to prepare and instruct qualified but inexperienced people who enter the procurement industry. The VRA should create the framework required to become a viable procurement entity. Each potential procurement body must again follow the procurement procedures outlined in “the Public Procurement Act” and detailed in the “Public Procurement Board Manual”. Challenges are unavoidable in procurement initiatives; nonetheless, the legal and legislative procedures that must be followed are there to aid the VRA in getting through without infringing the law.



## **CHAPTER 3**

### **METHODOLOGY OF THE STUDY**

#### **3.1 INTRODUCTION**

Research is an important and effective instrument for improving humanity. Without organized research, there would not have been much advancement (Pandey and Pandey, 2015). A thorough and methodical study and inquiry that increases consciousness is research (Cohen, 2000). Amaratunga et al. (2002) state that some conditions guiding research include sequential study of a defined problem, use of appropriate scientific methods, gathering adequate and representative evidence, use of logical reasoning in drawing conclusions because of evidence, demonstrating the validity or reasonableness of the conclusions drawn, and ensuring that research results can be validated by subsequent studies in the application of general scientific principles. A powerful method for increasing the validity of research is the significance of illuminating the study methodology. A



method of researching problems whose solutions are to be drawn partially or entirely from facts is research (Pandey and Pandey, 2015).

### **3.2 RESEARCH METHODOLOGY**

Research methodology is the best way to conduct a research study. It includes an analysis of the presumptions, guiding concepts, and methods used in a certain line of inquiry (Schwardt, 2007).

Research methodology, according to Mishra and Alok (2011), is the science that examines how research is carried out methodically. Research technique explains and defines the kinds of problems that are worth looking into, what makes a problem examinable, how to test hypotheses, and how to frame a problem so that it is simple to investigate using certain designs and processes. (Cresswell and Tashakkori, 2007; Schwardt, 2007).

All strategies and procedures used to conduct research are included in research methodologies (Mishra and Alok, 2011). According to Walliman (2017), research methods are the instruments and procedures used in conducting research. They are a variety of instruments used for various types of research. The means or modalities of data gathering and how certain results can be calculated were outlined by methods (Howell, 2013).

### **3.3 RESEARCH PHILOSOPHY**

A research paradigm is a set of philosophical presumptions regarding the phenomenon being investigated (ontology), how it can be understood (epistemology), as well as the goal and outcome of study (Hammersley, 2012). Research is not objective; rather, it reflects the personal interests, attitudes, skills, presumptions, goals, and aspirations of the researcher (Neville, 2007).

#### **3.3.1 Epistemology**

How do we know? Epistemology (Tennis, 2008). According to Raddon (2010), the term "epistemology" describes the study of the nature and acquisition of "real" knowledge. The



foundation of positivism is the invention of numerical measures of observations, which is used in the study of human behaviour. A positivist's perspective on knowing depends on meticulous observation and measurement of the world's existing objective reality (Creswell, 2014). According to realism, research only reveals an already-existing reality. The researcher uses impartial research techniques to ascertain the truth because it exists (Muijs, 2010). Realists believe that social things are like physical ones in the natural world in that they exist regardless of how they are thought of, according to Saunders et al. (2015). When collecting and analysing data for a study, interpretivism gives human interpretations of events and phenomena credit. The interpretivist holds that to comprehend and explain a phenomenon, one must concentrate on the interpretations, points of view, emotions, and experiences of the research participants in the particular circumstance (Priola, 2016).

### **3.3.2 Ontology**

Ontology refers to a set of beliefs or theories about how the world works (Saunders et al., 2015). The ontologist claims that there is an independent, objective world (Sale et al., 2002). Subjectivism, which draws on ideas from the arts and humanities, proposes that social reality is constructed via the perspectives and subsequent acts of social actors (people) (Saunders et al., 2015). From an objectivist perspective, social and physical phenomena are independent, universal, and enduring in nature, claim Saunders et al. (2015).

### **3.3.3 Axiology**

Axiology is the study of values in research (Saunders et al., 2015).. Saunders et al. (2015) claim that axiological research can be either value-free (detachment) or value-bound (integral and reflexive).

### **3.3.4 Research Philosophy Adopted for this Study.**

Given the philosophical orientation of the study, it stands to reason that either an inductive or an inductive-deductive approach would be acceptable. Case studies and surveys are recommended as research methods to better comprehend the study's goals (Collis and Hussey, 2013). For this reason, the mixed methods approach to research (quantitative and qualitative research approach) will be used for this study, as (Wilson, 2014) suggests that for a pragmatic research philosophy, the right research method could be either qualitative or quantitative, or a combination of both, as it becomes appropriate in responding to the research questions.

### **3.4 PHILOSOPHICAL APPROACH**

#### ***3.4.1 Deductive***

Thomas (2006) defines deductive analysis as the process of checking data for consistency with a researcher's presuppositions. First, a hypothesis or set of hypotheses is developed to form a theory that may account for a given situation or problem; next, observations are used to systematically test the hypothesis (confirm the hypothesis) (Malhorta, 2017).

#### ***3.3.2 Inductive***

Inductive approach is a way of creating new theory by combining several types of research (Zikmund, 2000). The goal of inductive research, according to Malhotra (2017), is to develop certain limited generalizations on the distribution of, and patterns of association among, seen or measured features of people and social processes. It is best described by Thomas (2006) as methods that largely rely on careful reading of unprocessed data to produce concepts, themes, or models through the interpretation of a researcher.

### ***3.3.3 Abductive***

Abductive research involves deriving hypotheses from the words, concepts, and stories of social actors in the context of their everyday behaviours. Research of this nature often starts with a description of the relevant behaviour and their meanings, before moving on to the relevant categories and concepts for doing so (Malhorta, 2017).

### ***3.3.4 Research Approach Adopted for the Study***

The research approach adopted by this study is the descriptive research study which is an approach that attempts to identify the characteristics of a problem through description through a careful selection of facts. A thorough literature review of procurement processes in different countries will be used to determine whether or not the data for factors limiting the application of the Procurement Act 2003 using the VRA as a case study is consistent with prior assumptions, theories, or theories developed. This is in accordance with Thomas's (2006) recommendation.

## **3.5 RESEARCH STRATEGY**

It is recognised that not all case studies are interpretive. Case studies are normally associated with qualitative research, but can also be used as a method of inquiry employing a positivist epistemology and ontology. Yin (1994) warns against confusing case studies with qualitative methods using the ethnographic method. Ethnographic methods are derived from cultural anthropology. In studying organisations these methods might help the researchers to extract cultural knowledge, and identify actions and instruments that participants utilise in their everyday life (Schwartman, 1993; Prasad, 1997). Yin (1994) distinguishes ethnographies from case studies in that the former take a long period of time to conduct and require very detailed observational evidence. Case studies, by contrast, are conducted within a defined time frame and do not necessarily imply the use of ethnographic techniques. Researchers conducting case studies may not even need to visit the organisation under study; they could collect their data



by consulting secondary sources or interviewing respondents telephonically or by e-mail (ibid.). Yin (1994) defines a case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined.

In order to achieve the objectives of this study, the research was conducted through a Case Study to enable the researcher attain an in-depth account of the variables in the study and to analyse intensively the diverse phenomena of all the variables. A case study is an empirical inquiry that investigates a contemporary phenomenon. Yin (2009) explained further that case study is a preferred method when the focus is on a contemporary phenomenon within a real life context and that case study method allows the investigator to retain the holistic and meaningful characteristics of the real life events such as managerial processes. A case study can involve both a single case as well as multiple cases (Voss et al., 2002; Yin, 2009, p. 46). This study was conducted through the use of a single case thus, Volta River Authority.

### ***3.5.1 Research Strategy Adopted for the Study***

The study used the case study research to apply the framework for procurement processes for VRA. Case study research emphasises conventional data collection and statistical analysis, as well as deduction, confirmation, theories/hypotheses, explanations, and predictions, as stated by Johnson and Onwuebguzie (2004). Furthermore, Borkan (2004) emphasized that methods for gathering quantitative data allow the researcher to draw conclusions exclusively about the topic under consideration, and that statistical procedures perform best when used alone or when correlating changes over time. Therefore, in order to develop a framework that can be used in future studies to test the application of the Procurement Act 2003 and be generalized to other institutions in the country as well as other emerging and developing countries, this



study will collect data from a sample of procurement experts who will represent the larger population of procurement experts.

### **3.6 RESEARCH DESIGN**

The study project's data collection and analysis phases are guided by the research design (Creswell, 2019). The framework specifies what information will be gathered, where it will come from, and how it will be gathered (Kinnear et al., 1991). A research design is an overarching plan that specifies how you'll go about gathering data and analysing it. (Churchill & Iacobucci, 2005; Pandey & Pandey, 2015) It provides a framework that specifies the type of information or data that has to be gathered, as well as the sources of that information, the method of data collection, and the instruments that should be employed. The several types of study designs used in social and scientific research are covered below.

According to Wharrad and Silcocks (2009), the term "experimenting" is used to characterize our actions when we are testing or attempting something new. Predictability, dependent and independent variables, causal effects between variables, and proper subject selection and assignment are characteristics of experimental research (Mildner, 2019).

Data for research is often gathered using surveys. Non-experimental techniques that attempt to represent reality can benefit greatly from their use (Mathers et al., 2007). To provide quantitative descriptions of the features of the larger community to which the sample belongs, researchers often conduct surveys (Avedian, 2014). A case study delves deeply into a plan, a procedure, an occasion, an activity, or one or more people (Creswell and Creswell, 2017). Case studies, in the opinion of Leedy and Ormrod (2001), aim to fully comprehend a complex issue. Case study designs have become a powerful tool for exploring and comprehending difficult issues in context.

Grounded theory is a popular approach of conducting research. It's possible to employ both qualitative and quantitative techniques to gather information for a grounded theory research

(Chun Tie et al., 2019). However, grounded theory was disputed by Chong and Yeo (2015) as a type of qualitative research designs. “A technique known as grounded theory involves collecting qualitative data, conducting data analysis, and creating categories (a theory) to explain an interest phenomenon”.

“Action research, also known as Participatory Action Research (PAR), is a community-based study that combines action learning, action science, and cooperative inquiry”. Its main goal is to improve conditions and practices (Lingard et al., 2018). Action research builds information based on studys carried out in specific, typically practical circumstances

(Johnson, 2020). Practice is informed by and influenced by action research (Wicks et al., 2018).

A cultural group is the subject of ethnography. According to Saunders et al. (2015), ethnography is focused on examining common meanings and practices (culture). In an ethnography, inquiries and observations typically center on common social and cultural meanings and processes within a particular group of individuals.

### ***3.6.1 Research Design Adopted for the Study***

The researcher would collaborate with military leaders and enlisted troops to gain insight into the situation at hand, gather fresh data, and fill in gaps in their knowledge. The purpose of doing this is to determine the current state of affairs. The method is a reworking of other instruments that will be utilised to better understand the challenges involved in public procurement of commodities in VRA. Records (assessment of reports and contract documents) accessible at the Procurement Unit will be reviewed and studied, and officers and suppliers who choose to take part will be invited to fill out a semi-structured questionnaire. Each respondent would be given a short set of open-ended questions to answer.

Procurement-related questions can be broken down into three categories: (1) those interested in learning more about the procurement process and procedures in general, its practises, and the existence of procurement principles prevailing in VRA; (2) those interested in delving deeper into

the challenges of creating procurement plans and obtaining invoices, as well as the legal, financial, and human resource hurdles that come with purchasing goods; and (3) those interested in learning more about ways to improve the procurement process. A survey methodology based on the use of structured questionnaires and interviews would be utilised to obtain the bulk of the data for this study.

### **3.7 TIME HORIZONS**

#### ***3.7.1 Longitudinal***

In a longitudinal design, a population's study sample is contacted across several years (Churchill and Iacobucci, 2005). An alternate term for a longitudinal is an alternative survey. It creates an image of ongoing events or enduring sentiments (Mathers et al., 2007). A trend survey, cohort survey, or trend survey are all examples of longitudinal surveys (Mathers et al., 2007; Avedian, 2014).

#### ***3.7.2 Cross-Sectional***

Data is gathered in a cross-sectional pattern at just one point in time (Churchill and Iacobucci, 2005). Cross-sectional designs give an overview of a group's state of affairs at a particular time. Most of the time, they choose a form that is exploratory or descriptive and merely seeks to depict behaviour or attitudes (Mathers et al., 2007).

#### ***3.7.3 The Time Horizon Position of this Study***

In this study, information was gathered using a cross-sectional temporal frame. The cross-sectional method is used to gather data for a single point in time. Time and resources prevented a cross-sectional design from being implemented, thus a longitudinal one was opted upon instead. Since the execution of the Act is continuous and progressive, choosing a longitudinal design would have given sufficient data to test the trend and ability of the VRA to change in accordance with procurement principles widely used around the world. However, the cross-sectional design offered enough information to



create a framework that can be used to assess the Procurement Act 2003 application mitigating factors in future research.

### **3.8 RESEARCH PROCESS DESIGN**

The steps that must be taken in the right order in order to conduct research successfully are called the research process (Mishra and Alok, 2011). The research process, according to Kothari (2004), entails several actions or processes that must be taken in the precise order that is wanted in order to do research.

#### ***3.8.1 Unit of Analysis***

The unit analysis is one of the most important concepts in a research project (Trochim and Donnelly, 2001). The primary entity that is being investigated is the unit of analysis, according to Trochim and Donnelly (2001). The unit of analysis is the first stage in data analysis, according to Trochim (2006). The "what" and "who" of the research are addressed by the unit of analysis. It assists in deciding what sort of data a researcher should gather from his study and from whom to reduce the possibility of coming to the wrong findings (Kumar, 2018).

To analyse “the effects of the Public Procurement Act 2003 (Act 663)” on procurement practices and service delivery, to establish the various challenges faced by procurement managers, to evaluate strategies to improve procurement practices, and to develop an appropriate framework for procurement processes using VRA as a case study were the study's units of analysis.

### **3.9 DATA COLLECTION METHODS**

Data collection refers to the process of amassing the information needed to answer a research question (Polit and Beck, 2004). Pandey and Pandey (2015) state that there is a wide range of data collection techniques, each requiring a unique combination of time, money, and other resources from



the researcher. Personal interviews, telephone interviews, online surveys, or mailing questionnaires are all methods for gathering data for surveys (ibid).

### ***3.9.1 Sources of Data***

The information gathered for the study endeavour is referred to as primary data. Primary data don't exist unless and until they are produced during the research phase of the project. Primary data comes from fieldwork, interviews, and unpublished documents like meeting minutes, among other sources (Hox and Boeije, 2005). Through a field survey and the use of a standardized questionnaire, the study obtained primary data.

Prior to a study, there are data that are considered secondary (Hox and Boeije, 2005). Secondary data, according to Bacon-Shone (2013), uses information that has already been gathered.

Secondary data has already been gathered and examined by another party (Muijs, 2010). According to Hox and Boeije (2005) and Muijs (2010), published journal articles, books, conference proceedings, newspapers, online sources, reports (from the local, central government, international bodies, universities), published and unpublished dissertations from accomplished authors, and institutions served as the sources of secondary data for this study.

#### ***3.9.1.1 Types of Data***

Samuels (2015) asserts that it is critical to comprehend the types of data you are working with when conducting statistical analysis. Data comes in three basic categories. The nominal scale was used in this study to describe the respondents' demographic characteristics. This assisted in classifying the respondents' standout traits, according to Samuels (2015). Nominal data/scales, such as gender, eye color, and building types, do not follow a natural sequence (SAS Institute, 2012; Samuels, 2015). A nominal scale, according to SAS Institute (2012), is a method of categorization that divides individuals, things, locations, or other items into groups that are mutually exclusive. According to Samuels (2015) and SAS Institute (2012), the variables derived from the extensive literature were

measured using the ordinal scale. This scale provides answers to ordered categories and not the difference between them (Avedian, 2014).

### ***3.9.2 Questionnaires Development***

Although ubiquitous, the questionnaire is a tool for collecting data from sources that are not physically within the observer's range (Odoh and Chinedum, 2014). An organized approach to data collection is used in quantitative research. Pre-defined questions with clear answers or thoughtful response alternatives are part of structured data collecting (Polit and Back, 2004). A questionnaire may be closed-ended or open-ended, according to Dornyei (2003). Open-ended inquiries necessitate quick, fill-in responses and provide qualitative information from which the researcher can extrapolate themes, patterns, and trends. Selecting specific responses from a closed-ended survey results in tabulation and quantification (frequency, percentages, averages).

According to Avedian (2014), the quality of the data collected is affected by the questionnaire's design. Formatting contingency questions clearly increases the likelihood that respondents will answer all of the questions in the survey. The wording and order of questions in a survey can have an impact on the responses they elicit. Clear instructions are necessary for a questionnaire to generate the right responses. Before distributing a questionnaire to a study sample, it should be pretested. The survey can be completed online or by mail (i.e., distributed by hand). The mailed questionnaire has the benefit of being reasonably priced, and because the respondents are not under immediate time constraints, their responses are thoughtful.

### ***3.9.3 Data Collection Method Adopted***

“Semi-structured questionnaires and interviews would be conducted (by the researcher and certain recruited personnel) at VRA and the corporate offices of some key suppliers would serve as the primary data gathering tools in this study”. The study objectives and other related aspects of public procurement and its difficulties serve as the foundation for the questionnaire. The questions on the

survey would contain checkboxes where responders could select the proper response. After being verified as important players in procurement and its related operations, respondents would be selected. They primarily must come from the Entity Tender Committee, Internal Audit Unit, Finance/Accounts Section, and Procurement Unit. A questionnaire on procurement and its related issues will be also administered to some of the VOLTA RIVER AUTHORITY's key suppliers.

**“Table 3.1: Classification of Respondents and Sample selection**

<b>Category of Respondents</b>	<b>Sample random selection</b>	<b>Confidence Level</b>	<b>Error” Tolerance</b>
Management & Tender Committees	20		
Management Staff	16		
Procurement Staff	24		
Suppliers/Contractors and Consultants	40		
Stores and user Department	50		
<b>TOTAL</b>	<b>150</b>		

### **3. 10 POPULATION AND SAMPLE FRAME**

According to Hayes (2011), the term "universe" is used to describe the complete collection of people and things that share certain characteristics. According to Kintchenham et al. (2002), the target audience consists of the people to whom the survey is directed, the people who are eligible to reply to the survey's questions, and the people to whom the survey's findings are relevant. The population of the research consisted of VRA employees who take part in public procurement. There would be a



total of one hundred fifty (150) respondents, including forty-five (45) key VRA suppliers and one hundred and five (105) direct VRA partners. There were primarily three groups of persons who were intended to benefit from this study's findings: suppliers to the VRA, members of the procurement committee, and employees in the VRA's procurement unit and other related units.

### ***3.10.1 Sampling Technique and Sample Size***

Sampling is an instinctive human action that involves observing a component to learn more about the total (Corbetta, 2003). A specific plan for obtaining a sample from a certain population is known as sampling technique (William, 2009). Sampling is the process of selecting people from a population so that each person has an equal probability of being included in the sample (Pandey and Pandey, 2015).

### ***3.10.2 Sampling Techniques***

Many different types of sampling techniques exist (Corbetta, 2003). The vast majority of these methods, however, may be classified as either probability or non-probability sampling (Pandey & Pandey, 2015).

#### ***3.10.2.1 Probability Sampling***

In probability sampling, the odds of selecting any given member of the population are known to be greater than zero (White, 2003). computationally determined probability or random sampling in which the likelihood of selecting each unit in the population is known. The best way to guarantee that a sample is unbiased, according to Muijs (2010), is to use probability sampling techniques. According to Mishra and Alok (2011), there are four different kinds “of probability sampling techniques: systematic sampling, clustered/area sampling, simple random sampling, and stratified sampling”. These are covered below.

The most popular technique for probability sampling is simple random (Muijs, 2010). Each potential sample for a particular size within a population has a common and known probability of being chosen as the research sample in simple random sampling. When a researcher selects a specific name



or number from a population, this is known as systematic sampling. This sort of sampling typically begins with the use of random numbers to select and choose the items to begin the study from a sample frame, which introduces an element of unpredictability. Using a stratified sampling, the population is split up into distinct categories, or strata.

For sampling, stratification separates the population into uniform groupings (Mishra and Alok, 2011). Individuals may be chosen using cluster sampling and geographical batches (i.e., the researcher may decide to focus on certain towns or electoral wards). Multi-stage sampling allows for a random selection of individuals from inside the selected cluster units (Mathers et al., 2007).

Multistage sampling, according to Avedian (2014), employs a mix of sampling techniques.

#### ***3.10.2.2 Non-Probability Sampling***

Non-probability sampling, which uses an arbitrary method to select units from a universe, is often easy, quick, and cheap (Mishra and Alok, 2011). Similar to probability sampling techniques, nonprobability sampling approaches aim to reduce the sampling expense. There are four distinct types of non-probability sampling methods, according to Takona (2020). These include random sampling, cluster sampling, stratified sampling, cluster sampling, convenience sampling, and availability sampling.

Convenience sampling refers to the process of selecting a sample from a larger population based on ease of access. The researcher's discretion determines whether he or she uses purposeful or judgmental sampling (Mishra and Alok, 2011). By way of illustration, incidental or inadvertent sampling refers to the practise of using groups of samples drawn from a population when conventional sampling methods are unavailable or impractical (Pandey and Pandey, 2015). In quota sampling, the researcher decides in advance on a set of key characteristics that will be used to divide the sample into groups. Since non-random selection prevents the use of inferential statistics, respondents may be selected based on convenience, and results cannot be extrapolated to a wider population (Mathers et al., 2007).

### ***3.10.2.3 Sampling Techniques Adopted for this Study.***

Judgement sampling, another name for purposive sampling, includes selecting respondents on the basis of predetermined criteria (Lewis and Sheppard, 2006). Purposive sampling allows for the exercise of discretion in selecting individuals who are provided or available and who best meet the aims or target groups (Neville, 2007). Purposive sampling is when a researcher knows exactly what data they need and actively seeks out people who are qualified and interested in helping out with the study (Lewis and Sheppard, 2006). While purposive sampling can follow snowball sampling on occasion (Brown, 2007), it does not use the respondent's original source (Bernard, 2017).

Snowball sampling relies on the links between relevant respondents to build a sample from a small initial sample. As each respondent suggests others, a sample is created by referrals (Noy, 2008). According to Neville (2007), a sample may be assembled through the use of informants by starting with one informant, who then offers the second respondent, and so on.

### ***3.10.2.4 Determination of Sample Size***

Ding et al. (1995) suggest selecting a sample size of 100–150 when employing the structural equation methods to detect differences across data sets. In addition, some pieces of literature provide conventional standards, such as the number of participants to the number of parameters to be estimated (e.g., 10 to 20 - Khine, 2013), while others suggest the number of observations to the number of indicators (Westland, 2010). Due to the intricacy of the model and the required sample size, the researcher would rely on a method based on the ratio of indicators to latent variable, as suggested by Westland (2010). Following this process, the following formula will be used to determine the required minimum sample size for the research that were suggested:

**“Table 3.2: Computing suitable sample size for model estimation**

<b>Latent Factor</b>	<b>Number of indicators per questionnaire</b>
Perceived behavioural control	4

Attitude towards usage	4
Subjective norm	4
Intention to adopt	4
Relative advantage	4
TOTAL	20

$$n \geq 50r^2 - 450r + 1100$$

$$r = p / k$$

Where n = minimum sample size

r=ratio of indicators to latent

variable

p=number of indicators

k=number of latent variables Substituting, r =

$$20/5 = 4 \quad n \geq 50(16) - 450(4) + 1100 = \approx 100$$

respondents

The expected actual response is calculated, however, if a minimum sample size of 100 is required and a worst-case effective response rate of 68% is reached, in order to overcome the propensity of high non-response rate that is frequently associated with survey studies. This would result in an estimated sample size of 150 respondents, which is 147 respondents.

The computations done would be as follows:

$$n_a = n * 100 / re\% = 100 * 100 / 68 = 147 \approx 150$$

Where n = minimum sample size  $n_a$  = actual

sample size required

re% = estimated response rate

expressed in percentage” **Source:** Saunders et al. (2017)

### 3.11 DATA PROCESSING AND ANALYSIS

Data analysis requires a number of interconnected steps, such as the formulation of categories and their application to raw data via coding, tabulation, and statistical inference. Calculating percentages, coefficients, etc., utilising a number of well-defined statistical equations, is a common task for analysts after tabulation (Pandey and Pandey, 2015). Creswell et al., (2017) maintain that once data



have been gathered, the researcher's responsibility is to minimize the volume of data gained to permit appropriate analysis. Data reduction typically entails coding, either manually if the survey has few respondents or automatically if there are many.

### ***3.11.1 Entering and Organisation of Data***

Data are obtained by observing the values of the variables for one or more individuals or objects. An observation is a single piece of data, and a data matrix or dataset is a collection of observations for a certain variable. The variables captured for a group of sample units make up a data set (Isotalo, 2001). The raw data will change prior to the responses being coded. Data editing is the process of reviewing the information gathered during a survey to look for errors and omissions and rectify them if necessary (Kothari, 2004). In order to improve data management, the researcher will classify the responses of the respondents prior to data collection using version 22 of the Statistical Package for Social Sciences (SPSS) with AMOS. The SPSS is the most widely used statistical software, according to Muijs (2010).

### ***3.11.2 Data Presentation Using Tables and Figures (Descriptive Statistics)***

Descriptive statistics seek to describe the relationships between the various characteristics of a population. Descriptive statistics allow researchers to simplify and characterise quantitative data based on empirical evidence (Polit and Beck, 2004). Avedian (2014) claims that descriptive analysis summarizes (describes) the data using graphical and numerical approaches. Using graphs, tables, and numbers, descriptive statistics summarize data and depict phenomena. Descriptive statistics encompasses the generation of visual displays like graphs, charts, and tables in addition to the computation of a wide range of descriptive measures including means, standard deviations, and percentiles (Isotalo, 2001).



In the form of mean, median, and mode, descriptive statistics, according to Satake (2014), provide an overview of data. The measurements of central tendency and degrees of dispersion (standard deviation) provided by Ali and Bhaskar will be used to define this study's descriptive statistics (2016). According to Mathers et al. (2007), the mean is "a measure of central tendency that is obtained by summing all the values and dividing that total by the number of cases to obtain an average," where "n" is the number of cases.

The standard deviation (SD) gauges how evenly distributed a dataset's values are. The values are close to the mean if the SD values are low or almost zero. Skewness as a measure of central tendency demonstrates how the items are distributed asymmetrically and around the mean. A skewed distribution is thrown to one side while an asymmetrical distribution achieves perfect equilibrium (Kothari, 2004). Kurtosis, which refers to a curve's hump or flat top, indicates how elements in the center of a series are distributed.

### ***3.11.3 Factor Analysis***

Factor analysis (FA) is used to clarify difficult and varied interactions between a group of observed variables by discovering the shared dimensions or factors that connect the seemingly unrelated variables and provides insight into the dataset's underlying components (Nimalathan, 2009). According to Child (2006), the two most common types of factor analysis are exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). In this analysis, we will use the EFA within the context of the Procurement Act for VRA. When the real nature of a summary construct is unknown, Goldberg and Velicer (2006) argue that EFA can be utilised to identify it. Everything, according to Tabachnick and Fidell (2007), requires at least three variables to be categorised as a factor; however, this categorization is not independent of the research design. Comrey and Lee (1992) suggest a sample size of 300, with at least 5-10 observations for each factor-affected variable. According to Yong and Pearce (2013), an identity matrix cannot be derived from the data if the significance level is less than 0.05.

#### **3.11.4 Relative Importance Index (RII)**

Using the relative significance index (RII) (Johnson and LeBreton, 2004), one may easily determine the individual and joint contributions of each predictor variable to the prediction of a criterion variable. Badu et al. (2013) calculated the Relative Importance Index (RII) using the following formula. “[W - weighting given to each statement by the respondents ranging from 1 to 5; A – higher response integer (5); N – total number of respondents]”.

$$RII = \frac{\sum A}{A * N}$$

#### **3.11.6 One-Sample T-test**

The difference between the sample mean and the estimated population mean may be analysed using a statistical method known as a one sample T-test. With a one-sample t-test, the population mean is known ahead of time (Lani, 2016). The sample mean is compared to the population mean (or proiri score) with a one-sample t-test. Both the sample standard deviation (z-test) and the population standard deviation (t-test) are used in the analysis of interval scores.

#### **3.11.7 Covariance-based Structural Equation Modelling (CBSEM) for Framework Development**

Both the confirmatory and exploratory factor analyses utilised a covariance-based structural equation model (CBSEM) (Kline, 2010; Owusu-Manu et al., 2018). The two most common types of factor analysis, as outlined by Child (2006), are exploratory factor analysis (EFA) and confirmatory factor analysis. (CFA). However, Goldberg and Velicer (2006) state that EFA is used to discover summary components when their nature is disguised, whereas CFA aims to test theory and portrays variables and factors using route analysis diagrams. CBSEM may be thought of as a factor-based methodology (Kock, 2019).

Modifying or deleting indicators with substantial error terms and/or low loadings might enhance the CBSEM's description of latent constructs (Hair et al., 2010). This requires maintaining a minimum of three variables per construct. Sample size determination for SEM has proven difficult for numerous researches (Wolf et al., 2013). According to Hair et al. (2017), the most important factor in deciding sample size is the study's capacity to generalise its findings. Wolf et al. (2013) found that, when compared to the commonly-used rules-of-thumb, the sample size requirements chosen in the existing literature ranged from 30 to 460 occurrences. According to Boomsma (1985), a sample size of 100–200 is recommended. As long as the measurement is correct, a sample size of 100 is sufficient for most applications, as stated by Hair et al. (2017). Therefore, a total of 150 participants were employed for this analysis in the CBSEM.

### ***3.11.8 Data Reliability and Validity***

#### ***3.11.8.1 Data Validity***

When a test or instrument measures what it claims to measure, this is known as face validity (Wharrad and Silcocks, 2009; Samuels, 2015; Pandey and Pandey, 2015). Mildner (2019) links appropriateness or veracity to validity. Valid research will produce comparable findings from comparable samples and eventually result in interpretations that can be applied to comparable populations or circumstances (Muijs, 2010). When researcher and participant understandings are consistent, we say that the study is valid. Criterion validity, construct validity, and content validity are the three forms of validity that may be assessed (Muijs, 2010).

Polit and Beck (2004) defined content validity as the appropriateness of the sampling of items for the construct being examined. Respondents are questioned about the instrument or test's face validity, a component of content validity (Muijs, 2010). Theory and criterion validity are strongly intertwined. It gauges the potential, theoretically, to be correlated with other measurements or to forecast specific results. Criteria validity may be contemporaneous or predictive (ibid). A crucial need for the defining of a variable is construct validity. Construct validity serves as a bridge between useful measurements



and insightful notions. The ability of a measurement to represent the scientific concepts or conceptions that serve as the true objectives of scientific research is known as construct validity. Whether or not the content of the manifest variables, such as test items or questionnaire questions, it is appropriate to measure the latent learning and inference (Seltman, 2018).

The degree to which study findings can be applied to other people and different research contexts is known as external validity. Generalizability and external validity are the same thing. External validity (generalizability) is concerned with the size of the sampled population and how justifiably the findings may be applied to a larger population (Seltman, 2018). Internal validity claims that the conditions of temporal precedence, covariation, and non-spuriousness are met by the causal relationship. Cause comes before effect in an experiment that is internally legitimate. The two are connected, and no other theory can account for the relationship (covariation) (Mildner, 2019). According to Avedian (2014), internal validity is utilized to determine whether effects seen in a study are caused by the relevant independent variables and not another confounding factor. According to Cohen et al. (2000), careful sampling, suitable apparatus, and suitable statistical analysis could lead to validity. The validity of the instrument was examined using the Cronbach's Alpha technique. An indicator of internal consistency is the coefficient alpha, which should be greater than 0.7. (Muijs, 2010).

#### ***3.11.8.2 Data Reliability***

The consistency over the course of a series of measurements is referred to as reliability (Pandey and Pandey, 2015). If the same outcomes are obtained when the instrument is retested, it is considered dependable (Samuels, 2015). Reliability is referred to as consistency by Mildner (2019). Reliability, according to Polit and Beck (2004), refers to the measurement precision of the data gathering tool. If a measurement correctly reflects the true scores of the variable under study, it is said to be dependable. If all of a test's items correlate with one another and measure the same thing, the test is considered dependable (Mildner, 2019).



Wright et al. (2004) define reliability as "the degree to which the results of the study are not modified by chance." How well results stay up over time and are representative of the whole group being researched is a measure of dependability (Joppe, 2001). It is anticipated, for instance, that if a respondent respond to an item in a given way, they would continue to react to it in the same way in subsequent surveys (Pandey and Pandey, 2015). Wright et al. (2004) also emphasised the need of transparency in the publication process and the accuracy of field notes as essential components of trustworthiness. A pilot study including 10 respondents will be used to evaluate the survey instrument's dependability.

#### **3.11.8.3 Pilot Test**

The draft questionnaire must be piloted before you start the main part of the fieldwork. If a questionnaire has never been piloted, it should never be utilized, especially if it is intended for selfcompletion and errors cannot be corrected (Mathers et al., 2007). In pilot research, 10 of the 15 participants who will be sampled for the questionnaire's reliability will be assessed. The 10 respondents including manufacturers, retailers, suppliers, store superintendents, procurement policy makers, sustainability, and ethics advocates in the field of procurement, and specialists in the field will be pilot tested.

### **3.12 ETHICAL CONSIDERATIONS**

The study of ethics, a part of philosophy, is concerned with how individuals should behave and how they should interact with one another (Blumberg et al., 2005). A system of moral principles known as research ethics is concerned with how closely research practices comply to their social, professional, and legal commitments to study participants (Polit and Beck, 2004). Walliman (2017) asserts that research only has value if it is conducted honestly.

If it is revealed that the researcher acted dishonestly, the findings of the study cannot be trusted. Integrity is about ethics, and ethics are the rules and standards of conduct that professionals follow

when interacting with participants. According to Shamoo and Resnik, (2009), “the following ethical principles were upheld in this study: objectivity, honesty, care, openness, respect for others' rights, confidentiality, respect for intellectual property, social responsibility, non-discrimination, competence, and protection of respondents' human rights”.

Additionally, this study complying with the ethical standards established by the Graduate School for conducting research at KNUST, including those governing the data collection tool and obtaining respondents' informed consent. Participants will be informed of the study's goals, the importance of their participation, and how their data will be utilised, as well as their rights and the protections afforded to them in the process. Respondents will be given complete freedom within the study's sample frame to disclose, refuse to disclose, refrain from participating, or act in any other way they see fit.

### **3.13 CHAPTER SUMMARY**

The research approach used for this study has been covered in depth in this chapter. The strategies that taken together will enable this study's goal to be realized have been carefully examined. The study's underlying principle has been well articulated. The research strategy (quantitative) and research approach (deduction) that the survey research design favours have been well-described. The research will use a cross-sectional approach. For this study, the purposive and snowball sampling approaches will be used to collect primary data. The instrument's validity will be examined using the Cronbach's Alpha test. The five-point Likert scale is used in the study's closeended questionnaire. Descriptive statistics, factor analysis, one-sample t tests, relative importance indices, and covariance-based structural equation modelling will all be used as data analytic techniques for this study.

## **CHAPTER 4 DATA PRESENTATION, ANALYSIS AND DISCUSSION**

### **4.0 INTRODUCTION**

This chapter demonstrates the use of questionnaires for data collection on the ground. To highlight the responses from respondents, questionnaires were analysed using a variety of tables and figures.

To shed additional insight on the questions posed on the ground and in relation to the research's goals, this chapter is also divided into sub-headings.

#### 4.1 RESPONSE RATE

VRA procurement staff from Takoradi, Tema, Akosombo, and Sunyani offices provided the questionnaire responses. 140 of the 150 administered questionnaires were received, of which 134 were valid. This gives a response rate of 89.33%. Only legitimate answers from this were used in the analysis.

#### 4.2 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

The demographic details of the study's respondents are given in this section. Managers of procurement, officers, suppliers, distributors, manufacturers, and retailers who work with or do business with VRA were among the respondents that were considered for the study. The main demographic details examined were gender, years with VRA, respondents' highest educational attainment, position, number of co-workers, and annual income. Table 4.1 displays the findings of the demographic data collected from VRA respondents.

**Table 4.1 Demographic Characteristics of Respondents**

Demography	Categories	Frequency	Percentage %
Gender	Male	61	45.5%
	Female	73	54.5%
	<b>Total</b>	<b>134</b>	<b>100.0%</b>
Job Position	Management (Tender Committee)	36	26.9%
	Management Staff	28	20.9%
	Procurement Staff	35	26.1%
	Supplier/Contractor	20	14.9%



	Stores/User Departments	15	11.2%
	<b>Total</b>	<b>134</b>	<b>100.0%</b>
Number of years with VRA	Under 1 Year	30	22.4%
	1 - 5 Years	55	41.0%
	6 - 10 Years	37	27.6%
	Above 10 Years	12	9.0%
	<b>Total</b>	<b>134</b>	<b>100.0%</b>
Highest Educational Level of Respondents	Polytechnic (HND)	36	26.8%
	1st Degree	47	35.1%
	Professional (ICA / ACCA/CIPS, CILT, PMP)	25	18.7%
	Postgraduate	26	19.4%
	<b>Total</b>	<b>134</b>	<b>100.0%</b>

**Source: Field Study, 2023**

As can be shown in Table 4.1, the vast of responders were females representing about 54.5% (n=73) of responses as confirmed by (Aryeetey et al, 1994; Abor and Biekpe, 2006), and the remaining 45.5% (n=61) were males. In terms of their positions in the selected organisation, majority (26.90%) were part of entity tender committee, followed by the procurement staff 26.10%, then 28.20% who were management staff, supplier/contractor making up (14.90%) with a few (11.20%) occupying stores/user department positions.

It was important to know the years respondents have been with the company, and it was realised majority of the respondents (41.0%) have been in the company for about 1 – 5 years, followed by 27.60% who have been with the company from 6 – 10 years. There were about 22.40% who have been with the company just under a year.

In terms of highest education level, most of the respondents have had tertiary education with 35.10% and 26.80% who either have a first degree or HND respectively. About 18.70% have professional certificates and 19.40% are postgraduate holders. From the above, it can be shown that the respondents' demographic data and their knowledge and assessment of Ghana's public procurement procedures are directly related. The replies supplied in respect to the study's subject are believed to be an accurate reflection of the problems being investigated given the respondents' appropriately long service histories, levels of education, and classifications of educational levels.



The study then proceeds to discuss how these demographics are connected to the objectives.

### **4.3 FACTORS MITIGATING THE APPLICATION OF THE PROCUREMENT ACT 2003**

The first objective was to determine the factors that mitigates the application of the Procurement Act, 2003 in Ghana. This was accomplished by using a combined TPB and TOE model and using its measurement constructs to identify the barriers to compliance with the Procurement Act of 2003 faced by public procurement managers in Ghana. The various factors identified from the model were Attitude towards the application of the Act, Subjective norm, Perceived Behavioural control, Relative advantage, Intention to the apply the Act, the extent of how it mitigates the application of the Act in Ghana has been presented in the next sub-sections.

#### **4.3.1 Attitude on Implementing the 2003 Procurement Act**

Public procurement managers' attitudes on the Procurement Act of 2003's application were the first factor to be found. The ideas required for a behaviour influence attitude. It is also possible to think of attitudes as the favourable or unfavourable emotions people have when engaging in a particular behaviour or conduct (Ajzen, 1991). Numerous research has discovered a direct, significant connection between attitude and actual practice, including Celik (2008), George (2002), Chai and Pavlou (2004). Respondents were asked to rate their degree of agreement about whether they believe this element mitigates “the application of the Procurement Act 2003 in Ghana” using a 5point Likert scale. Four items were used to determine this variable. Using a scale of 1 (strongly disagree), 3 (indifferent), and 5 (strongly agree), was applied.

According to this scale, mean scores above 3.00 were taken to indicate that a certain reason is thought to be sufficient by the respondents to affect their attitude regarding the application of the Act in Ghana. Table 4.2 below provides descriptive data that summarize the responses in this regard.

**Table 4.2: Attitude towards the application of the Procurement Act, 2003**

ITEM	DESCRIPTION	N	Mini mum	Maxi mum	Mean	Std. Dev.
ATTA1	Lack of proper analysis of suppliers resulting in lower quality procurement	134	1	5	3.37	.792
ATTA2	Failure to start procurement process on time.	134	1	5	3.22	.789
ATTA3	Delay in opening bids/proposals received.	134	1	5	3.18	.857
ATTA4	Delays in preparing technical specifications, scope of work/terms of reference.	134	1	5	3.13	.799
ATTAVG	OVERALL AVERAGE	134	1.00	5.00	3.224	.688

Variables: "1=Strongly Disagree 2=Disagree 3=Not Sure 4=Agree  
5=Strongly Agree"

#### Source: Field Study, 2023

According to the results in Table 4.2, "Attitude towards the application of the Procurement Act, 2003," the typical responder in Ghana had a positive outlook on the implementation of the law. The typical responder had an unfavourable view of the Procurement Act, 2003 being used in the workplace ( $M=3.224$ ;  $SD=0.688$ ), indicating that a majority of people share this view. With regards to the individual items, the respondents were in agreement that lack of proper analysis of suppliers results in lower quality procurement ( $M=3.37$ ;  $SD=.789$ ), there is a failure to start procurement process on time ( $M=3.22$ ;  $SD=.789$ ), delays in opening bids/proposals received show ( $M=3.18$ ;  $SD=.857$ ), and delays in preparing technical specifications, scope of work and terms of reference ( $M=3.13$ ;  $SD=.799$ ).

#### 4.3.2 Subjective Norm

The second component was the Subjective Norm regarding the implementation of the Procurement Act, 2003 in Ghana. The ideas required for a behaviour influence attitude. The perceived social pressure to engage in (or refrain from) behaviour is known as a subjective norm (Ajzen, 1991). Small and medium-sized institutions are especially susceptible to outside factors that could put pressure on

the adoption of a practice. In a study of the factors affecting the intend to use an expert system, Yang and Maxwell (2011) showed that subjective norm was a major predictor of intent. Nor and Pearson (2008) also found that the subjective norm mitigated the purpose to enforce the law favourably and significantly in Malaysia. Four questions and a 5-point Likert scale were used to calculate this variable; respondents were asked how much they agreed with the assertion that this factor lessens the Procurement Act, 2003's implementation in Ghana. A 5-point scale was utilized, with 1 denoting extreme disagreement, 3 denoting indifference, and 5 denoting strong agreement. Given this scale, mean scores above 3.00 were taken to indicate that a certain aspect is thought to be sufficient by the respondents to lessen the subjective norm for “the application of the Procurement Act, 2003 in Ghana”. Table 4.3 below provides a descriptive statistical summary of the responses in this regard.

**Table 4.3: Subjective Norm towards the application of the Procurement Act, 2003.**

ITEM	DESCRIPTION	N	Mini mum	Maxi mum	Mean	Std. Dev.
NORM1	Deliberate delay in starting or finishing the evaluation process.	134	1	5	2.95	.960
NORM2	Deliberate postponements during the approval process.	134	1	5	2.97	.949
NORM3	Delay in contracts' negotiations.	134	1	5	2.93	.993
NORM4	Procuring entity failure to comply with procurement rules.	134	1	5	3.00	.110
NORMAVG	OVERALL AVERAGE	134	1.00	5.00	2.9608	.78571

Variables: “1=Strongly Disagree      2=Disagree      3=Not Sure      4=Agree  
5=Strongly Agree”



**Source: Field Study, 2023**

According to Table 4.3 findings, the typical respondent in Ghana is not confident that the subjective norm on the application of the Procurement Act, 2003 is the same as it is in other countries. In particular, the average respondent strongly disagreed ( $M=2.96$ ;  $SD=0.786$ ) that Subjective Norm mitigates towards the application of the Procurement Act, 2003 in Ghana. Concerning the specifics, respondents were divided on whether or not deliberate postponements during the approval process ( $M=2.97$ ;  $SD=.949$ ), delay in contracts' negotiations ( $M=2.93$ ;  $SD=.940$ ), and deliberate postponements during the evaluation process ( $M=2.95$ ;  $SD=.960$ ) all weakened the application of the Procurement Act, 2003 in Ghana.

#### **4.3.3 Perceived Behavioural Control**

The Perceived Behavioural Control toward the application of the Procurement Act, 2003 in Ghana was the third element found. According to Montalvo (2006), behavioural control serves as a barometer for determining whether an environment has the necessary opportunities and resources to support innovative activity. Perceived behavioural control has a significant positive influence on an institution's propensity to enforce the law, as stated by Harrison et al. (1997). Perceived behavioural control (both internal and external) is another essential component that substantially determines whether or not a practise is employed, as stated by Venkatesh and Davis (2000).

Respondents were asked to rate their level of agreement with whether they believe this element is reducing the risk in the application of Ghana's 2003 Procurement Act. A 5-point scale was utilized, with 1 denoting extreme disagreement, 3 denoting indifference, and 5 denoting strong agreement. Given this scale, mean scores above 3.00 were taken to indicate that a particular aspect is thought to be important enough by respondents to have an impact on the perceived behavioural control that helps Ghana apply the Procurement Act, 2003. The responses to this regard have been summarized into descriptive statistics and presented in Table 4.4 below.



**Table 4.4: Perceived Behavioural control towards the application of the Procurement Act, 2003**

ITEM	DESCRIPTION	N	Mini mum	Maxi mum	Mean	Std. Dev.
PBC1	Inadequate numbers of capable officials to effectively supervise the purchasing department	134	1	5	3.10	.952
PBC2	Lack of consistency in the distribution of funds for procurement activities	134	1	5	3.17	.872
PBC3	There is a lack of serious consequences for public officials who break the rules of the Act.	134	1	5	3.25	.931
PBC4	There has to be less complexity in the procurement legislation.	134	1	5	3.19	.954
PBCAVG	OVERALL AVERAGE	134	1.00	5.00	3.1775	.6355

Variables: “1=Strongly Disagree 2=Disagree 3=Not Sure 4=Agree 5=Strongly Agree”

**Source: Field Study, 2023**

According to Table 4.4, the average respondent was not confident that the Procurement Act, 2003 is being applied with an average level of behavioural control in Ghana. Specifically, and to a substantial extent, the average respondent agreed that Perceived Behavioural Control reduces the impact of the Procurement Act, 2003 in Ghana (M=2.96; SD=0.786). However, when looking at the specifics, respondents were in agreement that: inadequate and erratic releases of funding for procurement activities mitigates the application of the Procurement Act, 2003 (M=3.17; SD=.872); lack of appropriate punishment to public officials who breach provisions of the Act (M=3.10; SD=.952); and absence of sufficient qualified officers in the right numbers to manage the procurement unit mitigates the application of the Act. (M=3.11; SD=.947).

#### **4.3.4 Intention to apply the Procurement Act, 2003**

This section presents an actual assessment on the degree of readiness and willingness (intention to apply the Act) of public procurement managers to apply the Act, 2003. The previous results and discussions have focused on factors likely to influence procurement managers' intentions to apply the law. Four items were used to determine this variable and using a 5-Point Likert scale, respondents

were asked to determine the level of agreement of whether they identify this factor as mitigating towards the application of the Procurement Act, 2003 in Ghana. There was a 5-point scale utilised, with 1 representing strongly disagreeing, 3 representing neutral, and 5 representing strongly agreeing. Averages above 3.00 on this scale indicated that respondents thought the factor was important enough to reduce the likelihood that they would implement the Act, 2003 in the workplace. The responses to this regard have been summarized into descriptive statistics and presented in Table 4.5 below.

**Table 4.5: Intention to apply the Procurement Act, 2003**

ITEM	DESCRIPTION	N	Mini mum	Maxi mum	Mean	Std. Dev.
INT1	VRA does not act in accordance with public procurement Act	134	1	5	3.22	.864
INT2	Procurement unit does not use appropriate criteria and acquisition strategies	134	1	5	3.53	.722
INT3	Procurement Unit does not utilize PPA Standard Tender Documents in procurement	134	2	5	3.63	.689
INT4	Procurement Unit does not publish their bid announcements and contract wins on the PPA website and newsletter.	134	2	5	3.63	.657
<b>INTVAVG</b>	<b>OVERALL AVERAGE</b>	<b>134</b>	<b>1.75</b>	<b>5.00</b>	<b>3.5037</b>	<b>.5475</b>

*Variables: “1=Strongly Disagree 2=Disagree 3=Not Sure 4=Agree 5=Strongly Agree”*

**Source: Field Study, 2023**

Table 4.5's findings on respondents' intentions to implement Ghana's Procurement Act of 2003 show that most people feel that its implementation will have a significant impact on the country. Specifically, and to a large extent, the average respondent agree that they have a positive Intention towards the application of the Procurement Act, 2003 at the work place (M=3.50; SD=0.5475).

With regards to the individual items, VRA does not act in accordance with public procurement Act (M=3.22; SD=.864), procurement unit does not use appropriate criteria and acquisition strategies (M=3.53; SD=.722), procurement unit does not utilize PPA Standard Tender Documents in

procurement (M=3.63; SD=.689), and Procurement Unit does not publish their bid announcements and contract wins on the PPA website and newsletter (M=3.63; SD=.689).

#### **4.4 STRATEGIES TO ENHANCE THE APPLICATION OF THE PROCUREMENT ACT, 2003.**

The objective is to appraise strategies to enhance procurement practices at VRA. Relative Advantage was identified as the main strategy that must be applied to enhance procurement practices at VRA. Benefiting from a larger proportion of the market, lower effective costs of doing business, and the necessity of performing immediate business in procurement are all examples of relative advantages noted by Kendall et al. (2001). Jeon et al. (2006) found that using relative advantage to improve Ghana's procurement procedures was a fruitful method. According to research by Low et al. (2011), organisations' preconceived notions of how beneficial a new method will be to them greatly influence their willingness to adopt it. Moon and Kim (2001) also provided empirical support for the relevance of relative advantage to outlook.

Four items were used to determine this variable and using a 5-Point Likert scale, respondents were asked to determine the level of agreement of whether they identify this factor enhancing procurement practices by public procurement managers Ghana. There was a 5-point scale utilised, with 1 representing strongly disagreeing, 3 representing neutral, and 5 representing strongly agreeing. On this scale, a mean score above 3.00 indicates that respondents believe this aspect has a significant impact on how they feel about doing business in compliance with the Procurement Act, 2003. The responses in this regard have been summarized into descriptive statistics and presented in Table 4.5 below.

**Table 4.6: Relative advantage as a strategy in procurement practices**

ITEM	DESCRIPTION	N	Mini mum	Maxi mum	Mean	Std. Dev.
------	-------------	---	-------------	-------------	------	--------------



RADV1	The PPA should broaden professionals' knowledge of the pernicious effects of bribery and corruption and encourage their increased awareness and application of procurement laws and controls.	134	1	5	3.42	.816
RADV2	The amount of bureaucracy in the system may be reduced if Act 663 were revised to minimise the number of processes involved in the procurement process.	134	1	5	3.22	.772
RADV3	A centralised procurement department should be established in all organisations to handle and coordinate all purchasing.	134	1	5	3.33	.882
RADV4	The practises and processes for dealing with complaints should be thoroughly taught to procurement professionals and the heads of entities.	134	1	5	3.11	.947
RADVAVG	OVERALL AVERAGE	134	1.75	5.00	3.2705	.6525

Variables: 1=Strongly Disagree 2=Disagree 3=Not Sure 4=Agree 5=Strongly Agree

**Source: Field Study, 2023**

Table 4.6's findings on Relative advantage's effect on enforcing Ghana's Procurement Act of 2003 show that, on average, respondents think the approach would improve procurement procedures there. With regards to the Procurement Act, 2003 in Ghana, the average respondent strongly agrees that they have a favourable Relative advantage ( $M=3.27$ ;  $SD=0.653$ ). Respondents generally agreed that PPA should promote greater knowledge among professionals of the negative effects of bribery and corruption and enhance the awareness and application of procurement laws and controls. Procurement practitioners and entity heads should be adequately trained in complaint handling practises and procedures ( $M=3.33$ ;  $SD=.882$ ), the Public Procurement Act 663 should be reviewed to limit the number of steps in the procurement process to reduce the level of bureaucracy in the system ( $M=3.22$ ;  $SD=.772$ ), and all entities should set up a single procurement unit to undertake and co-ordinate all procurement activities within the entity ( $M=3.32$ ;  $SD=.772$ ).



#### **4.5 SUMMARY OF FINDINGS ON FACTORS MITIGATING THE APPLICATION OF THE PROCUREMENT ACT, 2003 BY PUBLIC PROCUREMENT MANAGERS IN GHANA.**

The above results reveal (section 4.3) indicate that TPB tend to mitigate public managers' application of the Procurement Act, 2003 in Ghana, to a large extent, among respondents in from VRA, (1) procurement officials significantly have a positive attitude towards the application of the Act, 2003 (2) the Act, 2003 provides relatively added advantage to public institutions for its application, (3) intentions towards the application of the Act, 2003 are shaped by the official's position and experience. (4) Perceived behavioural control has a negative effect on the Act's application. These results reinforce existing literature (see for example, Sait et al., 2004; Fishbein and Ajzen, 2005 and Moon and Kim, 2001, Venkatesh and Davis 2000). Also, in terms of intention to apply the Act, the section of procurement managers who were considered for the study have negative application attitude. Regardless of the foregoing results, the following sections of the chapter will concentrate on statistically demonstrating the 'causal' links among these constructs and verifying the theory underpinning their interactions.

#### **4.6 MODEL EVALUATION AND THEORY TESTING**

Research methodology, including the testing of important hypotheses, is discussed here. Analysis of measurement models, analysis of structural models, and evaluation of theories were the focal points of the presentations.

##### **4.6.1 Measurement Model Analysis**

The methods by which the constructs were quantified are discussed below. It basically examines the items' reliability, validity, common procedure bias, and how they were cleaned up before the structural model was estimated. This was accomplished by the following statistical procedures, and the resulting data is as follows:

#### 4.6.1.1 Scale Reliability Test

SPSS and Cronbach's alpha were used to assess the reliability of the instruments used to measure each component. The collected data is shown in Table 4.6. Each scale employed exhibited a high degree of internal consistency across the measures utilised, with the lowest alpha value for the five constructs being .729 (for the intention to apply scale; Field, 2019). This is above the required criterion of .70 (Bagozzi and Yi, 2021).

**Table 4.7: Scale Reliability**

Constructs	Number of items	Cronbach alpha
1. Attitude towards apply	4	.872
2. Subjective Norm	4	.788
3. Perceived Behavioural Control	4	.889
4. Relative Advantage	4	.758
5. Intention to apply	4	.729

**Source: Field study, 2023**

#### 4.6.1.2 Exploratory Factor Analysis (EFA)

Exploratory factor analysis was used because, despite the fact that each item in the study was intended to measure a particular construct, there was still a chance that it might cross-load on other factors or that it might not be adequately explained by a single factor. This study was analysed with SPSS. Principal Factor Axis was the method of factor extraction used. Direct Oblimin with Kaiser Normalization was the rotation method. Additionally, the system was configured to suppress loadings below .40 and to only extract factors with Eigen values greater than 1.00. Using the Kaiser-Meyer-Olkin (KMO) metric, the sample suitability for EFA was evaluated. Bartlett's Test of Sphericity achieved statistical significance at the 1% level, supporting the factorability of the correlation matrix (Pallant, 2007), and the obtained KMO measure (.824) was greater than the suggested value of .60, indicating a sufficient sample size for the analysis (Field, 2019).

Overall, the five-factor explanation explained 55.53% of the variance, with components 1, 2, 3, 4 and 5 accounting for, respectively, 28.9%, 9.6%, 7%, 6.3%, and 3.8% of the variance. All 20 items that were the topic of the EFA were kept and subjected to confirmatory factor analysis (CFA) for additional study.

#### 4.6.1.3 Confirmatory Factor Analysis (CFA)

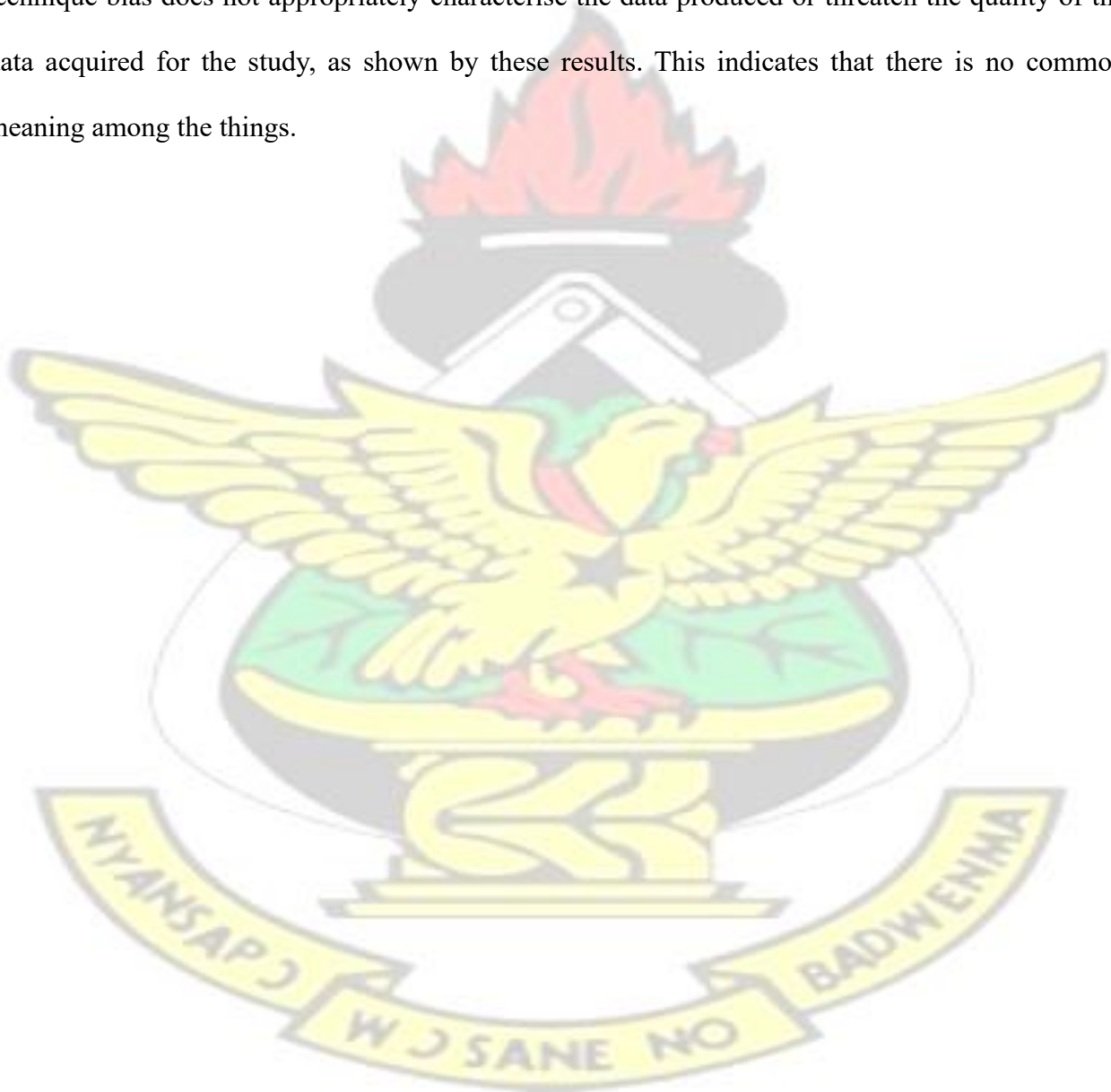
After the EFA, the items that were kept were employed in a confirmatory factor analysis (CFA), which helped to further hone the items and support the scales' validity. Linear structural relations were used for this analysis (Lisrel 8.8). Multiple measures purifications were carried out using the maximum likelihood estimate method. “Given the CFA fit indices, the final model produced a satisfactory fit to the data; Chi-square (degree of freedom) [ $X^2$  (DF)] = 100.87 (67); RMSEA = .062; non-normed fit index (NNFI) = .957; comparative fit index (CFI) = .969; standardized root mean square residual (SRMR) = .049” (Bagozzi & Yi, 2012; Hair *et al.*, 2014).

[“NOTE:  $X^2$ →Chi-square,  $df$ →degree of freedom, RMSEA→ root mean square error of approximation, NNFI→ nonnormed fit index, CFI→ comparative fit index, SRMR→ standardized root means square residual”].

See Table 4.7 for a rundown of the variables, loadings, errors, t-values, and R2s that were retained for use in estimating the structural model. Each of the factor loadings was significant at the 1% level. Consistent with the findings of Boso et al. (2013), the positive and large loadings retained measures' convergent validity. The correlations among the constructs, R-squared values, construct reliability, and average variance extracted are shown in table 4.8. Both the CRs and AVEs were satisfactory. All AVEs were also larger than the greatest R2 between the constructs, as stated by Fornell and Larcker (1981) and cited by Boso et al. (2013), demonstrating strong levels of discriminant validity.

#### 4.6.1.4 Assessment of Common Method Bias

Finally, common method bias was evaluated in this study to make sure that the information gathered was of high quality and suitable for model estimation. In Lisrel, a one-factor model was created by letting all retained elements load on a single latent variable. The following conclusions came from this analysis: The following common method bias fit indices were reported by Bagozzi and Yi (2012):  $\chi^2 (DF) = 735.78 (77)$ ;  $RMSEA = .254$ ;  $NNFI = .580$ ;  $CFI = .644$ ;  $SRMR = .177$ . Common technique bias does not appropriately characterise the data produced or threaten the quality of the data acquired for the study, as shown by these results. This indicates that there is no common meaning among the things.





**Table 4.8: Inter-item (retained ones after CFA) correlations and descriptive statistics.**

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PBC1														
2. PBC2	<b>±.703**</b>													
3. PBC3	<b>.597**</b>	<b>.668**</b>												
4. PBC4	<b>.657**</b>	<b>.683**</b>	<b>.706**</b>											
5. RADV2	.173*	.197*	.185*	.193*										
6. RADV3	.265**	.239**	.246**	.255**	<b>.732**</b>									
7. NORM2	.145*	.215**	.187*	.189*	.160*	.246**								
8. NORM4	.192*	.241**	.174*	.178*	.209**	.248**	<b>.556**</b>							
9. ATTA2	.190*	.186*	.170*	.214**	.312**	.399**	.250**	.309**						
10. ATTA3	.364**	.250**	.253**	.325**	.326**	.436**	.219**	.245**	<b>.632**</b>					
11. ATTA4	.309**	.271**	.239**	.283**	.449**	.493**	.263**	.271**	<b>.601**</b>	<b>.670**</b>				
12. INT1	.209**	.257**	.219**	.202**	.144*	.200*	0.106	.175*	.228**	.213**	0.128			
13. INT2	.244**	.316**	.254**	.238**	.175*	.158*	0.121	.216**	.340**	.256**	.192*	<b>.499**</b>		
14. INT3	0.100	.223**	.154*	0.132	0.015	0.037	.152*	0.143	.159*	0.112	0.132	<b>.540**</b>	<b>.576**</b>	-
Min	1	1	1	1	2	2	1	1	1	1	1	2	1	2
Max	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Mean	3.1	3.17	3.25	3.19	3.26	3.33	2.97	3	3.22	3.18	3.13	3.47	3.63	3.69
Standard deviation	<b>0.952</b>	<b>0.872</b>	<b>0.931</b>	<b>0.954</b>	<b>0.745</b>	<b>0.848</b>	<b>0.949</b>	<b>1.11</b>	<b>0.789</b>	<b>0.857</b>	<b>0.799</b>	<b>0.811</b>	<b>0.753</b>	<b>0.665</b>

**Note:**

1. PBC=perceived behavioural control; RADV=relative advantage; NORM=subjective norm; ATTA=Attitude towards application; INT=intention to apply

2.  $\pm$  = bold coefficients representing inter-correlations between items of same constructs
3. \*\* Correlation is significant at the 0.01 level (1-tailed).
4. \* Correlation is significant at the 0.05 level (1-tailed).

Source: Field study, 2023

88

Table 4.9: CFA results

Construct/Measures	Standardized loadings	Errors	T values	R <sup>2</sup>
<i>Perceived behavioural control [CR=.918; AVE=.737; Cronbach Alpha =.889(4<sup>±</sup>)]</i> PBC1:				
Inadequate numbers of capable officials to effectively supervise the purchasing department	.832	.308	Fixed	.692
PBC2: Unreliable and insufficient funds for necessary purchase	.896	.197	12.82	.803
	.837	.299	11.59	.701
PBC3: The lack of serious consequences for public officials who break the rules and the Act.				
PBC4: The rules governing procurement should be easier to grasp.	.868	.246	12.25	.754
<i>Relative advantage [CR=.891; AVE=.804; Cronbach Alpha =.758(4<sup>±</sup>)]</i>				
RADV2: The amount of bureaucracy in the system may be reduced if Act 663 were revised to minimise the number of processes involved in the procurement process.	.811	.342	Fixed	.658
RADV4: There has to be proper training for procurement professionals and organisational executives on how to handle complaints.	.975	.050	9.18	.950
<i>Subjective norm [CR=.754; AVE=.606; Cronbach Alpha =.788(4<sup>±</sup>)]</i>				
NORM2: Deliberate postponements during the approval process	.728	.470	Fixed	.530

NORM4: Procuring entity failure to comply with procurement rules. .826 .318 4.68 .682

*Attitude towards Application [CR=.875; AVE=.700; Cronbach Alpha =.872(4<sup>±</sup>)] ATTA2:*

Failure to start procurement process on time. .789 .378 Fixed .622

ATTA3: Delay in opening bids/proposals received .860 .261 10.45 .739

ATTA4: Delays in preparing technical specifications, scope of work/terms of reference. .859 .262 10.45 .738

*Intention to Apply [CR=.841; AVE=.639; Cronbach Alpha =.831(4<sup>±</sup>)] INT1:*

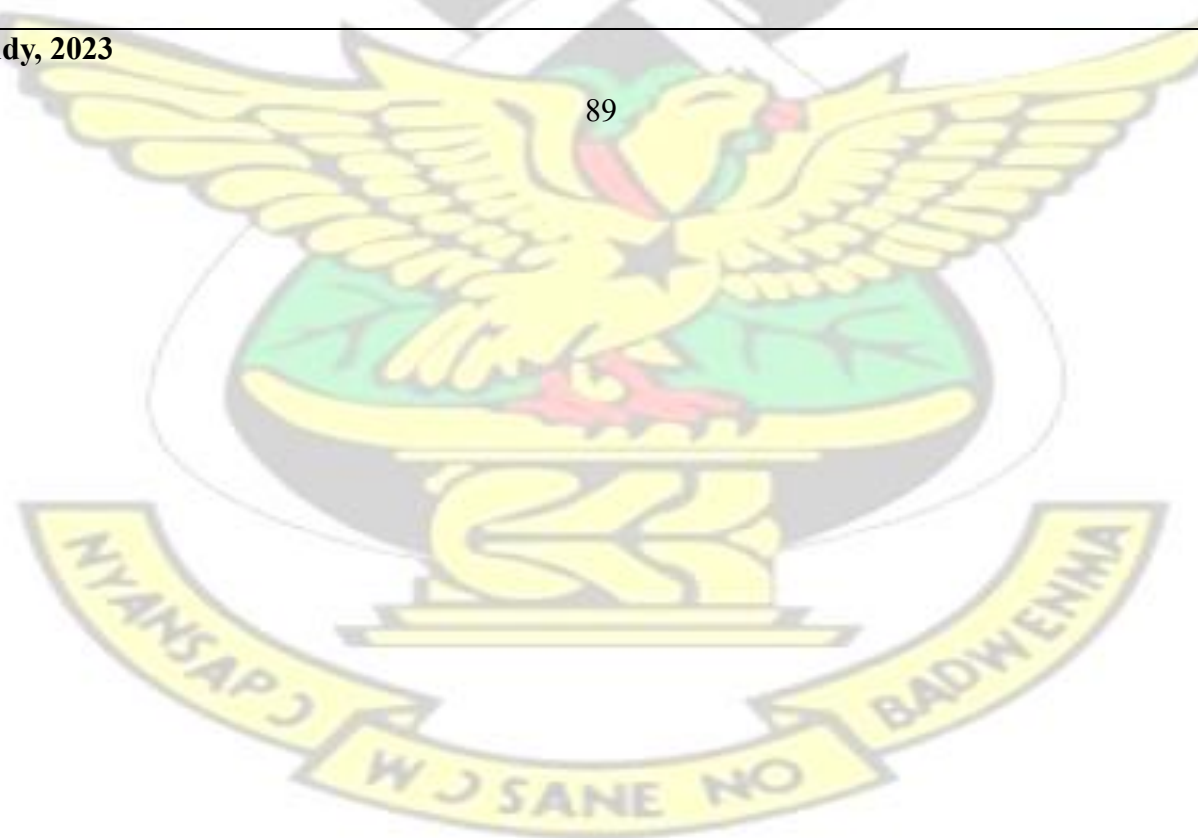
When it comes to public contracts, VRA is not following the law. .735 .460 Fixed .540

INT2: Suitable thresholds in procurement are not being applied by the procurement unit's purchase techniques. .829 .313 8.51 .687

INT3: Procurement Unit does not utilize PPA Standard Tender Documents in procurement .831 .309 8.51 .691

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**Source: Field Study, 2023**



Note:

1. CR=composite reliability; AVE=average variance extracted
2.  $\pm$  = Number of items used for computing Cronbach Alpha
3. T-value significant%

**Table 4.10: Inter-construct correlations and descriptive statistics**

Variables	1	2	3	4	5	6	7
1. Work experience (years)							
2. Unit size (no. of colleagues)	.218**						
3. Perceived behavioural control	.009	.095					
4. Relative advantage	-.058	-.063	.274**				
5. Subjective norm	-.124	.061	.248**	.266**			
6. Attitude towards application	-.260**	.039	.340**	.500**	.338**		
7. Intention to apply	.003	.071	.297**	.164*	.210**	.273**	-
<b>Mean</b>			<b>3.18</b>	<b>3.29</b>	<b>2.99</b>	<b>3.17</b>	<b>3.59</b>
<b>Standard deviation</b>			<b>0.804</b>	<b>0.741</b>	<b>0.909</b>	<b>0.709</b>	<b>0.618</b>

Note:

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

**Source: Field study, 2023**

#### **4.6.1.5 Structural Model Analysis and Results**

Using structural equation modelling (SEM), the proposed theoretical model was estimated. “The subsequent steps were taken: First off, a MIMIC (multiple-indicator, multiple-cause) model was employed in the model estimations for frugal reasons (Bagozzi and Yi, 2012)”. All latent exogenous variables, namely Subjective norm (NORM), relative advantage (RADV), and perceived behavioural control (PBC), were handled as single indicator variables in this process. The retained items (after CFA) for each of these constructs were



averaged to get the composite variables. Complete data were used for the latent endogenous variables attitude toward application (ATTA) and intention to apply (INTENT). Also, the demographic variables: Unit size and work experience; were treated as dummy variables. The study's suggested model was compared to 7 alternative models using established methodologies (e.g., Lu et al., 2010). To begin estimating, a baseline model was created with the two demographic variables serving as predictors. Because the existing literature is vague about how these factors relate to the desire to apply a certain legislation or practise, it became necessary to implement controls over them. Since 2004 (Bhatnagar and Ghose) and 2008 (Padachi et al.) and 2013 (Mutengenza and Ngoma) and 2014 (Marumbwa), we now know that.

Subsequent models were nested models that were compared to the original model by looking for differences in goodness of fit indices, degrees of freedom, and Chi-square values. A large improvement in Chi-square revealed that such path(s) was/were relevant and improve(s) fit to data better than the baseline model, since the models were constructed by constraining each consecutive theorised path (Lu et al., 2010).

Model 7 was used as a final resort in a post hoc examination to confirm the stability of the preceding models. The routes from the demographic factors to the primary outcome variable have to be constrained to zero. This was done to test the hypothesis that removing these factors will result in a more accurate model fit to the data.

Table 4.7 displays the estimated values of Chi-square and degrees of freedom for each model, as well as the changes in these values and other goodness-of-fit indicators. Here are some of the key features of each model:

“Baseline model (BM) = all paths except Firm size and Firm experience were constrained to zero.

Model 1 = only BM plus path from perceived behavioural control to intention to adopt freed

Model 2 = only Model 1 plus paths from Relative Advantage and subjective norm to intention to adopt freely estimated.

Model 3 = BM plus path from perceived behavioural control to intention to adopt constrained to zero with paths from perceived behavioural control and subjective norm to attitude towards use freely estimated.

Model 4 = BM plus path from perceived behavioural control to intention to adopt constrained to zero with paths from perceived behavioural control and subjective norm to attitude towards use control and path from perceived behavioural control to intention to adopt freely estimated

Model 5 = BM plus path from subjective norm to intention to use constrained to zero with paths from perceived behavioural control and subjective norm to attitude towards use control and path from perceived behavioural control to intention to use freely estimated

Model 6 = all paths freely estimated

Model 7 = Model 6 minus BM. Model 7 was run in a post hoc analysis in order to further establish the robustness of model 1 through to 6”.

Figure 4.1 shows that when the baseline model was run, all subsequent models resulted in a better model fit to the data. The study proposes Model 6, although it is observed that both Model 4 and Model 7 produced superior outcomes (in terms of more favourable goodness of fit indices). This is due to the fact that the addition of certain unimportant routes from the proposed model causes the model to match the data poorly. For the final model (model 6), the standardised beta values and t-values are shown in figure 4.1.

**Figure 4.1: Structural model estimates (standardized parameters) Source: Field study (2015)**

$\chi^2 (DF) = 148.03 (91)$ ;  $RMSEA = .069$ ;  $NNFI = .934$ ;  $CFI = .951$ ;  $SRMR = .070$

**Note:** 1. T-values are in the parenthesis.

2. \* Significant at 5% (one-tailed test)

3. \*\* Significant at 1% (one-tailed test)".

4. Paths evaluated at 5% significance level =1.645  
(one-tailed test)

The model explains 46.5%, 12.0%, and 13.7% variations in Perceived Behavioural Control, subjective norm, and intention to adopt respectively.

#### 4.6.1.6 Evaluation of theories and findings

Theory one (H1) argued that “there is a positive effect between perceived control and intention towards the application of the Act, 2003. The results ( $\beta=.23$ ;  $t=2.23$ ), provided in figure 4.1 provide support for this theory. The importance of the study is strongly consistent with Venkatesh and Davis (2000), study which found perceived behavioural control (both internal and external) to be a very strong determinant of intention to apply an Act. The Perceived behavioural control factor is very important in Ghana, where the availability of experts and the required knowledge are critical forerunner of the application of any law.

Theory two stated that “Perceived behavioural control has a positive effect on attitude towards use”. Given the results in figure 4.1 ( $\beta=.19$ ;  $t = 2.28$ ). The most plausible explanation of PBC’s significance on attitude in this study underscores the importance of its constituents.

The third theory advanced that” Relative advantage has a significant positive influence on attitude towards use the application of Acts. The study provides



results ( $\beta=.49$ ;  $t = 5.06$ ). This study confirms Jeon *et al.* (2006), study in South Korea that identified relative advantage as an important factor mitigating the application of procurement laws.

Further, theory four (H4) posited that “Relative advantage has a significant positive influence on subjective norm, given the following results: ( $\beta=.35$ ;  $t = 3.04$ ). As a result of this discovery, we may infer that individuals are more receptive to the value of procurement processes in contexts where subjective norms are more prevalent, even though, if given the chance, they would not have recognised the significance of such procedures otherwise. This result suggests that an individual's sense of the relative benefits of procurement activities is strongly influenced by their own subjective standard. This finding goes to confirm Pavlou and Chai (2002), in both the USA and Greece.

The fifth theory conceived that “Subjective norm significantly has a positive influence on attitude towards the application of an Act. The study’s results:

( $\beta=.21$ ;  $t = 2.20$ ) statistically support this hypothesis. Empirically supported by studies such as Kim *et al.* (2009), this study in Korea South identified subjective norm as a precursor of attitude and Act application intention in Ghana. This finding typically indicates that entities in Ghana tend to rely strongly on internal antecedent in Act-related processes decision making.

A surprising revelation was the insignificant relationship between the sixth (6) hypothesis, which outlined that” Subjective norm is expected to positively mitigating intention to apply the procurement Act. The study’s results: ( $\beta=.15$ ;  $t = 1.36$ ), which confirms Tan and Teo (2000), findings that Subjective norm was insignificant in predicting intention to apply laws in Singapore.



Meanwhile it sharply contradicts with other findings, such as (Pavlou and Chai 2002, both in the USA and Greece, and Pearson 2008 in Malaysia), hence in rejecting the study's proposition (H6), a conclusion is reached that Subjective norm in entities applying the procurement Act is not directly related to intention to apply the Act.

The seventh theory, advanced "Attitude towards adoption is positively related to intention to apply the Act". The study's results: ( $\beta=.19$ ;  $t = 1.64$ ), challenges the findings of Pavlou and Chai (2002), who found that attitude was a strong predictor of intention in procurement procedures in both Greece and the United States. Second Turkish research, this one by Celik (2008), disproved the hypothesis that attitude predicts e-procurement intent. Therefore, even if ample evidence of the Act's advantages were shown to entities in Ghana, the insignificance of the path estimate of attitude on behavioural intention demonstrates that they are unlikely to apply the Act. Therefore, it's important to get the word out about how useful the Procurement-by-procurement entities may be. This will spark a short-term mindset, which will eventually lead to widespread implementation.

**Table 4.11: Legal Procurement Documents**

Statement	Disagree		Agree		Neutral	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Application of the Public Procurement Act, 2003	20	14.93%	114	85.07%	-	-

Application of the Public Procurement Board Manual	110	74.62%	24	17.91%	-	-
Application of Standard Tender Documents	126	94.02%	8	5.97%	-	-
Application of Public Procurement Regulations	60	44.78%	50	37.31%	24	17.91%
Application of Procurement Guidelines	70	52.24%	50	37.31%	14	10.45%

**Source: Field Study, 2023**

According to table 4.11, a total of 114 respondents believed and agreed that VRA followed the Public Procurement Act. In contrast, one in every 20 respondents (14.93%) did not agree with the statement. As a result, it appears that the majority of respondents believe that VRA abides by the law. About 74.62% of respondents were against the statement, "Application of the Public Procurement Board Manual," while 17.91% were in favour. Twenty-four times, or 17.91 percent, of respondents gave no answer when asked whether any legal procurement document was utilised in accordance with Public Procurement Regulations.

On the application of procurement guidelines, 70 of the respondents representing 52.24% disagreed with the statement, 50 representing 37.31% agreed with the statement while 14 representing 10.45% of the respondents stayed neutral.

**The following procurement principles are currently being applied in Ghana.**

**Table 4.12: Procurement Principles Applied in Ghana**

Procurement Principles	Disagree (%)		Agree (%)		Neutral (%)	
	Freq.	Percent	Freq.	Percent	Freq.	Percent

Effectiveness and Efficiency in procurement processes	127	94.77%	7	5.22%	0	0
Professionalism in procurement activities	126	94.02%	8	5.97%	0	0
Tendering is Competitive	110	74.62%	24	17.91%	0	0
Accountability in procurement activities	104	77.61%	30	22.38%	0	0
Value for Money for procuring entity	91	67.91%	43	32.09%	0	0
Fairness in the procurement processes	114	85.07%	20	14.93%	0	0
Transparency in procurement procedures	105	78.35%	29	21.64%	0	0
Ethical approach to tendering	110	74.62%	24	17.91%	0	0

**Source: Field Study, 2023**

Table 4.11's statement items reveal profound discord and unhappiness on all fronts. Only 5.22% of people polled agreed that the public procurement process had been more effective and efficient. However, 127 people, or 94.77% of those who responded, strongly disagreed. There were 126 responses, or 94.02%, that were in opposition to the premise that procurement professionals are always professional. The public procurement system is plagued by weak competitive tendering, as seen by the 110-percent disapproval rate and the 24-percent neutral rate.

High disagreement frequencies of 91 and 43 (or 67.91 and 32.09 percent, respectively) were revealed during the inquiry, suggesting a widespread failure to prioritise the attainment of value for money. To move from a reactive to a proactive mode of operation and achieve a high degree of execution in departments, a regulatory structure for procurement should be put in place to verify buying proficiency and viability. Procurement procedure fairness: This section was meant to evaluate if State departments were ethical and if they were effectively encouraging more significant supplier investment in the tendering process by being transparent and working with each individual party to create a level playing field.

Responsibility in purchasing situations. Experts of the Act made a number of assertions, including that taking responsibility was one of the maximum actions that could be performed. Table 4.10 shows that 104 people, or 75.61%, agreed with the statement that procurement authorities would not be held accountable for their actions, while 30 people, or 22.38%, did not. However, 105 instances of worker discontent were reported, or 78.35% of the time, confirming a widespread belief that Ghana's procurement systems lack openness.



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## CHAPTER 5

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

The study's key findings are highlighted in this chapter. The conclusions are outlined with a clear emphasis on the specific objectives. The analysis of the literature and the results of the present study formed the basis for the conclusion. Finally, suggestions have been made to improve the Volta River Authority as a whole's degree of application of the Public Procurement Act's managerial procedures, techniques, execution, and approaches.

#### 5.1 Summary of Findings

The study showed that, despite several administrative obstacles and other legal requirements, VRA, as a public entity, had to uphold the Act 663's provisions to a significant extent.

### **5.1.1 The Procurement Processes and Procedures as well as Principles and Methods Observed in VRA**

To support and strengthen the implementation and oversight of the procurement capacities, “the Public Procurement Act 2003 (Act 663) established the foundation of the procurement structures. Procurement Unit, Entity Tender Committee (ETC), Evaluation Panel, and Head of Entity were the components of these structures”. The procurement process required the structures to complete a variety of tasks. The analysis established that the primary VRA controls, specifically Procurement Units and similar institutions, existed.

With the implementation of the procurement Act 2003, these procurement principles are being applied in Ghana. The survey found that the level of professionalism in procurement activities was not encouraging, with a disagreement rate of more than 94. Once more, the results for disagreement about procurement practices' transparency were dismal, with 78.35 percent of respondents disagreeing with their existence while 94.77 percent disagreed with the processes' lack of effectiveness and efficiency. The survey also showed that there was no commitment to attaining value for money in every area of procurement operations, while fairness, competition, and accountability also failed in the same way.

Also, the legal procurement documents that were tested, public procurement regulations, procurement guidelines and the public procurement Act, 2033 were appreciated by the practioners because of their highest percentage scored as compared to the rest of the documents.

### **5.1.2 The various Challenges faced by the Procurement Managers at VRA**

Several areas in the Service's procurement process needed to be improved, according to the Performance Assessment System achievement levels for the various classifications. The two biggest obstacles to progress were the lack of legal framework knowledge brought on by the Procurement Act and Regulation's inadequate dissemination, as well as the laws governing procurement. The least challenging factors were public procurement, insufficient facilitation, and planning officers' devotion. Once more, when putting the Act into action, supplementary issues were given careful consideration. This included ineffectiveness, inefficiency, and a disregard for value for money on the part of procuring entities, as well as a lack of professionalism in the public procurement system and a lack of justice in procurement processes and procedures. It was discovered that all of the tests were given scores of over 50%. Consequently, resolving them requires priority.

### **5.1.3 The Strategies put in Place to Enhance Procurement Practices in VRA**

When asked about potential solutions, most respondents agreed that increased education on procurement laws and procedures and their implementation would go a long way towards reducing the prevalence of bribery and corruption in the industry. Most respondents said that Act 663 should be revised to cut down on the red tape involved in the procurement process by streamlining the procedures involved.

## **5.2 Conclusion**

The primary purpose of this research was to analyse the barriers to enforcing the Public Procurement Act of 2003 within the Volta River Authority (VRA). There is an understanding among government organisations of the procedural effects of New Public Management (NPM) rationalities. Lack of prepared and qualified acquisition authorities who can supervise and direct such acquisitions in a professional, advantageous, and cost-effective manner is a major problem in many public procurement procedures. This problem is compounded by a lack of regard, a lack of direction, poor co-appointment, a lack of openness and transparency, varying degrees of bribery, and a lack of prepared and qualified acquisition authorities.

Open consumption is seen as modest, inadequate, costly, and usually fraudulent because of contract delays, price increases, the possibility of granting controlling agreements, and a lack of acceptable competition. According to the results of the study, a well-functioning public procurement system is crucial for enhancing the distribution of decentralised goods. In order to achieve the objectives of an effective and efficient procurement system, the study found that procurement techniques, procedures, and principles play a crucial role in successful service delivery.

The study uncovered some of the difficulties faced by public service managers and the impact they have on the public sector, which may be used to better manage and decrease problems in this area. Therefore, individuals with a stake in the public sector must do everything is necessary, including providing complete information to all stakeholders, to ensure that these challenges are managed as little as possible. This would be a huge help to the Ghanaian government in maintaining its responsiveness, knowledge, and



implementation of the Public Procurement Act.

### **5.3 Recommendation**

#### **5.3.1 Theoretical Recommendation**

The Public Procurement Authority, which is responsible for enforcing the Public Procurement Act, needs to be effective and efficient in handling the difficulties that the Act's participants encounter.

First and foremost, the Authority should exert all of its influence to encourage the reform of Act 663 in order to solve its numerous flaws and hazards. Second, the Act needs to specify the employment status of the professionals and specialists in procurement who will be chosen by all the government agencies. Here, hiring employees with background, experience, knowledge, and qualifications in procurement capabilities will aid in minimizing and eliminating the numerous issues mentioned in the study. Again, e-procurement should be implemented and enforced across all industries to guarantee the timeliness of procurement procedures, which will also lower overall procurement costs. The Authority should also demand honesty and responsibility across all fields, especially among the important and vital participants in the process. This would keep all stakeholders active and aware of their operations in accordance with the Act, hence preventing corruption.

#### **5.3.2 Practical Recommendation**

Training, and other workshops or seminars should be held or offered periodically to keep all parties involved in the procurement procedures up to date and to strengthen and expand their capacities. Additionally, recognized

agencies or divisions dedicated to procurement should be established in each public sector, free from any political or outside interference. Public Procurement Authority should also foster a sense of commitment and trust among all participants in the procurement process. It was evident that some Act participants, particularly those from the public sector, had poor attitudes and carelessly caused significant losses; therefore, it is recommended that all participants give the entire procurement process their full attention to ensure their long-term survival. The Authority must be run by the government as a legitimate corporate body devoid of political interference. Appointing and removing board members should be subject to the same competences, experiences, and other requirements as any other limited liability firm, with no political interference. This would enable the recruitment of knowledgeable, skilled, and other individuals who might not be swayed politically in their actions. The study will also be used as a source of reference for academics, professionals, and students pursuing additional studies in the same sector.

### **5.3.3 Recommendation for Future Studies**

It is a very diverse process so as the domain cannot be covered in only one research. Future research on Public Procurement Act implementations can be extended to include dimensions such as geographical proximity, cross functional collaboration, system integration and dedicated of e-procurement management that has been overlooked in this report. Future studies are suggested on the following aspects: the role of particular factors in developing

the PP Act to cover E-procurement systems and procedures, and the consequences of E-procurement for firm and procurement performance.

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Zainal, Z. (2007). Case study as a research method. *Jurnal Kemanusiaan*, 5( **APPENDIX**  
**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**INSTITUTE OF DISTANCE LEARNING QUESTIONNAIRE**

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I am final year postgraduate student pursuing MSC Procurement and Supply Chain Management from the above institution. This study largely seeks to investigate into the factors mitigating the application of the Public Procurement Act 2003, Act 663 by public service managers in Ghana. Thank you for your readiness to participate in this study.

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#### **PART A: DEMOGRAPHIC CHARACTERISTICS**

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##### **1. Gender**

Male [ ☐ ]

Female [ ☐ ]

##### **2. Job position**

Management (Tender committee) [ ☐ ]

Management staff [ ☐ ]

Procurement staff [ ☐ ]

Supplier/contractor [ ☐ ]

Stores/user department [ ☐ ]

##### **3. Number of years with VRA**

Under 1year [ ☐ ]

1-5 years [ ☐ ]

5-10 years [ ☐ ]

Above 10 years [ ☐ ]

##### **4. Highest Educational Level of Respondents**

Polytechnic (HND) [ ☐ ]

1<sup>st</sup> Degree [ ☐ ]

Professional certificate (ICA/ ACCA, CIPS, CILT, PMP) [ ☐ ]

Postgraduate [ ☐ ]

##### **5. Number of colleagues**

Fewer than 5 [ ☐ ]

5-9 [ ☐ ]



10-19 [ ]  
20 and above [ ]

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**PART B: FACTORS MITIGATING THE APPLICATION OF THE  
PROCUREMENT ACT, 2003**

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**6. The following statements determine attitude towards the application of  
the Procurement Act, 2003**

**Please indicate the extent to which you agree with the following  
statements**

**a. Lack of proper analysis of suppliers resulting in lower quality  
procurement.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**b. Failure to start the procurement process on time.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**c. Delay in opening bids/proposals received.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**d. Delays in preparing technical specifications, scope of work/terms of  
reference.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**7. The following statements demonstrate the Subjective norm Please  
indicate the extent to which you agree with the following statements.**

**a. Deliberate delay in starting or finishing the evaluation process.**

Strongly Disagree [ ]



Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**b. Deliberate postponements during the approval process.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**c. Delay in contracts' negotiations. Strongly**

Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**d. Procuring entity failure to comply with procurement rules.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**8. The following statements demonstrate the Perceived Behavioral control  
Please indicate the extent to which you agree with the following  
statements**

**a. Absence of sufficient qualified officers in the right numbers to manage  
the procurement unit**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**b. Inadequate and erratic releases of funding for procurement activities**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**c. Lack of appropriate punishment to public officials who breach provisions of the regulations and the Act.**

Strongly Disagree [ ]

Disagree [ ]

Not sure [ ]

Agree [ ]

Strongly Agree [ ]

**d. Understanding of the law overseeing procurement ought to be simplified.**

Strongly Disagree [ ]

Disagree [ ]

Not sure [ ]

Agree [ ]

Strongly Agree [ ]

**9. Intention to apply the Procurement Act, 2003.**

**The following statements measure the level of non-compliance with Regulatory Framework.**

**Please indicate the extent to which you agree with the following statement.**

**a. VRA does not act in accordance with public procurement Act.**

Strongly Disagree [ ]

Disagree [ ]

Not sure [ ]

Agree [ ]

Strongly Agree [ ]

**b. Procurement unit does not apply fitting acquisition methods for suitable.**

**thresholds in procurement**

Strongly Disagree [ ]

Disagree [ ]

Not sure [ ]

Agree [ ]

Strongly Agree [ ]

**c. Procurement Unit does not utilize PPA Standard Tender Documents in procurement.**

Strongly Disagree [ ]

Disagree [ ]

Not sure [ ]

Agree [ ]

Strongly Agree [ ]

**d. Procurement Unit does not post their tender adverts and contract awards at PPA site and bulletin.**

Strongly Disagree [ ☐ ]  
Disagree [ ☐ ]  
Not sure [ ☐ ]  
Agree [ ☐ ]  
Strongly Agree [ ☐ ]

**10. Relative advantage in the application of the Procurement Act, 2003. The following measures to address the mitigating factors. Please indicate the extent to which you agree with the following statements.**

**a. The PPA should increase awareness and application of procurement rules and controls and cultivate better understanding among professionals of the detrimental effect of bribery and corruption.**

Strongly Disagree [ ☐ ]  
Disagree [ ☐ ]  
Not sure [ ☐ ]  
Agree [ ☐ ]  
Strongly Agree [ ☐ ]

**b. Act 663 should be reviewed to limit the number of steps in procurement process to reduce the level of bureaucracy in the system.**

Strongly Disagree [ ☐ ]  
Disagree [ ☐ ]  
Not sure [ ☐ ]  
Agree [ ☐ ]  
Strongly Agree [ ☐ ]

**c All entities should set up a single procurement unit to undertake and coordinate all procurement activities within the entity.**

Strongly Disagree [ ☐ ]  
Disagree [ ☐ ]  
Not sure [ ☐ ]  
Agree [ ☐ ]  
Strongly Agree [ ☐ ]

**d. Procurement practitioners and entity heads should be adequately trained in complaint-handling practices and procedures.**

Strongly Disagree [ ☐ ]  
Disagree [ ☐ ]  
Not sure [ ☐ ]  
Agree [ ☐ ]  
Strongly Agree [ ☐ ]

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**PART C: LEGAL PROCUREMENT DOCUMENTS**

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**11. The following legal procurement documents have been accepted and applied in Ghana**

**Please indicate the extent to which you agree with the following statements.**

**a. Application of the Public Procurement Act, 2003 (Act 663)**

Strongly Disagree [   ]  
Disagree [   ]  
Not sure [   ]  
Agree [   ]  
Strongly Agree [   ]

**b. Application of the Public Procurement Board Manual**

Strongly Disagree [   ]  
Disagree [   ]  
Not sure [   ]  
Agree [   ]  
Strongly Agree [   ]

**c. Application of Standard Tender Documents (STDs)**

Strongly Disagree [   ]  
Disagree [   ]  
Not sure [   ]  
Agree [   ]  
Strongly Agree [   ]

**d. Application of Public Procurement Regulations**

Strongly Disagree [   ]  
Disagree [   ]  
Not sure [   ]  
Agree [   ]  
Strongly Agree [   ]

**e. Application of Procurement Guidelines**

Strongly Disagree [   ]  
Disagree [   ]  
Not sure [   ]  
Agree [   ]  
Strongly Agree [   ]

**12. The following procurement principles are currently being applied in Ghana Please indicate the extent to which you agree with the following statements****a) Effectiveness and Efficiency in procurement processes.**

Strongly Disagree [   ]



Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**b) Professionalism in procurement activities.**

**Strongly Disagree** [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**c) Tendering is Competitive.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**d) Accountability in procurement activities.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**e) Value for Money for procuring entity.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**f) Fairness in the procurement processes.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**g) Transparency in procurement procedures.**

Strongly Disagree [ ]  
Disagree [ ]  
Not sure [ ]  
Agree [ ]  
Strongly Agree [ ]

**h) Ethical approach to tendering.**

Strongly Disagree [   ]

Disagree [   ]

Not sure [   ]

Agree [   ] Strongly

Agree [   ]

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**Thank you very much, I'm very grateful.**

