

ASSESSING WAYS OF IMPROVING PROCUREMENT PRACTICES FOR  
EFFECTIVE INFRASTRUCTURE DELIVERY BY GHANA HIGHWAY  
AUTHORITY

BY

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the requirement for the award of degree of

MASTER OF SCIENCE IN PROCUREMENT MANAGEMENT

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## DECLARATION

I hereby declare that, this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Kwame Nkrumah University of Science and Technology, Kumasi or any other educational institution, except where due acknowledgment is made in the thesis.

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## **ABSTRACT**

Procurement is when an organization identifies a need and decides on its procurement requirement and extend to the ultimate disposal of property at the end of its useful life. Studies have shown that whiles procurement provides an opportunity for state institutions to use resources judiciously, numerous challenges still bedevils its existence. Generally, there are numerous public outcries that state institutions misappropriate public funds during the provision of social services in Ghana. This study therefore endeavoured to find possible remedies to existing problems associated with procurement practices meted out by Ghana Highway Authority.

The purpose of this study was to assess ways of improving procurement practices for effective infrastructure delivery by Ghana Highway Authority. It was also aimed at unearthing existing procurement practices in the authority as well as the various challenges confronting them. To achieve this goal, there was an extensive review of literature to understand the existing study on procurement practices, challenges and ways of improving them. Seventy-eight (78) questionnaires were administered to various respondents in Ghana Highway Authority. This consisted of 7 each to all the regional offices and 8 to the head office. It was observed that except for the practice of e-procurement, respondents agreed that all identified procurement practices were meted out in GHA. The study identified the consideration of threshold, complexity and the urgent need of a procurement item as the most ranked procurement practice in GHA. On the other hand, political interference, delay in release of funds and corruption were agreed by respondents as the most ranked challenges facing the authority in their procurement activities. Notwithstanding these challenges, various ways of improving procurement practice in GHA were identified. Less government interference, adoption of a well-structured electronic system that inculcate all procurement activities and clearly defined procurement plan covering all procurement items were

identified as the most ranked ways of ensuring proper procurement practice in Ghana Highway Authority. Politicians and the government were entreated to draw their road sector policies and projects ahead of time for inclusion in the Authority's Long-Term Development Plan in order to ensure consistency with laid down objectives. There was the need for the authority to also fast track the adoption and implementation of the Ghana Electronic Procurement System (GHANEPS) which can facilitate effective and efficient procurement practice in the authority.

**Keywords: Procurement practice, infrastructure delivery.**

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## **CHAPTER ONE**

### **GENERAL INTRODUCTION**

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

Countries all around the world commit huge amounts of money to ensure works, goods and services purchased using public resources are done in a manner consistent with guiding principles. In Ghana, the Public Procurement Act 663, enacted in 2003, Amendment Act, 2016 (Act 914) serves as the legal document in ensuring sanity in procurement activities in Ghana. Its main objective was reducing or at best eliminating corruption in public procurement, achieving value for money and efficiency in the procurement process among others (Tetteh , 2014). Contemporary procurement requires that works, goods and services are procured within the framework of time, cost and quality. Lloyd and McCue (2004) have reiterated that public procurement is one of the most legislated and regulated fields of government; and as such care must be taken in the procurement of works, goods and services in order not to be entangled in the claws of the law.

Meanwhile, the aspirations of realizing a sustainable value for money in the procurement system is becoming unattainable as certain undercurrents underlying procurement practices are defeating this noble purpose (Manchi, 2014). IMANI Ghana estimates that Ghana loses about Ghc 3.5 billion to corruption accounting to about 30% of total GDP. According to the Corruption Perception Index (2018) on its perceived levels of public sector corruption placed Ghana 78<sup>th</sup> in the world and 19<sup>th</sup> in Africa. It is incumbent on the procurement entities to acquire works, goods and services within the rules and regulations enshrined in publicly enacted documents to ensure value for money.

Public Procurement, as defined by the Public Procurement Act, 2003 (Act 663), is the acquisition of goods, works and services at the best possible total cost of ownership, in the right quantity and quality, at the right time, in the right place for the direct benefit or use of governments,

corporations, or individuals, generally via a contract” (Public Procurement Authority, 2007). Procurement begins when an organization has identified a need and decided on its procurement requirement and also extends to the ultimate disposal of property at the end of its useful life (Agyemang, 2014). On the other hand, procurement practices outline the activities a procurement entity or individuals undertake during the planning and execution of the procurement cycle.

The mandate of Ghana Highway Authority is to provide a safe and a reliable trunk road network at optimal cost by taking advantage of modern technology in road building and new income-generating methods to facilitate socio-economic development in the country. As an authority under the Ministry of Roads and Highways, the Ghana Highway Authority is responsible for the planning, development, maintenance and administration of trunk road and related facilities in Ghana. This responsibility requires awarding of road construction and maintenance contracts to private entities and as a result the need to adhere to proper procurement practices. (Schiele, 2007) asserts that public organizations serve the public interests through delivering desired services and this certainly makes it imperative to study problems associated with procurement practices in the public sector to find possible challenges of critical success factors in the delivery of efficient and effective services (Agyemang, 2014). Therefore, the study will attempt to unearth the various procurement practices of the Authority, the problems with existing practices and possible remedies in relation to the existing practices.

## **1.2 PROBLEM STATEMENT**

Schapper et al. (2006) have affirmed that the principles of procurement including transparency, value for money, open and effective competition, fair dealing, accountability and due process even though known by governments are proven hard to be achieved. Procurement entities and

individuals have developed numerous unethical practices to bypass the laid down practices resulting in the difficulty in the attainment of these principles.

Generally, there are numerous public outcries that state institutions misappropriate public funds during the provision of social services in Ghana. The stakes are high in relation to the provision of infrastructural facilities such as roads which consume a huge amount of the public purse. As a result, pressure groups and the mass media have begun to exercise vigilance in the practices in the procurement of infrastructural facilities in the country (Adjei, 2015).

One area where the public procurement has witnessed massive infractions as far as public procurement is concerned is the procurement of works at the local authority levels which in some occasions seen at the national level (Boakye, 2014). The problems of violations of procurement procedures, the use of high-ranking officials to influence procurement decision-making and bribery-induced violations of procurement procedures by government officials in collaboration with providers are attributed not only to the technical skills of the experts but rather their ethical skill (Agyemang, 2014).

It has therefore become necessary to study the procurement practices meted out by state institutions such as the Ghana Highway Authority which has been the spotlight of the public for some time now.

### **1.3 RESEARCH QUESTION**

The following research questions informed objectives of the research as stated above. They include:

1. What are the existing procurement practices of Ghana Highway Authority?

2. What are the problems with the existing procurement practices of Ghana Highway Authority?
3. How can we improve on the existing procurement practices of Ghana Highway Authority?

## **1.4 AIM AND OBJECTIVES**

This section describes the main aim of the study as well as various objectives of achieving the aim.

### **1.4.1 Aim**

The aim of this study is to assess how procurement practices of Ghana Highway Authority can be improved.

### **1.4.2 Objectives**

Specific objectives directed to achieving the main aim includes the following:

1. To examine the existing procurement practices of Ghana Highway Authority.
2. To identify the problems with the existing procurement practices of Ghana Highway Authority.
3. To assess strategies aimed at improving the existing procurement practices for effective project delivery by Ghana Highway Authority.

## **1.5 SIGNIFICANCE OF THE STUDY**

The quantum of money and resources which go into procurement demands that the actions and inactions which create leakages in the procurement process are eliminated (Tetteh, 2014). The Public Procurement Act (Act 663) and Amendment Act, 2016 (Act 914) which mandates public entities to acquire works, goods and services within the Act has been over in existence decade now but various concerns have been raised concerning the application of the key aspects.

In spite of the numerous studies which focus on the major aspects of the procurement system, there is not much that has been done in terms of the various procurement practices in government institutions. This study therefore was relevant to unearth various procurement practices and their corresponding problems in order to add up to the body of knowledge which can be assessed by various stakeholders for decision making. It equally endeavored to provide empirical evidence to support and also serve as a point of reference in policy formulation that seeks to improve upon the existing practices of Ghana Highway Authority.

## **1.6 METHODOLOGY**

The study commenced with an in-depth literature review covering the various theoretical and empirical underpinnings of the subject matter to provide the researcher with insight from secondary sources. There was also use of the case study research design as the overall strategy to integrate the various components of the study in a coherent and logical order. A closed-ended questionnaire was also considered in gathering information from participants of the study. With respect to selecting participants in for data collection purposes, purposive sampling technique was adopted to select respondents knowledgeable in the subject matter including management and resource persons responsible for procurement activities in the authority. Additionally, a stratified probability sampling method was also considered to select individuals in various divisions and regional offices of the authority in order to gather information from all stakeholders in the study.

## **1.7 SCOPE OF THE STUDY**

The scope of the study covered the geographical scope and the contextual scope. Whereas the geographical scope gave a brief description of the location of the study area, the contextual scope covered various issues to be considered under the study.

The study was conducted at the Head Office of the Ghana Highway Authority located at the ministries, Osu in Accra as well as the various Regional offices throughout the country. It took into consideration the various divisions of the authority including the planning, finance, maintenance, contracts and quantity surveying divisions.

Contextually, the study explored the existing procurement practices in Ghana highway authority while looking at the problems associated with these practices. It further explored the remedies aimed at combating the underlisted problems.

## **1.8 STRUCTURE OF REPORT**

The study had five chapters. Chapter one had to do with the introduction of the study, background of the study, problem identification, research questions, aims and objectives, justification of the study, scope of the study, research methodology and organization of the study. Chapter two reviewed related literature on terms and definitions associated with procurement practices. It also covered various theoretical and empirical literature and conceptual framework. In chapter three, emphasis was placed on methodology and the study organization. It entailed the research design, sampling method and data analysis techniques. Chapter four captured the analysis and the discussion of the results based on the set objectives of the study. Finally, in chapter five captures summary of the findings and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

This chapter delves into the various concepts associated with procurement practices in Ghana and the world as a whole. It gives an in-depth discussion of the various issues, concepts and variables associated with procurement practices. The chapter also covers a conceptual framework which tries to inculcate the various concepts discussed into an integrated system.

#### **2.2 CONCEPT OF PROCUREMENT**

Thai (2001) has indicated that the earliest form of procurement in human history could be traced back to 2400BC and 2800BC with a procurement order written in red clay from Syria. The order was for 50 jars of fragrant smooth oil for 600 small weights in grain. Hunja, (2003), reiterated that there were other evidences of historical procurement including the development of the silk trade between China and a Greek colony in 800B.C. In contemporary times however, procurement has evolved as a whole new concept with a multidimensional approach in its methodology.

Procurement in contemporary times has become an inevitable part of both private and public institutions that has helped in the effective management of public resources. The procurement of goods, works and services by public institutions worldwide amounts on average to between 15% and 30% of Gross Domestic Product (GDP) and the figure could even be higher in some countries (Transparency International, (2006). In Sub-Saharan Africa, for instance, the procurement market could be worth between US\$ 30 to US\$ 43 billion (Manchi, 2014). In Ghana, public procurement accounts for 50% - 70% of the national budgets (after personal emoluments), 14% of the Gross Domestic Product and 14% imports (World Bank, 2003a). In this light, governments and public

institutions are becoming aware of the need to undertake procurement activities to ensure that public resources are used judiciously.

Kaspar and Puddephatt (2012) have suggested that management of public funds affects different elements of society. Firstly, it affects the citizens who need material support that is provided through public projects (e.g. roads, hospitals, desks and educational supplies, etc.). On the other hand, it affects the business community who serve as potential suppliers and service providers with the aim of satisfying the government's requirements. As such, a well-managed and transparent procurement system can benefit the society as much as a poorly managed and corrupt system can harm it (Akomah, 2014). Therefore, the management of public funds through procurement should be viewed as a comprehensive approach that affect a multidimensional level of society.

Public Procurement, according to the Public Procurement Act, 2003 (Act 663) and Amendment Act 2016 (Act, 914) is 'the acquisition of goods, works and services at the best possible total cost of ownership, in the right quantity and quality, at the right time, in the right place for the direct benefit or use of governments, corporations, or individuals, generally via a contract' (PPA Module, 2007). The Chartered Institution of Purchasing and Supply (2005) on the other hand, views procurement as a means of identifying, sourcing, and managing works, goods or services that a firm, an institution, or an organization purchases to achieve organizational goals. In addition to the above definitions, United Nations (2014) ascertained that procurement or public procurement means the acquisition of goods, construction or services by a procuring entity.

### **2.2.1 History of Public Procurement in Ghana**

Evidence of procurement can be traced back to the colonial administration of the then Gold Coast. The Public Works Department was the state agency responsible for the supply of goods and services for the administration. However, after independence in 1957, Ghana Supply Company

was formed in the 1960s with the responsibility of purchasing all goods for all public institution. The company was further renamed in 1976 as the Ghana National Procurement Agency. Successive regimes relied less on GSC and by 1996, it was touted as inefficient, and one of the most corrupt institutions in Ghana. Anvuur et al. (2006) as cited in Oppong (2013) have said that the absence of guidelines for procurement activities was the reason for the inefficiencies of the Ghana national Procurement Agency.

The introduction of regulated procurement in Ghana was triggered by the numerous challenges in the public financial management that bedeviled the development of Ghana in the early 1990s. Among the striking factors was weak compliance with financial regulations, lack of proper accounting, ineffective public expenditure, monitoring and control, lack of strategic planning and incremental budget system as well as an absence of linkage between recurrent and capital budget (Iddrisu, 2015). As a result of this, the Public Financial Management Reform Program (PUFMARP) was introduced to provide a comprehensive and an integrated approach in resolving the woes of public financial management in Ghana.

The overarching objective of PUFMARP in enhancing the efficiency, transparency and accountability of financial management functions of government brought forth procurement reforms including the advent of the procurement act; Public Procurement Act, 663 (2003). Prior to the introduction of the Public Procurement Act, the Ghana Supply Company Limited (GSCL) was the agency in charge of all public goods purchases since January 2000. However, lack of a proper database and delays in the acquisition of government subventions led to extended delivery times. This prompted Ministries, Departments and Agencies (MDAs) to decide to implement their own procurement activities. The Public Procurement Act, 663 was then introduced to serve as a framework in streamline procurement activities in MDAs.

## **2.3 PRINCIPLES OF PUBLIC PROCUREMENT**

A clear understanding of public procurement principles gives a footprint of the day to day application in the decision-making process. Public procurement principle remains the foundation of public procurement. They serve as guidelines to mainstreaming activities of public procurement officials in dispensing their duties. By integrating these principles such as transparency, integrity, economy, openness, fairness, competition and accountability into work ethics, the outcome of decisions goes in line with the goals of public procurement (OECD, 2009). Some widely known fundamental procurement principles are discussed below.

### **2.3.1 Transparency**

Transparency is one of the key tenets of public procurement and as a result, information regarding the procurement of goods, works and services must be known to all stakeholders. Major stakeholders such as contractors, suppliers, services providers and the general public should be made to know information about the use of public funds unless there are justifiable and legal reasons for keeping other information confidential. Certain military and defence-related procurement, proprietary information belonging to companies and individual contractors and suppliers participating in the solicitation process may be a few confidential information that can be kept from the public (Parliament of Ghana, 2003).

Transparency in public procurement process demands that requirements should be announced either by e-mails, press releases or other avenues. Announcements must be detailed enough to inform interested contractors, service providers and other suppliers of their eligibility to compete. The tender documents should be relatively affordable in order to allow various bidders an opportunity to purchase. According to the Public Procurement Act, Act 663 (2003) and its

Amendment, Act 914 (2016), service providers, suppliers and contractors should be able to have first-hand knowledge on:

- the nature of the requirement and its scope
- dates for submission of offers
- selection and evaluation criteria
- submission of offers
- clarification on the number of copies, submission point and other information as deem fit
- the deadline for submission of queries
- any other pertinent details

In the case where additional information and corrections are essential, procurement entities should endeavour to use the same publication used in the initial publication to notify bidders. This ensures that contractors, service providers or suppliers take necessary actions in order to act in a timely manner to comply with changes.

### **2.3.2 Integrity**

Oxford Dictionary (2009) defines integrity as the practice of being honest and showing a consistent and uncompromising adherence to strong moral and ethical principles. Integrity is considered in public procurement management in two dimensions. In the first instance, integrity is considered in the procurement process while the other looks at integrity of the public procurement practitioners.

Integrity with respect to the procurement process considers the reliability of information being disseminated by the procurement entity. All stakeholders and bidders must be able to rely on any information from the procurement entity. Information given to bidders should contain a clear understanding of requirements, and how bidders will be assessed. Selection and evaluation criteria

must remain constant throughout the evaluation process unless there is an urgent need to do so. Sufficient time must be given to bidders in cases where changes are needed in the submission date in order to meet new deadlines (Parliament of Ghana, 2003).

On the other hand, integrity of public procurement practitioners dictates that officials should display high levels of professionalism and personal integrity. Public procurement practitioners should not allow room for inconsistencies in their line of duty. They should always be known for inculcating trust, honesty, responsibility and reliability in their line of duties (OECD, 2009).

### **2.3.3 Economy**

Economy in procurement refers to efficiency, value for money and commercially reasonable price of using public resources. It stresses on the need for procurement officials to give due diligence and care so that the cost of services, works and goods are acceptable and represent good use of public funds (Agyemang, 2014). As much as possible, public procurement practitioners should avoid fraud, wastes of public resources, collusion with other bidders and paying unjustifiable prices for standard products

### **2.3.4 Fairness**

Various authors have argued that fairness as a principle of procurement has different interpretations as far as the procurement process is concerned. One school of thought considers fairness as treating all prospective contractors and suppliers equally while the other sees it as how fairness is achieved in procurement planning. Agorku (2014) has indicated that fairness in treating all contractors and suppliers equally cannot be realised because of certain conditions attached to certain types of procurement. Request for quotation and sole sourcing methods are examples of procurement methods that restrict fairness of treating all suppliers or contractors equally. However,

on how fairness can be achieved during the procurement process, procurement officials should show no preferential treatment to certain individual or contractors and decision making must be unbiased. With respect to the consideration of offers, they must be based strictly on compliance with the stipulation of tender documents. No offer should be rejected except for violation of specification specifically stated in the documents (Sindani, 2014). Sindani (2014) has further indicated that, contractors, suppliers and service providers should be able to challenge in cases where they feel they have been unfairly treated and where the procurement entity have deviated from carrying out processes as stipulated in the procurement regulations.

Raymond (2008) has suggested that while decisions on the selection of bidders must be made with consideration of set criteria, it will not be a misplaced idea for all unsuccessful competitors to know the results of their bid with explanations why their bids were not successful.

### **2.3.5 Competition**

The existence of competition in the procurement is one key area that ensures an effective and efficient functioning of public procurement (Abebe, 2012). Competition is the basis for efficient, impartial and transparent procurement therefore, contracting authorities are entreated to maintain this criterion for all bidders (Sánchez, 2009). Competition in public procurement has been known to serve as a thrust for other principles such as accountability and transparency. The objective of competitive processes is to provide all eligible prospective bidders with timely and adequate notification of requirements and an equal opportunity to tender for the required goods, civil works and services (IFAD, 2010). The public procurement market is an indicator of a country's openness to competition through appropriately publicized tender procedures structured in a way that does not give rise to discrimination and managed in a transparent manner within a framework of legal and financial certainty. Despite this principle, not all contracts are awarded using a competitive

process because this sometimes depends on the urgency of need and the resulting procurement method used to fulfil a specific requirement. Public procurement requirements should be widely disseminated to increase the chances of a good market response, leading to the award of competitively-priced contracts. The use of non-competitive procurement methods such as sole/single sourcing and request for quotation although essential and justifiable in certain circumstances, should be used with precaution. Guidelines on each of these methods should be followed to ensure strict adherence to methods that promote competition in procurement practices.

### **2.3.6 Accountability**

Accountability in public procurement essentially means public officials being made to be responsible for their actions and having obligations to render accounts for their stewardship (Soudry, 2007). The principle of accountability in public procurement is satisfied when there is a “defining level of authority for approval of spending and approval of key stages based on appropriate and assigned duties (Adu, 2011). As public servants, procurement practitioners and others involved in the public procurement process, accountability exposes decision makers to sanctions as a remedy for any behaviour that contravenes the public procurement legal framework and principles. They submit themselves to the public to justify their actions (Abebe, 2012). These are to ensure that standard practices are followed in the procurement cycle and takes into consideration financial audit which help in checking for financial fraud (OECD, 2009). Rasmus (2010) added further that accountability constitutes a central pillar of any procurement system. The existence of accountable system fosters government and citizens to work hand-in-hand in utilizing public resources. This limits the fear of corruption and embezzlement of funds meant for developmental project.

## **2.4 PROCUREMENT PRACTICES ASSOCIATED WITH THE PROCUREMENT OF WORKS**

Procurement as practices meted out by procurement entities is dictated by the Public Procurement Act of Ghana, (Act 663) and its amendment (Act 914). Whiles the procurement process outlines series of events procurement entities should go through in order to ensure that the procurement of works, goods and services activities are within the various stages of the procurement process. In order to ensure value for money, accountability, fairness and transparency, procurement entities must follow laid down procurement practices set out by existing guidelines by procurement legislative instruments of the jurisdiction in question.

The starting point in developing any procurement system is to identify procurement activities that commence once the need for procurement is identified and end when the transaction is completed (Construction Industry Development Board, 2002). According to Krasniqi (2012), some procurement practices involves procurement planning, calculating the value and classification of the contract, determination of the procurement procedure, preparation of tender documents, announcement of the notice – publication, opening and evaluation of tenders, giving and signing of contract and contract administration (Krasniqi, 2012). Construction Industry Development Board (2007) further described series of procurement practices such as the establishment of needs, deciding on procurement strategies, soliciting and evaluating tender documents and award of contracts. However, the United Nations Procurement Practitioners (2006) as cited in Manchi (2014) enlisted the stages of the procurement process and their respective procurement practices consisting of;

- Identifying the need and planning the procurement
- Developing the specification

- Selecting the procurement method
- Procurement documentation
- Inviting, clarifying and closing offers
- Evaluating offers
- Selecting the successful tenderer
- Negotiations
- Contract management
- Evaluating the procurement process

Studies have shown that procurement practices will vary according to the type of procurement and the individual organizational specifications. Manchi (2014) reiterated that whiles the procurement of goods may include disposal, procurement of works on the other hand may consider maintenance instead of disposal. The United Nations Office on Drugs and Crimes (UNODC) has also outlined the three phases of procurement namely; the pre-tendering phases, tendering and post-tendering phase. So far, the phases of procurement and its respective practices outlined by the UNODC are the only ones which have remained consistent with provisions of the Public Procurement Act 663 and Amendment Act 914 in Ghana. Therefore, for the purpose of this study, the various stages of procurement to be discussed shall include;

- Pre-Tendering phase
- Tendering Phase
- Post Tendering Phase

### **2.4.1 Pre-Tendering Phase**

The pre-tendering phase of the procurement process focusses on drawing the work plan for the procurement process. It includes the formulation of the procurement strategy and gives a step-by-step guideline to facilitate the procurement process. During this phase, needs assessment and planning are the activities conducted. Other practices include planning and budgeting and definition of requirements as well as choice of procedures in the same coherent manner. There is the need for authorities to be guided by lessons of past process in order to come out with a well proven process in the up and coming processes (UNODC, 2013).

#### **2.4.1.1 Identification of Need for procurement of works**

Before the initiation of any public work, there is the need for an expression of demand from the citizenry before such a project could be undertaken (Synyenlentu, 2014). Needs assessment determines whether a project is needed in the first place before a final decision is made for its commencement. In a more advanced level, experts are responsible for the determination of needs. In the assessment of needs of works, experts are responsible for carrying out surveys to determine what is to be done. In this instance, experts identify development gaps by comparing survey results with set standards. Where survey results fall short of sets standards, needs arise and must be attended.

#### **2.4.1.2 Procurement Planning and Budgeting**

Agada and Shipman (2007) described procurement planning as a procurement practice employed by firms both in the public and private sector to plan purchasing activity for a given period of time. During the procurement planning process the procurement method is assigned and the expectations for fulfillment of procurement requirements determined (Lynch, 2013).

Planning entails the ability of entities to determine the standard of work they need, strategize on a general direction for the work and be in a position to anticipate potential risk and put in place measures to help reduce such risk (Ayitey, 2012).

In addition, Abrams (2013) mentioned that “officials responsible for procurement identify what items require procurement and what type of procurement is needed, and the dates when procurement actions must begin in order for the procurement to be completed by the time the works are needed”. According to the Public Procurement Act 663 (Amendment Act 914), procurement planning is essential because resources for funding projects might not be enough. This requires that procurement planning activities considers the prioritization of works to make good use of available scarce resources. Section 21 of the Act allows procurement entities to prepare their own procurement plans as well as quarterly reports to the tender committee (PPA, 2006).

Alongside planning for procurement activities, there should be estimation of the cost of the works to be procured. The annual report of the Public Procurement Authority (2013) has indicated that procurement entities have the responsibility to determine what they would need and how much each of the works will cost. This requires that skills personnel undertake this task to come out with realistic budget for works to be procured. In terms of works, detailed drawing and plans are required to give a clear view of the cost of works. The Procurement Act 663 and Amendment Act 914 of Ghana requires heads of procurement entities to coordinate budget preparation for that institution based on previous works and consumptions needed for such kind of work (PPA, 2013)

A comprehensive procurement planning and budgeting process should be able to forecast various activities of the procurement process to capture works, determine the cost and timelines of projects, determine sources of funding and to minimize incidence of unplanned projects. Procurement entities “determine what they would need in terms of goods and services and how much they would

like to spend” (PPA, 2013). The Public Procurement Act dictates that procurement entity shall prepare a procurement plan to support its approved programme. The plan shall include contract packages, description of lots, estimated cost for each package, the procurement method, source of fund and processing steps and time.

## **2.4.2 Tendering Phase**

The tendering stage is the main stage of the procurement process. According Economic Co-operation and Development (2009), there are three main practices meted out in the tendering phase of the procurement process. Various procurement practices in the tendering stage include invitation to tender, evaluation of tender and award of contract.

### **2.4.2.1 Invitation to tender**

The first procurement practice at the tender phase is the invitation to tender. Publication of procurement notice is one of the most important part of the procurement process that ensures transparency. Contractors are entitled to information concerning procurement activity of public works. Therefore, the procurement entity owes an inalienable responsibility to invite various contractors and suppliers for an ongoing tender through various mediums. According to UNODC (2013), “as a general rule, a procuring entity should therefore publish a public notice of its intent to procure works, so that potential bidders can become aware of any contract opportunity with the government”.

An unbiased public procurement process demands that requirements should be announced either electronically, through press release, the internet or other avenues. It is important that procurement entities devote much time to well-structured document that spells out the various procedures, requirement or qualification needed to participate in the procurement process. Announcements must sufficiently detail interested contractors to determine if they are qualified to compete.

According to the Public Procurement Act 2003 (Act 663) and amendment Act 914 a procurement notice shall;

- contain name and address of the procurement entity and a brief description of the service/item to be procured
- be published in English and in a newspaper of wide circulation or in a relevant or trade publication of wide circulation except where participation is restricted solely to a category of consultants

Meanwhile, the Act allows for confidentiality in the relay of certain information to the public under special circumstances. “If the disclosure of information poses a threat to national security or impede law enforcement, prejudice the legitimate commercial interest of a supplier or contractor and impede fair competition, the procurement entity may decide not to disclose certain information” (Parliament of the Republic of Ghana, 2003).

#### **2.4.2.2 Evaluation of Tender**

After tenders have been submitted, the procurement entity assesses and select a tender compliant to the set criteria in the invitation documents. Procurement entities have the responsibility of selecting tenders with consideration of economically most advantageous of the given criteria such as price, operating costs, quality, aesthetics and functional characteristics, service and maintenance, environmental impact, etc. or have the lowest price (Sindani, 2014).

Ghikas (n.d) stated that procurement entities should clarify criteria for selecting tender prior to the evaluation of tender as well as the various weights given to each respective criterion. There must be abrupt strictness in the balance between quality and price of the works or goods to be procured. According to the Public Procurement Act, 663 (2003) and amendment Act, 914 (2016), the

procurement entity shall evaluate and compare tenders that have been accepted in order to ascertain the successful tender in accordance with the procedures and criteria set out in the invitation documents. However, during international competitive tendering, the act mandates procurement entities to exercise a margin of preference for the benefit of a domestic bidder or any other preferences authorized or required by any other procurement regulations. The evaluation criteria underlisted by the Public Procurement Act shall include;

- a. The cost of construction and functional characteristics of construction
- b. The time for delivery of completion of construction
- c. The environmental and other characteristics of the subject matter
- d. The terms of payment of the procurement
- f. The guarantees in respect of the subject matter; and
- g. Any other criteria the procurement entity considers to be relevant to the procurement

#### **2.4.2.3 Award of Contract**

Once the tender evaluation process has been completed, successful bidders enter into contractual agreement with the procurement entity concerning the given construction activity. Prior to this development, Section 65 of the Public Procurement Act 663 (Amendment Act 914) mandates procurement entities to provide an acceptance notice of the tender to the supplier or the contractor within thirty (30) days. In return, the supplier or contractor whose tender has been accepted shall be required to sign a written contractual document with the procurement entity with also within thirty (30) days. The contract enters into force once both parties sign the contractual agreement.

### **2.4.3 Post Tendering Stage**

The post-tendering stage is the implementation stage of the procurement process. It focusses on the administration of the awarded contract and ensures that the objectives and specifications are fully met. There are three main practices procurement entities undertake at the post-tendering phase. These are contract management, monitoring and payment of the project (OECD, 2009). Ayitey (2012) has said that while the contract cannot commence without both parties appending their signatures, the contract should be managed to ensure that obligations are adhered to by both parties. Activities to be undertaken during contract management include checking bank guarantees, establishing letters of credit, making arrangements for receipt, expediting delivery and verifying documents.

The presence of an effective monitoring system cannot also be undermined. After a contract is awarded, there should be measures in place to monitor the quality of work going on. Stephens (2010) has mentioned that monitoring and supervision could be done by a procurement entity or by a consultant. According to Stephens (2010), the procurement office also has a role to play, that is, monitoring performance as well as ensuring that both parties comply with contractual agreements.

In terms of payment agreement, there are about three types of payment agreements which could be agreed upon by both parties. In the first instance, parties could agree on advance payment where the successful contractor is given money for initial mobilization of the construction activities and then a complete sum is paid after the contract is executed. Secondly, the procurement entity and the successful contractor could enter into an agreement where payments are done on routine basis. In the last circumstance, Contractors are paid 5% to 15% of the contract sum to cover unexpected

loss or risk such as rise of inflation which could affect prices of goods and services (UNODC, 2013, Stephens, 2010).

## **2.5 PROCUREMENT AS PRACTICED BY GHANA HIGHWAY AUTHORITY**

Ghana Highway Authority has always been at the forefront when it comes to provision of road infrastructure in Ghana. Ghana Highway Authority is responsible for strategic roads which are very important for the development of national economy and wider region, including connections between the national capital and regional capitals; roads to international borders; and roads of socio economic or defense security importance (Tetteh, 2014). The management of such a significant road network of trunk roads in Ghana comes with a task of the employment of private entities to undertake various construction and maintenance works through procurement activities.

Ghana Highway Authority predominantly deal in procurement of works and services. The planning division of the authority is responsible for procurement of services related items. On other hand, procurement of works related items is undertaken by the Quantity Surveying division of the Ghana Highway Authority, both at the Head Office and regional levels. Works related items are basically in two forms; routine maintenance and periodic maintenance. Periodic activities include construction, upgrading, rehabilitation, partial reconstruction, regravelling, resealing of roads, installation of road safety devices on roads and construction of bridges while Routine activities include grading and ditch cleaning of unengineered roads, construction of drainage structures as well as pothole patching and shoulder repairs.

Procurement in Ghana Highway Authority is strictly done based on the regulations of the Public Procurement Act 663 and Amendment, Act 914. Although Ghana Highway Authority has no significant procurement system or a procurement unit, activities of procurement are duly undertaken by some of the divisions. Preparation of both tender and contract documents for works

is done by the quantity surveying division both at head office and the regional level whereas planning division does so for services contract at head office. The quantity surveying division also prepares bill of quantities with detailed designs from survey and design division to come up with the estimated cost of the work to be procured. In addition, the quantity surveying division together with Civil engineers from other divisions such as contract, maintenance etc. and other expertise from divisions such as audit and accounts sections take part in the evaluation of tenders. Similarly, the quantity surveying division and the civil engineers in other divisions coordinate opening of tenders which is usually led by the head of the quantity surveying division. Monitoring of ongoing works is done by civil engineers from the various divisions such as materials, maintenance, survey and quantity surveying divisions not forgetting the administrative activities by the administration and accounts sections. Quantity surveying keeps records of all works procurement activities as well as some of the services activities. Monitoring is done to check if contractors meet specifications in the contract documents. Issuance of award letters to successful bidders/tenderers after the approval of the entity tender committee is also done by the quantity surveying division for works contract, likewise planning division, which is made up of civil engineers does so for services contract. However, quantity surveying division also plays major roles in services contracts in terms of certification, attending of site meetings etc. and are also involved in the tendering stage of services contracts. All the works activities are carried out both at the regional and national levels, while services are done at head office (Ghana Highway Authority, 2015).

## **2.6 CHALLENGES CONFRONTING PROCUREMENT PRACTICES**

The contributions of the procurement to effectiveness of public financial management cannot be undermined. Yet these contributions continue to be hindered by various daunting challenges. Corruption has been known to be present in all stages of the procurement process. Lengwiler and

Wolfstetter (2006) estimates that the amount of money which is exchanged through corruption in procurement is between \$390-400 billion per annum all over the world. According to Ameyaw (2012), lack of adequate financial resources, non-compliance with the provisions of the regulatory instruments, shortage of qualified staff and poor records keeping as well as overpricing have been identified as factors impeding the process. However, Ngugi and Mugo (n.d) have observed that all facts mentioned above can be grouped into four broad areas. These include the problem of accountability, ICT adoption, internal processes and ethics.

Procurement entity's obligation of demonstrating effectiveness and producing the types of services that the public need is termed accountability (Segal and Summers, 2002). The absence of accountability to the general public breed corruption in the procurement. According to Brinkerhoff (2004), measurement of goals, punishment for non-compliance to regulations and justification of results are the three main components of accountability. However, due to interference in the procurement process these components of accountability are hardly achieved.

The issue of adoption of information technology to procurement activities has also become an issue in recent times. While government have realized the need to incorporate information technology in the procurement process, its adoption has been extremely slow. The inability of procurement entities to integrate information communication technology in their procurement practices has been a great disadvantage and affecting the various tenets of procurement such as value for money, accountability, transparency, competition, integrity and fairness. Also, pressure that emanates from politicians and other top officials to force procurement entities to procure some works and services affects infrastructure delivery in terms of time and cost. This is because there is little time to do detail packaging, for example inadequate cost estimate is always the results which also leads to cost overrun etc. This ad hoc decisions from the politicians also lead to

situations whereby the procurement entities end up not accomplishing their procurement plans for the fiscal year but rather procuring outside their approved procurement plans. Kusi (2014) has stressed that even though most procurement entities have technological equipment in operations that are closely related with e-Procurement tools, they practice the paper-based transaction system of procurement due to inadequate knowledge on e-procurement procedure which is very new to practice. He stressed that for procurement entities to adopt e-procurement practices, there is the need to follow laid down framework which can serve as a road map.

Ethical behaviour encompasses the concepts of honesty, integrity, probity, diligence, fairness, trust, respect and consistency. Ethical behavior includes avoiding conflicts of interest and not making improper use of an individual's position. Hunja (2003), observed that the inconsistent enforcement of the prevailing rules and regulations has been found to be the main cause of abuse of procurement practices. Similarly, Falvey et al. (2007) state also that corruption depends on the lack of enforcement and monitoring systems and on the lack of an effective system of debarment for contractors who have been accused of corruption. Political interference with the procurement process poses a challenge to the Implementation process and public procurement reforms. A good number of politicians think that they have the right to intervene in the procurement procedures thereby leading to capricious procurement decisions (Ameyaw et al., 2012). Agaba and Shipman (2012) posit that the procurement system has suffered various forms of malpractice and unethical conduct, including a high incidence of vested interests, interference and insider dealings and occasional cases of retrospective approval of contract award.

## **2.7 WAYS OF IMPROVING PROCUREMENT PRACTICES**

The procurement of works for effective infrastructure delivery is constantly being re-examined as to how it can be improved (Adjei, 2015). Proper procurement practices are a significant part of public financial management system that ensure the judicious use of public funds. Falvey et al. (2007) have suggested some strategies with respect to some challenges associated with procurement practices. They suggested the following for limiting the opportunities for corruption at the stage of the procurement process:

- i. “The criteria for the selection of suppliers/contractors could be set by law or regulation and the procuring authority should be bound by those criteria, in so limiting the discretion of the public authority and avoiding the use of ad hoc solution aimed at favoring corrupted bidders”.
- ii. “Clear and unambiguous rules regarding publication and advertisement of solicitation documents should be included in the law defining in clear and succinct terms, time allowed for adverts for each procurement method used. Advertising rules and limits must be reviewed with the view to prescribing clear time limits for publication”.

Some ways of improving procurement practices are explained below:

A study conducted by Kangogo and Kiptoo (2013) on factors affecting ethical standards in procurement practices recommended that frequent independent procurement audits and rigorous monitoring to ensure compliance to the procurement regulations as a way of enhancing the ethical standards in public procurement. They further recommended a proper documentation of all procurement activities to ensure effective audit in order to check unethical procurement practices. Strict adherence to code of conduct by procurement officials is mandatory and therefore persons found culprit of offences must be subjects to sanctions. The Ghana Public Procurement Act 663

(2003) and its amendment Act 914 postulate that officials suspected of non-adherence to the rules and regulations and found guilty following investigations would be suspended and his or her benefits including salary withheld whiles officials found misappropriating government funds regardless of the value are to be summarily dismissed. Hence, Section 92 of Act 663 (2003) establishes that contravention of any provision of the Act is an offence and stipulates the penalties to be applied while Section 93 of the Act defines corrupt practices in terms of article 284 of the Ghanaian constitution, and the Criminal Code of Ghana, Act 29 (1960).

According to the United Nations hand book (2009), stakeholder participation remains one important area procurement entities should inculcate in their procurement practices. According to Everett Community College (2010), key stakeholders are those directly or indirectly affected by decisions of the procurement process. Stakeholders may include employees, contractors, procurement entities, funding agencies and beneficiary communities each having a unique perspective about what it will take for a proper procurement practice. Stakeholder participation remains key in ensuring a coordinated and integrated action to fill the need for works in a timely manner and at reasonable cost. The Procurement Transformation Division (2010) has said that procurement is complex and requires expertise advice and series of consultations from all stakeholders involved. Stakeholder involvement in the procurement process ensures that overlapping and competing needs are identified during the procurement process.

Public Procurement Oversight Authority (2007) has indicated that procurement regulations were meant to ensure that efficient training is offered to procurement officials to undertake proper procurement practices. Sauber et al., (2008) have emphasized the need for procurement officials to acknowledge and devise strategies for managing procurement challenges. It is therefore widely known that requirement to educate professionals and equip them with new and higher-level skills

in procurement practices is subsequently becoming urgent. Officials must be perceived as being fully addressed with procurement practices in order to acknowledge the challenges and their procurement practice (Agyemang, 2014). As observed by the Public Procurement Oversight Authority (2007), procurement follows series of practices that must be observed by various stakeholders. These practices include; planning for the required procurement over a given period, identifying the source of the items, highlighting specifications/initiation of procurement, determination of procurement procedure, Sourcing (soliciting) offers, evaluation of offers, post. Procurement officials are therefore encouraged to be equipped with adequate up-to-date knowledge on these practices.

The presence of well-structured e-procurement system that incorporate all aspects of procurements practices by procurement entities cannot be undermined. There is the need for procurement entities to develop a framework for the adoption of information technology in their procurement practices. To develop an effective e-procurement system, procurement entities must check their readiness before implementation. According to Basil (2014), for procurement entities to consider the adoption of information technology, there must be public awareness of the system, available of resources such as computers and other soft infrastructure as well as analysis of perceived benefits and risks followed by the acquisition of programmable software. The software to be used must be well protected to save vital documents from fraud and phishing. The system should be tested and assessed to know its efficiency and performance. Legal framework should therefore be put on the system if the process proves right.

## **2.8 CONCEPTUAL FRAMEWORK**

Conceptual framework incorporates all variables, issues and concepts discussed in the literature review. It gives a graphical representation of the casual relationship on how variables are linked with each other and the casual relationship between them. For the purpose of this study, Figure 2.1 represents a conceptual framework discussing the variables discussed in this review. It shows that the principles and the processes of procurement emanates from the Public Procurement Act while the challenges of the procurement process have a backward relationship between them. This indicates a positive relationship between the Act and the principles and process of procurement. On the other hand, the process and principles are related to the challenges negatively.

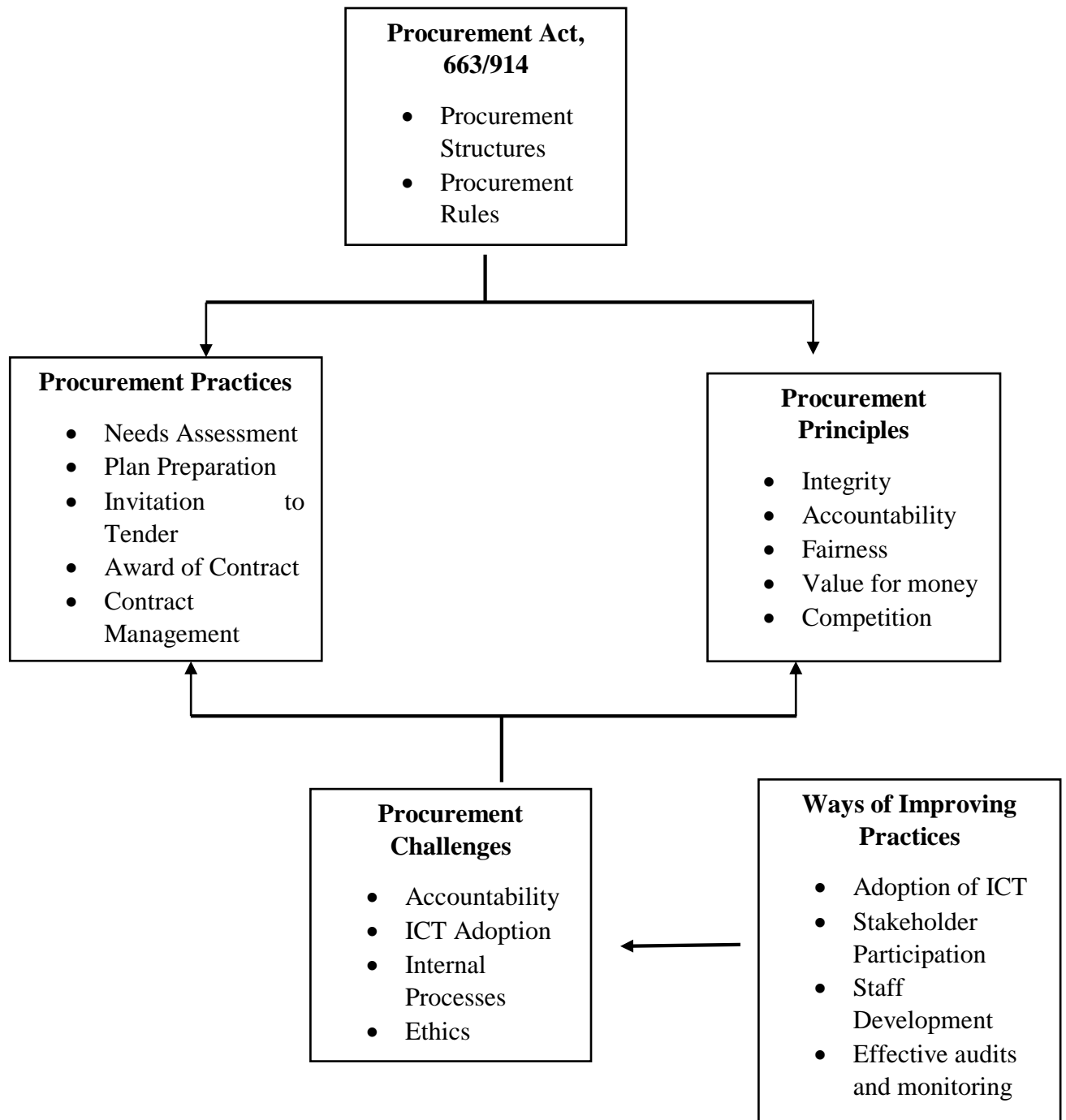


Figure 2.1: Conceptual Framework of the study

Source: Author's Construct

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 INTRODUCTION**

This chapter describes the research methods and materials used to collect relevant data. It also covers the profile of the study area, criteria for selection of respondents, the research design, as well as data collection and analysis techniques.

#### **3.2 PROFILE OF GHANA HIGHWAY AUTHORITY**

Ghana Highway Authority was carved from the erstwhile Public Works Department in 1974. It was established as a cooperate body by GHA decree 1974 (NRCD 298). The NRCD 298 was repealed and later replaced by the GHA Act 1994 (Act 540) which continues to back the existence of the authority till date.

Ghana Highway Authority is responsible for the planning, development and maintenance of about 13,374km of trunk roads in Ghana representing one-third of the total road network (40,186km) in the country. Trunk roads as described by Tetteh (2014) are strategic roads which are very important for the development of national economy and wider region, including connections between the national capital and regional capitals; roads to international borders; and roads of socio economic or defense security importance (Tetteh, 2014).

Activities of GHA is coordinated by the head office located in Accra, Osu. Ghana Highway Authority has a Chief Executive who is assisted by three other deputies namely Deputy Chief Executive (Maintenance); Deputy Chief Executive (Development) and Deputy Chief Executive (Administration). Together, the Deputy Chief Executives head the three departments of the Authority (Maintenance, Development and Administration Departments).

The Administration Department is sub divide into Finance, Human Resource, Legal Services, Training and Development, Public Affairs and MIS Divisions each headed by a Director. The Development Department on the other hand, also consists of the Planning, Materials, Contracts, Quantity Surveying, Road Safety and Environments and Bridges Divisions. Under the Maintenance Department, there is the Road Maintenance and Plant and Equipment Divisions. Additionally, all Regional Offices (10 in all, one in each region) also fall under the Maintenance Department. However, there exists other administrative bodies within the regional hierarchy known as the Road Areas responsible for road maintenance activities of sections of each region, each headed by Road Area Managers.

### **3.3 RESEARCH STRATEGY**

According to Naoum, (1998) research strategy deals with how the research objectives is realized. It encompasses the general plan of how the researcher went about answering the research questions (Saunders et al., 2009). The research was started with the identification of the research problem by the researcher. There was then the formulation of the research questions and objectives to define the paradigm of the study. A thorough literature review was then conducted on various similar studies encompassing the research topic to understand different opinions on the research topic. With an in-depth knowledge of the research topic, the methods and procedures for conducting the study was then derived. Questionnaires were then developed to obtain information from targeted group of people who were sampled using purposive, stratified and simple random sampling techniques. There was then the use of quantitative and qualitative methods of data analysis to obtain meaning from data collected from respondents. Conclusions were then drawn based on the analyzed data to realize the research objectives.

### **3.4 RESEARCH APPROACH**

Research approach is a plan and procedure that consists of the steps of broad assumptions to detailed methods of data collection, analysis, and interpretation. There was the use of both inductive and deductive research approaches. While deductive consider the detailed review of secondary data to derive concepts, themes and models, while and inductive approach focusses on statistical analysis (Saunders et al., 2009).

There was an extensive literature review to have a fair idea and explore various studies on some procurement practices, their challenges and some ways of improving them. These practices, challenges and remedies were then assessed by respondents with the aid of questionnaires. Levels of agreement were earmarked with numerical values (1-5) based on their severity (i.e. strongly disagree, disagree, neutral, agree and strongly agree) to the various practices, challenges and remedies. After assessment by respondents, responses were then analyzed using SPSS to bring out total score, mean, and the standard deviation of each procurement practice, challenge and remedy. Based on the total score and the mean values accrued by each procurement practice, challenge and remedy, they were then ranked. These ranking were then used as basis for answering the research questions and the realization of the research objectives.

### **3.5 RESEARCH DESIGN**

Research design refers to the overall strategy one chooses to integrate the various components of the study in a coherent and logical order. This gives a blueprint in data collection, measurement and analysis and ensures that such a strategy effectively address the research problem. The function of a research design is to ensure that the evidence enables us to answer the initial question through a logical structure of an inquiry (Danes, 2015). There are four main types of research design according to Danes (2015). Each design is applied according to the context most suitable for the

research. They include experimental research design, case study, longitudinal design and cross-sectional design.

Case study research design was used in the course of the study. It emphasizes detailed conceptual analysis of a limited number of events or condition and their relationships. Yin (1984) defines case study as an empirical enquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries of phenomenon and context are not clearly evident. The design brings up an understanding of complex issue or object and can extend experience or add up to already existing research (Soy, 2010). This research design was chosen based on three main criteria;

- The type of research question

The type of research question depends largely on how the research question is phrased. In the case of this study, the research questions included ‘what are the existing procurement practices of Ghana Highway Authority?’, ‘what are the problems with the existing procurement practices of Ghana Highway Authority?’ and ‘how can stakeholders improve on the existing procurement practices of Ghana Highway Authority?’. The use of ‘how’, ‘what’ and ‘why’ in the research questions required a descriptive and an explanatory analysis purposely to be able to answer the research question. This helps to give an accurate and valid representation of the factors or variables relevant to the research question by giving an in-depth study on the topic.

- The control the researcher has on the actual behavioral events

Case study research design can also be used in the case where the researcher has no or little control of the outcome of the research. Considering this study, ‘ways of improving procurement practices for effective infrastructure delivery’, the researcher’s influence of the outcome is very minimal if

not absent. No action of the researcher can be able to influence the answers to be given by respondents, as a result case study design remained the appropriate method to be used.

- The focus on contemporary as opposed to historical

Case study design also focusses on recent happenings and try to find answers to an existing phenomenon. Case study is usually conducted either on the basis of the data available for that period or on the basis of respondents' recall of the situation (Kumar, 2011).

### **3.6 POPULATION OF THE STUDY**

Population can be defined as all people or items that one wishes to understand while sampling is the process of selecting segment of the population for investigation (Rahi, 2017). It is a process of selecting a sample of units from a data set in order to measure the characteristics, beliefs and attitudes of the people (Hair, 2003).

Ghana Highway Authority has a total staff population of 1,143. This population presents the general scope of Ghana Highway Authority for which the sample frame was acquired (Ghana Highway Authority, 2015).

#### **3.6.1 Sampling Frame**

Sampling frame defines a frame where a sample of target population can be drawn (Rahi, 2017). Similar to this accession authors like Creswell and Clark, have stated that, a sample frame can be defined as a list of all units in the population from which research sample will be selected.

In this study, all individuals under divisions or sections of Ghana Highway Authority who are directly linked to procurement activities were considered as the sample frame. Division such as contracts, quantity surveying, planning, and maintenance are directly linked to procurement activities at the head office. At the regional level, personnel under the regional quantity surveying

and maintenance sections are directly linked to procurement activities. These group of personnel represented a frame from which the sample size was drawn.

The variables that were sought for included demography of personnel to determine their level of education, position and work experience. This will indicate the credibility of the response given that a significant number of respondents are conversant with procurement practices in Ghana Highway Authority. Respondents were then quizzed on various existing procurement practices and their challenges as well as ways to improve them.

### **3.6.2 Sample Size**

To determine the sample size, respondents were chosen from divisions of Ghana Highway authority at the head office and sections at the regional level directly linked to procurement activities. The various divisions considered at the head office were the planning, contract, quantity surveying and maintenance division from which eight (8) respondents were selected; two (2) from each division. Similarly, seven (7) respondents were selected from each region. Respondents included the Regional Highway Directors and Maintenance Managers of each of the Regional Offices, three staffs from the Regional Quantity Surveying division and two to the Road Area Managers of the respective Regions. Cumulatively, 78 questionnaires were deployed where eight (8) were administered at the head office and 70 (7 per each region) were administered at the regional offices.

Therefore  $8+(7 \times 10) = 78$

- Calculation of the sample size was based on the researcher's discretion. This was because the study was focused on a targeted group of people.
- 8 respondents were selected at the head office (2 each for Planning, Quantity Survey, Contracts and Maintenance Divisions)

- 7 respondents were selected from the regional office (1 Regional Director, 1 Maintenance Manager, 3 staff from the Quantity Surveying Section and 2 Road Area Managers)
- There were 10 regional offices

### **3.7 SAMPLING TECHNIQUES**

Sampling techniques presents the various sampling methods that can be applied in choosing respondents for questionnaire administration. Authors like Malhotra and Birks (2007) have explained that a smaller group of population has ability to make an inference about a larger group of population. This type of selection is also beneficial to reduce the work burden and cost that would have been involved in studying the whole target population (Rahi, 2017).

In this research, three sampling techniques were used for the study. Purposive sampling method was adopted for effective research outcome. Purposive sampling technique was used to select respondents knowledgeable in the subject matter. Again, the choice of purposeful selection was because respondents selected within the various divisions and sections are directly related to procurement activities of Ghana Highway Authority and were able to contribute to realize the research objectives. They were also able to give technical knowledge on the subject matter and provide empirical data to back their claims, thus the need for purposeful selection of the respondents.

All respondents selected purposely for the study had roles to play at various stages of the procurement process of Ghana Highway Authority. The planning division of the authority is responsible for procurement of services related items. On other hand, procurement of works related items is undertaken by the Quantity Surveying division of the Ghana Highway Authority, both at the Head Office and regional levels. The quantity surveying division also prepares bill of quantities with detailed designs from survey and design division to come up with the estimated cost of the

work to be procured. Regional Directors together with Maintenance Managers and the quantity surveying divisions take part in the evaluation of tenders. Monitoring of ongoing works is mostly done by the key technical staff in the Authority.

With a sample size of 78, there was the use of the stratified sampling method in order to have an idea of regional disparities to the subject matter. The researcher was of the view that, in order to acquire divergent response that is representative of Ghana Highway Authority, there is the need to consider the various regional offices. However, the use of simple random sampling was also important in selecting respondents who have not specified in the sample size. Given the assumption that personnel in procurement-related offices of the authority are responsible for organizing procurement activities, any personnel chosen at random within these offices should be able to give accounts on procurement practices that exist in Ghana Highway Authority.

### **3.8 METHODS OF DATA COLLECTION**

Two main data collection techniques namely; primary and secondary were used for data collection. Whiles the latter focuses on the researchers acquired data from the field, the former covers already published, materials used by the researcher on the subject matter.

#### **3.8.1 Primary Data Collection**

Primary data may be defined as data that has been previously published, thus the data is derived from a new or original research or study and collected at the source (Ankra-Kusi, 2012). Thus, the information is obtained from a first-hand source by means of surveys, observation or experimentation. In this study, the primary source of data focused primarily on the use of a semi-structured questionnaire to gather information from the field.

### **3.8.2 Secondary Data Collection**

Secondary data is also data that has been collected and readily available from other sources. Such data are cheaper and more quickly obtainable than the primary data and also may be available when primary data is not. This method was employed because it is economical in terms of time and cost. It also helped the researcher identify gaps deficiencies and what additional information needs to be collected on the study. Secondary data for the study was obtained from books policy document, relevant journal articles and materials on the internet.

### **3.9 METHODS OF DATA ANALYSIS**

Data analysis can be defined “as consisting of three concurrent flows of activity: data reduction, data display and conclusion drawing/verification” (Saunders et. al., 2007). "Believe in many constructed realities that generate different meanings to different people, and interpretations which depend on the goal of the researcher (Onwuegbuzie & Leech, 2005). Therefore, both qualitative and quantitative data analysis techniques were used. Quantitative data analysis was done based on descriptive statistical analysis using frequencies, percentages and bar graphs especially data gathered on the demographic characteristics of respondents and existing procurement practices. Additionally, qualitative analysis approach entailed the deliberate approach in deriving meanings and substantive interpretations from the collected data. It makes use of a non-numerical approach in data analysis.

Statistical software used included the Statistical Package for Social Scientists (SPSS) version 16.0 by Pearson Prentice Hall (2008) and Microsoft Excel 2017 by Microsoft Cooperation.

## **CHAPTER FOUR**

### **RESULTS, ANALYSIS AND DISCUSSIONS**

#### **4.1 INTRODUCTION**

The chapter presents the results, data analysis and discussions. The chapter is structured into three (3) sections. The first section concerns the demographic characteristics of respondents to the study. The second section details analysis of data of the various objectives of the study. The third however gives interpretation of data presented.

Seventy-eight questions were issued to the respondent for administration. Out of seventy-eight questionnaires, sixty-three (63) were retrieved representing a response rate of 81% of the total number of questionnaires issued. Table 4.1 below shows the number of questionnaires issued and received from the various regional offices and headquarters of the Ghana Highway Authority and their responsive rates.

From Table 4.1, only Ashanti Region had a 100% response rate with the rest of the regions recording a response rate of less than 90%. While there was a response rate of 87% at the head office, Greater Accra Region, Western Region (now Western and Western North Regions), Brong Ahafo Region (now Bono, Ahafo and Bono East Regions), Upper East Region, Central Region, Volta Region (Volta and Oti Region) all recorded 85% response rate. This implies that out of the 7 questionnaires issued to these regions, 6 were answered. However, the rest of the regional offices recorded 5 answered questionnaires out of the 7 issued except Northern Region which recorded 3 answered questionnaires. The inability of various regional offices to record a response rate up to 100% was attributed to unavailability of some Road Area Managers whose offices are not situated at the regional offices. It must however be reiterated that, the response's given by the rest of the respondents remained representative of Ghana Highway Authority.

Table 4.1: Details of Questionnaire Distribution, Rate of Return and Response.

| Category             | Questionnaires Issued | Questionnaires Received | Questionnaires Responsive | Response Rate (%) |
|----------------------|-----------------------|-------------------------|---------------------------|-------------------|
| Head Office          | 8                     | 7                       | 7                         | 87                |
| Greater Accra Region | 7                     | 6                       | 6                         | 85                |
| Ashanti Region       | 7                     | 7                       | 7                         | 100               |
| Eastern Region       | 7                     | 5                       | 5                         | 70                |
| Western Region*      | 7                     | 6                       | 6                         | 85                |
| Brong Ahafo Region*  | 7                     | 6                       | 6                         | 85                |
| Upper East Region    | 7                     | 6                       | 6                         | 85                |
| Upper West Region    | 7                     | 5                       | 5                         | 70                |
| Northern Region*     | 7                     | 3                       | 3                         | 43                |
| Central Region       | 7                     | 6                       | 6                         | 85                |
| Volta Region*        | 7                     | 6                       | 6                         | 85                |
| <b>Total</b>         | <b>78</b>             | <b>63</b>               | <b>63</b>                 | <b>81%</b>        |

\*Regions have been split but there exists only one regional office

Source: Field Survey, 2019

## 4.2 DEMOGRAPHY AND LEVEL OF CONVERSANCE WITH EXISTING PROCUREMENT PRACTICES IN GHANA HIGHWAY AUTHORITY

Demographic data of respondents were collected to understand the various characteristics of respondents. Variables which were sought for included highest educational level attained, type of profession and number of years respondents have worked under the authority. Respondents were also queried on their level of conversance with existing procurement practices in Ghana Highway Authority.

#### 4.2.1 Highest Level of Education Attained

Figure 4.1 illustrates the highest educational level attained by among respondents in Ghana Highway Authority. All 63 respondents who were interviewed had reached tertiary levels of education. However, of the 63 respondents, 28 and 17 hold a bachelor's degree and Higher National Diploma respectively. Postgraduate degree (MPhil/MSc) on the other hand accounted for 16 out of the total number of respondents. Only 2 respondents were PHD holders. Cumulatively, Bachelor degree holders accounted for almost half of the total number of respondents.

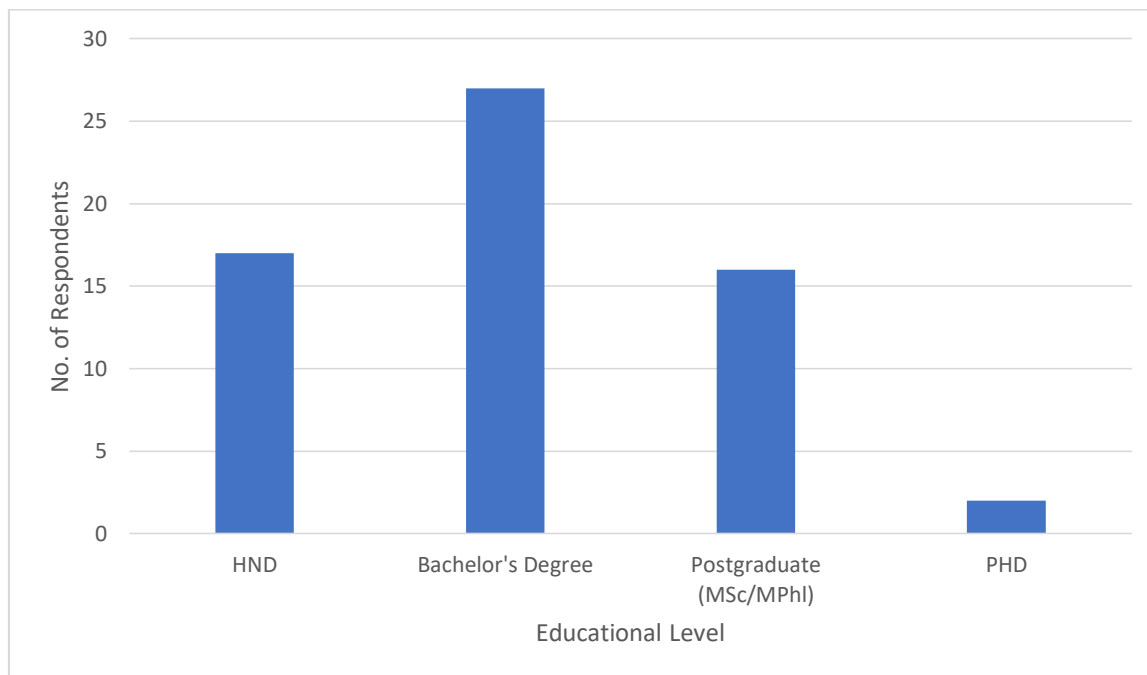


Figure 4.1 Highest level of Education Attained

Source: Field Survey, 2019

The data above suggest that most personnel under Ghana Highway Authority have a higher level of educational accomplishments. The objectives of planning, and maintenance of trunk roads comes with a responsibility that require thorough technical expertise for which the authority can boast of. With a 100% of respondents all possessing tertiary certificates, the authority has in

abundance of personnel who have the technical-know-how to ensure the realization of the objectives of Ghana Highway Authority

#### 4.2.2 Profession of Respondents

Data gathered from the study revealed that a majority of respondents (68%) were quantity surveyors with 23% being civil engineers. Survey Engineers accounted for only 9% of the total number of respondents while there were no respondents from the administration and accountants' section. The high number of quantity surveyor and civil engineers reveals the significant roles these personnel play in procurement activities within Ghana Highway Authority. Figure 4.2 gives a breakdown of respondents' profession in Ghana Highway Authority.

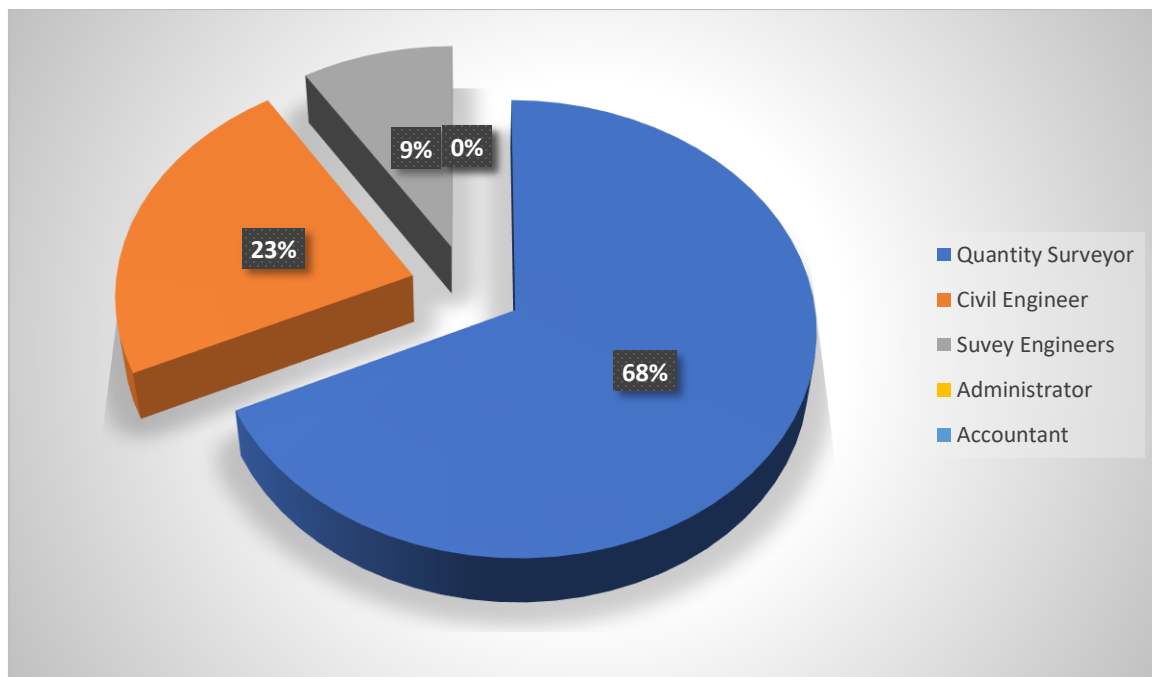


Figure 4.2 Profession of Respondents

Source: Field Survey, 2019

### 4.2.3 Years of Experience of Respondents

From Figure 4.3, 9 respondents representing 14% had worked in Ghana Highway Authority for less than 5 years. There were also 25 (39%) respondents who had been in the authority for 5- 10 years. On the other hand, 17 respondents representing 13% said that they had worked in the authority for 11-15 years while 12 respondents representing 19% had acquired more than 16 years of experience in Ghana Highway Authority.

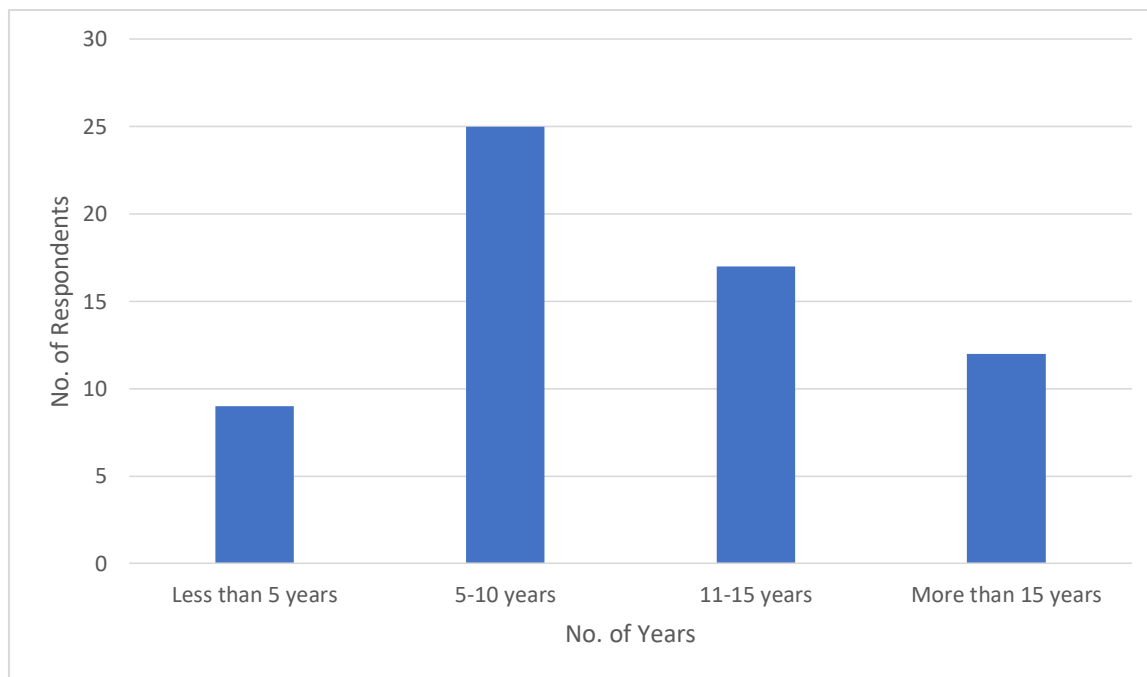


Figure 4.3 Years of Experience

Source: Field Survey, 2019

As a result of government's policy that restrict public sector employment, respondents who had a working experience of less than 5 years recorded the least number of respondents. The rest however have had more than 5 years of experience in the authority. This signifies that a good number of respondents have first-hand knowledge on the subject matter given the high number of years of experience

#### 4.2.4 Level of Conversance with Existing Procurement Practices in Ghana Highway

##### Authority

Regarding the extent of conversance with the existing procurement practices in GHA, from figure 4.4 below, 17 respondents representing 28% said they were very conversant, 36 respondents constituting 57% said they were conversant with the existing procurement practices in GHA, 7 respondents representing 11% indicated that they were fairly conversant with the existing procurement practices of GHA. While only 4% said they were not conversant, none of the respondents indicated that they were not sure. It was evident that, almost all the respondents were conversant with the existing procurement practices in GHA.

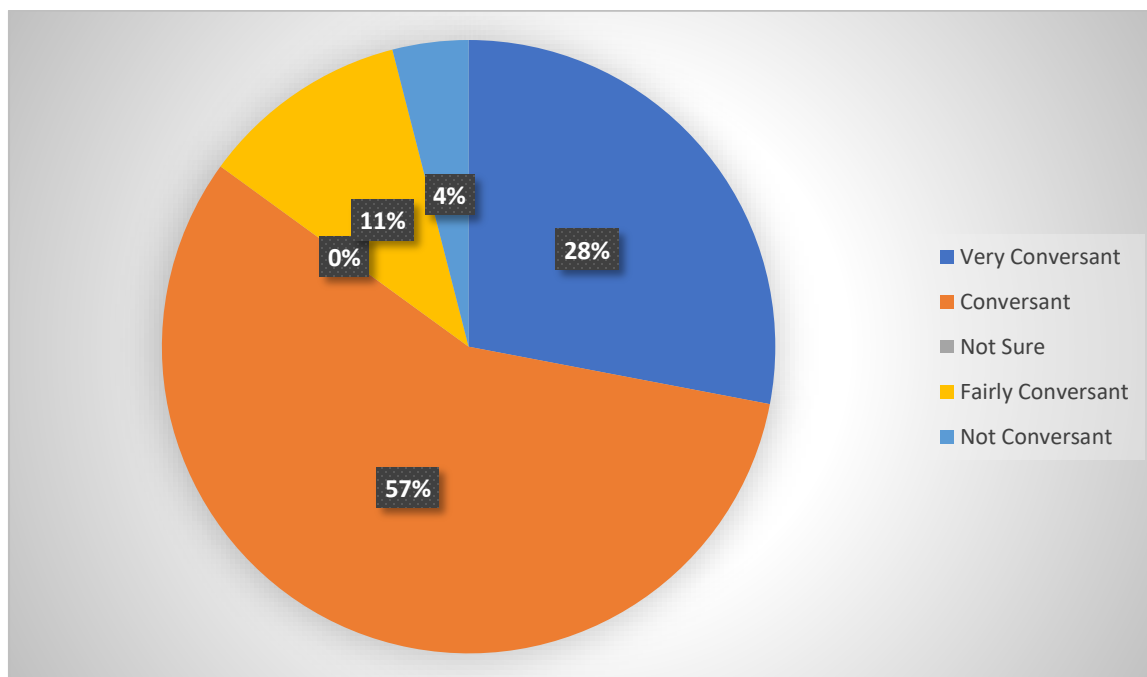


Figure 4.4 Level of Conversance with Existing Procurement Practices of GHA

Source: Field Survey, 2019

### 4.3 EXISTING PROCUREMENT PRACTICES IN GHANA HIGHWAY AUTHORITY

One of the objectives of the study was to identify existing procurement practices in Ghana Highway Authority with regards to the requirements in the Public Procurement Act (663 and 914). Respondents were to indicate the extent to which they agree to the various identified existing procurement practices of Ghana Highway Authority. Using a Likert scale, respondents were to assess the identified practices based on given criteria; strongly agree, agree, neutral, disagree and strongly disagree which were represented on a scale of 5, 4, 3, 2 and 1 respectively. The total weight ( $\sum W$ ) represents the number of points derived for a specific existing practice while the mean represents the average value around which respondents assessed a given practice. A mean above 2.5 indicate that respondents agree or strongly agree to the existing procurement practice proposed by the researcher. On the other hand, mean of below 2.5 indicates that respondents disagree or strongly disagree to the practice. For the purpose of rankings, the mean values for the various practices were used. The highest value is ranked first while the lowest mean value becomes the least ranked existing procurement practice in Ghana Highway Authority. Table 4.2: Existing Procurement Practices in Ghana Highway Authority

| Existing procurement practices in Ghana Highway Authority   | No. of Respondents | Total Score | Mean  | Standard Deviation | Rank            |
|---|--------------------|-------------|-------|--------------------|-----------------|
| 1. Threshold, complexity and urgent need of the item to procure determine the procurement method    | 63                 | 282         | 4.476 | 0.147              | 1 <sup>st</sup> |
| 2. The Authority advertises its tenders in newspapers   | 63                 | 278         | 4.413 | 0.153              | 2 <sup>nd</sup> |
| 3. The Authority uses PPA's Standard Tender Documents (STDs) and FIDIC for solicitation for tenders | 63                 | 278         | 4.413 | 0.153              | 2 <sup>nd</sup> |

|  |    |     |       |       |                  |
|--|----|-----|-------|-------|------------------|
| 4. Notification of award is issued to the successful tenderers/bidders after tendering                               | 63 | 278 | 4.413 | 0.161 | 2 <sup>nd</sup>  |
| 5. The Authority keeps client/employer informed and involved in all procurement activities                           | 63 | 271 | 4.302 | 0.163 | 5 <sup>th</sup>  |
| 6. The Authority maintains a good relationship with contractors/suppliers  | 63 | 271 | 4.302 | 0.163 | 5 <sup>th</sup>  |
| 7. The Authority maintains confidentiality of all information including tenders/bids                                 | 63 | 267 | 4.238 | 0.167 | 7 <sup>th</sup>  |
| 8. The Authority keep proper records of all procurement activities   | 63 | 267 | 4.238 | 0.167 | 7 <sup>th</sup>  |
| 9. The Authority constitutes an ad hoc Tender Evaluation Panel for each tender                                       | 63 | 263 | 4.175 | 0.173 | 9 <sup>th</sup>  |
| 10. Identification of need and requirement definition, preparation of tender document before requisition is received | 63 | 252 | 4     | 0.179 | 10 <sup>th</sup> |
| 11. The Authority prepares a procurement plan for each fiscal year   | 63 | 233 | 3.698 | 0.185 | 11 <sup>th</sup> |
| 12. The Authority ensures integrity of the procurement process.  | 63 | 222 | 3.524 | 0.201 | 12 <sup>th</sup> |
| 13. The Authority practices decentralized Procurement system   | 63 | 222 | 3.524 | 0.201 | 12 <sup>th</sup> |
| 14. The Authority has a data base for Contractors/suppliers who are reliable   | 63 | 222 | 3.524 | 0.201 | 12 <sup>th</sup> |
| 15. The Authority publishes results of award in the procurement bulletin   | 63 | 222 | 3.524 | 0.201 | 12 <sup>th</sup> |
| 16. There are other divisions in the Authority which are in charge of procurement activities.                        | 63 | 219 | 3.476 | 0.213 | 16 <sup>th</sup> |
| 17. The Authority has a procurement unit that  | 63 | 211 | 3.349 | 0.218 | 17 <sup>th</sup> |

|  |    |     |       |       |                  |
|--|----|-----|-------|-------|------------------|
| coordinates all the activities of procurement          |    |     |       |       |                  |
| 18. GHA gives notice to unsuccessful Tenderers/bidders | 63 | 174 | 2.761 | 0.322 | 18 <sup>th</sup> |
| 19. The Authority practices e-procurement              | 63 | 126 | 2     | 0.428 | 19 <sup>th</sup> |

Source: Field Survey, 2019

Inventory from the field survey suggest that, respondents viewed the consideration of “threshold, complexity and urgent need of the item to procure determine the procurement method” as the highest ranked procurement practices with a mean score of 4.476 and 0.147 standard deviation. Respondents further agreed that the advertisement of tender, the use of PPA standards Tender Documents and FIDIC for solicitation of tender as well as notification of award to successful tenderers/bidders after tendering with each having a mean of 4.413 and a standard deviation of 0.153, 0.153, 0.161 respectively. Respondents further agreed that the authority keeps client/employer informed and involved in all procurement activities and also maintain a good relationship with contractors. These practices were both ranked 5<sup>th</sup> with mean values of 4.302 and with standard deviation of 0.163. However, the least ranked practices namely; the presence of a procurement unit in GHA, giving notice to unsuccessful tenderers/bidders and the practice of e-procurement had mean values of 3.349, 2.761, and 2 respectively.

#### **4.4 CHALLENGES OF EXISTING PROCUREMENT PRACTICE IN GHANA**

##### **HIGHWAY AUTHORITY**

Every procurement practice meted out by procurement entities faces some sort of challenges and these affect entities’ operations. The study intended to identify factors that pose as challenges to existing procurement practices of Ghana Highway Authority. Respondents were to indicate the extent to which they agree to the various identified challenges of existing procurement practices

of Ghana Highway Authority. Table 4.3 gives a summary of response given by respondents on the challenges of existing procurement practice of GHA.

Table 4.3: Challenges of Existing Procurement Practices in GHA

| <b>Challenges of existing procurement practices in Ghana Highway Authority</b> | <b>No. of Respondents</b> | <b>Total Score</b> | <b>Mean</b> | <b>Standard Deviation</b> | <b>Rank</b>      |
|--|---------------------------|--------------------|-------------|---------------------------|------------------|
| 1. Political interference  | 63                        | 293                | 4.650       | 0.152                     | 1 <sup>st</sup>  |
| 2. Delay in release of funds   | 63                        | 278                | 4.413       | 0.161                     | 2 <sup>nd</sup>  |
| 3. Corruption/Self enrichment  | 63                        | 267                | 4.238       | 0.173                     | 3 <sup>rd</sup>  |
| 4. Inadequate time for project preparation                                     | 63                        | 256                | 4.063       | 0.186                     | 4 <sup>th</sup>  |
| 5. Misplaced priority  | 63                        | 252                | 4           | 0.212                     | 5 <sup>th</sup>  |
| 6. Government policies   | 63                        | 248                | 3.937       | 0.223                     | 6 <sup>th</sup>  |
| 7. Poor performance by some contractors  | 63                        | 237                | 3.762       | 0.254                     | 7 <sup>th</sup>  |
| 8. Inadequate training and education on procurement                            | 63                        | 230                | 3.651       | 0.269                     | 8 <sup>th</sup>  |
| 9. Inadequate funding  | 63                        | 222                | 3.524       | 0.271                     | 9 <sup>th</sup>  |
| 10. Inadequate procurement planning  | 63                        | 222                | 3.524       | 0.273                     | 9 <sup>th</sup>  |
| 11. Lack of motivation for staff   | 63                        | 200                | 3.175       | 0.284                     | 11 <sup>th</sup> |
| 12. Inadequate procurement personnel   | 63                        | 193                | 3.063       | 0.296                     | 12 <sup>th</sup> |
| 13. Poor Contract Management   | 63                        | 185                | 2.937       | 0.306                     | 13 <sup>th</sup> |
| 14. Poor understanding of the Public Procurement Act                           | 63                        | 167                | 2.651       | 0.354                     | 14 <sup>th</sup> |

Source: Field Survey, 2019

With mean scores of 4.650, 4.413 and 4.238 respectively, respondents revealed that the most serious challenges to procurement practices in Ghana Highway Authority include political

interference, delay in release of funds and corruption/self-enrichment. These factors occupied the 3 most highly ranked challenges of procurement practices in Ghana Highway Authority with standard deviations of 0.152, 0.161, 0.173 respectively. However, inadequate time for project preparation and misplaced priority were also cited as other intrinsic factors hampering procurement practices in Ghana Highway Authority. These factors were ranked 4<sup>th</sup> and 5<sup>th</sup> with mean of 4.063 and 4 respectively. In order of the extent of agreement by respondents, government policies, poor performance by some contractors and inadequate training and education on procurement were also ranked 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> respectively with mean values of 3.762, 3.651 and 3.524. However, respondents regarded inadequate procurement personnel, poor contract management and poor understanding of the Public Procurement Act as the least ranked challenges confronting procurement practices in the authority.

#### **4.5 WAYS OF IMPROVING PROCUREMENT PRACTICES IN GHANA HIGHWAY AUTHORITY**

After assessing the various challenges confronting the existing procurement practices in Ghana Highway Authority, respondents were again to indicate the extent to which they agree to the various identified ways of improving existing procurement practices of Ghana Highway Authority. Using the Likert Scale, respondents were to express their extent of agreement to identified ways of improving existing procurement practices. Table 4.4 gives a summary of the responses given by respondents on the ways of improving existing procurement practices in Ghana Highway Authority.

From Table 4.4, the total weight ( $\sum W$ ) represents the number of points derived for a specific way while the mean represents the average value around which respondents assess a given way. A mean above 2.5 indicate that respondents agree or strongly agree to the way of improving existing

procurement practice proposed by the researcher. On the other hand, mean of below 2.5 indicates that respondents disagree or strongly disagree to the way. For the purpose of rankings, the mean values for the various ways were used. The highest value is ranked first while the lowest mean value becomes the least way of improving existing procurement practice in Ghana Highway Authority.

Table 4.4: Ways of Improving Procurement Practices in GHA

| <b>Ways of improving procurement practices in Ghana Highway Authority</b>                    | <b>No. of Respondents</b> | <b>Total Score</b> | <b>Mean</b> | <b>Standard Deviation</b> | <b>Rank</b>      |
|--|---------------------------|--------------------|-------------|---------------------------|------------------|
| 1. Less government interference  | 63                        | 296                | 4.698       | 0.142                     | 1st              |
| 2. Adoption of a well-structured electronic system that inculcate all procurement activities | 63                        | 297                | 4.714       | 0.149                     | 2nd              |
| 3 Clearly defined procurement plan covering all procurement items                            | 63                        | 289                | 4.587       | 0.152                     | 3rd              |
| 4. Communicate openly and effectively  | 63                        | 281                | 4.460       | 0.162                     | 4th              |
| 5. Ensuring procurement ethics, such as transparency, competitiveness efficiency etc.        | 63                        | 278                | 4.413       | 0.184                     | 5 <sup>th</sup>  |
| 6. Clearly defined means of accountability   | 63                        | 278                | 4.413       | 0.184                     | 5 <sup>th</sup>  |
| 7. Establishing procurement unit/division in the Authority                                   | 63                        | 278                | 4.413       | 0.184                     | 5 <sup>th</sup>  |
| 8. Employing competent staff   | 63                        | 274                | 4.349       | 0.193                     | 8 <sup>th</sup>  |
| 9. Organizing periodic workshops for staff   | 63                        | 271                | 4.302       | 0.197                     | 9 <sup>th</sup>  |
| 10. Ensure an efficient and effective contract management system                             | 63                        | 267                | 4.238       | 0.204                     | 10 <sup>th</sup> |
| 11. The use of mass media in the relay of information on all procurement related activities  | 63                        | 259                | 4.111       | 0.207                     | 11 <sup>th</sup> |
| 12. Sustainability of procurement  | 63                        | 256                | 4.063       | 0.232                     | 12 <sup>th</sup> |
| 13. Making objective decisions   | 63                        | 256                | 4.063       | 0.232                     | 12 <sup>th</sup> |
| 14. Employing competent staff  | 63                        | 233                | 3.698       | 0.287                     | 14 <sup>th</sup> |
| 15. Clarifying roles and responsibilities  | 63                        | 230                | 3.650       | 0.294                     | 15 <sup>th</sup> |

Source: Field Survey, 2019

With mean scores 4.698, 4.714 and 4.587, the respondents revealed less government interference, adoption of a well-structured electronic system that inculcate all procurement activities and clearly defined procurement plan covering all procurement items were placed 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> respectively. This stands to reason that, the above mentioned were revealed to be the top ways of improving existing procurement practices. Communicating openly and effectively and defining means of accountability were also ranked 4<sup>th</sup> and 5<sup>th</sup> respectively. However, the three least ranked ways of improving procurement practices included making objective decisions, employing competent staff and clarifying roles and responsibilities with mean values of 4.063, 3.698 and 3.650 respectively.

## **4.6 DISCUSSION OF FINDINGS**

### **4.6.1 Existing Procurement Practices in Ghana Highway Authority**

According to Table 4.2, except for the practice of e-procurement with a mean of 2, all other procurement practices assessed by respondents had a mean value of more the 2.5 average. This suggest that respondents had varying levels of agreement to all identified practices except for the practice of e-procurement which was refuted. More than half of the identified procurement practices recorded mean values of between 4 and 4.476 and were placed 1<sup>st</sup> to 10<sup>th</sup>. These practices recorded low standard deviation (0.147 to 0.179) values suggesting that responses given by respondents were not so divergent i.e. responses given by respondents were concentrated around “strongly agree”, “agree” and neutral. 11<sup>th</sup> and 17<sup>th</sup> ranked practices however had a mean of 3.698 to 3.349 also suggesting that respondent agree that procurement practices within this range was meted out in Ghana Highway Authority. Meanwhile, notices to unsuccessful tenderers/bidders and the practices of e-procurement by Ghana Highway Authority were the least ranked practices recording mean values of 2.761 and 2 respectively. The practice of e-procurement was the only

identified practice which recorded mean value of less than the 2.5 average. This indicates that respondents do not agree that the authority practices e-procurement in Ghana Highway Authority.

From Table 4.5 below the highly ranked procurement practice was “Threshold, complexity and urgent need of the item to procure determine the procurement method” according respondent. With a mean value of 4.476 and standard deviation of 0.147. From Table 4.5, most of the respondents (63.5%) showed various levels of agreement to the consideration of threshold, complexity and urgent need of the item to be procured to determine the procurement method. Respondents who strongly agreed to the first procurement practice constituted 27% while those who agreed were 36.5% of the total number of respondents. Only 12.6%. of respondents disagreed about the practice of the 1<sup>st</sup> procurement practice in Ghana Highway Authority. The result suggested that there was a general level of acceptance of the consideration of threshold, complexity and the urgent need of the item to be procured as the most important procurement practiced.

Table 4.5 Highest Ranked Procurement Practice in GHA

| <b>Criteria</b>   | <b>Frequency</b> | <b>Percentage</b> | <b>Cumulative Percent</b> |
|-------------------|------------------|-------------------|---------------------------|
| Strongly agree    | 17               | 27%               | 26.9%                     |
| Agree             | 23               | 36.5%             | 63.5%                     |
| Neutral           | 15               | 23.8%             | 86.5%                     |
| Disagree          | 4                | 6.3%              | 92.8%                     |
| Strongly disagree | 4                | 6.3%              | 100%                      |
| <b>Total</b>      | <b>63</b>        | <b>100%</b>       |                           |

Source: Field Survey, 2019

According to the study, the determination of procurement method for a particular procurement item can be a daunting task. Respondents indicated that the main factors considered by Ghana Highway Authority were the threshold, complexity and the urgent need of procurement item. Other procurement practices which was also considered as important was advertisement of tender in newspapers to bidders which ensures transparency, fairness and competition among bidders.

The authority also uses Standard Tender Documents by the Public Procurement Authority as well as the Federation Internationale Des Ingenieurs-Counseils (FIDIC) to conduct procurement activities.

On the other hand, the least ranked also recorded a mean of 2 and a 0.428 standard deviation. Although the practice of e-procurement recorded the least mean, it was identified as the highest standard deviation. This suggested that responses given by respondents were dispersed between the various given criterion (strongly agree, agree neutral, disagree and strongly disagree). Table 4.6 below gives an overview of responses given by respondents on the practice of e-procurement in Ghana Highway authority. From Table 4.6 only 4.8% of the respondents agreed that there was the practice of e-procurement in Ghana Highway Authority. Meanwhile a whopping 95.2% of respondents had varying levels of disagreement to the practice. While 55.6% disagreed, 39.7% strongly disagreed to the practice of e-procurement in Ghana Highway Authority. This stands to reason that, respondents generally expressed disagreement that the authority practiced e-procurement.

Table 4.6: Least Ranked Procurement Practice in GHA

| <b>Criteria</b>   | <b>Frequency</b> | <b>Percentage</b> | <b>Cumulative Percent</b> |
|-------------------|------------------|-------------------|---------------------------|
| Strongly agree    | 0                | 0%                | 0%                        |
| Agree             | 3                | 4.8%              | 4.8%                      |
| Neutral           | 0                | 0%                | 4.8%                      |
| Disagree          | 35               | 55.6%             | 60.4%                     |
| Strongly disagree | 25               | 39.7%             | 100%                      |
| <b>Total</b>      | <b>63</b>        | <b>100%</b>       |                           |

Source: Field Survey, 2019

#### 4.6.2 Challenges of Existing Procurement Practices in GHA

Data as revealed in Table 4.3 showed that, all the challenges assessed by respondents had mean of more than the 2.5 average. This indicates that respondents expressed various extent of agreement to identified challenges of procurement practices in Ghana Highway Authority. The results suggested that of 14 identified challenges of procurement practices in the authority, the first 5 ranked procurement challenges had a mean of 4 and above. However, political interference was the only challenge with a mean of above 4.5 indicating that respondents strongly agreed with the challenge. Table 4.7 shows the responses given by respondent on the extent of agreement with political interference as a challenge to procurement practices in Ghana Highway Authority. The results showed that while 30.2% of respondents strongly agreed that political interference is a challenge to procurement practice in the authority, 38.1% agreed. On the other hand, while 4.8% disagreed, 1.6% strongly disagreed with the assertion. The results showed that political interference recorded the highest proportion of respondents showing various levels of agreement. This suggested that political interference remains the most important challenge agreed by respondents affecting procurement practice in the Ghana Highway Authority.

Table 4.7: Highest Ranked Challenge of Existing Procurement Practices in GHA

| <b>Criteria</b>   | <b>Frequency</b> | <b>Percentage</b> | <b>Cumulative Percent</b> |
|-------------------|------------------|-------------------|---------------------------|
| Strongly agree    | 19               | 30.2%             | 30%                       |
| Agree             | 24               | 38.1%             | 68.1%                     |
| Neutral           | 16               | 25.4%             | 93.5%                     |
| Disagree          | 3                | 4.8%              | 98.4%                     |
| Strongly disagree | 1                | 1.6%              | 100%                      |
| <b>Total</b>      | <b>63</b>        | <b>100%</b>       |                           |

Source: Feld Survey, 2019

In order of rankings using the mean, delay in the release of funds, corruption/self-enrichment, inadequate time for project preparation and misplaced priority were ranked behind political interference in the same order. All challenges mentioned above had a relationship with each other. It was discovered that inadequate time for project preparation, delay in the release of fund, misplaced priority and political interference had an inter-twined relationship where each challenge lead to the other. There were also several incidences of ad-hoc tender as a result of unprecedented government policies and public outcries which had not been catered for in the procurement plan of the specific year in question. A larger percentage of the respondents were of the view that corruption takes place in procurement because people are not held accountable for their actions and decisions they make.

In the same way the least ranked challenges as assessed by respondent include inadequate procurement personnel (3.063), poor contract management (2.937) and Poor understanding of the Public Procurement Act (2.651). While these challenges recorded the least mean values, they had the highest mean deviations. This suggested that respondents had varied opinions on the level of agreement of these challenges to procurement practices. Table 4.8 gives a summary of responses on poor understanding of the Public Procurement Act as the least ranked challenge of procurement practices in Ghana Highway Authority. The results showed that almost 52.3% of respondents disagreed while 39% strongly disagreed that procurement officials did not understand the Public Procurement Act. Another 1.6% and 6.3% agreed and strongly disagreed with the challenge respectively. This gives an indication that the mere understanding of the Public Procurement Act was not a guarantee to proper procurement practices. Other internal factors such as political interference, delay in the release of funds and corruption would have to be addressed in the quest to ensuring proper procurement practices in GHA.

Table 4.8: Least Ranked Challenge of Procurement Practice in GHA

| Criteria          | Frequency | Percentage  | Cumulative Percent |
|-------------------|-----------|-------------|--------------------|
| Strongly agree    | 1         | 1.6%        | 0%                 |
| Agree             | 4         | 6.3%        | 4.8%               |
| Neutral           | 1         | 1.6%        | 4.8%               |
| Disagree          | 33        | 52.3%       | 60.4%              |
| Strongly disagree | 24        | 39%         | 100%               |
| <b>Total</b>      | <b>63</b> | <b>100%</b> |                    |

Source: Filed Survey, 2019

#### 4.6.3 Ways of Improving Existing Procurement Practices in GHA

On the ways of improving procurement practices in Ghana Highway Authority, respondents agreed that all remedies were essential to ensure proper procurement practices in the authority. All identified ways had a mean of more than the average of 2.5 with lowest recording a mean of 3.650 and a standard deviation of 0.294. On the other hand, less government interference was agreed to be the utmost way of ensuring proper procurement practices in Ghana Highway Authority.

The government and other political parties were advised to draw their road sector policies and projects ahead of time for inclusion in the authority's Long-Term Development Plan in order to ensure consistency with the objectives of Ghana Highway Authority. This would go a long way to avoid ad-hoc tenders and ensure strict adherence to projects drafted in the procurement plan.

The second ranked way of improving procurement practices was the adoption of a well-structured electronic procurement system that inculcate all procurement activities of the authority. With mean values of 4.714, respondents strongly agreed that the adoption of e-procurement system will not only go a long way of reducing incidence of corruption but will also ensure efficiency and effectiveness of procurement practices in Ghana Highway Authority. In line with this, the government of Ghana in April 2019 launched the Ghana Electronic Procurement System

(GHANEPS) in the quest to minimize face-to-face interaction as well as increasing productivity. Upon adoption, contractors will be able to respond to tenders, seek clarification and information at the comfort of their offices via the internet. Time and risks involved will all be reduced if not eliminated.

Respondents further revealed that the authority did not include the procurement of goods in its procurement plan it was high time GHA considered doing so. There is the need for the drafting of clearly defined procurement plan covering the procurement of works, services and goods. Needs assessment is also needed at the beginning of every fiscal year in order to channeling befitting road projects in the procurement plan.

On the flip side, making of objective decisions, employment of competent staff and clarifying of roles and responsibilities was adjudged the least ranked remedy to challenges of procurement practices although respondent agreed of their impact on procurement practices. They had the least mean values of 4.063, 3.698 and 3.650 respectively. Table 4.9 gives a summary of the responses on clarifying roles and responsibilities as a way of improving procurement practices. According to Table 4.9, 20.6% and 4.8% respondents agreed and strongly agreed to clarifying roles and responsibilities as a way of improving procurement practices in Ghana Highway Authority respectively. On the other hand, while 33.3% disagreed on the assertion, another 17.4% of respondents strongly disagreed. This showed a divergent response by respondents and it is represented by a relatively higher standard deviation of 0.294.

Table 4.9: Least Ranked Way of Improving Procurement Practice in GHA

| <b>Criteria</b>   | <b>Frequency</b> | <b>Percentage</b> | <b>Cumulative Percent</b> |
|-------------------|------------------|-------------------|---------------------------|
| Strongly agree    | 3                | 4.8%              | 4.8%                      |
| Agree             | 13               | 20.6%             | 25.4%                     |
| Neutral           | 15               | 23.8%             | 49.2%                     |
| Disagree          | 21               | 33.3%             | 82.5%                     |
| Strongly disagree | 11               | 17.4%             | 100%                      |
| <b>Total</b>      | <b>63</b>        | <b>100%</b>       |                           |

Source: Filed Survey, 2019

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS AND CONCLUSIONS**

#### **5.1 INTRODUCTION**

This chapter presents the summary of findings that have been drawn from the study. It also includes recommendations and conclusion that seeks to address some major challenges discovered in the study.

#### **5.2 SUMMARY OF FINDINGS**

The aim of the study was to assess ways of improving procurement practices for effective infrastructure delivery by Ghana Highway Authority. Three objectives were coined in order to realize the research objective. They were;

1. To examine the existing procurement practices of Ghana Highway Authority.
2. To identify the problems with the existing procurement practices of Ghana Highway Authority.
3. To assess strategies aimed at improving the existing procurement practices for effective project delivery by Ghana Highway Authority.

##### **5.2.1 Objective One: Existing Procurement Practices of Ghana Highway Authority**

The study revealed that with the exception of the practice of e-procurement, respondents agreed to all identified procurement practices by Ghana Highway Authority. According to analysis on data collected, respondents agreed that in determining the procurement method as part of procurement planning activities, Ghana Highway Authority prioritize threshold, complexity and urgent need of a procurement item to determine the procurement method. The second and third most ranked were the advertisement of tender in newspapers and use of Public Procurement Authority's Standard

Tender Documents and FIDIC for solicitation for tenders respectively. In order of ranking the 4<sup>th</sup> to the 10th procurement practices were identified as;

- Notification of award is issued to the successful tenderers/bidders after tendering
- The Authority keeps client/employer informed and involved in all procurement activities
- The Authority maintains a good relationship with contractors/suppliers
- The Authority maintains confidentiality of all information including tenders/bids
- The Authority keep proper records of all procurement activities
- The Authority constitutes an ad-hoc tender Evaluation Panel for each tender
- Identification of need and requirement definition, preparation of tender document before requisition is received

### **5.2.2 Objective Two: Problems with Existing Procurement Practices of Ghana Highway Authority.**

With respect to challenges of existing procurement practices of Ghana Highway Authority, respondents agreed to all identified challenges of procurement practices. Political interference, delay in release of funds and corruption were agreed by respondents as the most ranked problems facing the authority in their procurement practices. However, respondents regarded inadequate procurement personnel, poor contract management and poor understanding of the Public Procurement Act as the least ranked challenges confronting procurement practices in the authority. In order of ranking using the mean, the 1<sup>st</sup> ten ranked challenges of procurement practices as agreed by respondents include;

- Political interference
- Delay in release of funds

- Corruption/Self enrichment
- Inadequate time for project preparation
- Misplaced priority
- Government policies
- Poor performance by some contractors
- Inadequate training and education on procurement
- Inadequate funding
- Inadequate procurement planning

### **5.2.3 Objective Three: Ways of Improving Existing Procurement Practices in GH**

On the ways of improving procurement practices in Ghana Highway Authority, respondents agreed that all ways identified and assessed by respondents were essential to ensure proper procurement practices in the authority. All identified ways had a mean of more than the average of 2.5 with lowest recording a mean of 3.647 showing a higher level of agreement. Corresponding to the challenges of procurement practices, less government interference was agreed to be the utmost way of ensuring proper procurement practices in Ghana Highway Authority. The adoption of a well-structured electronic system that inculcate all procurement activities was also ranked 2<sup>nd</sup> by respondents. In order of rankings, the first ten ranked ways of improving procurement practices in Ghana Highway Authority include:

- Less government interference
- Adoption of a well-structured electronic system that inculcate all procurement activities
- Clearly defined procurement plan covering all procurement items
- Communicate openly and effectively
- Ensuring procurement ethics, such as transparency, competitiveness efficiency etc.

- Clearly defined means of accountability
- Establishing procurement unit/division in the Authority
- Employing competent staff
- Organizing periodic workshops for staff
- Ensure an efficient and effective contract management system

### **5.3 RECOMMENDATIONS**

- In response to the main challenge of existing procurement practice, it is recommended that the government and other political parties draw their road sector policies and projects ahead of time for inclusion in the authority's Long-Term Development Plan in order to ensure consistency with the objectives of Ghana Highway Authority. This would go a long way to avoid ad-hoc tenders and ensure strict adherence to projects drafted in the procurement plan.
- There is the need for the authority and government to fast-track the adoption and implementation of the Ghana Electronic Procurement System (GHANEPS). In this respect, incidence of face-to-face interaction will be reduced while efficiency and effectiveness in procurement practices of Ghana Highway Authority can be achieved.
- The authority is entreated to ensure strict adherence to defined procurement plan covering the procurement of works, services and goods. A comprehensive needs assessment is also needed at the beginning of every fiscal year in order to channel befitting road projects in the procurement plan.
- A comprehensive code of ethics should be designed by Ghana Highway Authority to serve as a blue print to guide activities of procurement. This code when designed must be duly enforced to bring some sanity in the procurement profession.

- Policy makers at the various public institutions/ministries should devote considerable time and resources to efficient procurement plan considering the importance of procurement plans in service delivery and the policy of enforcing compliance to development of procurement plans must be supported; by providing appropriate funding needed on time.

## **5.4 CONCLUSION**

The results of this study have shown that while highest ranked existing practices in Ghana Highway Authority was the consideration of threshold, complexity and urgent need of the procurement item, the advertisement of tender in newspaper and the use Public Procurement Authority's Standard Tender Documents and FIDIC for solicitation for tenders were equally important. Political interference, delay in release of funds and corruption were agreed by respondents as the highest ranked problems facing the authority in their procurement practices. Meanwhile, on the ways of improving procurement practices, less government interference was agreed to be the utmost way of ensuring proper procurement practices in Ghana Highway Authority while the adoption of a well-structured electronic system that inculcate all procurement activities and a clearly defined procurement plan covering all procurement items were placed 2<sup>nd</sup> and 3<sup>rd</sup> respectively.

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## **APPENDIX**

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

**FACULTY OF BUILT ENVIRONMENT**

**DEPARTMENT OF CONSTRUCTION TECHNOLOGY AND MANAGEMENT**

**POSTGRADUATE THESIS QUESTIONNAIRE**

**PROJECT TOPIC: ASSESSING WAYS OF IMPROVING PROCUREMENT PRACTICES  
FOR EFFECTIVE INFRASTRUCTURE DELIVERY BY GHANA  
HIGHWAY AUTHORITY**

Dear Sir/Madam,

I am a final year student of Kwame Nkrumah University of Science and Technology- KNUST from the Department of Construction Technology and Management, Kumasi, conducting a research on **the ways of improving procurement practices for effective infrastructure delivery** as part of the university's academic requirement for the completion of Master of Science degree programme in Procurement Management.

Your objective response to this questionnaire is an invaluable aid to this research work. All information provided would be treated as confidential and for academic purposes only. There are no rights or wrong answers.

In case of any doubt/s or need for clarification, please contact any of the addresses given below.

Thank You.

Supervisor

Prof. Theophilus Adjei-Kumi

Mob: **0244536995**

E-mail: **tadjeikumi@yahoo.com**

Student

Charlotte Korsah

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Please answer the following questions with a tick [✓] and comment where necessary

## SECTION A: **DEMOGRAPHIC CHARACTERISTICS AND ORGANIZATIONAL DATA**

1. What is the highest level of education you have attained?

- A. Higher National Diploma [   ]
- B. Bachelor's Degree [   ]
- C. Postgraduate (MSc/MPhil) [   ]
- D. PhD [   ]
- E. Others, specify.....

2. State your position in the Authority

- A. Quantity Surveyor [   ]
- B. Civil Engineer [   ]
- C. Survey Engineer [   ]
- F. Others, specify.....

3. How long have you worked with Ghana Highway Authority?

- A. Less than 5years [   ]
- B. 5-10 years [   ]
- C. 11-15 years [   ]
- D. More than 15 years [   ]

4. How conversant are you with the procurement practices in Ghana Highway Authority?

A. Very Conversant [   ]

B. Conversant [   ]

C. Not Sure [   ]

D. Fairly Conversant [   ]

E. Not Conversant [   ]

## SECTION B: EXISTING PROCUREMENT PRACTICES IN GHANA HIGHWAY

### AUTHORITY

1. Under listed are some identified procurement practices in Ghana Highway Authority. Please express your opinion by ticking the appropriate box

| Existing procurement practices in Ghana Highway Authority                                    | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|--|----------------|-------|---------|----------|-------------------|
| 1. The Authority has a procurement unit that coordinates all the activities of procurement   |                |       |         |          |                   |
| 2. The Authority practices decentralized Procurement system                                  |                |       |         |          |                   |
| 3. There are other divisions in the Authority which are in charge of procurement activities. |                |       |         |          |                   |
| 4. The Authority practices e-procurement   |                |       |         |          |                   |
| 5. The Authority prepares a procurement plan for each fiscal year                            |                |       |         |          |                   |
| 6. The Authority has a data base for Contractors/suppliers who are reliable                  |                |       |         |          |                   |
| 7. The Authority advertises its tenders in newspapers  |                |       |         |          |                   |
| 8. Notification of award is issued to the successful tenderers/bidders after                 |                |       |         |          |                   |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| tendering  |  |  |  |  |  |
| 9. Threshold, complexity and urgent need of the item to procure determine the procurement method                     |  |  |  |  |  |
| 10. The Authority constitutes an ad hoc Tender Evaluation Panel for each tender                                      |  |  |  |  |  |
| 11. The Authority keeps proper records of all procurement activities   |  |  |  |  |  |
| 12. The Authority publishes results of award in the procurement bulletin   |  |  |  |  |  |
| 13. The Authority uses PPA's Standard Tender Documents (STDs) and FIDIC for solicitation for tenders                 |  |  |  |  |  |
| 14. GHA gives notice to unsuccessful Tenderers/bidders   |  |  |  |  |  |
| 15. Identification of need and requirement definition, preparation of tender document before requisition is received |  |  |  |  |  |
| 16. The Authority maintains confidentiality of all information including tenders/bids                                |  |  |  |  |  |
| 17. The Authority keeps client/employer informed and involved in all procurement activities                          |  |  |  |  |  |
| 18. The Authority ensures integrity of the procurement process.  |  |  |  |  |  |
| 19. The Authority maintain a good relationship with contractors/suppliers  |  |  |  |  |  |
| Others please specify and rate them.<br>.....<br>.....   |  |  |  |  |  |

**SECTION C: CHALLENGES ASSOCIATED WITH PROCUREMENT PRACTICES IN  
GHANA HIGHWAY AUTHORITY.**

1. Below are some identified challenges of procurement practices in Ghana Highway Authority.

Please express your opinion on the under listed by ticking the appropriate cell

| <b>Challenges of existing procurement practices in Ghana Highway Authority</b> | <b>Strongly Agree</b> | <b>Agree</b> | <b>Neutral</b> | <b>Disagree</b> | <b>Strongly Disagree</b> |
|--|-----------------------|--------------|----------------|-----------------|--------------------------|
| 1. Inadequate procurement personnel  |                       |              |                |                 |                          |
| 2. Inadequate training and education on procurement                            |                       |              |                |                 |                          |
| 3. Poor understanding of the Public Procurement Act                            |                       |              |                |                 |                          |
| 4. Lack of motivation for staff  |                       |              |                |                 |                          |
| 5. Inadequate funding  |                       |              |                |                 |                          |
| 6. Poor Contract Management  |                       |              |                |                 |                          |
| 7. Delay in release of funds   |                       |              |                |                 |                          |
| 8. Poor performance by some contractors  |                       |              |                |                 |                          |
| 9. Inadequate procurement planning   |                       |              |                |                 |                          |
| 10. Political interference   |                       |              |                |                 |                          |
| 11. Misplaced priority   |                       |              |                |                 |                          |
| 12. Corruption/Self enrichment   |                       |              |                |                 |                          |
| 13. Government policies  |                       |              |                |                 |                          |
| 14. Inadequate time for project preparation                                    |                       |              |                |                 |                          |
| Others please specify and rate them.<br>.....                                  |                       |              |                |                 |                          |

**SECTION D: WAYS OF IMPROVING EXISTING PROCUREMENT PRACTICES FOR  
EFFECTIVE PROCUREMENT DELIVERY IN GHANA HIGHWAY  
AUTHORITY**

**1.** Below are some identified ways of improving procurement practices. Please express your opinion on the under listed by ticking the appropriate cell.

| <b>Ways of improving procurement practices<br/>in Ghana Highway Authority</b>                      | <b>Strongly<br/>Agree</b> | <b>Agree</b> | <b>Neutral</b> | <b>Disagree</b> | <b>Strongly</b> |
|--|---------------------------|--------------|----------------|-----------------|-----------------|
| 1. Clearly defined procurement structure   |                           |              |                |                 |                 |
| 2. Clearly defined procurement plan covering<br>all procurement items                              |                           |              |                |                 |                 |
| 3. Clarifying roles and responsibilities   |                           |              |                |                 |                 |
| 4. Less government interference  |                           |              |                |                 |                 |
| 5. Clearly defined means of accountability   |                           |              |                |                 |                 |
| 6. Organizing periodic workshops for staffs  |                           |              |                |                 |                 |
| 7. Adoption of a well-structured electronic<br>system that inculcate all procurement<br>activities |                           |              |                |                 |                 |
| 8. The use of mass media in the relay of<br>information on all procurement related<br>activities   |                           |              |                |                 |                 |
| 9. Ensure an efficient and effective contract<br>management system                                 |                           |              |                |                 |                 |
| 10. Making objective decisions   |                           |              |                |                 |                 |
| 11. Ensuring procurement ethics, such as<br>transparency, competitiveness, efficiency<br>etc.      |                           |              |                |                 |                 |
| 12. Communicate openly and effectively   |                           |              |                |                 |                 |
| 13. Employing competent staff  |                           |              |                |                 |                 |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| 14. Sustainability of procurement                              |  |  |  |  |  |
| 15. Establishing procurement unit/division<br>in the Authority |  |  |  |  |  |
| Others please specify and rate them.<br>.....                  |  |  |  |  |  |
| .....  |  |  |  |  |  |