

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

**Assessing the Effectiveness of Contract Management in Achieving Value for Money in the
Procurement of Works in the Public Sector: The perspective of GhIS, GIE & GIOC**

by

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A Dissertation submitted to the Department of Building Technology,
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in partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE

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DECLARATION

I hereby declare that this submission is my own work towards the MSc Procurement Management 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

Over the years, the government has lost millions of the tax payer's money through poor service or poor product delivery, corruption and extended contract periods, unfinished projects and cancelled contracts. Managing contracts in the past had little emphasis on its involvement in the achievement of value for money. This has triggered the need to assess the area of contract management in the procurement cycle on achieving value for money. This study focuses on identifying the gaps and providing more knowledge on how procurement contracts are formulated, implemented and administered in order to achieve value for money in the public procurement of works. To achieve this, professionals from three institutions (GhIS, GIE and GIOC) who had over ten years of experience were purposively chosen to take part in a semi- structured interview to ascertain how some practices were adopted in contract management to achieve value for money in the public procurement of works. From the interviews, it was noticed that procurement proceedings and processes were adequately followed although there was still room for improvement. The results also highlighted some practices that were implemented and enforced to ensure value for money such as the retention fund, regular site meetings, the use of certificates, the defects liability period and the Liquidated Damages etc. The results also revealed the role of the Quantity Surveyor as an enforcer and verifier of the works done to attain value for money. As recommendations, procurement procedures and guidelines should be effectively followed to ensure that there is value for money. Clients should also liaise with the appropriate personnel to ensure that works are completed according to specifications before certificates are honoured. Also, clients must release funds on timely basis and frequent variations to works should be minimized. Contractors must comply with specifications given by the client, and must also engage only skilled personnel in the works. These suggestions and more are emphasized in this study in an attempt to educate all in the procurement and construction fields on the attainment of value for money in the procurement of works.

Key words: Value for Money, Contract Management, Public Procurement, Works Contracts, Contract Administration, Ghana

DEDICATION

To God Almighty and my family, especially my Dad, Mr. Justice Samuel Mensah and Mr. Isaac Okornoe.

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Public procurement is directly associated with the acquisition of goods, services and works to support national and local government operations and most importantly, to provide public goods and services according to (Lynch, 2014). The Public Procurement Authority (2013) confirms that public procurement absorbs over 50% of government's revenue and contributes about 17% to Ghana's GDP. A study by Ameyaw et al. (2012) reports that the government of Ghana in consultation with its development partners has identified the public procurement system as an area that requires urgent attention in view of the widespread perception of corrupt practices and inefficiencies, and to build trust in the procurement system.

Various public institutions depend on the goods and services which they purchase to deliver their core services. These can range from basic and low value items such as pens and paper to high value and complex items such as IT enabled services and major infrastructure to support business change, or technical advice or equipment to support research and development. Purchasers need to purchase goods and services of the right quality, at the most cost effective price, in the most economic quantities, and ensure that they are available when needed. Failure to meet any of these requirements can seriously affect an organization's ability to meet its objectives and outputs and ultimately to deliver services to citizens. Procurement is therefore strategically important to organizations (National Audit Office, 2012).

Mitkus and Trinkūniene (2010) point out that one of the most important features which distinguishes works procurement from other processes is the complexity with the various stages

involved, which needs to be properly managed. The entity that commissions construction works must make critical decisions at various stages of the construction project.

(Mamiro, 2010) observed in his study that due to the cost implication embodied at the different stages throughout the process ranging from need identification up to contract management and termination, public procurement must be built on the principle of value for money.

Management of construction works includes adjustment of agreements between the client and the contractor. Preparation of an agreement has a great influence on economic success of both parties in increasing their profits and providing protection against possible risks. Proper contract execution largely determines the economic success of the parties involved (Podvezko, Mitkus and Trinkūniene, 2010)

Russell's study in 1999 (cited in Safa et al., 2017) maintains that the contract is one of the most important components of a construction project. A successfully completed project requires proficiency in the contract management and contractor selection process, as well as methods for optimizing contract management. Contract management covers all the activities performed by both the procuring entity and the supplier/contractor/service provider upon signing of the contract up to full discharge of the obligations of each party (Mamiro, 2010).

Mchopa (2016) further confirms that contract management is an important activity in public procurement especially in executing developmental projects while aiming at value for money. On the contrary, reports from the Public Procurement Regulatory Authority show that funds have been wasted due to poor contract management practices hindering value for money achievement.

As public procurement accounts for a substantial portion of the taxpayers' money, governments are expected to carry it out efficiently and with high standards of conduct in order to ensure high

quality of service delivery and safeguard the public interest (Organization for Economic Co-operation and Development, n.d).

(The Chartered Institute of Public Finance & Accountancy, n.d) asserts that due to a series of high profile governance failures, public scrutiny is running high. Ensuring that contracts achieve the intended outcomes must be of utmost importance to procurement and contract management professionals. It is therefore imperative that the effectiveness of contract management in the public procurement of works be critically examined to aim towards achieving value for money; and this is what the study seeks to achieve.

1.2 STATEMENT OF THE PROBLEM

Indeed, public procurement is the principal means through which governments meet developmental needs such as the construction of physical infrastructure (Mchopa, 2016). On the contrary, the pursuit for value for money in public spending remains a big challenge to governments and their institutions across most countries (Mchopa et al., 2014).

The Government of Ghana has lost millions of the tax payer's money through poor service or poor product delivery, corruption and extended contract periods, unfinished projects and cancelled contracts in the past years.

The World Bank (2003) has observed and reported that there exists a broad array of poor procedures and practices throughout the procurement cycle, especially, in the tendering and contract management process, which have been the cause of many of Ghana's public procurement problems, and where most of the leakages in public procurement funding occur and substantial savings could be realized.

A lot of good effort is spent during the selection of a supplier, contractor or service provider without further questioning whether what is being delivered is actually what is being paid for

(Mamiro, 2010). Procurement entities, therefore, need to exercise effective contract management to avert the apparent loss of value during this contract management phase of procurement, especially for works, which consume a lot of funds as compared to the procurement of goods and services (Mchopa, 2016).

Extensive research has been done on contract management with little emphasis on its involvement in the achievement of value for money. This has triggered the need to assess the area of contract management in the procurement cycle on achieving value for money. Thus, among other objectives, this study focuses on identifying the gaps and providing more knowledge on how procurement contracts are formulated, implemented and administered in order to achieve value for money in the public procurement of works.

1.3 AIM OF THE STUDY

To assess the effectiveness of contract management in achieving value for money in the public procurement of works.

1.4 OBJECTIVES OF THE STUDY

In order to achieve the aim of this research, the following objectives have been set:

1. To evaluate the adequacy of formulation of procurement of works contracts in achieving value for money.
2. To evaluate how works contract is enforced and implemented and its effectiveness towards achieving value for money.

1.5 RESEARCH QUESTIONS

This study sought to address the following research questions:

1. How adequate is the formulation of procurement of works contracts in achieving value for money?
2. How are works contracts enforced and implemented to effectively achieve value for money?

1.6 SCOPE OF THE RESEARCH

The study focuses on the contract management and administration practices in achieving value for money in procuring public works. The research was carried out in Accra, Ghana. The study was restricted to registered professionals who have been working in the consultancy or the construction industry for not less than ten years, as their experience is very key in answering the qualitative method of data collection. The professionals were sought to respond to an interview in the form of a structured open-ended questionnaire.

1.7 SIGNIFICANCE OF THE STUDY

The contract management stage of the procurement cycle is extremely significant to be ignored since it is vital for all procuring entities in attainment of value for money (Athumani, 2018). As stated earlier expansive research has been done on contract management in procurement with less emphasis on its involvement in ensuring the achievement of value for money. Findings of this study will therefore expand the literature that exists on the issue of contract management in the procurement of works for the benefit of academia. Furthermore, it will aid procurement officers as well as construction professionals in realizing the significance of efficient and effective contract management and administration practices on construction projects.

Again, the application of findings of this research, undoubtedly, will go a long way to ensure that proper mechanisms are in place to monitor and evaluate contractors' performance in the fulfillment of their contractual obligations, and to ensure that appropriate actions are taken to promptly remedy

any deficiencies observed in contract execution or the contract scope, terms and conditions (Lynch, 2014).

Finally, problems such as unreasonable cost overruns, extensive delays of construction projects, defects in building works and diminished productivity on construction sites can be minimized if not completely eliminated.

1.8 STRUCTURE OF THE REPORT

The framework of this study will be designed to gain insight into the objectives of the study and will include five chapters, namely: the General Introduction, Literature Review, Methodology, Analysis of results and Discussion, Conclusion and Limitations as well as Recommendations for Future Research. A brief summary of each of the chapters is given below:

Chapter One: Chapter one deals with the introduction, which includes the background to the study, problem statement, aims and objectives, scope, significance of the research, and structure of the report.

Chapter Two: The literature review which relates to the study of the previous secondary data that exist on the topic will be detailed here. This chapter will focus on reviews on research areas on contract management in the public procurement of works.

Chapter Three: This chapter will establish the method adopted for the study and hence, the appropriateness of the qualitative research approach. Also the use of an interview schedule will be reasoned in this chapter as well.

Chapter Four: This chapter will reveal the analysis and interpretation of the responses which will be gathered during the survey.

Chapter Five: This chapter will relate to the final conclusion where all the findings from the research will be summarized. The limitations faced while conducting this research will be well noted in this chapter, as well as recommendations for future research and improving the existing situation.

Figure 1.1 demonstrates the work flow of the study.

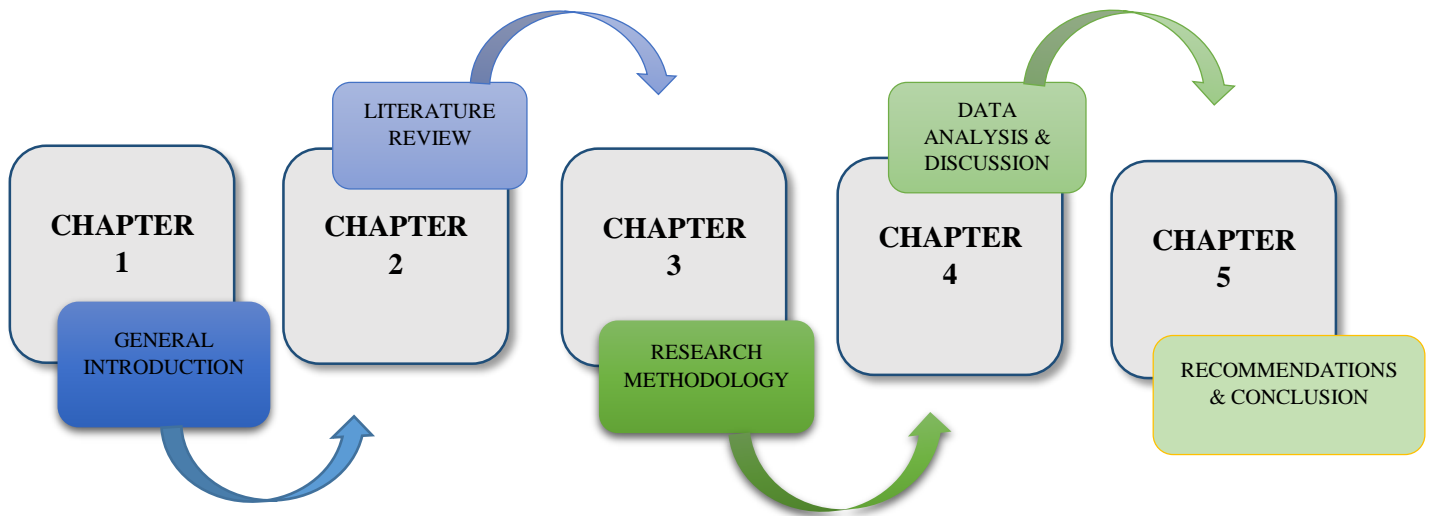


Figure 1.1: Outline of Research

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of this chapter is to review the literature on subject areas relevant to the research topic of the study. The review is directed towards identifying important themes, concepts, variables and significant findings and to facilitate the development of a theoretical framework for the study. The concept of efficient contract management in the public procurement of works is explored here with emphasis on its involvement in achieving value for money.

2.2 INTRODUCTION TO PUBLIC PROCUREMENT

Anvuur (2014) defines the term ‘Procurement’ as a means of acquiring goods, works or services at the best possible cost to meet the needs of the purchaser in terms of quality, quantity, time and location. Kidd (2005), in his study, also views procurement as a business management function that ensures identification, sourcing, access and management of the external resources that an organization needs or may need to fulfil its strategic objectives. It covers the complete range of events from the identification of a need for a good or service through to its disposal; and also involves the activities before and after the signing of a contract.

Public Procurement can be defined as a government function that involves using government resources (i.e. public funds) to obtain goods, works and services to meet the needs of government as it carries out its responsibilities for the citizens. The National Procurement Agency (2014) refers to public procurement as the overall process of acquiring goods, civil works and services which includes all functions from the identification of needs, selection and solicitation of sources, preparation and award of contract, and all phases of contract administration through to the end of a services’ contract or the useful life of an asset.

The World Bank (2003) indicates that the annual value of public procurement for goods, works, and consultancy services was about US\$600 million which represented about 14 per cent of Ghana's GDP. Public procurement is necessary for governments since it ensures security of supply, lower costs, reduced risk, improved quality, greater added value, increased efficiency and innovation (Kidd, 2005).

Indeed, Khi (2009) attests that all governmental entities of rich and poor countries are struggling in the face of unrelenting budget constraints; government downsizing; public demand for increased transparency in public procurement; and greater concerns about efficiency, fairness, and equity.

2.3 AN OVERVIEW OF GHANA'S PUBLIC PROCUREMENT SYSTEM

In 1996, the government of Ghana embarked upon an exercise to reform the Public Procurement System as an integral part of a wider Public Financial Management Reform Programme (PUFMARP). The exercise was to improve the overall public financial management in the country (Bamfo-Agyei, Hackman and Nani, 2015).

Prior to the enactment of the Public Procurement Act, 2003 (Act 663), the Ghana Supply Commission and the Ghana National Procurement Agency were the main governmental procurement agencies that were engaged in the procurement of all public goods on behalf of government since there was no comprehensive procurement guidance on the scope and procedures for the procurement of goods, works and services in Ghana. These bodies did not regulate procurement but only purchased goods and services on behalf of public entities as observed by Anvuur, Kumaraswamy and Male (2006) in their study.

In December 2003, the Government of Ghana enacted the Public Procurement Act 663. The Act became effective on 27th August 2004. The Public Procurement Act 2003 is expected to promote competition, efficiency, transparency and accountability in the award of contracts to ensure that

the country gets good value for its money. It established the Public Procurement Board. The Board makes administrative and institutional arrangements for procurement; stipulate tendering procedures and provide for purposes connected with these (Bamfo-Agyei, Hackman and Nani, 2015).

2.3.1 Objectives and Scope of the Public Procurement Act, 2003 (Act 663)

The Organisation for Economic Co-operation and Development (no date) observed that public procurement accounts for a substantial portion of the taxpayers' money, hence, governments are expected to carry it out efficiently and with high standards of conduct in order to ensure high quality of service delivery and safe guard the public interest.

In Ghana, the Public Procurement Act 2003 (ACT 663) defines and describes public procurement functions and responsibilities within which the public sector organizations and departments operate (Ofori-Nuako, 2014). The Public Procurement Act rests on 4 pillars: Transparency, Fairness, Economy and Sanctions which aim to provide guidelines for best practices in procurement, eliminate fraudulent practices, secure value for money in Public Procurement, maintain the integrity and sanctity of the Procurement Process and prescribe appropriate sanctions for acts of inefficient procurement (Affotey-Walters, 2007).

The Procurement Act serves as a guide in establishing the Public Procurement Board; making administrative and institutional arrangements for procurement; stipulating tendering procedures and providing for purposes connected with these (PPA Act 663, 2003). The main objective of the Act is to harmonize the processes of public procurement in the public service to secure a judicious, economic and efficient use of state resources in public procurement and ensure that public procurement is carried out in a fair, transparent and non-discriminatory manner (PPA Act 663, 2003).

2.4 INTRODUCTION TO PUBLIC PROCUREMENT OF WORKS

“Works” means work associated with the construction, reconstruction, demolition, repair or renovation of a building or structure or surface and includes site preparation, excavation, erection, assembly, installation of plant, fixing of equipment and laying out of materials, decoration and finishing, and any incidental activity under a procurement contract. (Section 98 of ACT 663 as amended in ACT 914).

According to Kidd (2005), Public Procurement of Works can best be defined as the business management function of public entities or organizations to ensure the identification, sourcing, access and management of infrastructure projects to meet their strategic objective of economic, political or social agenda.

Works contracts will often require technical supervision by an engineer/project management team to ensure quality, timely schedule and cost effectiveness (Seglah, 2014). According to PPA Annual report (2009), contract completion rate for the year was about 68%. This signifies that contract management is a major challenge for most entities (Seglah, 2014).

The APMG International (2018) confirms that infrastructure works and services provided by an external source on behalf of the government require as much, if not more, management by the procuring authority than those provided in-house. Although output-driven, such contracts require considerable management efforts on the part of the government. This is due to the nature of such contracts which have a long time span, require substantial works and services to be provided, and from which significant complexities arise due to the uncertainty of the future events and occurrences.

2.5 THE PROCUREMENT CYCLE

The procurement cycle is a road map of the activities within a procurement function. It establishes key activities required at every stage of the procurement process and also provides a benchmark for the monitoring and evaluation of the process by procurement monitors and evaluators (Amorichmond, 2014). The Procurement Cycle is initiated by establishing what is to be procured up to administering the contract and confirming compliance with the requirements.

Figure 2.1 below represents a typical procurement cycle in a construction or works project.

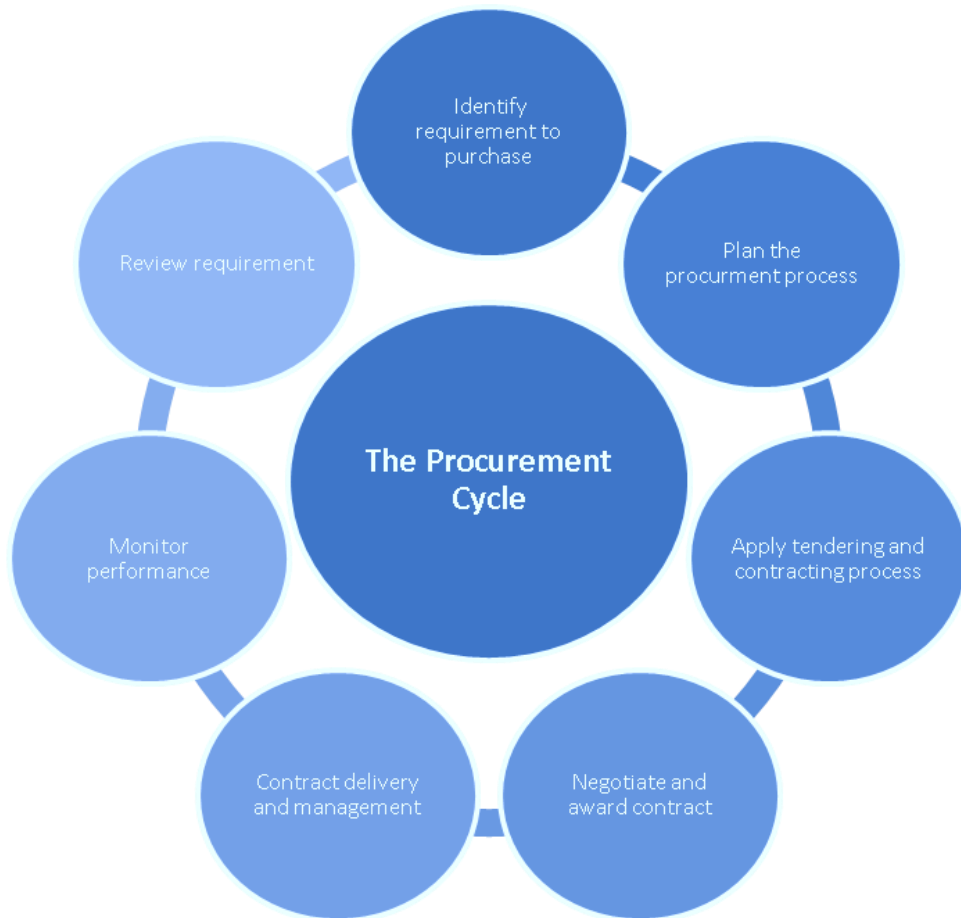


Figure 2.1: The procurement cycle (Public Procurement Authority, 2007)

2.6 THE CONTRACT MANAGEMENT STAGE OF THE PROCUREMENT CYCLE

Amo-Richmond (2014) suggests that any awarded contract must be managed to ensure that both the Client and the Supplier, Contractor or Service Provider perform their contractual responsibilities.

Contract management consists of a range of activities that are carried out together to keep the arrangement between customer and provider running smoothly. According to the Public Procurement Directorate of the Republic of Cyprus (2008), contract management refers to the procedures that allow a contracting authority to verify that the contractor is executing the project in accordance with the terms of the contract, providing the services/supplying the products or constructing the works that have been set forth by the tender documents, at the time and in the quantity defined in the contract but also with the quality and the cost that have also been defined in it. Contracts are frequently complex, may involve multiple actors, may last a long time and may consume many resources. It is therefore vital that they are properly managed (Ofori, 2014).

APMG International (2018) observed in its study that once the contract is finalized and services are procured, many parties fail to properly monitor and oversee the implementation of these contracts and fail to fulfil their contractual obligations. Failure to meet these obligations can result in missed savings, heavy fines, costly litigation, and broken relationships - all of which constitute decreased public benefits and Value for Money. Sound contract management is therefore crucial to the success of a PPP. Failure to adequately manage the project will inevitably erode its Value For Money and may ultimately undermine its objectives (APMG International, 2018).

Contract management is an indispensable stage in the procurement cycle. A contract management plan assists contract managers to properly manage contracts by addressing transition management, monitoring performance and helping to ensure that both parties fulfil their commercial and

contractual commitments. Contract management plans should be developed for all medium to high risk contracts. A public authority should ensure that contracts are managed in accordance with the contract management plan and that plans are kept current (Government of Western Australia, 2016). Contract life cycle management “is the process of systematically and efficiently managing contract creation, execution and analysis for maximizing operational and financial performance and minimizing risk (CIPS, 2007). Successful contract management, however, is most effective if pre-award activities are properly carried out (CIPS, 2007).

2.6.1 Contract Formulation and the Legal Framework

Contracts define the various aspects, obligations and relations between each party that are necessary to reach a common expected goal hence one of the most important tools in the construction sector as they contribute to successful completion of projects. Varmalis (2015) emphasizes that parties to a contract must conduct all business relationships with honesty and fairness and avoid any practice that gives one party an improper advantage over another. The complexities of large construction projects require that particular attention be directed to contracting strategy (Safa *et al.*, 2017).

In terms of contract management, specific concerns have been identified in research, such as conflicting terms, breach, and risk-management provisions. Dealing with these concerns and bridging the gap between construction experts, engineers, manufacturers, and researchers requires a model that provides a common platform and terminology shared by all stakeholders as observed by Safa *et al.* (2017). The aim of contract management is to enable both parties to achieve the obligations set within the contract. Pre-contract procurement activities lay the foundation for effectiveness of contract management in the procurement of goods.

According to section 65(1-7) of the Public Procurement Act 663 of 2003 as amended by Act 914, a tender that has been ascertained to be the successful tender in accordance with this Act shall be accepted and notice of acceptance of the tender shall be given within 30 days of the acceptance of the tender to the contractor submitting the tender. Where the tender documents require the contractor whose tender has been accepted to sign a written procurement contract conforming to the tender, the procurement entity and the contractor shall sign the procurement contract within 30 days after the notice. Where a written procurement contract is required to be signed, the contract shall enter into force on the commencement date indicated on the contract. If the contractor whose tender has been accepted fails to sign a written procurement contract within 30 working days of receipt of the notice of acceptance or fails to provide the required security for the performance of the contract, the procurement entity shall select a successful tender from among the remaining tenders that are in force.

During contract formulation, the terms and conditions of the contract need to be correct with fair dealing to both parties so as to guarantee the best attainable value for money, timely delivery of goods and cost effectiveness (Athumani, 2018).

2.6.2 Contract Award and Implementation

After the tender is evaluated, the award decision is made by the relevant authority, usually based on the recommendation made by the evaluation team. Once the contract has been awarded, the necessary steps are taken to proceed to the signing of the contract by both parties. At the end of this phase, the authority has in place an enforceable and effective contract, duly executed after the accomplishment of prior conditions (CIPS, 2007). The end of this phase represents the start of the life of the contract and the concurrent ‘contract management’ period.

During contract implementation a contract management plan has to be the prime document for managing quality and spells out how the quality objectives are to be achieved. Cost overruns and delays are effectively managed when there is a good contract management plan in place (Ndiokubwayo, 2008)

This stage also includes requirements such as:

1. Conducting a smooth construction process to avoid interruptions and re-scheduling
2. Delivering a contract that will demonstrate Value for Money and will benefit both parties
3. Ensuring that, at the time the contract is executed, the government will have a high degree of certainty that the contractor will secure the required financing and deliver the required outcomes according to schedule
4. Effectively utilizing competition to deliver the optimal Value for Money outcome for the government.

2.6.3 Areas of Contract Management

Whatever type of contract you are managing, the right relationship can create a value-adding environment (Foster, 2007). Contract management can be grouped under the areas of management of service delivery, management of the relationship with the supplier and contract administration. The first is concerned with ensuring that the service is being delivered in accordance with the agreed performance and quality levels set out in the contract; the second is concerned with maintaining and developing an open and constructive relationship with the supplier and the last with the formal management of the contract (CIPS, 2007).

2.6.3.1 Service delivery management

This activity is concerned with the fundamental aspect of contract management, that of ensuring that the actual service provided by the contractor is in accordance with the agreed standards and prices. The ability to measure the performance of the contractor and to provide feedback is critical to successful contract management.

2.6.3.2 Relationship management

Contractual arrangements may commit the organization to its contractor(s) for some time and to varying degrees of dependency. It is therefore important to make the relationship work effectively by developing mutual trust and understanding, creating an open and constructive environment and contributing to the joint management of the contract delivery.

The factors that encourage the development of a successful relationship include:

1. Securing senior level support in both organizations.
2. Ensuring that roles and responsibilities are clearly understood by both parties and that the necessary authority levels have been ascribed.
3. Ensuring that escalation routes are clear and understood but that problems are resolved as early as possible and as low down the management tree as possible.
4. Separating strategic matters from the day-to-day service delivery issues.
5. Ensuring that appropriate attitudes and behaviour are practised to assist the promotion of a positive relationship.
6. Communicating and sharing information at the appropriate levels between the organization and the contractor.

2.6.3.3 Contract administration

This activity is concerned with the practicalities of the relationship between the organization and the supplier and the operation of the routine administrative functions. The importance to the smooth running of post-award contract management should not be underestimated and it should be resourced appropriately. This is one of the primary responsibilities of a contract manager.

areas covered by contract administration and forming part of the responsibility of the contract manager are charges and cost monitoring, ordering and payment procedures, budget procedures, resource management and planning (CIPS, 2007).

2.6.4 Contract Administration Practices

Effective contract administration is a basis for an ongoing good relationship in the delivery of a project (Varmalis, 2015). Contract Administration formally commences when the building contractor signs the contract to deliver the building project and associated works. The Contract Administration phase covers all construction, subcontracting, procurement and installation of engineering services, commissioning, handover, defects rectification works, and extends to the final financial close of the project, (CPSP, 2011).

Contract Administration includes negotiating the terms and conditions in contracts and ensuring compliance with the terms and conditions, as well as documenting and agreeing on any changes or amendments that may arise during its implementation or execution (Ofori, 2014). It is also concerned with the mechanics of the relationship between the customer and the provider, the implementation of procedures defining the interface between them, and the smooth operation of routine administrative and clerical functions (Athumani, 2018).

Contract Administration involves making decisions and the timely flow of information and decisions to enable completion of the project as required by the contract documents including

review and observation of the construction project. This is important to the Owner and Consultant not only to determine that the work is proceeding in conformity with the contract documents but also because it allows a final opportunity to detect any inaccuracies, ambiguities or inconsistencies in the design(Ubuku Consulting, no date).

2.6.5 Challenges that Hinder the Effectiveness of Contract Management

The performance of construction in Ghana is poor and many reports have decried the public sector's lack of commercial edge in the exercise of its procurement function(Anvuur, Kumaraswamy and Male, 2006). The development of efficient and comprehensive competitive contracting approaches is a subject of global interest that deserves significant attention(Ioannou and Awwad, 2010).

2.7 THE CONCEPT OF VALUE FOR MONEY IN PROCUREMENT

Value for money (VFM) is the most important principle of procurement (Jeanette, 2008). Value for money is not about achieving the lowest initial price: it is defined as the optimum combination of whole life costs and quality(National Audit Office, 2012).

Pele (2007) suggests that Value for Money is achieved when public procurements are executed economically and efficiently. For this to happen government departments are required to adapt to creative ways to simplify procedures and eliminate wasteful expenditure and inefficiency to promote productive use of resources in public procurement. At the heart of the concept of Value for Money, are three critical elements namely economy, efficiency and effectiveness. This is known as the 3 E's (Pele, 2007).

1. Economy: Explores whether specific inputs are acquired at the lowest cost and at the right time.

2. Efficiency: This refers to how productively inputs are translated into outputs. It further means that there should be maximum output with little cost.
3. Effectiveness: The extent to which outputs achieve the desired outcomes (Amo-richmond, 2014)

Given the limited resources available to government, ensuring VFM in procurement is key to ensuring the optimum utilization of scarce budgetary resources (Ademan, 2015). VFM should always be assessed over the whole life of the project to consider sustainability issues. This should include disposal and take into account all costs and benefits to society as a whole (Ademan, 2015).

2.7.1 Factors That Ensure Value for Money in Public Procurement

Value for Money (VFM) VFM is often talked about but not quite well understood; it is not about buying the cheapest, but is the balance between the lifetime cost of the purchase and the quality and performance of that product or service. A number of factors contribute to the attainment of value for money in public procurement. These are generally dispersed throughout the entire procurement cycle. This is also to emphasize that the success of construction projects cannot thrive only on the post contract stage but also largely depends on how well the pre-contract stage is managed. These factors include but are not limited to the following:

1. Certainty and sustainability of service delivery over the life of the contract.
2. Early completion and commencement of service delivery of the facility/project.
3. A contractual form that encourages high-powered incentives for better service outcomes including quality construction for low life cycle costs.
4. Ex post performance measurement. Contractors are paid only for services delivered to specification over the life of the contract.
5. Competition in bidding processes and competitive dialogue during negotiations.

6. Design, construction and operational innovation.
7. Improved asset utility.

2.7.2 Challenges That Inhibit the Attainment of Value for Money in Procurement of Works Contracts

In 1996, the government launched Public Financial Management Reform Programme (PUFMARP) and the purpose of the programme, as noted by Ameyaw et al. (2012) was to improve financial management in Ghana. The programme identified several weaknesses in the procurement processes including lack of comprehensive public procurement policy and lack of rules and regulations to guide the procurement process (Ameyaw et al., 2012). Thus, these obstacles militated against value for money in the procurement process (see Osei-Tutu et al., 2011). The introduction of the Act was supposed to offer a breakthrough in providing value for money in public procurement. However, it appears that the public procurement system of Ghana is still handicapped in certain areas, thus the inability to effectively attain value for money:

1. Lack of accountability and transparency in procurement of goods, works and services at various institutions.
2. Inadequate skilled personnel in managing procurement at some public institutions.
3. Lack of top management support for VFM programmes.
4. Inadequate measures for monitoring and evaluation of the procurement activities to ensure VFM.
5. Problem of non-compliance with the VFM objectives of institution.

2.8 SUMMARY

Undoubtedly, as confirmed by Amo-Richmond (2014) the government will certainly not have sufficient resources to tackle all the immediate needs of its people simultaneously, therefore careful use of resources will contribute towards achieving the main objective of procurement, which is, the attainment of value for money. It is highly imperative that various institutions of the public sector adopt effective measures that can efficiently help in achieving value for money in the procurement of works contracts, and ultimately, minimizing construction problems such as poor quality, high risk, delay in works and cost overruns.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter details the procedures and strategies employed to achieve the research aim and objectives. The research strategy and research design, in addition to the methods and techniques used for data collection and analysis are covered in this chapter.

3.2 RESEARCH SCOPE

The research scope looks generally at the contract management and administration practices in achieving value for money in procuring public works. The research was carried out in Accra, Ghana. The study was restricted to the professionals who have been working in the consultancy or the construction industry for not less than ten years as their experience is very key in answering the qualitative method of data collection.

3.3 RESEARCH APPROACH

Having a research approach determines how one would collect the data. Basically, there are two approaches, namely, the inductive approach and the deductive approach. In the inductive approach the researcher analyzes the data as they are being collected and comes up with a conceptual framework that would be used to guide the ensuing work. This Saunders et al (2009) referred to as a grounded approach on account of the nature of the theory or explanation that came out by means of the research process. Saunders et al. (2009) added that there was the likelihood that the inductive approach may have some of the elements of a deductive approach and this happens when researcher wants to develop a theoretical position. Afterwards, one could then go ahead to test how it can be applied through successive data collection and analysis.

3.3 RESEARCH STRATEGY

The strategy adopted for this research is a census. This strategy examines the efficiency of contract management in achieving value for money, in order to induce key themes and results that would help to provide a means to understanding a research problem with greater clarity, and to also bring to light any hidden issues that need to be applied in contract management in public procurement. A case study approach was adopted so that the professional institutes which have a direct correlation with the subject matter were those who were sampled.

Boateng (2016) opined that there are basically three (3) research methods namely the quantitative, qualitative and mixed method. Selecting a research method depends on the objectives that have been set in place. Each research approach has its advantages and disadvantages.

The method employed here is qualitative as this research seeks to explore meanings, beliefs among others that someone (in this case, the registered professionals) associate with a phenomenon. The phenomenon in this case is achieving value for money. The qualitative research method is also employed in this study due to the following reasons: -

- a) To provide understanding into the study and generate ideas and for future research.
- b) This research is more exploratory and is relevant where it is necessary to know if consensus exists on an issue.

3.4 DATA SOURCES AND TYPES

Every research can make use of primary data and secondary data. These are the two basic types of data that can be used in a study. The primary data is basically the data collected by the person conducting the research himself/herself for the purpose of the research. Conversely, secondary data is data that has been collected by an institution or another person. For instance in Ghana, secondary data can also be used as the main source of data especially for quantitative studies. In

this research, primary data was the key type of data used since it is qualitative in nature. The source of the primary data was from the professionals which has already been stated. Secondary information from journals, articles and other published works were also used especially in the discussion to support the results obtained from the primary data.

3.5 POPULATION OF THE STUDY

A research population is in general an enormous collection of individuals or objects that is the main focus of a scientific query (Castillo, 2009). The population does not exclude any member of the group or collection. Taking into consideration the design of this study (qualitative study), the population used was made up of a small number of people. Qualitative research does necessarily need large populations. The target population for this study are procurement and construction professionals in public institutions in Accra, Ghana. In all, professionals who belong to the under listed professional Institutes were purposively chosen to be part of the study. These are the Ghana Institute of Construction (GIOC), Ghana Institution of Surveyors (GhIS), Ghana Institute of Architects (GIA) and Ghana Institute of Engineers (GIE). This group formed the population for the study. Nevertheless, using all professionals in these categories from all public institution may not be feasible since the precise number of the professionals is not known. Therefore, the best approach is to use a sample which is also a representation of the population. A brief description of what these institutes do have been discussed below.

3.5.1 Ghana Institute of Construction (GIOC)

According to the LinkedIn Profile of the Ghana Institute of Construction (GIOC), 2018, it is the pan-industry body for the construction industry in the country who work towards the promotion of excellence. One of the objectives of GIOC is that as a membership body, it seeks to bring together all relevant stakeholders all over the industry and from sectors who play relevant roles in

construction. This was done to give them a voice that is prominent and could get the attention of all. It is an open group for all professionals in the construction industry. At the time of this research, their official website was under maintenance. The institute have the relevant people who could address the questions that have been raised up in this study.

3.5.2 Ghana Institution of Surveyors (GhIS)

On 28th February 1969, the Ghana Institution of Surveyors was established. This was done at the Annual General Meeting of the Ghana Branch of the Royal Institute of Chartered Surveyors (Official Website of GHIS, 2018). GhIS came into force when a resolution was passed on this day and the Constitution governing GhIS was promulgated.

3.5.3 Ghana Institute of Engineers (GIE)

In 1968, the Ghana Institution of Engineers was founded as a professional body which was autonomous and did not have any affiliation to a political party. This was done to succeed the Ghana Group of Professional Engineers (Official Website of GIE, 2018). The institute turned 50 years in 2018. They have recently launched a chapter for women in engineering which are at the various public institutions.

3.6 SAMPLE SIZE

Determining the sample sizes for qualitative and quantitative research are different. Whereas, in quantitative, based on the population, one could use a formula, this may not apply to qualitative studies (Malterud, Siersma and Guassora, 2016). In qualitative studies, the concepts of saturation and information power have been the predominant concepts in determining the sample size. This direct implication of this is that the more information the sample holds, the more pertinent that specific sample is for the actual study. Therefore, using a smaller number of participants will be appropriate instead of sampling a large group who may not have the relevant knowledge on that

particular subject. Other critical points to note is the strategy for analysis as well as the quality of dialogue for the structured interviews (Malterud, Siersma and Guassora, 2016). Therefore, the sample size for this study was 8; however based on the responses and availability of the respondents, the sample size was then reduced to five (5). Table 3.1 shows how professionals from the various institutes participated in the study according to their level of willingness and availability.

Table 3.1 Institutes participated in the study according to their level of willingness and availability

Institution	People interviewed
GIOC	2
GhIS	1
GIE	2
Total	5

Source: Author's construct

3.7. SAMPLING TECHNIQUES AND SAMPLE FRAME

The study adopted purposive sampling as the main sampling method adopted in this research. This type of sampling can be used in situations where the researcher needs to reach a targeted sample in a quick and effective manner where proportionality is not the major concern. The reason for choosing this method of sampling is that the subject under discussion needs the opinion of specialists in the field and not every person who is part of the professional institutes.

Figure 3.1 illustrates the process that was followed in the sampling.

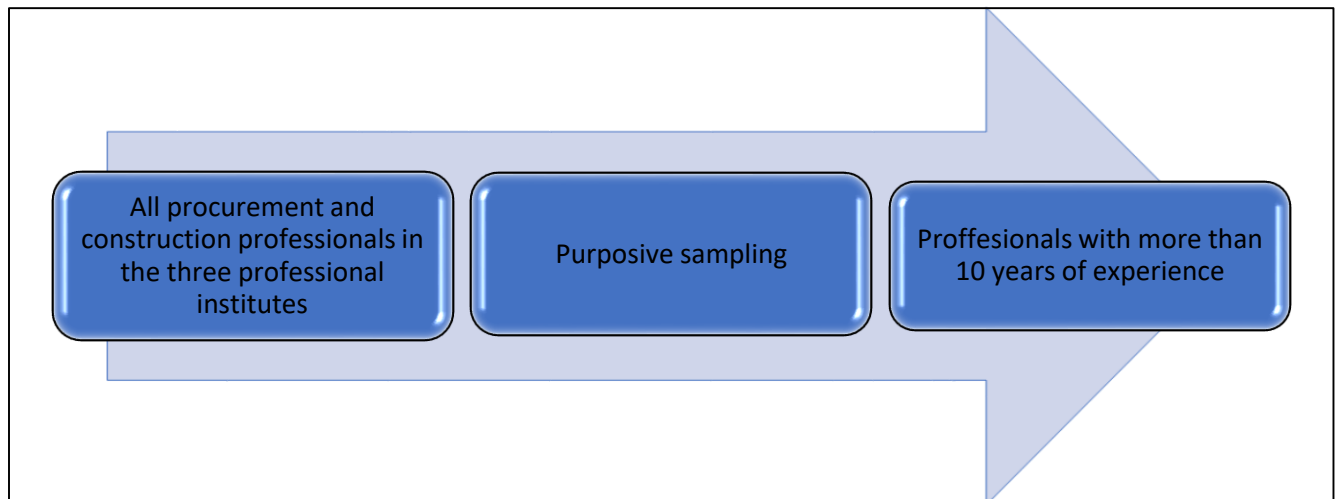


Figure 3.1: Sampling method used for the study (Source: Author's construct)

3.8 DATA COLLECTION METHODS

For qualitative studies, one is limited to the use of interviews which may be a structured one or a semi-structured one. Another technique is to use focus group discussions and also to use observations (Saunders et al, 2009; Boateng 2016). Using focus group discussions in this study is not feasible since the professionals are scattered over the departments and offices in Accra. Therefore conducting an interview is the option that was most favorable in this study.

The main technique used to collect the data is semi-structured interview. Using interviews as data collection instruments help interviewees to be able to bring out opinions on specific issues with their very own words.

Using semi-structured interviews helps the researcher to be able to probe further on the issue which has been asked when they need further clarification. Therefore, by design, the questions that are asked in these cases are open-ended in nature. Care was taken to have the interviews recorded by bringing along an audio device and asking the consent of the respondents. The recordings were also done so that after the interviews, one could always go back to a word that was said even if the

researcher forgot to write everything that was said. The researcher sent an initial email and phone calls to the departments of the institutions. The institutions then responded by giving the name of the preferred candidate for the interview. Afterwards, there was a date that was set for the interview and that was from the 19th to the 30th of August, 2018. Averagely the time it took for an interview was 20 minutes. The interview questions were formed into different sections based on the literature and the research questions for the study.

3.8.1 Interview guide

Section A of the guide had questions on the respondent's profile: age, gender, their institutions and the number of years they have worked. Section B was developed on the formulation of procurement of contracts in achieving value for money. This was to know if respondents were aware of the public procurement proceedings. Section C had questions that were related to contract management and administration practices that were geared towards achieving value for money.

3.9 DATA ANALYSIS OF QUALITATIVE STUDY

In literature, three principal strategies are available in qualitative data analysis for use. Maxwell (2005) stated that these are firstly to categorize these strategies (for instance coding and thematic analysis), secondly to connect the strategies (for instance narrative analysis and individual case studies), and lastly by using memos and displays.

For the purpose of this research, thematic matrix analysis was adopted as the method of analyzing data. This is because as a tool, it is independent of theory and epistemology. This can be applied through a number of approaches which could be either theoretical or epistemological in addition to methods which are different (Braun & Clarke, 2006). The first stage was that the data that was collected from the interview was transcribed verbatim. Afterwards, it was sorted into themes that came out after the transcription. The aim of doing a thematic matrix analysis is to bring out the

themes which are salient in a text at levels which are different. Using a thematic method helps to structure and depict these themes which are relevant to the subject under study. However the profile of the respondents were presented in pie-charts since it was easier to represent the data that way.

3.10 ETHICAL CONSIDERATIONS

For every research setting, there are some considerations that should be made in order for the findings of the study to be well appreciated. One of the first ethic that was considered was to clearly state to the respondents that the research is an academic one. Being professionals, some of them may not want to be part of a study as they may not want to say something that could cast a negative image on their institutions. They were therefore assured of strict confidentiality and also anonymity. Anything that they did not want to be stated on record was kept off record. Another ethic that was observed in the interview is that in probing further for information, the researcher did not make them feel like what they said was not the truth or that there was an air of doubt surrounding what they said with a sense of professionalism.

3.11 VALIDITY AND RELIABILITY OF DATA

One of the issues that came up that needs to be addressed is the issue of validity and reliability. Every researcher has to make sure that the data and techniques that he/she uses are valid. The issue of validity simply means the degree to which a test (in this case qualitative research) or an instrument (in this case the research guide) is able to measure or perform the task for which it was designed (White, 2009). Saunders et al., (2009) added that one thing that can reduce threats to reliability is to have a high degree of the structure during the interview schedule. Although for qualitative study, there are no set standards that exist to evaluate the validity, or authenticity of conclusions, Becker (1958) suggested some criteria that can be followed and this was used in this

study. The first criteria is the credibility of the respondent. In case of this research, the researcher limited the years of experience that the respondents should have to a minimum of ten years. The second criteria according to Becker (1958) was if statements that were made in response to the interview questions sounded like a rehearsed statements or were these statements spontaneous. The third criteria is to reduce the bias that comes from the person carrying out the research. Here, there could be some questions that the researcher may ask based on a certain viewpoint that he/she had before conducting the research. Care was taken so that the above mentioned criteria for validity and reliability were maintained during the study.

3.12 SUMMARY

In conclusion, discussions in this chapter has highlighted the data sources and types used in the study. It has also discussed the methods of sampling and data analysis and also shown how the researcher dealt with issues of validity, reliability and ethics. The next chapter will now present what was obtained after the thematic analysis.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 INTRODUCTION

The purpose of this chapter is to detail the analysis of primary data collected from the five (5) registered professionals operating in the Accra Metropolis. The chapter discusses the respondents' views on the specific objectives of the study. Results obtained from the thematic analysis are examined here. It also discusses how the results obtained are in line with what other researchers have done or what the literature states in this case.

4.2 BACKGROUND OF RESPONDENTS

This section of the interview guide comprised questions seeking basic information to ascertain the respondents' knowledge about the study in order to provide detailed respondent characteristics.

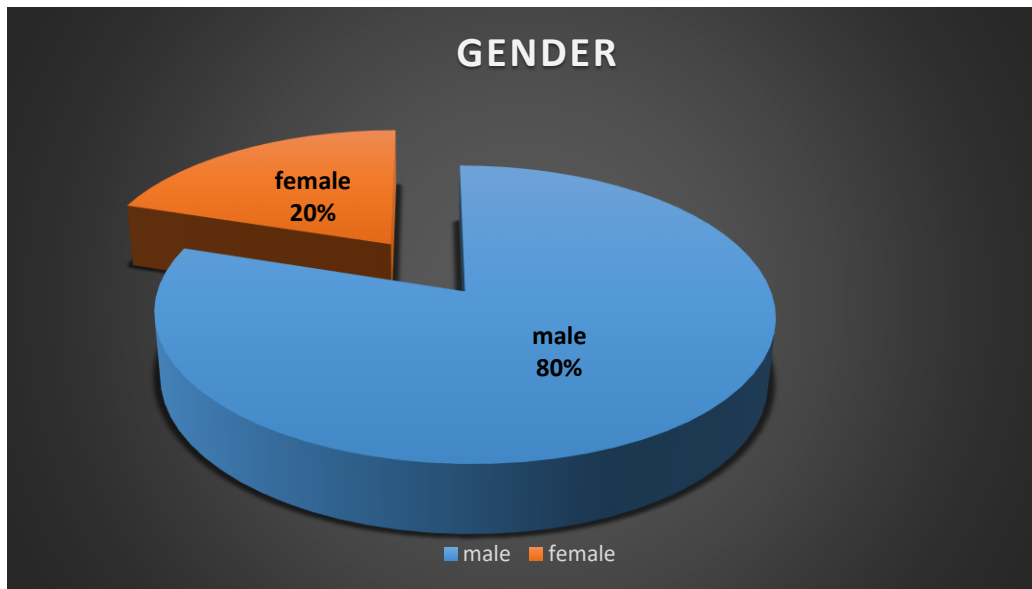
Data in this section included the following:

- ❖ Age and gender of respondent
- ❖ Membership to professional body
- ❖ Highest level of education completed
- ❖ Years of experience as an Architect
- ❖ Employment status
- ❖ Type of organization respondent belongs to

The relevance of this section is to establish the credibility or otherwise, and generate confidence in the data collected.

4.2 RESONDENTS PROFILE

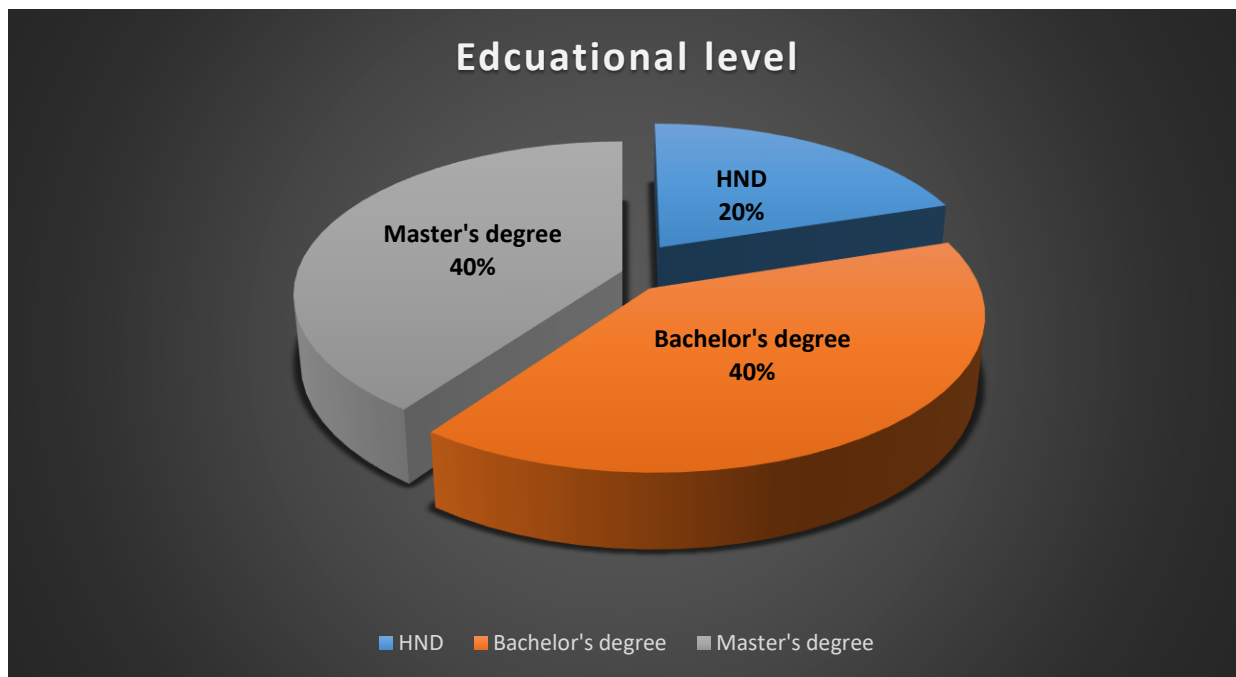
With respects to the gender of the respondents, four of the people (80%) interviewed are men, with only one woman representing 20% participated in the study as illustrated in the pie chart (Figure 4.1).



Source: Author's construct

Figure 4.1: Gender of the respondents

This does not mean that there are not sufficient women in construction, surveying, engineering or architecture in the country although these are male dominated industries.



Source: Author's construct

Figure 4.2: Educational level of the respondents

With respects to their level of education, one of them has an HND, two of them have a Bachelor's degree in their various fields and two of them also have a master's degree. The pie chart shows the educational level of the respondents (Figure 2). This implies that despite that fact that they have been working as professionals for over 10 years, they also have the relevant educational level.

Each person who participated in the interview was given a unique code. GOIC 1 stands for the first respondent from GOIC, GOIC 2 stands for the second respondent from GOIC. GIE 1 stands for the respondent from GIE and GhIS1 stands for the respondent from GhIS and the second respondent from GhIS has the code GhIS2. The summary of the respondent's profile is represented in Table 4.1.

Table 4.1: Summary of the respondents' profile

Code of respondent	Educational level	Employment status	Type of organization	Years of experience
GhIS 1	Bachelor's degree	Public	Client's organization	Above 15 years
GIOC1	Bachelor's degree	Private	Consulting firm	11-15years
GIE1	Bachelor's degree	Private	Contracting firm	11-15 years
GhIS2	HND	Public	Consulting firm	11-15yrs
GIOC2	Post-graduate (Msc)	Public	Contracting firm	11-15 yrs

Source: Author's construct

- **GhIS 1**

This person is a quantity surveyor and is a member of the Ghana Institution of Surveyors with over 15 years of experience. He has a Bachelor's Degree as his highest level of education and works with a client's organization. He works with a public institution.

- **GIOC 1**

He is a contractor and has a Bachelor's Degree and is a member of the Ghana Institute of Construction. He works with a private consulting firm with over ten years of experience

- **GIE1**

He is a project manager with a private firm and is part of the Ghana Institute of Engineering. With over ten years of experience to his credits, he works with a contracting firm.

- **GhIS2**

He has to his credit over ten years of experience and belongs to GhIS. He works as a consultant to a firm and has an HND.

- **GIOC2**

She has to her credit over ten years of experience in the construction industry. Her highest level of education is a post-graduate (Msc) degree and she is a project manager for a contracting firm. She is also a member of the GIOC.

All of these professionals are aware of the public procurement proceedings.

4.3 RESULTS OF THE INTERVIEW

After transcribing the interview section, the following themes emerged which are linked to the objectives of the study.

- ❖ Adequacy of procurement of works contracts in achieving value for money.
- ❖ Enforcement of works contract towards achieving value for money.
- ❖ Implementation of works contract towards achieving value for money.
- ❖ Effectiveness of works contract towards achieving value for money.
- ❖ Challenges that affect contract management and administration practices in achieving value for money.
- ❖ Measures to improve contract management and administration practices

This section is in three parts. The first part deals with the adequacy of procurement of works in achieving value for money while the second part deals with the enforcement, implementation and effectiveness of works contract towards achieving value for money. The final section deals with the challenges and measures of improving contract management and administration practices towards achieving value for money.

4.3.1 Adequacy of procurement of works in achieving value for money

With regards to how adequate the procurement of works are in achieving value for money, one of the areas to look at is first of all if the procurement proceedings are followed in formulation of contracts. This is against the background that there is a Public Procurement Act and in 2016, this Act was amended to have the Public Procurement Act (Amended) 914. From the interview, in both the public and private sectors, these proceeding (procedures) are followed. Some of them gave good grades to show how well these proceedings are followed.

“The procurement proceeding are quite followed in formulation of contracts. Some requirements of the ACT are mostly complied with. On a scale of 1-5, I would say 4”. GhIS 1

“Quite effectively, on a scale of 1-10, I will say an 8”. GhIS 2

“Procurement proceeding are effectively done to achieve the procurement objectives of a contract”. GIOC1

“Procedures are followed before awarding contract to best bidder or tender”. GIE1

4.3.1.1 Processes involved in formulating procurement contracts

After the procurement proceedings, the other thing to look at is the processes which are involved in formulating procurement contracts. Here, if the processes are not followed judiciously, there may be challenges in achieving value for money. According to (Amo-richmond, 2014), the

procurement cycle which is a road map of the activities within a procurement function has at the second stage the planning of the procurement process.

“The processes followed are quite sufficient except that there is still more room for improvement because I believe that if all the requirement of the ACT are strictly followed, there would be very little room for the problems that arise during procurement”. GhIS 1

Amo-richmond (2014) also mentioned that the third stage of the procurement process is to apply the tendering and contracting processes. In light of this there are some of them who opined that this is also duly followed in their statement below.

“Open tendering is made to the general public. Contractors or suppliers tender and effectively the best bidder is awarded the contract”. GIE1

However, some of them have divergent views with regards to the processes as some believe that the processes are not enough. If that is the case, it may have an impact on value for money.

“Processes are not sufficient because there is less transparency and gap in the formulating procurement of contract”. GIOC1

4.3.1.2 Formulation of procurement contracts for works to guarantee the achievement of value for money

Contracts should be formulated in a way that would guarantee value for money. As noted by APMG International (2018), once the contract is finalized, although there can be some variations that can be added, all these may have an effect on the expected date and budget. And all of which constitute decreased public benefits and Value for Money. Therefore, before the signatures are appended to the contract, care should be taken so that these contracts are formulated in the best way.

“The contracts are formulated in such a way so as to minimize waste of funds. However there are a few loopholes here and there that does not help the contracts to achieve total value for money. Examples are incompetence of some project managers, poor allocation to various resources of the projects among others. On a scale of 1-10, I will give it a seven”. GhIS 1

“To achieve value for money, stakeholder’s consultation is very important to access the expectation and the need for proper proceeding in contract works”. GIOC1

“The completion of all relevant designs, specifications and the subsequent pricing of them in a bill of quantities”. GIOC2

“I am certain that the way contracts are formulated can guarantee about 70-80% achievement of value for money”. GhIS2

In the formulation of the contract, there is a need to have a well-established purpose which at the end of the contract should be achieved. As Wang and Miguel (2011) argue, if contracts were properly designed, there are some risks which could not be mitigated such as schedule risks, cost risks, quality risks, commercial and other risks. In design, the purpose of the contract is very important. For some of them, the purpose of every contract was well established and usually achieved. There should be clarity of purpose for the contract to follow the necessary right proceedings and so to achieve the procurement goal. The clients normally highlighted the purpose for the contract and also gave specifications for the contract. However for some of them, this was not really the case as the purpose was not achieved due to not clearly defining the purpose

As asserted by Ofori (2014), contracts are frequently complex, may involve multiple actors, may last a long time and may consume many resources. Therefore, managing them is vital. One can also term these actors as stakeholders. It was observed that sometimes some of the stakeholders were involved. However, at some point they were excluded.

“Stakeholders such as donor, constructor, consultant, client and the end user are usually involved. However the only issue is that end users are usually involved up to a point and left behind when the project gets to a certain point”. GhIS1

“Some stakeholders are involved except when works contract are from the central government to other public institutions”. GIOCI

4.3.2 Enforcement, implementation and effectiveness of works contract towards achieving value for money

One of the ways of having effectiveness in implementing the contract is to have all the necessary personnel and equipment. With regards to the respondents, they were well equipped in terms of personnel. With regards to the equipment, the contractor could always hire the necessary ones needed for the job.

“In terms of personnel, the organization is quite well equipped except that sometimes project/contract managers that are engaged do not live up to expectation. Sometimes sensitive aspects of the work are left for the subordinates/supervisors to manage”. GIOCI

“35% personnel (hired staff). The rest are hired when needed. 80% will account for the equipment in contract administration practice”. GIOCI2

4.3.2.1 The importance of kick-off meetings and site meetings

The kick-off meeting or the pre-construction meeting is normally organized to explain the project objective and the project expectation before the start of that new projects. Discussions at this meeting centers on project deliverables by identifying key milestones and effective control measures. It is at these meetings that each party's (contractor and client) obligations are spelt out and those who are going to be involved in the project are introduced to both parties. It is also at these meetings that the methodology of the project is discussed.

“The organizations hold pre-construction (kick-off) meeting. This is usually done after signing of the contract and before actual works begin. However there has been an instance where the contractor fully mobilized his personnel and equipment to site months before the kick-off meeting was held”. GhIS 1

“To be able to complete the project on schedule while maintain quality standards with the ultimate aim of making profit by maintaining if not improving productivity and technology of carrying out the works(minimal materials wastages, employing excavators to carry out excavations instead of going manual or vice versa depending on the nature of the works”. GIOC 2

Additionally, after the kick-off meeting one of the ways to enforce the project is to hold site meetings regularly be it monthly, weekly or even every fortnight. These meetings are important as they help to review the progress of the works and also to do a forecast for the coming week. However all of this depends on the scope of the works. All of them asserted to the fact that they hold site meetings regularly. Additionally they are aware of the importance of these meetings if one wants to achieve value for money. This is one of the ways to monitor the project. monitoring of projects is very important and is one of the stages of procurement cycle (Amo-richmond, 2014). As is in line with APMG International (2018), once the contract was finalized and services procured, many parties failed to properly monitor and oversee the implementation of these contracts. Failing to do this decreases public benefits and Value for Money.

4.3.2.2 Payments

In Ghana, there are some procedures which are followed for payments to be made after a contractor has finished works, he has to raise an interim payment certificate. The works have to first and foremost measured (by a Quantity Surveyor and the contractor) after which interim payment certificate is raised and sent to the client for payment. In most cases, it should take a month for the

certificates to be honoured. But sometimes, this goes beyond one month because certain approvals were needed to be made before payment would be processed. Nevertheless, a delay in payments may result in an interest that would be accrued. The interest was normally calculated from the date the payment should have been made to the date the last payment was made. All these affect value for money because if someone has to pay an interest for late payment which was not budgeted for in the contract, then the total cost of the works would increase. The processes for request of payment has been discussed below

“The Quantity Surveyor goes to the site to measure the amount of work done to confirm if it matches up to the payment claimed by the contractor. That is after the contractor has issued an interim payment certificate”. GhIS2

“The contractor submits his certificate of work done to the consultant. The consultant and the client visit the site to certify work done by the contractor. The consultant endorses and forward the interim payment certificate to the project unit. They then verify the work done by the contractor and forward it to the ministry of finance and cheques are issued to the contractor”. GIOC 1

“Joint measurement of work done are carried out by the consultant (normally a Quantity Surveyor) and the contractor (normally the Site Engineer. An interim certificate is prepared by the consultant and issued to the client for payment”. GIOC 2

There may be some reasons why a construction works may delay where in one scenario, the client may want to modify or change the scope of work. In that case it becomes necessary to modify or alter the scope of work, the client approves change orders through the consultant. A formal letter is written to the consultant seeking approval if the change is coming from the contractor. A letter plus the necessary changes in designs from the consultant may be communicated to the contractor

if the change is coming from the client. The contractor can work on the changes and add variation to the new works done when submitting the interim payment certificate.

In the case where a contractor unjustifiably delays the work, a percentage of the contract amount was deducted from his payment. This is done each day for the delay and this is referred to as liquidated damages. It is the amount of money that would be lost as a result of the delay if the facility had been put to use. This measure is also put in place to ensure that there is value for money.

4.3.2.3 The retention fund

To ensure that there is value for money about 10% of the money to be paid is retained as retention fund when interim payment certificates are prepared. This is so that the works that would be finally released to the client would be of good quality and the client would have value for money. For every construction work, there is the defects liability period which is set aside in case any defects is found around that time. It is after the defects liability period, when the contractor has remedied all the defects, that the retention fund is released to the contractor. Other responses buttress what happens during this period which is important for a client to achieve value for money.

“Retention fund is released 6 months of completion of project when the client finds out that there is no defect on work done by the contractor”. GIOCI

“The retention is released after the defects liability period (DLP). If limit of retention is a condition in the contract, then half of the retention limit is released immediately to the contractor or practical completion and the other half released after the D.L.P”. GIOCI2

“Retention fund is released at two period of the contract. The first is at the practical completion of the works and the second is released when the defects liability period has expired and all defects have been remedied”. GhIS 2

4.3.2.4 Practical completion of a project and accompanying certificate

From the interviews, it was noted that at this stage of the project, there is site visitation and inspection of project where a consultant (Architect) checks on work done. Both parties (clients and contractors) go through a project close out and contractor hand over the facility to the client. If there are no issues, a certificate of practical completion is given to the contractor and the client can occupy the facility. It is at this stage that the client pays half of the retention to the contractor. He can also pay the full retention to the contractor if he provides a retention guarantee from a bank or an insurance company.

4.3.2.5 Penalties charged for works with poor quality

The general consensus that came out was that normally this does not usually occur, as a client is supposed to ensure that the contractor stuck to the given specifications. Normally due to site meetings that should go on regularly, the client at most stages of the works would notice if the construction was done according to specifications given. However, according to the experts, this depended on the time that the poor quality was detected. In this case, the seriousness of the client plays a major role to ensure that no shoddy work was done.

“It depends on the time the poor quality of work was identified. For example the contractor will be asked to correct poor quality at no additional cost to the client if they are detected during the construction stage. Retention is held by client if contractor fails to correct defects or poor-quality workers after DLP”. GIOC 2

“The consultant is responsible for ensuring that the contractors does quality work. Consultant should always ensure design is good and poor materials are not used in the construction of the works. The contractor pays for tests and samples that were not specified in the specification if the

tests proves to be defective. If the tests prove no defects, then the test will be treated under compensation events”. GhIS 2

4.3.2.6 The defects liability period

The defects liability period has been set aside so that defective works would be properly rectified. Defects arising as a result of poor workmanship are communicated and rectified properly. Some defects are not accepted such as defect resulting from the negligence on the part of end users/client. The contractor normally repairs any defect during the defect liability period which may come up as a result of poor work done on the part of the contractor. After that, defective works are checked before the 5% of retention is paid. All these processes have been set in place so that at the end, the client would be satisfied and value for money would also be achieved. When the defects liability period expires, a client can release the retention amount to the contractor as he remedies all defects or he could engage another contractor to remedy all defects and payment made from the retention money.

4.3.3 Challenges in contract management and administration practices that affect the attainment of value for money

One of the challenges that came up is that sometimes contracts are not completed within the required time as indicated in the contract terms and conditions due to extensions of time. The responses below buttress this point.

“Mostly contracts are not completed on the expected date”. (GIE1)

“Contracts are completed within the required budget as indicated in the contract terms and conditions but sometimes there are cost overruns because of inflation”. (GIE1).

The additional costs affects the budget of the works. For instance in Ghana, the cost of goods keeps on increasing on a daily basis due to macroeconomic factors. Currently the cedi is depreciating

against the other foreign currencies. Therefore if a contractor did an estimate for a client three months ago when one dollar was equivalent to 4.6 cedis but the funds for the projects are released now, (bear in mind that the exchange rate is now one dollar to five cedis). The cost of that project would go high because the price of goods and services would increase.

In addition, there are some factors which affect contract works and administration practices as stated by some respondents:

“There are inadequate measures for monitoring the works, non-compliance to the conditions of the contracts by both parties, delay in obtaining approvals for payments, variations etc.” (GhIS1)

“Favoritism is inhibiting contract administrative practice”. GIOC1

4.3.3.1 Measures to improve contract management and administration practices towards achieving value for money

One of the ways to achieve value for money is to be able to finish the project on the expected date. There were some suggestions that came up for contractors to finish on time however some of them were also linked with the client:

“Client should minimize frequent variations to the work as they greatly delay the works. Also contractor should be paid on times to avoid unnecessary time overruns. Clients must release funds or honour certificate on time so contractor moves at a faster pace with works”. GhIS 1.

“It can be improved when signatories to the signing of the IPC is reduced”. GIOC1.

Another area to achieve value for money is to be able to work with the required budget. The measures that came up are below. Timely payments to the contractor:

“Client should pay contractors on time to avoid the interest that are to be made on their payments to the client. Release and honour certificate on time” GhIS 1.

“Clients should release payment on time to save some contractor from borrowing”. GIOC1

With regards to measures which can be adopted so that completed works conform to the quality standards as specified by contract terms and conditions, a few points were highlighted. Most of them were that the works should be followed according to specification:

“Contractors should try as much as possible to stick to specifications given by the client. Also only skilled personnel should be engaged to do the works”. GhIS1

“Consultant should not hesitate to allow contractor to produce quality standard”. GIOC1

4.3.3.2 Suggestions to modify the existing practice

Some of the respondents suggested ways by which the existing practice can be modified.

“Organizations should engage experienced and skilled contract managers to oversee the contract between clients and contractors”. GhIS 1

“There should be fairness and transparency in the procurement practice in the award of contract”.GIOC1

The issue of favoritism would be adequately dealt with when there is fairness and a level of transparency.

4.4 DISCUSSION OF FINDINGS

Having adequate procurement proceedings in formulation of contracts is important. From the results, this was being followed based on the rating some of them gave. Nevertheless, none of them who graded was able to say that it was 100%. This implies that to achieve 100%, there is the need to make sure that more is done in contract formulation especially in the light of the new Public Procurement Act where in addition to having value for money, one has to look at the social aspect and the environmental aspect or issues of sustainability. Most of the respondents attested to the

fact that these were being followed, nevertheless some of them claimed that the issue of transparency was lacking in the process. The issue of transparency is able to solve any notion of favoritism and this finding is in line with what Nsiah-Asare and Prempeh (2016) said that there is the need to have an open, fair and transparent procurement procedures.

Additionally it was also noticed that the formulation of procurement contracts for works was done to guarantee the achievement of value for money. Nevertheless, at the stage, it was around 70% according to the interview done. This meant that although on the average, it may be good, there could still be some measure that should be in place to achieve 80% or even 90%.

Additionally it was realized that whereas in some cases, the purpose of the contract was clearly defined, that was not the case in most times. If a contract work was not properly designed with its purpose stated, there were some risks which could not be mitigated against which is in line with what Wang and Miguel (2011) asserted. This has the capacity to affect value for money especially if the risks arise during the projects.

The management of all the different stakeholders in the project is important. However, it was noticed that although at the beginning of the project, the stakeholders were involved, at some point they were excluded.

One of the practices that is being adopted to ensure that there is value for money is the retention fund. The retention fund differs from country to country, in UK, it is usually in the region of 3 to 5% (Hughes et al., 2000). However in Ghana, it was noticed during the interview that this stood at 10%. The purpose of this retention is in two folds with the first to provide a fund for the employer in the event that the contractor fails to perform on account of insolvency. The second fold is to serve as a motivation so that the contractor would complete all minor outstanding items and repair defects after the work is finished. Following this practice ensures that there is value for money.

Another practice that came out was the issuance of certificate at various stages in the works after the client has been satisfied that works have been well completed. This is in line with what Cunningham (2012) said that at every stage, there are certificates which are compiled for valuations which are the interim, practical completion, partial possession, and final certificates for contracts.

The role of a quantity surveyor also came into play as they have to verify at certain stages if the works claimed to be done by the contractor was actually what had been done. This is in line with the findings of Cunningham (2012) on the roles of quantity surveyors in processing the valuations required by these certificates. Therefore to achieve value for money in works contracts, the quantity surveyors are not left out as they are those who can ascertain if the works that has been done at various stages merit the amount being paid or requested for.

One of the practices that is being implemented is the defects liability period which is in line with what Cunningham (2013) opined should be done. Cunningham (2013) added that this commenced the day after the issue of the Certificate of Practical Completion. It was at this period that the contractor was held responsible for making good defective work within a reasonable time of receiving the instruction from the architect or representative of the employer. The best part was that it should be at no cost to the employer (client) and so value for money can be achieved as the contractor was aware that his completed works should stand the test of the defects liability period and even beyond that.

With some of the measures that came out from the study, it was realized that when the client did not honour certificates on time after the contractor had satisfied all requirements it made the contractor entitled to an interest. This is also in line with what Cunningham (2013) that if the architect failed to issue a Final Certificate, the contractor was entitled to interest for outstanding

period. If the employer failed to honour the Final Certificate then contractor was entitled to interest for outstanding period. Therefore, achieving value for money involves all actors working hand in hand and ensuring that the right thing was done at each stage.

Additionally, the concept of having periodic site meetings is very important to the success of the project and ensures that effectiveness is maintained at all times and is in line with the findings of Ayodeji and Bhekisia (2016) where site meeting helps to enforce quality standards for instance developing a project quality control plan, assessing workmanship during construction, increasing communication in the construction team and assessing the specification used. Ayodeji and Bhekisia (2016) also opined that this is an effective monitoring tool.

Also, the case of using the Liquidated Damages clause in some of the contracts came up. This is beneficial to the client but not always to the contractor as was revealed by Baiden et al. (2016) that although majority of small contracts have LDs being up to 5% of the project value, small contractors especially lamented about their over-estimated nature, which was not a reflection of genuine pre-estimates of possible losses in the event of a delay on a small project. Additionally, LDs were largely determined without the input of small contractors prior to project commencement. Baiden et al. (2016) also found out that majority of clients did not relinquish their powers to enforce LD clauses in the event of unapproved delays on small projects and some small contractors ended up bankrupt when LD clauses were enforced. Nevertheless, in the wake of achieving value for money, the LD clauses should not be ignored. As Brawn (2012) emphasizes, there is the need to have an adequate understanding of the effect that delaying events have upon the contractor's right to an extension of time and the entitlement of the employer to liquidated damages is critical for successful project completion. Brawn (2012) went on to say that in the case of concurrent and sequential delays; where both parties were at fault, it may

be appropriate to deny the employer (client) any entitlement to liquidated damages and deny the contractor any entitlement to loss and expense. That sounds like a fair deal.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This Chapter discusses how the research objectives have been achieved, conclusions and recommendations based on the results from the study. Additionally, the limitations of the study have also been clearly outlined in this chapter.

5.2 ACHIEVING THE RESEARCH OBJECTIVES

The key research aim is to assess the effectiveness of contract management in achieving value for money in the public procurement of works. To achieve this, it was broken down into specific objectives. Also, in order to achieve the stated objectives, professionals from GHIS, GIE and GIOC who had over ten years of experience were purposively chosen to take part in a semi-structured interview to ascertain how some practices were effective in contract management to achieve value for money in the public procurement of works.

5.2.1. Objective One - To evaluate the adequacy of formulation of procurement of works contracts in achieving value for money

The first objective is on how adequate the formulation of procurement of works contracts is in achieving value for money. From the interview it was noticed that:

1. There were adequate procurement proceedings which were being followed although there was still room for improvement in complying with some rules of the proceedings.
2. The processes were being followed nevertheless some of them claimed that the issue of transparency was lacking in the process.
3. Procurement contracts for works were formulated to guarantee the achievement of value for money.

4. In some cases, the purpose of the contract was clearly defined, however, that was not the case all the time.
5. At the beginning of the project, the stakeholders were involve in the project, at some point they were excluded. Therefore, in term of managing all stakeholders in the contract, this may not be adequate.

5.2.2. Objective Two - To evaluate how works contract is enforced and implemented and its effectiveness towards achieving value for money

The second objective was to evaluate the effectiveness of how works contract were enforced and implemented in achieving value for money. From the study, there were some practices that were implemented and enforced.

1. The retention fund was applied to make sure that the contractor would complete all minor outstanding items and repair defects after the work is finished.
2. The issuance of certificate at various stages in the works after the client has been satisfied that works have been duly completed.
3. Visits to site to check if everything was in according to the specification.
4. The use of the defects liability period where this period was used to ascertain if the construction works was of good quality. It was after this time that the retention fund was paid.
5. Having regular site meetings was very important to the success of the project and to ensure that construction work was according to schedule. It was seen as an effective monitoring tool.
6. The use of the Liquidated Damages clauses in some of the contracts to avoid delays.

5.2.3. Objective three - To suggest measures to improve contract management and administration practices towards achieving value for money.

These were measures to improve contract management and administration practices towards achieving value for money. From the interviews, it was noticed that certain measures need to be applied in order to ensure that works are completed on time and at the right cost.

1. Client should minimize frequent variations to the work as they greatly delay the works.
2. Contractor should be paid on time to avoid unnecessary time and cost overruns.
3. Clients should release funds or honour certificate on time so contractor can have a smooth cash flow for the works.
4. Reducing signatories to the signing of the Interim payment certificates.
5. Contractors should try as much as possible to comply with specifications given by the client.
6. Contractor should make use of only skilled personnel in the works.
7. Organizations should engage experienced and skilled contract managers to oversee the contract between clients and contractors.
8. There should be fairness and transparency in the procurement practice in the award of contract.

Based on this the objectives of the research has been achieved.

5.3 RECOMMENDATIONS

Based on the outcome of the study some recommendations have arisen. These are in two aspects: The first aspect are recommendations to the employer or client while the second batch of recommendations are for the contractors, quantity surveyors and architect.

5.3.1 Recommendations to the Employer (client)

1. Firstly, the client should make sure that in the formulation of the contract for works, the procedures are duly followed to ensure that there is value for money.
2. Also, processes for works should be transparent to ensure that favoritism and giving an unqualified person undue advantage is nonexistent to ensure that there is value for money.
3. Clients should use regular site meetings as a monitoring tool to ensure that the works are completed according to budget and specified time. Having regular meetings on site every two weeks would make the client abreast with issues on the site.
4. They should also work with the quantity surveyor to make sure that before certificates are honoured, the works on the ground match the amount being requested for.
5. Clients should release funds or honour certificates on time so that the contractor can facilitate the works.
6. Client should minimize frequent variations to the work as they greatly delay the works.
7. Quantity surveyors are enforcers and verifiers of the works claimed to be done. They should therefore work efficiently by monitoring the contractor's work to ensure that value for money can be achieved.

5.3.2 Recommendations to the Contractor

1. Contractors should try as much as possible to comply with specifications given by the client.

When this is done, the employer (client) who gave the specifications would be satisfied because he has acquired value for money.

2. Contractors should also engage only skilled personnel in the works.
3. Contractors should avoid any delay because of the LD clause which can affect them.

The LD clause is supposed to make a contractor work according to schedule and not give unjustifiable excuses why the works could not be completed on schedule.

4. Contractors should not use sub-standard materials for their works.
5. Contractors should work closely with the quantity surveyor so that the various certificates can be honoured on time.

5.4 CONCLUSION

Contract management is very important throughout the lifecycle of the construction works if all the stakeholders (clients, architects, surveyors, contractors, consultants among others) work hand in hand. To achieve effectiveness, there are some practices which have been put in place to ensure that the clients have value for money. The best practices should be put in place so that each party at both ends can be satisfied that at the end of the works.

Once the employer (client) follows the proceedings for procurement in a judicious manner and awards the contract using the right and accepted processes, the project can be completed on time and value for money can be achieved.

Additionally the best practices on the part of the contractor and consultant should be enforced and implemented so that quality and cost effective works can be handed over to the client.

5.5 LIMITATIONS OF THE STUDY

One of the limitation of the study is that some respondents who played key roles on the project team were not available for interviews, others also did not show much interest to grant interviews due to reasons best known to them. Therefore, the researcher was restricted in the number of respondents for data collection.

5.6 AREAS FOR FURTHER STUDIES

One possible area of study is to widen the scope of this study to consider enforcement and implementation of works contracts in achieving value for money in the other regions in Ghana.

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APPENDICES

APPENDIX 1

INTERVIEW GUIDE

DATE:

CODE/NO:

RESEARCH TOPIC: “EFFECTIVE CONTRACT MANAGEMENT IN THE PUBLIC PROCUREMENT OF WORKS: ACHIEVING VALUE FOR MONEY”

The researcher is a postgraduate student of Kwame Nkrumah University of Science and Technology, from the department of Building Technology. She intends to execute this research as part of the University's academic requirement for the completion of her Master's degree in Procurement Management.

The purpose of this interview is to enable the achievement of the following research objectives:

- To evaluate the adequacy of formulation of procurement of works contracts in achieving value for money.
- To evaluate how works contract is enforced and implemented and its effectiveness towards achieving value for money.
- To suggest measures to improve contract management and administration practices towards achieving value for money.

Your assistance in answering the questions set out below would be of invaluable aid to this research work. All information provided would be treated as confidential and for academic purposes only. Thank you.

For any enquiries, please contact my Supervisor,

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Or the student,

Rachel Sefakor Mensah

Mob. 0248857077

Email. rachel.mensah3@gmail.com

SECTION A: RESPONDENT'S PROFILE

Please provide the correct information by ticking [☒] the appropriate box and fill in the blank spaces where necessary.

(1) Gender: Male [] Female []

(2) Please indicate if you are a member of any of the following professional bodies.

GHIS [] GIA [] GHIE [] GIOC [] Others []

(3) Please indicate your age

21 – 29 Years []

30 – 39 Years []

40 – 49 Years []

50 Years and above []

(4) What is your highest level of education?

Polytechnic (HND) []

University (BSc) []

Post Graduate (MSc, MPhil, PhD) []

Others (please specify) []

(5) For how long have you been practicing as a professional?

Less than 5 years []

6–10 years []

11 – 15 years []

Above 15 years []

(6) How would you describe your current employment status?

Public []

Private []

(7) What type of organization do you belong to?

Client's organization []

Contracting firm []

Consulting firm []

Others (please specify) []

SECTION B: INTERVIEW QUESTIONS

The interview questions design took into consideration the objectives of the study with the aim to answer the research questions. The information is for academic purposes only and would be treated with confidentiality. Please answer freely but objectively to the following open-ended questions. Thank you.

Part One: Formulation of procurement of works contracts in achieving value for money.

This section of the questionnaire aims at determining whether public procurement contracts for works are properly formulated to guarantee the achievement of value for money. Please provide your response to the following questions in the spaces provided:

1. Are you aware of the public procurement proceedings? Yes [] No []

2. If yes, how effectively are they followed in the formulation of a works contract?
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.....
.....

3. Do you think the processes involved in formulating procurement contracts is sufficient?
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4. To what extent are procurement contracts for works properly formulated to guarantee the achievement of value for money?
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5. Is there clarity of purpose for the contract or is the reason for the contract well established?

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6. Are stakeholders, particularly the end-user, usually involved in the formulation of the works contract?

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Part Two: Contract management and administration practices in achieving value for money

This section of the questionnaire aims at determining how works contract is enforced and implemented and its effectiveness towards achieving value for money. Please provide your response to the following questions in the spaces provided:

1. How well equipped are you in terms of personnel and equipment for administering effective contract administration practice?

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2. Does your organization always hold a pre-construction (kick-off) meeting before you start work on new projects, and what transpires at this meeting?

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3. How often does the client organize site meetings in the course of the work?

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4. When the contractor submits a request for payment on work done, how long does it take before the certificates are honored?

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5. What is the procedure in making payments to a contractor for work done?

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6. When the client fails to pay promptly, what action is taken against them?

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7. When it becomes necessary to modify or alter the scope of work, who approves that and how is it done?

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8. When the contractor unjustifiably delays the work, what action does the client take against him?

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9. How much is retained as retention fund when interim payment certificates are prepared?

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10. When and how is the retention fund released to the contractor?

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11. What does the client do when the contractor reports of practical completion of a project?

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12. What does the client do when the defects liability period expires?

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13. Are penalties charged for works with poor quality?

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14. Are defective works properly rectified during the defect liability period?

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15. Are liquidated damages charged for delayed works as agreed in the contract?

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Part Three: Measures to improve contract management and administration practices towards achieving value for money.

This section of the questionnaire aims at determining measures to improve contract management and administration practices towards achieving value for money. Please provide your response to the following questions in the spaces provided:

1. Are contracts completed within the required time as indicated in the contract terms and conditions? In what ways can this be improved to achieve value for money?

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2. Are contracts completed within the required budget as indicated in the contract terms and conditions? In what ways can this be improved to achieve value for money?

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3. Do completed works conform to the quality standards as specified by contract terms and conditions? In what ways can this be improved to achieve value for money?

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4. What factors in your opinion are inhibiting effective contract administration practice?

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5. What will you suggest to modify the existing practice?

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