

**EXPLORING THE CHALLENGES WITH MONITORING AND EVALUATION  
IN THE BUILDING CONSTRUCTION INDUSTRY OF GHANA. A CASE  
STUDY OF CHPS COMPOUND PROJECTS.**

By

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## DECLARATION

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

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## **ABSTRACT**

Monitoring and Evaluation over the years have been very challenging in the Construction Industry of Ghana. This dissertation Explores the Challenges with Monitoring and Evaluation in the Building Construction Industry of Ghana: The Case of CHPS Compound Projects. Specifically, the study identifies the challenges to Project Monitoring and Evaluation practice in the Ghanaian Construction Industry, it also determines critical success factors for improving Monitoring and Evaluation in the Industry. A total of 40 respondents were drawn from different consultants, which included mainly Monitoring & Evaluation Officers, Field Officers, Engineers, Project Managers, Quantitative data was obtained through prepared questionnaires. Questionnaires have been used as a data collection tool, while the data analysis was done through a special programme known as Statistical Package or Social Science (SPSS) and Microsoft Excel 2019. Findings of this study showed that the challenges with M&E practices are Lack of adequate financial resources, lack of M&E expertise, Lack of training of those tasked with M&E activities. The study also revealed that Competent M&E expertise is needed for the success of projects as well as effective planning and controlling, M&E plan and an educational Policy to emphasis on M&E across the Construction Industry.

**Keywords: Project, Monitoring, Evaluation, Construction Industry, Ghana, Challenges, CHPS Compound, Accra.**

## TABLE OF CONTENTS

<b>DECLARATION .....</b>	<b>i</b>
<b>ABSTRACT.....</b>	<b>ii</b>
<b>TABLE OF CONTENTS .....</b>	<b>iii</b>
<b>LIST OF TABLES .....</b>	<b>vii</b>
<b>LIST OF FIGURES .....</b>	<b>viii</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>ix</b>
<b>DEDICATION.....</b>	<b>x</b>
<b>CHAPTER ONE.....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND TO THE STUDY.....	1
1.2 PROBLEM STATEMENT .....	3
1.3 RESEARCH QUESTIONS.....	4
1.4 AIM OF THE STUDY .....	4
1.5 Research Objectives.....	4
1.6 SIGNIFICANCE OF THE STUDY .....	5
1.7 SCOPE OF THE STUDY .....	6
1.8 METHODOLOGY .....	6
1.9 ORGANISATION OF THE STUDY .....	8
1.10 CHAPTER SUMMARY .....	9
<b>CHAPTER TWO .....</b>	<b>11</b>
<b>LITERATURE REVIEW AND THEORETICAL FRAMEWORK.....</b>	<b>11</b>
2.1 Introduction .....	11
2.2 Construction industry in Ghana.....	11

2.3 The Concept of Project Performance, Success and Scope.....	12
2.4 Project Management and Implementation .....	14
2.5 Definition of Monitoring and Evaluation .....	15
2.6 Conceptual Framework: The Process of Monitoring and Evaluation .....	17
2.7 Importance of Monitoring and Evaluation in the Building Construction Sector .....	22
2.8 Using Monitoring and Evaluation in Project Execution.....	25
2.8.1 The misconception about M&E in Project Implementation.....	27
2.10 Critical success factors for improving monitoring and evaluation in the Ghanaian construction industry. ....	31
<b>CHAPTER THREE .....</b>	<b>33</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>33</b>
3.1 INTRODUCTION.....	33
3.2 RESEARCH STRATEGY .....	33
3.2.1 QUALITATIVE RESEARCH STRATEGY .....	34
3.2.2 QUANTITATIVE RESEARCH STRATEGY.....	34
3.3 RESEARCH APPROACH .....	35
3.4 RESEARCH DESIGN.....	36
3.5 UNIT OF ANALYSIS.....	37
3.5.1 Time Horizons .....	38
3.6 DATA COLLECTION METHODS.....	38
3.7 POPULATION AND SAMPLE SIZE .....	40
3.7.1 Sample Frame .....	40
3.8 Sampling technique .....	40
3.8.1 Purposive Sampling Technique .....	41

3.8.2 Sample Size .....	42
3.9 DATA PROCESSING AND ANALYSIS.....	42
3.10 ETHICAL CONSIDERATION .....	44
3.11 CHAPTER SUMMARY .....	44
<b>CHAPTER FOUR.....</b>	<b>45</b>
<b>DATA ANALYSIS AND DISCUSSION OF RESULTS.....</b>	<b>45</b>
4.1 INTRODUCTION .....	45
4.1.1 Survey Responses .....	45
4.2 Analysis of the Demographic Data of Respondent .....	45
4.3 THE CHALLENGES TO PROJECT MONITORING AND EVALUATION IN THE GHANA CONSTRUCTION INDUSTRY. ....	48
4.4 CRITICAL SUCCESS FACTORS FOR IMPROVING MONITORING AND .....	51
4.5 SUMMARY .....	53
<b>CHAPTER FIVE.....</b>	<b>54</b>
<b>RECOMMENDATIONS AND CONCLUSION .....</b>	<b>54</b>
5.1 INTRODUCTION .....	54
5.2 REVIEW OF OBJECTIVES.....	55
5.2.1 To identify the challenges with Project Monitoring and Evaluation in the Ghanaian Construction Industry.....	55
5.2.2 To determine critical success factors for improving monitoring and evaluation in the Ghanaian Construction Industry. ....	56
5.3 RECOMMENDATIONS.....	56
5.4 RECOMMENDATIONS FOR FURTHER STUDIES .....	57
5.5 RESEARCH LIMITATION .....	57

<b>REFERENCES.....</b>	<b>59</b>
<b>APPENDIX.....</b>	<b>70</b>

## **LIST OF TABLES**

Table 4.1: Respondents Characteristics.....	46
Table 4.2 the challenges to project monitoring and evaluation .....	50
Table 4.3 Critical success factors for improving Monitoring and Evaluation.....	52

## **LIST OF FIGURES**

Figure 1. Conceptual Diagram of Thesis Organisation .....	9
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## **DEDICATION**

I dedicate this research to my Mother Susanna Okpoti, for her prayers and support and the entire Staff of Tonyman Company Limited for their inspiration throughout my study.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 BACKGROUND TO THE STUDY**

In recent times Monitoring and Evaluation have become an essential project requirement in construction projects (James 2016), from the countless advertisements this has been made evident from M&E specialists. The construction sector of Ghana is one of the sectors contributing significantly towards the socio-economic development of the country, hence there is a need for good M&E practices.

According to Crawford and Bryce, (2003), Monitoring is a continuing procedure of collection of data and analysis mainly because of project control with an inside driven focus on effectiveness of the task given (Crawford and Bryce, 2003). Work assessment is independent and systematic. These are ways to access a completed or ongoing project as well as its results and implementation (Uitto, 2004). Evaluation and Monitoring is a process whereby both procedures are combined which are diverse but eventually correlative (Gorgens and Kusek, 2009). In all, Monitoring and Evaluation schemes are a body of mechanisms that are associated with each other and organize to aid an aim which is common for following up on the implementation and the outcome of the project (SAMDI, 2007). A system of monitoring and evaluation constitutes four sections that are interlinked, which are: M&E systems being set up, implementing M&E the systems, stakeholder participation in the project, final results of M&E being communicated (Guijt et al., 2002). Supposedly, a perfect M&E system needs to be independently adequate so that it can be outwardly reliable and legitimate socially (Briceno, 2010). Hence, it ought to be able to make an impact on creation of policy from endorsements of lessons learned

plus being sustained intensely whereby it becomes receptive to the project stakeholders' requirements. Research conducted by Nyonje (2012) stated that for some reasons project monitoring and evaluation are essential to diverse people, also, project managers and their stakeholders together with other donors find this very important. This because they find it necessary to know the degree to which their projects being conducted meet the required goals and objectives. Monitoring and evaluation support great responsibility in the management and application of scarce assets for the project were then normally needed by sponsors or project owners (Nyonje, 2012). Also, M&E techniques are needed to help make decisions during project execution and it also strengthens the implementation of the project and helps to attain the quality of the project. Generally, M&E techniques have been present since the olden days (Kusek and Rist, 2004), but in recent times, the request for M&E techniques as a tool for management to demonstrate productivity has increased due to demand coming from stakeholders to ensure accountability of every project via the application of M&E by NGOs which also comprises of the government. Apart from construction, banks, and other agencies also apply regularly M&E techniques in their projects to check transparency and effectiveness (Briceno, 2010), and this shows how important M&E has now become in projects, especially in construction projects even Ghana.

According to the UNDP, (2011), several governments of African countries just like any other developing country for quite some time now has no essential monitoring and evaluation programs except for financial review and monitoring that are done to review, and this has also led to the fact that the support to push M&E techniques has not been well understood yet. And for this reason, the study delves into the challenges with

Monitoring & Evaluation in the Building Construction Industry of Ghana using the CHPS projects as a case study.

## **1.2 PROBLEM STATEMENT**

The Community-based health planning and services (CHPS) is a national policy to provide important community-based health services which comprise of planning and services in regard to health delivery with the communities. The initiative is to build health sectors and the main focus of CHPS is to bring health services to communities that are deprived. In 2012 a total of Twenty-Six (26) projects were given out to various contractors. In 2018, the Government gave out a total of Fifteen (15) and in 2019, Twenty-Seven (27) CHPS projects were awarded. The various projects have acquired the practice of Monitoring and Evaluation, with this, the management of the task given finds it necessary to explore the importance of Monitoring and Evaluation of the projects.

An operational definition of monitoring and evaluation are essential aspects of management that offers a connection between planning and implantation. Even though monitoring focuses on activities and performance, Evaluation focuses on the results and objectives. Monitoring also is seen as a project beginning while evaluation just like monitoring is a process that continues in the execution of a project.

Kule and Umugwaneza, (2016), inadequate capacity of M&E techniques have led to unsuccessful project outcomes, this is because most of these projects do not attain their expected requirements after they are implemented. The analysis was done by Nisa, (2015) whereby he noticed that M&E techniques were positively connected with the success of the project. M&E adds up more in increasing the success of the project. There have been several challenges of project Monitoring and Evaluation techniques whereby

this has also led to the technique not performing satisfactorily as it's supposed to and also, its obligatory requirement as a decision-making tool is not seen. The UNDP, (2011) also stated that the support that M&E techniques can deliver when adopted into every project has not been yet understood, but yet still monitoring and evaluation are not getting the push and support that it needs. These challenges have been of difficulty in the technique. For this reason, the study will conduct an exploratory investigation into the challenges with M&E of projects in the industry of Building Construction in Ghana.

### **1.3 RESEARCH QUESTIONS**

1. What are the challenges to project monitoring and evaluation in the Ghanaian construction industry?
2. What are the critical success factors for improving monitoring and evaluation in the Ghanaian construction industry?

### **1.4 AIM OF THE STUDY**

The main aim of the study is to explore the challenges with Monitoring and Evaluation in the Building Construction Industry of Ghana.

### **1.5 Research Objectives**

The specific objectives of the research are:

1. To identify the challenges to project monitoring and evaluation in the Ghana construction industry; and
2. To determine critical success factors for improving M&E in the Ghana construction industry.

## **1.6 SIGNIFICANCE OF THE STUDY**

According to Kule and Umugwaneza, (2016), inadequate capacity of M&E techniques has led to unsuccessful project outcomes, which means adequacy of M&E techniques can lead to the successful implementation of the project. This proves how essential it is to ensure operative M&E projects.

The study is of much importance because the results from this study could also be used by policymakers of government to ensure an effective comprehension of M&E techniques, and how to advance these to reach the prospects of the stakeholders, and also to deliver valued information for interventions of the future. The study is also of much importance because it brings out the challenges to project Monitoring and Evaluation in the Ghanaian construction industry. The study will also bring into light the critical success factors for improving M&E in the Ghanaian construction industry, in addition to the limited literature which exists with respect to the area of the study. Also, practitioners of project management are sure of profiting based on the research because it adds up to the body of academic knowledge. This study is important for consultants in projects to comprehend the changing aspects of M&E to carry out construction tasks given. The study is of an appropriate addition to present knowledge and the body of theory, by the means of supporting to embark on further research in this subject area.

## **1.7 SCOPE OF THE STUDY**

The scope of the study cuts across two main factions, the geographical scope and the conceptual scope. Geographically this study considered consultants, project manager and M&E persons who were involved in CHPS projects or are working on one currently, who are also in the Accra metropolis.

The study scope embodies project Monitoring and Evaluation challenges and techniques while looking at how these are done in the construction sector in Ghana. Projects are failing and this is due to numerous challenges with project Monitoring and Evaluation. Hence, this study considers the challenges with Project monitoring and Evaluation in the Construction Industry of Ghana.

## **1.8 METHODOLOGY**

The research methodology used affects the approach which the research study adopts in meeting the strategic objectives of the study. In choosing which approach to use for one's study one must first determine the philosophical stand of the entire research. Saunders et al. (2009) postulated that there are four main research philosophies; ontology, axiology, epistemology, and methodology. This study adopted the epistemology approach which supports the positivist approach hence the study is objective in nature, following some law-like generalization principles, gathering data and subjecting the data to hypothesis testing while forming an aggregation of facts (Bryman and Cramer, 2005; Christou et al., 2008; Saunders et al., 2009).

Hence, from the philosophical stand which this research took, it could be envisaged that the deductive research approach is best for positivism. Also, it could be understood that

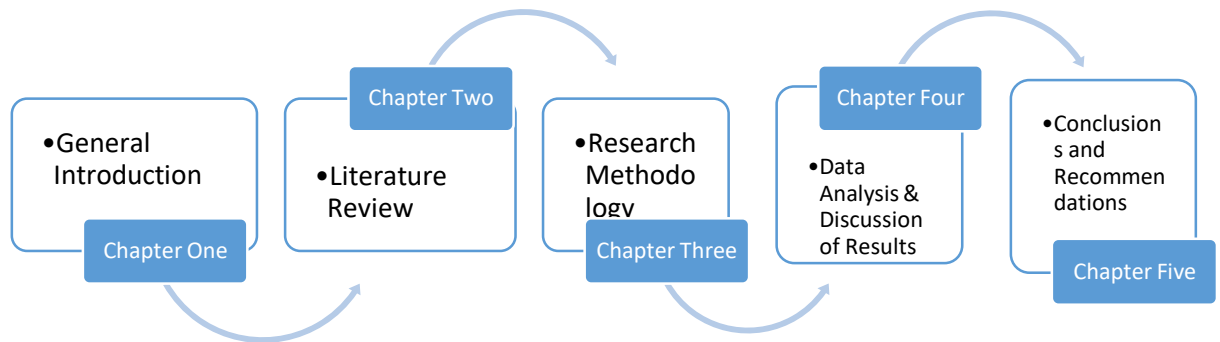
adopting surveys as the research strategy would help in achieving the objectives of this particular study (Collis and Hussey, 2013). Therefore, the quantitative research method was used for the research, because quantitative research approach is also impartial in nature inquiry into a social or human setback, based on hypothesis testing, and employs mathematical models, theories and tools in analyzing data (Creswell, 1994; Hittleman and Simon, 1997; Sarantakos, 2005).

The population of this study consisted of consultants, Project Managers and M&E officers in the Accra Metropolis who have worked on a CHPS project before or are still working on one. Data for the study was obtained from both primary data and secondary information. Primary data was obtained mainly from the survey questionnaires which were taken out to the respondents to solicit their views on project monitoring and evaluation on CHPS projects in Ghana. Secondary information was obtained from published articles, journals, and papers from Google Scholar, Scopus, Emerald, KnustSpace ETC. The questionnaires used for the study were compounded from the obtained information in the literature review of the study. Chen and Jin (2013) opined that a questionnaire survey is a most broadly adopted approach in quantitative research. The sampling technique adopted for this study was purposive sampling technique.

The primary data obtained from this survey were thoroughly analyzed via descriptive statistics (means, frequencies, standard deviations, and standard error means), Mean Score Ranking and Relative Importance Index. The dependability of the scale was checked by using Cronbach's Alpha coefficient test. Software for analysis were Statistical Packages for Social Sciences (SPSS) windows version 25, Microsoft Excel 2019 and Microsoft Word 2019.

## **1.9 ORGANISATION OF THE STUDY**

This thesis is arranged in such a way as to follow the way in which KNUST presents its Master of Science thesis. Going through this study, the thesis consisted of five main chapters (General Introduction, Review of the literature, Research Methodology, Data Analysis and Discussion of outcomes, and Conclusions and Recommendations of the study). Nonetheless, each chapter had several subheadings under each of them which helps in explaining the concept in that chapter. Nevertheless, clarity was given so as not to create several subheadings to confuse the reader. The first chapter (Chapter 1) covers the general introduction of the study, and as an overall introduction, it starts with a research background, then the problem statement (gap in literature which this particular study intends to fill), the research aim and objectives, the research questions, importance, methodology, scope and organisation of the research. Chapter two discussed the literature review of the study. In chapter two the conceptual, empirical and theoretical reviews of M&E techniques in the industry of construction were discussed. The third chapter (methodology); this chapter presented several research methods which were adopted for the study. Informing on the philosophy to use, the approach to adopting and the strategies to use for the study. The next chapter, Chapter four (Data analysis and discussion of results); this chapter considers the data which were retrieved from the survey, the tools of analysis and the discussion of the results thereof. The last chapter for this thesis is the conclusions and recommendations (Chapter Five); this chapter draws the curtains of the study to a close, by concluding and analyzing whether all the objectives of the study have been attained, making recommendations, stating the limitations and showing directions for future research in this area of study.



**Figure 1. Conceptual Diagram of Thesis Organisation**

Source: Author's Construct (2019)

## **1.10 CHAPTER SUMMARY**

This chapter was basically formed to give a snapshot of the entire research study. The chapter presented on the background of the study which talked about project monitoring and evaluation challenges in the building industry. The gap in the literature was explicitly expressed in the problem statement of the study. This chapter also presented a summary of the research methodology as well as the scope of the study, the significance of the study, research objective and research aim. This chapter concludes with how the whole

study is going to be organized in the organization of the research section part of this chapter.

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

#### **2.1 Introduction**

This chapter presents the review of the literature, in which the key plan of the study was deliberated. In this chapter, there were key definitions as to the area of project monitoring and evaluation in the building construction sector of Ghana. Based on this, the literature mainly looked into the challenges to project monitoring and evaluation in the construction industry and to determine critical success factors for improving monitoring and evaluation in the Ghana construction industry. The discussed information above was obtained from books, research papers, past thesis, journals, web articles, conference proceedings, and many other important sources. All these explorations were done to aid the study in arriving at its principal purpose, which was to study the challenges to project monitoring and evaluation in the construction industry.

#### **2.2 Construction industry in Ghana**

In Ghana, the construction industry is quite complex. It also comprises countless stakeholder's involvement. In developing countries like Ghana, construction business performs a vital role in the economic development of the economy. It also delivers housing, infrastructure, and employment. It additionally donates to the GDP of the country. There are several practices that are unprofessional in the building construction sector yet the industry adds to the development of the economy and social development, more than a few challenges such as; excessive bureaucracy, a feeble base for material provision, monetary precariousness, a poorly controlled labour market and insufficient

management arrangements are the challenges that comes across the construction industry (Amoa-mensah, 2002). The industry is negatively affected by inadequate planning, poor water consumption, excessive energy usages, and excessive generation of waste that makes the industry not able to meet clients and customer needs. (Twumasi-Ampofo et al. 2013). Most of the procedures and practices in the construction sector are unmaintainable and it brings continuous environmental degradation which impedes the growth of Ghana (Djokoto et al. 2014).

Globally, the construction industry assists as the main source of economic undertakings. Adding to the provision of infrastructural requirements for society, it further establishes the main part of the economy of countries. Overall, the construction sector is an interesting sector to work and therefore there is a need for effective monitoring and evaluation techniques to aid improve the sector.

### **2.3 The Concept of Project Performance, Success and Scope**

In the past decades, projects have emerged as one of the professions on the rise in the world because of its relevance as a mechanism to deliver businesses and accomplish set objectives (Prabhakar, 2008). Many projects start with good ideas, huge investments, and great efforts. Many people and organizations have defined what a project is, or should be, However, the definition of a project as per Project Management Institute (PMI) is: “a project is a temporary endeavour undertaken to create a unique product, service, or result”. As per ISO 21500:2012 “A project consists of a unique set of processes consisting of coordinated and controlled activities with start and end dates, performed to achieve project objectives.” Projects are often the means to accomplish strategic goals (CGIAR, 2019).

Project performance and the end product can be evaluated using diverse performance indicators such as cost, quality, client satisfaction, and business satisfaction (Alqahtani et al., 2015). However, time, cost, and quality are the three main performance evaluation dimensions. Again, project performance is affected and influenced by three aspects, which are: organizational culture, project management culture and project manager characteristics.

Unfortunately, the vagueness of project success and failure has resulted in several theories about achieving the project outcomes and performance (Vartiak, 2015). Literature shows that most projects tend not to achieve much success (Mirzaa et al., 2013). According to them, a major input to unsuccessful projects is the lack of understanding or definition of project and product scope at the commencement of the project. An accurately defined and managed scope leads to quality product delivery, in agreed cost and within specified schedules to the stakeholders. Whilst there is an unambiguous understanding of the desire for projects to be successfully, shockingly little is published on the importance of scope on project success (Mirzaa et al., 2013).

On the other hand, the project scope is the process whereby a project is defined and prepared for execution (Fageha & Aibinu, 2013). Further, it helps to decide on whether or not to proceed with the project. According to project management literature, the project scope includes all the processes required to ensure that all the project work required to complete the project successfully (PMI, 2019). However, a partially completed scope definition in the early phases of a project's life cycle is a common source of difficulty especially in the process of developing a construction project. This is because; the development of the project can cause either a positive or negative variety of interests.

Construction projects by its nature produce a number of degrees of changes in one's surrounding environment. Hence, project definition limitations may be redefined, or subjected to inconsistent expectations and understanding by various stakeholders (Fageha & Aibinu, 2013).

## **2.4 Project Management and Implementation**

Project management is a specialized subdivision of management that has evolved in order to co-ordinate and control some activities that are complex in the modern industry (Prabhakar, 2008). The rapid change in the business environment of the twenty-first century increases the range of activities under the periphery of project management techniques and the way projects are managed. According to PMI (1994), project management involves applying knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations. It is the art of directing and coordinating human and material resources throughout the life of a project to achieve project objectives within specified constraints (Prabhakar, 2008).

Kerzner (2003) defines project management as the planning, organizing, directing, and controlling of resources of a company for short term objective that has been established to complete specific goals and objectives. Project Management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements (CGIAR, 2019). Project management is achieved via the engagement of processes such as: initiating, planning, executing, controlling, and closing. Project management is more often than not used to describe an organization's approach to the management of continuous operations also referred to as management by projects. Similarly, many

aspects of continuous operations are considered as projects in order to apply the project management practices with ease to the operations (Prabhakar, 2008).

Therefore, effective project implementation or simply put, the success of any project can be measured on the foundation of time, cost and quality (performance), commonly known as the triple constraint. These three factors represent the Key Performance Indicators (KPIs). To establish whether a project has been effectively implemented, or better still if the project has been successful. However, one has to go back to the initial project goals of time, cost and quality (performance) to be able to measure the extent of their individual achievement. On the other hand, project management is the fundamental issues inherent in the project, which must be maintained in order for team working to take place in an efficient and effective manner. They require day to day attention and operate through the life of the project” (Ocharo & Kimutai, 2018).

## **2.5 Definition of Monitoring and Evaluation**

Monitoring and evaluation are important management tools to track your progress and facilitate decision making (Sera & Beaudry, 2007). In their view, while project funders may require some form of evaluation, the greatest beneficiaries of evaluation are probably the community of people with whom the project is being implemented. Moreover, planning defines the tactics and procedures for achieving the objectives of any project, whereas Monitoring and Evaluation bring to light the essential checks and balances for ensuring that the plans and objectives of the project are achieved (Mwangu & Iravo, 2015). Further, plans cannot work on themselves to produce the desired end

results; the plans need to be complemented by monitoring and control to achieve the set goals.

According to the World Bank, monitoring can be defined as a continuing function that is aimed at providing management and stakeholders of an ongoing project with early indicators of progress, or lack thereof, in the achievement of results. Monitoring helps organizations track achievements by regularly collecting information that assists timely decision making, ensure accountability, and provide the basis for evaluation and learning (Biwott et al., 2017). Evaluation, on the other hand, is the systematic and objective assessment of an on-going or completed project. The aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact, and sustainability.

Therefore, project Monitoring and Evaluation system tracks, reviews, and regulate the progress to meet the performance objectives defined in the project management plan. Monitoring also includes status reporting, progress measurement, and forecasting while Evaluation is systematic and independent. In relation to M&E, the performance offers information on the project's performance about scope, schedule, cost, resources, quality, and risk, which may be used as inputs to other processes (Njeru & Luketero, 2018). As a key part of successful project implementation, the existence of monitoring enables project managers to work towards attaining project goals, as well as enables the organization to have a communication matrix that establishes a feedback mechanism to the organization (Ocharo & Kimutai, 2018).

## **2.6 Conceptual Framework: The Process of Monitoring and Evaluation**

Construction projects are undertaken to achieve certain outcomes. Each project executed is underpinned by an overarching objective. The end product arising from it should be able to fulfil what it was meant to fulfil by enabling certain functions to be carried out in the end product. Some more objectives of every project are the completion time that is tied to a budget, quality, durable, etc. These various objectives listed above often become the criterion for assessing project completion. Additionally, a number of contract documents also give an idea about the project objectives.

Upon completion of construction and facilities are readily available to be handed over to the client, the best practice is to crosscheck if the project objectives were accomplished. A far-sighted client would surely carry out this assessment together with the contractor. More often than not, literature opines that clients are seldom happy with the outcome as it is likely there will be either an underachievement or not achieving at all either one or more objectives. Although at the onset of a project, both the client and contractor would have the same mind of achieving the set objectives of the project. This is evidence that some things happen when projects are underway to make achieving objectives either difficult or impossible at all. These prevailing influences are the reason behind this study, especially when there is an opportunity to be prompted if proper monitoring and evaluation process had been followed.

The basis for the conceptual framework is to develop and bring to light the major factors which affect the performance and outputs of projects. According to Stare (2011), as cited in Alqahtani et al (2015), there are a number of reasons a project will be called a failure. These include factors such as; unclear characterization of the objectives, inadequate

project schedule, variations/change, too little control, unsuccessful communication, an ambiguous role of the stakeholders, or little top management support. All these reasons are in one way or the other linked to the organizational/project systems and can be related to one of the three main aspects: organizational culture, project management culture and the project manager. With respect to extensive literature reviews, especially journals and books, factors that have an effect on performance and outcomes were teased out in this process. Literature opines that there are three main factors that affect project performance and outcome, namely organizational culture, project management culture, and the project manager. Some elements of organizational culture are values, norms, and leadership. Some elements of project management culture are strategic emphasis, top management support, PM methodology, stakeholder's commitment, communication system, and project review and learning (Alqahtani et al., 2015). According to them, some influencing aspects of the project manager identified were competencies and skills, capability, self-sufficiency, and leadership style. Since these factors affect project output, it was important to develop a conceptual framework that brings together these three factors in a logical manner. The conceptual framework is particularly looking at what improves the performance and outcomes of their projects.

In modern project management, all important measures of performance are taken into consideration in an attempt to build up a multidimensional performance evaluation framework for the construction sector. With respect to prior studies, ten key factors, with a total of 57 associated items were identified. Findings revealed that the items making up the ten key performance factors (KPI's) are namely; Time, Cost, Quality, Safety & Health, Internal Stakeholder, External Stakeholder, Client Satisfaction, Financial

Performance, Environment, and Information, Technology & Innovation. The study of these factors aid in developing multi-dimensional performance evaluation framework for the efficient measurement of the construction performance. It is, however, important to be aware of a multi-dimensional performance evaluation framework by including all key factors affecting construction performance. This helps to effectively plan to implement an effective monitoring and evaluation plan at the management level to equal the organization/project delivery (Soewin & Chinda, 2018).

As indicated earlier, it is the responsibility of every project manager to habitually make sure that the planned work is going according to schedule. This helps to ensure that the project is being undertaken as planned while actions are taken to resolve problems or challenges that may arise (Candido et al., 2014). Performance measurement is a basic requirement for tracking cost, time and quality of a project (Yang et al., 2014). Moreover, the main aim of managing a construction project is to finish the project on time and within the stipulated budget while conforming to the well-known requirements and specifications. To achieve that objective, substantial effort and commitment are required (Murithi et al., 2017).

Murithi et al maintained that the construction process must be supported by an effective performance monitoring and evaluation system. They cited (Narbaev, 2013), who indicated that, no matter how perfect the construction project plan is if no regular and timely reviews are performed during the project execution, neither the project progress nor the effectiveness of the plan can be evaluated. Project Monitoring and Evaluation allows for a review of previous happenings and to forecast what is likely to happen in the

near future if previous performance is likely to continue or when there are no changes at all in the management of the project.

Studies have established that no matter the project team on a project, they will always try to keep certain three elements on track and they are; cost, time, and scope (Shah, 2016).

Furthermore, monitoring and evaluation compare actuals to planned performance while helping project implementers to take both preventive and corrective actions based on the findings (Murithi et al., 2017). Again, it is advised that late corrections are avoided since they are fruitless and will most likely cause cost and time overrun (Shah, 2016). Earned value management is a very important quantitative technique for independently monitoring the physical project progress. It enables the comparison between the actual work performance and the plan from inception (Murithi et al., 2017). Shah (2016), argued that any project with a significant time overrun misses the steps early in the project implementation but the project manager does not realize it until it is too late. He then indicated that, by the time the problem is realized, it is too late in the day the ability to recover the project to achieve its planned objectives.

Considering the importance of this project, the adoption of the EVM process is necessary for a better examination of the process in terms of project monitoring and evaluation. This research is performed in the study of issues in project control and progress performance evaluation. Particularly, it focuses on the progress measurement by applying the Earned Value Management (EVM). EVM is one of the widely used approaches for project monitoring and control which allows one to assess project progress through the scope, schedule, and cost measurements. In order to track the progress effectively the measurements, data should be provided systematically. According to Adebayo et al and

other related research on this subject, there are several benefits that have been associated with the use of EVM in Project Management (PM) as well as the understanding of the concept of Monitoring and Evaluation. The main aim is to assess how EVM, when applied to the monitoring and evaluation of real projects, will help project managers achieve success in terms of actual cost expenditures versus planned costs and potential usage of budget and schedule adherence.

According to literature, the key practice of monitoring and evaluating projects using earned value management (EVM) includes two steps: first, establishing a performance measurement baseline (PMB) and, second, measuring and analyzing the performance of a project against the PMB (Adebayo, et al. 2018). Steps to effectively build a PMB includes decomposition of work scope to a manageable level, assigning responsibilities, developing a time-phased budget for each work task, and maintaining PMB integrity throughout the project (Murithi et al. 2017). Performance measurement and analysis comprises recording resource usage during the project execution, objectively measuring the actual physical work progress, analyzing and forecasting cost/schedule performance, reporting performance problems, and taking corrective actions (PMI, 2011).

As introduced above, Earned Value Management Systems allow the project manager to monitor and evaluate the following indicators as it relates to the project: Where was the project; where has it reach; where is the project going. Further, Earned Value Management has three data sources from which it can explore and assess performance: the budget (or planned) value of work scheduled; the actual value of work completed; the “earned value” of the physical work completed. Earned Value takes these three data sources and is able to compare the budgeted value of work scheduled with the “earned

value of physical work completed” and the actual value of work completed. The Planned Value describes how far the project work is supposed to be at any given point in the project schedule and cost estimate. Cost and Schedule baseline refers to the physical work scheduled and the approved budget to accomplish the scheduled work. The Actual Cost (AC), also called actual expenditures, is the cost incurred for executing work on a project. Whereas the Earned Value reports the accomplishments of the project. EV is the quantification of the “worth” of the work done to date. In other words, EV tells you, in physical terms, what the project has accomplished. After those three values are established, a variance analysis can be performed.

## **2.7 Importance of Monitoring and Evaluation in the Building Construction Sector**

According to construction literature, the implementation of building projects provides an essential angle/area to the construction sector (Mahmoud & Elshaikh, 2019). It is therefore important that building projects are implemented successfully with fewer challenges while minimizing the adverse impacts of the project outcome. In the profession of project management, it is normally assumed that the project goals, product quality, delivery time and cost to the client, are firm, and are not negotiable (Grennberg, 2019).

Obi et al., (2015), observed that effective performances, particularly on building projects, has been a major problem in many developing countries. According to them, clients have continuously adopted designs and strategies to deliver building projects. Yet, many projects are not delivered within expected target cost performances resulting from the influences of waste factors amongst several others identified (Obi et al., 2015). Changes in drawings and contract documents usually lead to change in the contract price and/or

schedule. However, monitoring of project performance gives an early indication of deviations from plan, enabling swift actions (Szentes, 2019).

According to Mahmoud and Elshaikh (2019), some of the major contractual disputes are as a result of the non-existence of monitoring and evaluation processes during project implementation. This presents problems to all parties involved in the process of building projects and therefore leads to projects failure (Mahmoud & Elshaikh, 2019). In order to avoid unnecessary conflicts and huge cost/schedule variations during project implementation, monitoring and evaluation should be seen as an important part of the building and construction project management process, especially if the project is to be a success (Adebayo et al., 2018). They cited Woodhill (2000) who explained that any project implemented is to address developmental needs or problems. Moreover, projects are designed and implemented based on characteristics and attributes such as the purpose, life cycle, uniqueness, interdependencies, and conflict. Therefore, the application or use of M&E tools; identifies discrepancies, handles change management, and provides feedback to update and progressively elaborate the plan. According to them, any project monitoring tool works to minimize the deviations from the project plans. This includes; identifying and reporting the status of the project, comparing it with the plan, analyzing the deviations, and implementing the appropriate corrective actions for the attainment of outcomes/targets. Moreover, in construction, contractors are one of the major parties concerned with the monitoring and evaluating projects, as they are responsible for executing the works that form the contract (Idoro, 2012).

Murali Sambasivan (2007) as cited in Hamza et al (2011), observed that failure to meet timelines, budget cost and specified quality result in negative effects on projects, especially in the construction sector. Moreover, when the projects are delayed, they are either extended or accelerated resulting in additional cost (Hamza et al., 2011). According to Peterson & Fisher (2009), as cited by Kamau et al., (2015) most construction firms are usually interested in project time variance and verification of contractor's progress payments requests (Kamau & Humam, 2015). However, an institution of a proper M&E system will monitor the project specifications, check the progress of activities against the plan. M&E will also review performance regularly and at the stipulated review points, and confirm the validity and relevance of the remainder of the plan. M&E will also recommend adjustments to the plan if necessary, in light of performance, changing circumstances, and new information, but remain on track and within the original terms of reference.

According to Marangu (2012) as cited again by Kamau and Human (2015), monitoring and evaluating projects can be of great importance to all stakeholders and lead to project success. This is because monitoring and evaluation provide the opportunity to learn from experiences in the past and to ensure that, similar projects are replicated elsewhere (Kamau & Humam, 2015). Studies also show that factors critical to the success of projects centred on managing stakeholders, by assessing their attributes and compromising conflicts among them effectively (Yang et al., 2014). According to Yang et al, it is necessary to formulate a clear statement of project missions, predict stakeholders' reactions for implementing strategies, and analyze the change of

stakeholders' influence, relationships and behaviours. In their view, all these activities require some form of M&E.

## **2.8 Using Monitoring and Evaluation in Project Execution**

Several studies have been conducted to evaluate the role of Monitoring and Evaluation of projects. According to Biwott et al (2017), Literature shows that there is a great influence of monitoring and evaluation on the utility and sustainability of projects. It is, therefore, prudent to embed Monitoring and Evaluation in all Projects embarked on. It is worthy to note, however, that each project may have unique requirements for this and that in such circumstances, project managers and developers should attempt to develop suitable Monitoring and Evaluation mechanisms (Biwott et al., 2017).

Monitoring, Evaluation, and Control are very important management functions for ensuring that project objectives are fully achieved and that the project remains on course. This was confirmed in the study which investigated how Monitoring and Evaluation have an effect on the success of Projects in Kenya. According to the researchers, the aim of their study is to establish whether the project Monitoring and control efforts of the contractors and project supervisors contribute to an improved project outcome. Through a field survey, the study was conducted using a sample of 45 respondents who were selected by stratified random sampling. The results of the study reveal that contractors and project supervisors apply monitoring tools to a certain level in their project operations consequently producing satisfactory levels of success. The findings further revealed that most projects were completed within the stipulated time frame and budget and that majority of the respondents considered them a success (Mwangu & Iravo, 2015).

In a related survey conducted by Adebayo et al., (2018), the results showed that there is a relationship existing between the type of project monitoring and control technique used by a construction company and project delivery/success. They observed that the use of Program Evaluation and Review Technique (PERT) for time/schedule control and Earned Value Management (EVM) (alongside other monitoring and control techniques) for cost control as used by companies are very effective in meeting set project objectives. Based on the findings, a number of recommendations were made. Among these are, that monitoring and control units should be established within construction companies and well-trained workers/professionals should be put in charge of handling these units and the techniques and tools used therein (Adebayo et al., 2018).

According to Idoro (2012), monitoring and evaluation are very important management functions that ensure that project objectives are fully achieved. Idoro compared the level and effectiveness of the efforts of indigenous and expatriate Nigerian contractors on Project Monitoring and Evaluation. The aim of his study established and the results of the study reveal that indigenous contractors carry out project Monitoring and Evaluation strategies more frequently than expatriate contractors. Furthermore, three of the eight Monitoring and Evaluation strategies influence the project outcome, while the remaining strategies do not; this result indicates that while some of the strategies are effective, others are not. Contractors should thus ensure that their project monitoring efforts are directed towards improving the entire outcomes of their projects (Idoro, 2012).

### **2.8.1 The misconception about M&E in Project Implementation**

Although Monitoring and Evaluation ensure project success (Karani et al., 2014), there is a tendency to forget its importance of providing managers with the information they need to take action and produce results (LeMay, 2019). According to LeMay (2019), in the rush to evaluate, some organizations downplay monitoring in favour of evaluation, in order to show results. LeMay (2019) observed that monitoring is often an underused management practice that can get lost between the evaluators and the planners. Further, research has also shown that, in most cases, during project implementation, little priority is given to both Monitoring and Evaluation. As a result, they are done simply for the sake of fulfilling the requirements of most projects and not using it as a mechanism of ensuring the success of the projects. The sad aspect is that information from M&E is often used to decide whether or not to stop the project or when a new phase is under consideration (Biwott et al., 2017).

### **2.9 Monitoring and Evaluation Challenges in Project Execution**

The construction industry is one of the most important sectors for the development of infrastructure and the economy of a Nation (Asinza et al., 2016). It is therefore important that adequate measures are put in place to ensure quality in the sector. However, due to numerous challenges encountered by the sector in the area of monitoring and evaluation, it affects project delivery and quality. In the Ghanaian construction industry, for instance, studies have shown a number of challenges that affect Monitoring and Evaluation, which have led to the poor performance of the industry (Tengan & Aigbavboa, 2016). The study by Ocharo (2018) also observed that project Monitoring and Evaluation if not adhered to, makes the project implementation process below expectations and then leads to cost

overruns and re-scheduling of projects. (Ocharo & Kimutai, 2018). The study by Asinza (2016), revealed that monitoring effort had a strong relationship with project quality by organizations involved in the construction sector in Kenya. Monitoring factors considered were the extent of monitoring and monitoring methods (Asinza et al., 2016).

Tengan and Aigbavboa (2016) in their study, identified and evaluated some of the barriers faced by projects in the implementation of Monitoring and Evaluation in the Ghanaian construction industry. In the study, they reviewed the literature and then, developed a semi-structured questionnaire to encourage the appropriate response from major stakeholders in the Ghanaian construction industry. Literature findings, however, revealed ten (10) challenging factors to the implementation of monitoring and evaluation. These include; weak institutional capacity, limited resources and budgetary allocations for Monitoring & Evaluation, weak linkage between planning, budgeting and Monitoring & Evaluation, weak demand for and utilization of Monitoring and Evaluation results and finally, poor data quality, data gaps and inconsistencies were identified as the most significant contributing factors to the implementation of M&E in Ghana construction projects (Tengan & Aigbavboa, 2016).

In subsequent research to validate the mechanisms to mitigate the challenges of not meeting the desired objectives when it comes to project execution, and Monitoring and Evaluation of the projects have been applauded as a panacea to solving these performance challenges. Although the factors influencing effective Monitoring and Evaluation systems have not been agreed upon in the Ghanaian construction industry. The qualitative Delphi approach was adopted to validate the factors influencing Monitoring and Evaluation in the Ghanaian construction industry. Eleven experts

concluded a two-stage iterative Delphi study process and reached consensus on all the fourteen (14) factors identified to influence the Monitoring and Evaluation process to ensure successful project delivery in Ghana. The study again agreed that factors such as stakeholder involvement, budgetary allocation, leadership, and communication and M&E information systems were needed to ensure effective Monitoring and Evaluation. The Delphi technique served as a vital tool to achieve the objective of the study. It is subsequently recommended for studies that require consensus to be reached on matters that are lingering and being understood in diverse perspectives on the challenges of construction project management. The implication of the finding is for a quality, robust Monitoring and Evaluation system for project success (Aigbavboa & Tengan, 2018).

Another study that sought to find out the factors affecting the effective Monitoring and Evaluation of projects had five guiding objectives. These were: To determine the influence of level of training, budgetary allocation, stakeholder participation, politics and institutional framework on effective Monitoring and Evaluation of projects. A descriptive survey research design was used to collect primary data. The questionnaire was pilot tested so that the anomalies were corrected. The research purposively targeted 31 respondents responsible for the Monitoring and Evaluation of projects. The results agreed with other similar studies done previously which established that there were several factors affecting effective Monitoring and Evaluation. These included lack of training of those tasked with Monitoring and Evaluation activities and unclear institutional framework for conducting the same. Other factors included not incorporating the Monitoring and Evaluation budget into project budgets, limited involvement of primary stakeholders and political interference. The study recommends training for those involved

in Monitoring and Evaluation to arm them with requisite skills and improve communication of data, defining clear structures for Monitoring and Evaluation including and an appointment of Monitoring and Evaluation personnel, delineation of monitoring budget from capacity building, involvement of primary beneficiaries at all stages of the project cycle other than conceptualization and limiting political influence in projects (Musomba, et al., 2013)

In a related study that looked at the determinants factors influencing the effectiveness of M&E systems in the city of Addis Ababa through a probability sampling system backed by a simple random sampling method. The findings indicated that the selection of tools and techniques, training, budget allocation, technical assistance, and technical skill/competency to be used in an M&E system determines its success or failure and were also relevant for an effective M&E system. The study concludes and recommends that there is a modification of the M&E systems; an educational policy to be put in place to emphasis on M&E across the sector to have a quantity and quality M&E experts (Kebede, 2018).

A study that was also conducted on the influence of M&E on project sustainability adopted a descriptive approach and collected data from 90 respondents sampled using structured questionnaires. The results indicated a strong correlation between all of the independent variables; M&E organizational factors; Human Capacity for M&E; Partnerships in M&E and Communication in M&E; as well as project sustainability. However, according to the findings, organizations are yet to develop adequate Human Capacity in M&E. Again, organizations should ensure that they establish critical linkages with other organizations in order to enhance their M&E functions and activities. Finally,

the study recommended that communication in M&E should be linked to strategic objectives and must be based on high-quality information (Njeri & Omwenga, 2019).

## **2.10 Critical success factors for improving monitoring and evaluation in the Ghanaian construction industry.**

Project is measured to be effectively monitored and evaluated successfully if it among other

things where by is completed on time (principle of time), accurate budget (monetary standard),

attains essentially all the objectives set for it (effective criterion), is satisfied by the client and used for the intended purpose without hesitation (the standard of the client being satisfied). Thus, for any project to be measured successful, in the time criterion, productivity, efficiency and quality delivery among others are to be fulfilled.

Normally, critical success factors are a set of project factors that are robustly connected to project success, and whose expansion or minimization, liable on whether they are approving or disapproving, which will lead to a successful project.

According to Rockart, J (1979), critical success factors are the number of limited areas in which satisfactory outcomes will guarantee successful modest performance for the individual, department, or organization. There are some areas in the execution of work where things must go accurate for the flourishing of the job being executed. If outcomes in these areas are inadequate, the effort of the organization for the period will be less than desired.

It was concluded by Frese and Sauter (2003) stated that Good Planning, Schedule Control as well as Project leadership and Governance, Clear Accountability, Responsibility, and Communications are key areas of successful projects. This means that a plan for risk management, a clear project plan, and the obligation and provision from stakeholders are the critical success factors for project management. In the study conducted by Khang and Moe (2008) expand this further whereby he stated that critical success factors included; monitoring and evaluation plan, Monitoring and Evaluation activities of the project should as well be integrated in the project schedule, Involvement of all stakeholders in the Monitoring and Evaluation process of the project, effective financial resources to perform Monitoring and Evaluation, educational policy to be put in place to emphasis on M&E across the sector, effective training for those involved in Monitoring and Evaluation, involvement of primary beneficiaries at all stages of the project cycle, limiting political influence in projects. this and many more are critical success factors that help for improving monitoring and evaluation in the Ghana construction industry.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This section of the study basically discusses the research methods available and the reasons for selecting a particular research approach for this study. The methods adopted for any study should be such that it would help the researcher answer the research questions with the aim of achieving the purpose of the research. In summary, this chapter presents the research strategy, research approach and research design. The research approach would be either deductive or inductive reasoning, the research strategies which was quantitative, and the research design, time horizons, unit of analysis and data collection methods i.e. questionnaires. This chapter also provides information on the sampling technique adopted, sampling frame, sample size and population of the study, and it concludes with the tools which were adopted in analyzing the responses from the survey. Basically, chapter three provides an overview of how the survey was conducted.

#### **3.2 RESEARCH STRATEGY**

The research strategy is a very important part of the research philosophy approach (Pathirage et al., 2005). Guba and Lincoln (1994) asserted that the research strategy mainly involves two key areas (quantitative and qualitative). Baiden (2006) opined that the research strategy consists of three diverse areas, thus, quantitative, qualitative and triangulation. The purpose of the study is considered in selecting any of the diverse areas as well as the research questions and the ease of obtaining data (Naoum, 2012).

### **3.2.1 QUALITATIVE RESEARCH STRATEGY**

Qualitative research mostly takes place in a naturalistic setting; thus, it tends to consider the quotidian activities of people and groups of communities (Antwi-Afari, 2019). Denzin and Lincoln (2003) assayed that qualitative research involves a naturalistic approach, understanding the subject matter; looking at interpreting or making sense of issues, by considering the meaning which people attach to them. Creswell (2003) opined that this research consists of different knowledge claims, several methods for collecting data and diverse inquiry initiatives that could be employed. Sources of data for qualitative research includes case studies, interviews, questionnaires, documents, researcher's impressions and responses (Bryman, 2004).

### **3.2.2 QUANTITATIVE RESEARCH STRATEGY**

The quantitative research approach enables the investigation of quantitative properties and their relationship systematically (Wadsworth, 1997). Creswell (1994) opined that this approach considers past actions, words, or records with a statistical significance, and determines the findings of these observations. The objective of this approach is simple; how do we employ mathematical models, theories and hypothesis concerning a natural phenomenon (Sarantakos, 2005).

Sources of data collection are mostly questionnaires, surveys, and experiments using mathematical tools in analyzing them (Hittleman and Simon, 1997). This study adopted the quantitative research strategy because it adopted variables on a subject and by adopting some tools like descriptive statistics (mean, standard deviations, frequencies, etc.) to determine the differences between the various variables.

### **3.3 RESEARCH APPROACH**

Research Approach deals with the stepwise way and plans used for research from one stage to the other until the study aim is achieved (Creswell, 2013). The research philosophy chosen affects the research approach used for any study (Creswell, 2009).

Kwofie (2015) asserted that the research approach provides an avenue to propose a general view of the research problem while providing answers to the research questions. There are two key areas in research approaches, which are the deductive and inductive research approach. Easterby-Smith et al. (2008) opined three main reasons which influence a particular research approach. They are the research design, research strategy used and the knowledge in the several research methods available to conduct the study.

Deductive reasoning basically deals with existing theories that have generally been used or ideas about a subject by identifying the theory and testing through observations to confirm the theory (Ofori-Kuragu, 2013). The deductive approach mostly consists of a top-down approach in the creation of the theory and testing of hypotheses while maintaining the independence of the researcher (Antwi-Afari, 2019). Hence, the process starts with the identification of the relevant theories and the adoption of scientific study through observations to confirm these theories. Kwofie (2015) added that the deductive approach to research is more concerned with finding out patterns through observation to confirm the actual occurrence of the patterns from general to specific. This approach mostly adopts quantitative methods for data collection and analysis.

Inductive reasoning is used mainly in formulating theories, and it starts with the study of specific instances of societal issues through the identification and development of patterns from the analysis of data obtained (Ofori-Kuragu, 2013). In inductive, adopting

the qualitative methods in its data collection and analysis means it is subjective in nature (Antwi-Afari, 2019). In developing theories using the inductive approach, it can be said to be one that helps in gaining more understanding of the problem of society such that the researcher is part of the survey (Saunders et al., 2009). The research approach adopted for this study was that of deductive reasoning because the aim of this study and its strategic objectives can easily be attained, find patterns through observation to confirm a reality (Kwofie, 2015). Hence, a deductive approach was the best for this study.

### **3.4 RESEARCH DESIGN**

The research design falls under the three main research strategies. Baiden (2006) opined that the research design could either be experiments or surveys (quantitative); case study, action research, grounded theory, ethnography, etc (qualitative) or convergent, transformative, explanatory or exploratory sequential, etc. (mixed method).

As a research style, most scientific or natural researches and some few of psychological social researches adopt the experimental research approach to determine causality between two variables through exploratory and explanatory mode to answer the why and how questions (Saunders et al., 2009). In experiment research, we mostly look for treatment for a phenomenon which is expected to be one variable, by keeping the control factors for the other variables and measuring the outcome of both variables. While experiments undertaken in the natural sciences are mostly done in a controlled laboratory, those in the social sciences are done in open fields (Owusu-Manu et al., 2012).

Surveys are adopted as tools for collecting a large number of quantitative data for exploratory and descriptive research through the use of standardized questionnaires (Saunders et al., 2009) and structured interviews with the aim of generalizing from a

sample to the population using statistical analysis (Creswell, 2009). Case studies are for empirical or exploratory investigations where the researcher has to do an in-depth analysis. It is mostly employed within a context of existence, and its purpose is for gaining a rich understanding of such existence (Baiden, 2006; Saunders et al., 2009). Yin (2003) opinionated that case studies are forms of empirical inquiry in which one looks into a contemporary phenomenon within its real-life context, especially where the boundaries between the phenomenon and context are not very clear. This study adopted the survey and case study research designs which helps in machinating and achieving the objectives of the study. Exploring the challenges with project monitoring and evaluation could easily be achieved through the use of standardized questionnaires from expert consultants and Project Managers.

### **3.5 UNIT OF ANALYSIS**

To ensure that the study easily identifies or obtains the best result from the data collection method, the researcher must first identify the unit of analysis (Sekram, 2003). The unit of analysis is grouped into five main types; individual, dyads, groups, organization and culture. Considering the purpose of this study, the organization unit of analysis was chosen. Notwithstanding, it must be appreciated that primary data was obtained from individuals in these organizations who are experts and representatives of the organization's understudy. Speer (2002) opined that the unit of analysis chosen by the research is also affected by the environment where the researcher operates. This study adopted the field survey and it is influenced by the natural environment.

### **3.5.1 Time Horizons**

In research, there are two main time horizons, the longitudinal and cross-sectional time frame (Saunders et al., 2007; Bryman, 2012). Saunders et al. (2007) stated emphatically that the research approach or methodology adopted for a particular study does not influence or determine the time horizon which the study must adopt. The longitudinal time frame considers obtaining data repeatedly over a period of time. This is mostly adopted when one needs to study a particular changing variable to enable the researcher to get the actual results and changing patterns and how that could influence the study (Goddard and Melville, 2004). This study adopted the cross-sectional time horizon, the cross-sectional time horizon is also known as the snapshot time framework. Mostly employed when the study is already established and what is left is for the research to collect data at a particular point in time (Flick, 2015). Hence, it is usually adopted when one needs to provide data to easily prove or debunk an already existing theory identified or formed from literature. It is one time (not recurring at several points in time) and done and completed within a specific timeframe (Antwi-Afari, 2019).

### **3.6 DATA COLLECTION METHODS**

Tongco (2007) was of the view that good data should be collected from the onset because no amount of calculation can atone for the collection of poor data for analysis. This is because of the data collection methods adopted for a study influence the attainment of the research objectives and purpose of the study.

Sources of data are mostly either primary or secondary. This study adopted only primary sources of data which mostly employed the use of survey questionnaires as the tool for data collection. Secondary information for the study was obtained from doing in-depth

desk literature review and identifying important variable which could help in exploring the challenges with project monitoring and evaluation in the building construction sector of Ghana. The variables obtained from literature were strategically compounded into close-ended questionnaires that were distributed to the target population of the study to help in meeting the objectives of the research. For quantitative research, there are two main types of data; categorical and numerical data (Saunders et al., 2009). This study adopted both forms of data in its analysis.

Survey questionnaires were used as the tool for data collection because of the quantitative research approach which this study adopted (Sarantakos, 2005). Questionnaires are mostly in two forms, open-ended and close-ended questionnaires. Questionnaires are formed in such a way so as to answer the objectives of the study (Oppenheim, 1996). A good questionnaire would be unique and contribute to generating several kinds of information from the respondents (Gall et al., 2003). Questionnaires were clear, concise and precise without the use of jargon or field abbreviations for easy understanding and answering by the target population.

Piloting of the questionnaires was done before the main survey. Yin (2009) opined that pre-testing of questionnaires could go a long way of enabling the researcher to understand how the variables identified generally answer and enable in obtaining the research objective and how the target population understands the questions being asked. Lietz (2010) said that pre-testing of questionnaires is very important in obtaining reliable and valid data, it also creates room for correction of any ambiguity in the questions asked.

### **3.7 POPULATION AND SAMPLE SIZE**

Naoum (2012) opined that the population of a study consists of all the possible prospects who fall under the study who are supposed to give or required to be assessed to help in obtaining the purpose of the study. The population of this study consists of consultants, Monitoring and Evaluation Officers and Project Managers who have either undertaken the CHPS project before or are doing it currently.

#### **3.7.1 Sample Frame**

Kothari (2004) defined a sample frame to consist of a list of items from which the study sample is to be taken. Ritchie et al. (2013) were of the view that for any study, the researcher can identify the sample frame specifically to the study or it could be obtained from secondary information. Naoum (2012) was of the view that surveying the whole population mostly becomes difficult financially and technically, hence obtaining a subset of the general population under investigation and using it to acquire information on the entire population should be adopted. The sample frame if properly done can help provide the required information needed about the general population.

### **3.8 Sampling technique**

After identifying the population of the study, the next step is to use a sampling technique to choose some sample out of the population of the study. Sampling techniques are usually grouped into two main categories, thus, probability sampling and non-probability sampling techniques (Saunders et al., 2009). Probability sampling techniques are those cases whereby each individual in the population has an equal chance of being selected. It is mostly used when the population of the study is known. Bryman (2004) postulated that the probability sampling technique helps in easily calculating the confidence interval and

margin of errors in the study. Examples of such techniques are stratified random sampling, multi-stage random sampling, simple random sampling, cluster sampling, and systematic sampling.

Non-probability sampling techniques are those cases whereby it is impossible for each individual in the population to have an equal chance to be selected. Non-probability sampling technique does not give the opportunity to calculate for confidence interval and margin of errors, but the approach appears very easy and cost-effective (Bryman, 2004). Examples are quota sampling, convenience sampling, purposive sampling, self-selection sampling and snowball sampling (Saunders et al., 2009). This study, therefore, adopted a census sampling technique.

### **3.8.1 Purposive Sampling Technique**

A purposive sampling technique relies on the judgment of the researcher in selecting the group, class or organization which is to be studied. Hence, it can be called the selective, subjective or judgemental sampling technique (Saunders et al., 2009). In the purposive sampling technique, based on the specific goal of the researcher and the purpose in mind, there are several examples to choose from like expert sampling, case sampling, total population sampling and homogenous sampling among others (Saunders et al., 2009). This study adopted the case sampling type of purposive sampling technique to select consultants, Project Managers, M&E officers who are in the Accra metropolis as case studies. These persons were chosen based on the following criteria; that they should have experts who understand project monitoring and evaluation; they should have done a CHPS project whether the project was monitored, controlled and evaluated, and they

should currently be doing a CHPS project which is undergoing monitoring and evaluation.

### **3.8.2 Sample Size**

After determining the sampling technique for the study, the next focus was to try and find out the sample size for the study. It must be reiterated that the study adopted a non-probability sampling technique in determining the sample from the population. Cochran (1977) opined that in determining the sample size for an unknown population, a few important things must be considered such as; the level of precision and desired level of confidence. However, these determinants are mostly for probability sampling techniques. For census sampling technique, the population is taken as the sample size from the field survey. The population for the study was Sixty-Eight (68) and it was adopted as the sample size.

### **3.9 DATA PROCESSING AND ANALYSIS**

To answer the research questions which will lead to answering and achieving the aim of the study, the data obtained from the survey is analyzed (Saunders et al., 2009). Kwofie (2015) was of the view that this approach generally leads to how the obtained data would be organized, examined, categorized, tabulated, interpreted and tested. Mostly normally distributed data uses parametric tests while the non-normally distributed data adopts the non-parametric tests (Saunders et al., 2009).

In order to get quality data that would show a generalization of the entire population, Yin (2003) was of the view that data obtained from surveys should be sorted and organized first, by so doing making sure no incomplete questionnaire is finally added and taking

note of all missing values. The obtained data which is good for further analysis is being coded into Statistical Package for Social Science (SPSS) windows version 25.

The results from the SPSS are meaningfully presented to the audience as findings of the study in forms of tables and figures (Kapadia-Kundu and Dyalchand, 2007; Carpio et al., 2007). Tables and figures have been tagged as a useful way of presenting large quantity text in simplified forms for easy understanding. UN (2009) was of the view that all tables should contain at least these five main criteria in presenting their findings to the respondents; the table title, column headers, row stubs, footnotes and source line.

The Relative Importance Index (RII) was used as the tool of analysis. RII was proposed by Soofi et al. (2000) as a tool for determining the relative significance of quantities through the formulation of indexes from which the various characteristics are ranked (hence, understanding the contribution of each variable to a response variable). Kapadia-Kundu and Dyalchand (2007) opined that using a five-point Likert scale is very good in measuring statement which would be solved using the RII tool. Hence, this study adopted a similar approach in the questionnaire formation. RII has been used in several scientific research (see for example Johnson, 2000; Jeyamathan and Rameezdeen, 2006; Antwi-Afari et al., 2018; Owusu-Manu et al., 2018; Antwi-Afari, 2019, etc.). One major reason for using RII is the avowal of Carpio et al. (2007) who opined that RII is best for a group of variables, and the questionnaires of this study were formulated as such (see Appendix).

RII is calculated as  $RII = \frac{\sum W}{A * N}$  where  $W$  is the weight given to each factor by respondent ranging from 1 – 5,  $N$  is the total number of respondents, and  $A$  is the highest response integer (5 in this case).

### **3.10 ETHICAL CONSIDERATION**

Emphasis was made on the fact that respondents that the answering of the questionnaires is voluntary and that they are free to withdraw anytime they so wish during the research period. Respondents were also not under any duress to take part in the research study. Massive assurance was also made in protecting the privacy of the respondents by strict standard anonymity, and also reiterated the fact that the research is solely for academic purpose.

### **3.11 CHAPTER SUMMARY**

This chapter presented the research methodology for this study. In this chapter, an effort was made to position the study along a particular line of the research approach. The deductive research approach was chosen which informs the use of quantitative research strategy. The population of the study considered consultants, Monitoring and Evaluation Officers and Project Managers in Ghana who has worked on or is working on CHPS compound Projects. The tool for data collection was questionnaires. Relative Importance Index, Mean Score Ranking were considered as the tools for analysis. The software adopted for the study is Microsoft Excel, Word, and Statistical Package for Social Sciences windows version 25.

## **CHAPTER FOUR**

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

#### **4.1 INTRODUCTION**

This chapter converses the analysis of the data recovered from the survey instrument. The demographic data of the respondents were analyzed. The main objectives of the study on the challenges to project Monitoring and Evaluation in the Ghanaian construction industry as well as the critical success factors for improving Monitoring and Evaluation were also analyzed using the relative importance index. This helped in analyzing the study successfully.

##### **4.1.1 Survey Responses**

During the survey, out of 68 questionnaires that were administered to consultants, Project Managers, 40 was retrieved representing a response rate of 59%. Baruch (1999), stated in his study that, a response rate of approximately 35% is satisfactory for most academic studies targeting top management or organizations' representative. This implies that the response rate obtained for this study (59%) is acceptable.

#### **4.2 Analysis of the Demographic Data of Respondent**

In an effort to check the reliability of the data retrieved from the questionnaire, it was considered important to critically analyze the respondent's demographic data. The descriptive analysis of the demographic data is summarized in Table 4.1.

**Table 4.1: Respondents Characteristics**

<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Educational background</b>		
HND	9	22.5
Degree	11	27.5
Postgraduate(MSc/MPhil)	17	42.5
PhD	3	7.5
<b>Practical working experience</b>		
Less than 2 years	5	12.5
2 - 5 years	10	25
6 - 10 years	17	42.5
10 years and above	8	20
<b>Number of years respondents have worked with Company</b>		
Less than 2 years	3	7.5
2 - 5 years	12	30
6 - 10 years	15	37.5
10 years and above	10	25.0
<b>Position</b>		
Monitoring & Evaluation Officer	4	32.5
Program manager	6	20
Project Officer	15	22.5
Engineer	10	15
Field Officer	5	10
<b>Involved in conducting monitoring and evaluation</b>		
YES	35	87.5
NO	5	12.5
<b>Total</b>	<b>40</b>	<b>100</b>

**Source: Field survey (2019)**

Table 4.1 shows the details of respondent's characteristics, which is well presented in the table above, the first characteristics detail presented is the educational level of respondents, and out of forty respondents, 42.5 % are Postgraduate (MSc/MPhil) holders, 27.5% are First degree (BSc) holders, 22.5% are Higher National Diploma (HND) holders and 7.5% are educated to the PhD level. The question was demonstrated to respondents in finding out the level of education of respondents, for the reason that, the level of this qualification to a larger extent determines their roles and output in their companies.

From the table, the number of years of experience from respondents is shown above, whereby 12.5% have experience in the construction industry for less than 2 years, 25% between 2 - 5 years, 42.5% have experience in construction projects between 6 to 10 years and lastly another 20 % between 10 years and above. The years of experience presented shows how experienced respondents are in the study conducted together with how much knowledge they have in the study conducted, also aids in obtaining a practical and convincing response in regard to the subject area.

The number of years' respondents have also worked in their recent company is presented above, 7.5 % have worked in their present company for Less than 2 years, 30% for 2 - 5 years, 37.5 % for 6 - 10 years, and 25% for 10 years and above. From the table above it is observed that out of forty respondents, about sixty per cent of the respondents have been in their industry for more than five years, and have much knowledge about their companies monitoring and evaluation activities. The various positions of respondents in the industry are listed above as seen in table 4.1. As observed above, the greater part of the respondents is Monitoring & Evaluation

Officers, which represents 32.5 and Program manager, representing 20% of the total number of respondents, 22.5% were Project Officers, 15% were Engineers, and lastly, 10% were Field Officers. The various positions of all forty respondents were presented. Lastly, the study gathered information from respondents to know if they have been involved in conducting monitoring and evaluation. From the results of the data, majority of the respondents representing 87.5% of the respondents have been involved in this activity before, a few of the respondents representing 12.5% have not yet been involved in this activity before. Since the majority of the respondents have been involved in project monitoring and evaluation before the results of the data there is therefore reliable in conducting the study.

#### **4.3 THE CHALLENGES TO PROJECT MONITORING AND EVALUATION IN THE GHANA CONSTRUCTION INDUSTRY.**

Monitoring and Evaluation are very important in the construction industry, therefore there is a need to consider Monitoring and Evaluation during the execution of a project (James 2016). In the past year's challenges to project monitoring and evaluation has been an issue that needs to be focused on. Information in this part of the study was collected from the literature and assessed by construction professionals who have more knowledge in this subject area, hence, factors below were categorized based on their importance indices and are presented in *Table 4.2*. Professionals in construction agreed on the four strongest challenges to be "Lack of adequate financial resources to carry out monitoring and evaluation", "Lack of monitoring and evaluation expertise", "Multiple monitoring and evaluation requirements leading to difficulties", and "Lack of training of those tasked with monitoring and evaluation

activities” as the strong challenges to project monitoring and evaluation. Research conducted by (Musomba, Kerongo, mutual and Kilika 2013), stated that, they agree with certain challenges that affect project monitoring and evaluation that needs to be addressed, and these factors include; Lack of training of those tasked with monitoring and evaluation activities, Lack of adequate financial resources to carry out monitoring and evaluation, Multiple monitoring and evaluation requirements leading to difficulties and Weak linkage between planning, budgeting, and Monitoring & Evaluation. Challenges selected by respondents were also mentioned by several researchers. Therefore, it is agreed by the findings of this study to a large extent with the findings in the literature on the challenges to project monitoring and evaluation in the Ghana construction industry.

**Table 4.2 the challenges to project monitoring and evaluation**

<b>Challenges</b>	<b><math>\Sigma w</math></b>	<b>RII</b>	<b>Ranking</b>
Lack of adequate financial resources to carry out monitoring and evaluation	193	0.97	1 <sup>st</sup>
Lack of monitoring and evaluation expertise	187	0.94	2 <sup>nd</sup>
Multiple monitoring and evaluation requirements leading to difficulties	176	0.88	3 <sup>rd</sup>
Lack of training of those tasked with monitoring and evaluation activities	164	0.82	4 <sup>th</sup>
Inadequate tools and techniques	158	0.79	5 <sup>th</sup>
Weak linkage between planning, budgeting, and monitoring & evaluation,	151	0.76	6 <sup>th</sup>
Lack of involvement of the local community in the planning, initiation, and execution of projects, leading to a challenge in project delivery	139	0.70	7 <sup>th</sup>
Limited resources and budgetary allocations for monitoring & evaluation	128	0.64	8 <sup>th</sup>
A lack of proper prioritization, leading to ineffective project delivery	112	0.56	9 <sup>th</sup>
Weak institutional capacity	98	0.49	10 <sup>th</sup>
Weak demand for and utilization of monitoring and evaluation results.	80	0.40	11 <sup>th</sup>
Inadequate time, efficiency, and effectiveness leading to poor delivery of project	77	0.39	12 <sup>th</sup>
Political interference	49	0.25	13 <sup>th</sup>
Difficulty to demonstrate attainment of the long-term objectives	41	0.21	14 <sup>th</sup>

**Source: Field Survey, 2019**

#### **4.4 CRITICAL SUCCESS FACTORS FOR IMPROVING MONITORING AND EVALUATION.**

The study went further into a literature review to gather critical success factors for improving monitoring and evaluation. Critical success factors are a set of project factors that are strongly linked to project success, and whose growth or minimization, accountable for whether the project is going as planned or not, which will lead to project success. On the second objective of the study, data was also collected from the literature and assessed by construction professionals, which was categorized based on their importance indices and presented in *Table 4.3* with the help of the Mean score ranking. Professionals in construction acknowledged the five key success factors for improving Monitoring and Evaluation, and this includes: “Competent Monitoring and Evaluation expertise”, “Effective planning and controlling”, “There should be Monitoring and Evaluation plan”, “Educational policy to be put in place to emphasis on M&E across the sector” and “Adequate provision of Monitoring and Evaluation budget”. Findings from the literature also stated these success factors, which were in line with the findings of the study. Khang and Moe (2008) conducted a study and expand this further whereby he stated that critical success factors included: There should be Monitoring and Evaluation plan, Educational policy to be put in place to emphasis M&E across the sector and Adequate provision of Monitoring and Evaluation budget. It was also stated by Frese and Sauter (2003), whereby they supported these critical success factors by mentioning that, competent Monitoring and Evaluation expertise and Effective planning and controlling were equally mentioned. These were confirmations from other researchers, in table 4.3, as stated

in their research. Hence, the following must be applied to improve project Monitoring and Evaluation in construction.

**Table 4.3 Critical success factors for improving Monitoring and Evaluation**

<b>Success Factors</b>	<b><math>\Sigma w</math></b>	<b>RII</b>	<b>Ranking</b>
Competent Monitoring and Evaluation expertise	201	0.96	1 <sup>st</sup>
Effective planning and controlling	196	0.94	2 <sup>nd</sup>
There should be a Monitoring and Evaluation plan.	191	0.91	3 <sup>rd</sup>
Educational policy to be put in place to emphasis on M&E across the sector	179	0.86	4 <sup>th</sup>
Adequate provision of Monitoring and Evaluation budget	169	0.81	5 <sup>th</sup>
Effective financial resources to carry out Monitoring and Evaluation	163	0.78	6 <sup>th</sup>
Monitoring and Evaluation activities of the project should also be included in the project schedule.	154	0.74	7 <sup>th</sup>
Effective stakeholder involvement	126	0.60	8 <sup>th</sup>
Effective training for those involved in Monitoring and Evaluation	121	0.58	9 <sup>th</sup>
Involvement of primary beneficiaries at all stages of the project cycle	90	0.43	10 <sup>th</sup>
limiting political influence in projects	81	0.39	11 <sup>th</sup>
Involvement of all stakeholders in the Monitoring and Evaluation process of the project.	44	0.21	12 <sup>th</sup>

**Source: Field Survey, 2019**

## **4.5 SUMMARY**

In the overall context, the results of the survey as discussed are found to reflect the true nature of Monitoring and Evaluation in the construction industry. It also shows that the respondents responded to the questionnaire on the account of their experience over the years on Monitoring and Evaluation. The chapter was opened with a brief discussion of the survey participants and a descriptive statistic of the results obtained from the field.

Moreover, it is evident now that lack of adequate financial resources to carry out Monitoring and Evaluation is a major challenge in the construction industry while difficulty demonstrating the attainment of the long-term objectives is the least of the challenges confronting the industry.

It was further revealed that competent Monitoring and Evaluation expertise is the topmost critical success factor for improving Monitoring and Evaluation while the involvement of all stakeholders in the Monitoring and Evaluation process of the project has little effect on the success of projects.

## **CHAPTER FIVE**

### **RECOMMENDATIONS AND CONCLUSION**

#### **5.1 INTRODUCTION**

This study particularly focused on exploring the challenges with monitoring and evaluation in the building construction industry of Ghana with a view to improving the success of projects through effective monitoring and evaluation. The main introduction was covered in Chapter One. In Chapter Two, there were discussions on previous findings on the challenges with monitoring and evaluation in the building construction industry. In Chapter Three, the research delved into Methodology and the most appropriate research method was considered. There was a pilot of the research process through the issuing of survey questionnaires. Detailed analysis and discussion of results obtained from the survey were contained in Chapter Four. Ultimately, in Chapter Five, the research questions and the objectives of the study were revisited to bring into light the extent to which the aim of the research has been achieved in the entirety of the various places of study.

Chapter Five, therefore, follows the structure below: a summary of how the objectives were fulfilled is well-substantiated and a detailed discussion to emphasize the contribution of this research in achieving the research objectives. In winding up, this Chapter offers recommendations for further research that can be conducted based on the findings of the study and brings to light the mishaps faced throughout the study.

A summary of this dissertation, the overall aim of this study is to explore the challenges with Monitoring and Evaluation in the Building Construction Industry of Ghana. In order

to achieve the aim of the research, two objectives were determined. All two objectives were achieved mainly through questionnaires and supported through literature reviews.

## **5.2 REVIEW OF OBJECTIVES**

### **5.2.1 To identify the challenges with Project Monitoring and Evaluation in the Ghanaian Construction Industry.**

This study gave an insight into the real challenges faced by the construction Industry. These challenges have over the years led to the poor performance of the industry and leads to delay in project execution and cost overruns. Through the survey, factors such as Lack of adequate financial resources to carry out monitoring and evaluation, Lack of monitoring and evaluation expertise, Multiple monitoring and evaluation requirements leading to difficulties, Lack of training of those tasked with monitoring and evaluation activities, Inadequate tools and techniques, Weak linkage between planning, budgeting and monitoring & evaluation, Limited resources and budgetary allocations for monitoring & evaluation, Weak institutional capacity, Weak demand for and utilization of monitoring and evaluation results, Political interference were the challenges with Project Monitoring and Evaluation in the industry.

The study also revealed that a lack of adequate financial resources to carry out monitoring and evaluation is the topmost challenge in the Ghanaian Construction Industry with an RII of 0.97. Furthermore, contrary to believe the political interference is a major challenge, the study discovered that it was actually one of the least challenges ranked 13<sup>th</sup> out of 14 challenges. The least challenge from the study was the difficulty to demonstrate attainment of the long-term objectives with an RII of 0.21.

### **5.2.2 To determine critical success factors for improving monitoring and evaluation in the Ghanaian Construction Industry.**

Professionals in the construction industry acknowledged the five key success factors for improving monitoring and evaluation, and this includes: “Competent monitoring and evaluation expertise”, “Effective planning and controlling”, “There should be monitoring and evaluation plan”, “Educational policy to be put in place to emphasis on M&E across the sector” and “Adequate provision of Monitoring and evaluation budget”.

The survey revealed that competent monitoring and evaluation expertise is the major success factor for improving monitoring and evaluation in the Ghanaian construction Industry with a mean ranking of 4.78. Adequate provision of monitoring and evaluation budget had a mean of 4.03 and was ranked 5<sup>th</sup>. The involvement of all stakeholders in the monitoring and evaluation process of the project was the least factor. It has a mean of 1.05 and was ranked 12<sup>th</sup>.

### **5.3 RECOMMENDATIONS**

The results of this research are expected to contribute to realizing the challenges associated with Monitoring and evaluation in the construction industry of Ghana and then by tackling those challenges efficiently, projects will be much more successful. In order to achieve this study, the study proposes a number of recommendations to help tackle the challenges of Monitoring and Evaluation in the Industry.

- The Government should devise a strategic plan for Monitoring and Evaluation that will serve as a guide for every project to be undertaken
- Extensive training should be given to the Monitoring and Evaluation team who will be conducting the exercise from time to time. Furthermore, the team

should be highly independent and unbiased for effective Monitoring and Evaluation

- Budgets should be allocated purposely for Monitoring and Evaluation on each and every project in the industry. It could be a percentage of the Contract Sum.
- In preparing Contract documents, a detailed Monitoring and Evaluation Plan should be considered and strictly adhered to.

#### **5.4 RECOMMENDATIONS FOR FURTHER STUDIES**

Following this dissertation, it is evident that further research can be done and below are suggested areas in which research can be done:

- An investigation into the effect of Challenges with Monitoring and Evaluation on Construction Projects in Ghana
- The impact of Lack of effective Monitoring and Evaluation Plan on Project Success
- This research was conducted in the Greater Accra Region so in order to obtain more holistic information on these challenges, similar research should be undertaken in other regions.

#### **5.5 RESEARCH LIMITATION**

Despite the fact that the research was able to achieve the objectives, there were some limitations that were noted. They include but not limited to:

- Acquiring data on the population used for the study due to the fact that a number of respondents were reluctant. That notwithstanding the research provided

assurance that the information provided was strictly for academic purposes and confidentiality is key.

- Time constraint was an issue since the collection of the questionnaire took longer than expected.

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## **APPENDIX**

**Kwame Nkrumah University of Science and Technology**

**Department of Construction Technology and Management**

### **QUESTIONNAIRE**

**RESEARCH TOPIC:** Exploring the challenges with Monitoring and Evaluation  
in the Building Construction Industry of Ghana. A case study of CHPS  
Compound projects.

Dear Sir/Madam,

I am a Masters student of the Kwame Nkrumah University of Science and Technology, Kumasi, carrying out a study on Exploring the challenges with Monitoring and Evaluation in the Building Construction Industry of Ghana. A case study of CHPS Compound projects. I am certain that your firm has much experience in this area of study and I would appreciate it if you could provide answers to the following questions. Information provided on this questionnaire will be treated confidentially and this will assist the research to attain its main objective.

Thank you.

Duke Kofi Klutse

Tel no. (+233) 24 696 3788

Professor (Nana) Edward Badu

PMB

Department of Construction Technology and Management

KNUST-KSI, GHANA

## QUESTIONNAIRE

### PART ONE: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT

Please appropriately respond to this questionnaire based on an authentic experience and please answer by ticking [ ✓ ] the appropriate cell.

1. What is your position in your organization?

- |                                 |       |                  |
|---------------------------------|-------|------------------|
| Monitoring & Evaluation Officer | [   ] | Engineer         |
| [   ]                           |       |                  |
| Field Officer                   | [   ] | Program manager  |
| Project Officer                 | [   ] |                  |
| Others                          |       | (please specify) |
| .....                           |       |                  |

2. What is your level of education?

- |                               |       |
|-------------------------------|-------|
| HND                           | [   ] |
| Degree                        | [   ] |
| Postgraduate (MSc/MPhil)      | [   ] |
| PhD                           | [   ] |
| Others (please specify) ..... |       |

3. How many years have you been working with your current organization?

- |                    |       |
|--------------------|-------|
| Less than 2 years  | [   ] |
| 2-5 years          | [   ] |
| 6-10 years         | [   ] |
| 10 years and above | [   ] |

4. How many years of practical working experience do you have in the construction industry?

- |                    |       |
|--------------------|-------|
| Less than 2 years  | [   ] |
| 2-5 years          | [   ] |
| 6-10 years         | [   ] |
| 10 years and above | [   ] |

5) Have you been involved in conducting monitoring and evaluation of any project?

Yes [   ]                      No [   ]

## PART TWO

### THE CHALLENGES TO PROJECT MONITORING AND EVALUATION IN THE GHANA CONSTRUCTION INDUSTRY.

Based on the review of literature, a number of the challenges to project monitoring and evaluation in the Ghana construction industry. From practical experience in project activities, please express your views on the following challenges listed below. (Please tick [ ✓ ] the suitable box). [Where Strongly Disagree = SD (1); Disagree = D (2); Neutral = N (3); Agree = A (4); and Strongly Agree = SA (5)]

No.	CHALLENGES TO M&E	Scale				
		SD (1)	D (2)	N (3)	A (4)	SA (5)
1.	Lack of monitoring and evaluation expertise					
2.	Lack of adequate financial resources to carry out monitoring and evaluation					
3.	Multiple monitoring and evaluation requirements leading to difficulties					
4.	Difficulty to demonstrate attainment of the long-term objectives					
5.	Inadequate time, efficiency, and effectiveness leading to poor delivery of project.					
6.	A lack of proper prioritization, leading to ineffective project delivery					
7.	Lack of involvement of local community in the planning, initiation, and execution of projects, leading to challenge in project delivery					
8.	Weak institutional capacity					
9.	Limited resources and budgetary allocations for monitoring & evaluation					
10.	Weak linkage between planning, budgeting and monitoring & evaluation,					
11.	Weak demand for and utilization of monitoring and evaluation results.					
	Lack of training of those tasked with monitoring					

12.	and evaluation activities					
13.	Political interference					
14.	Inadequate tools and techniques					
	<i>If others, please specify</i>					

### PART THREE

#### TO DETERMINE CRITICAL SUCCESS FACTORS FOR IMPROVING MONITORING AND EVALUATION IN THE GHANA CONSTRUCTION INDUSTRY.

Below are a number of critical success factors for improving monitoring and evaluation in the Ghana construction industry. Based on your experience, please answer by ticking [ ✓ ] suitable box. [Where Strongly Disagree = SD (1); Disagree = D (2); Neutral = N (3); Agree = A (4); and Strongly Agree = SA (5)]

No.	CRITICAL SUCCESS FACTORS	Scale				
		SD (1)	D (2)	N (3)	A (4)	SA (5)
1.	There should be monitoring and evaluation plan.					
2.	Adequate provision of Monitoring and evaluation budget.					
3.	monitoring and evaluation activities of the project should also be included in the project schedule.					
4.	Involvement of all stakeholders in the monitoring and evaluation process of the project.					
5.	Competent monitoring and evaluation expertise					
6.	Effective financial resources to carry out monitoring and evaluation					
7.	Effective stakeholder involvement					
8.	Effective planning and controlling					

9.	Educational policy to be put in place to emphasis on M&E across the sector					
10.	Effective training for those involved in monitoring and evaluation					
11.	Involvement of primary beneficiaries at all stages of the project cycle					
12.	limiting political influence in projects					
	<i>If others, please specify</i>					

If any other comments, please provide below

.....  
.....  
.....  
.....  
.....

**THANK YOU!**