

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

**ASSESSING THE ROLES OF A PROJECT MANAGER IN THE PROCUREMENT OF
WORKS AT THE CONSTRUCTION STAGE IN GHANA; A CASE STUDY OF THE
KEJETIA REHABILITATION PROJECT.**

By

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**A Thesis submitted to the Department of Construction Technology and Management,
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MASTER OF SCIENCE

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DECLARATION

I hereby declare that this submission is the result of my own work and that it has not been submitted either in part or whole for any other degree elsewhere. Works by other authors have been duly acknowledged.

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ABSTRACT

The conventional literature buttressed the growing importance of a project manager in the construction of any project. However, their roles and challenges in a large project such as the Kejetia Rehabilitation Project has not been explored. This study therefore intended to assess the roles and challenges of the project manager in the Kejetia Rehabilitation Project. The objectives of this study was to determine the roles of the project manager in the procurement of works and also to assess the challenges that may undermine the operations of the project manger and to suggest ways of improving them. The study adopted a qualitative method, specifically a case study approach. Responses were solicited from the(one) project manager and 10 construction workers. A convenience and accidental sampling technique helped in collecting the data from the construction workers. The results indicated that the project does not employ minors below the age of 18, which is in tandem with the rules of the International Labour Organization. Also, the inadequate education on the part of the construction workers interviewed affected their perception on the roles and challenges. Furthermore, the challenges of the project manager include: long hours at work, unpaid salaries and delay in delivery of equipment and machinery. However, some strategies were adopted to help alleviate the aforementioned challenges. These are: regulator stakeholder meetings, regular monitoring, effective risk management strategies, well structured communication plan, management of stakeholder expectations, risk management plan and on the job training. The study therefore concludes that the construction workers should be involved more in the project because their perception on the project can help ensure its successful implementation. Again, the project manager should dedicate time to the work and recognize that the hours involved is necessary for the project success.

TABLE OF CONTENTS

	Page
DECLARATION	i
ACKNOWLEDGEMENT	iii
ABSTRACT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background	10
1.2 Research Problem.....	2
1.3 Research objectives	4
1.4 Research questions	4
1.5 Scope of the study	5
1.6 Preliminary Methodology	5
1.7 Organization of the study	6

CHAPTER TWO

REVIEW OF RELEVANT LITERATURE ON PROJECT MANAGEMENT AND PROCUREMENT

2.1 Introduction	7
2.2 Definition of key concepts	7
2.2.1 Project.....	7
2.2.2 Construction of projects.....	9
2.2.3 Project Management	9
2.2.4 Procurement.....	10
2.3 Stages of Project Implementation and Management	11
2.3.1 Roles of a project manager	13
2.4 Stakeholder management in project implementation	13
2.5 Public Procurement in Ghana	14

2.5.1 Types of Procurement in Ghana	15
2.6 Conceptual framework	16
2.7 Summary of Relevant literature	18

CHAPTER THREE

PROFILE OF THE STUDY AREA AND RESEACH METHODOLOGY

3.1 Introduction	19
3.2 Profile of Kumasi.....	20
3.2.1 Location and Size	20
3.2.2 Political Administration.....	20
3.2.3 Population statistics	21
3.3 Research Design.....	22
3.3.1 Selection of Study Area and Project.....	23
3.3.2 Sampling Frame and Sample Size Determination	24
3.4 Key Research Issues/Variables	24
3.5 Study Population and Unit of Enquiry/analysis	26
3.6 Method of Data Collection.....	26
3.6.1 Desk Study.....	26
3.6.2 Pilot Survey	27
3.6.3 Survey on Project manager and construction workers	27
3.6.4 Observation.....	27
3.7 Tools of Data Analysis.....	27
3.8 Summary	28

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION

4.1 Introduction	29
4.2 Bio-demographic data of construction workers	29
4.3 Background of the Kejetia Rehabilitation Project.....	32
4.4 Roles of the project manager.....	35
4.4.1 Construction worker's perception on the roles of the project manager	38
4.5 Challenges of the project manager	41
4.5.1 Perception of the challenges of the project manager from construction workers	44

CHAPTER FIVE

SUMMARY OF KEY FINDINGS AND CONCLUSION

5.1 Introduction	48
5.2 Summary of results	48
5.2.1 Bio-demographic data.....	48
5.2.2 Roles of the project manager	49
5.2.3 Challenges of the project manager	50
5.3 Strategies adopted to alleviate challenges	50
5.4 Conclusion.....	51
References	54
Appendix 1: Project Manager Interview schedule.....	58
Appendix 2: Construction workers Interview schedule	63

LIST OF TABLES

Table 2.1: Thresholds for Procurement Methods	16
Table 3.1: Distribution of population by age, sex and sex ratio	22
Table 3.2: Variable, Data Source and Method of Data Collection	25
Table 4.1: Bio-data counts of construction workers	30
Table 4.2: Project manager responses on background of project	34
Table 4.3: Project manager's perspective on roles	37
Table 4.4: Construction worker's perception on the roles.....	40
Table 4.5: Challenges faced from the perspective of the project manager	43
Table 4.6: Perception on challenges from construction workers.....	45

LIST OF FIGURES

Figure 2.1: Conceptual framework	17
Figure 3.1: Kumasi Metropolitan Map	21
Figure 4.1: Proposed Kejetia/Central Market Redevelopment Project.....	33

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background of the study

Projects have been globally offered to implement developments that have the tendency to result in change in the lives of people. They are mainly efforts that aim to produce a result within a specific timeframe and budget (Archibald, 2004). The complex nature of projects therefore require expert management and execution for it to be able to achieve its set goals and become successful. It is from the successful implementation that projects sometimes graduate to be called “Great Projects” (Dvir and Shenhar, 2011).

The concept of project success has been able to capture a lot of attention by scholars in their academic writings over the last few years (Ika, 2009). Some define it based on time or cost and/or quality. However, it is agreed that to make project successful, competitive advantage should be gained by projects and to gain competitive advantage organization needs to define its strategic objectives and employ individuals capable of implementing the project (Awwal, 2014). The individuals in essence become the project team and are primarily lead by the project manager (Milićević et al., 2014). Project management may seem trivial but involve technical expertise with some years of experience to perfect. As a result, every project ought to undergo a careful thought and implementation process to guarantee its results within a specified resource allocation (Archibald, 2004).

Generally, a project manager's role in project implementation is varied based on the specific project at hand. It may also vary depending on the location and size of the project and can include rental or sale projects, purchase projects, employment projects or project proposals for new businesses¹. Their roles in the implementation of projects has been identified in the conventional and grey literature to be worthwhile. According to San et al., (2017), the role of a project manager is to monitor the construction works at the site, ensure the site complies with stipulated standards and the project implementation is within the specified time and cost allocation. In addition, another important role is relationship management (Meng and Boyd, 2017).

Furthermore, the roles of the project manager can be observed from the procurement and construction stage point of view. They perform certain specific roles in the procurement of works of any project. The roles that they play are very important for the successful implementation of any project. According to (Kerzner and Kerzner, 2017) a project manager's role cannot be underestimated. They make sure the project fully satisfies the conditions of the client.

Even though there may be a wildly and globally acclaimed perception of the roles of the project manager in the procurement of works, there are some specific roles tied to some projects. It is based on this premise that the study seeks to assess their roles and challenges in the implementation of a very large and important project (ie. the Kejetia Rehabilitation project). The study is not intended to generalize the findings to all rehabilitation projects. However, it intends to unravel the significance of a project manager to such a large project as well as identify challenges that can be solved to help guarantee the smooth completion of any and such projects.

1.2 Research Problem

Projects managers are one important implementers of projects. Their roles in the implementation of projects have been emphasized in the literature (Meng and Boyd, 2017; Mossalam and Arafa, 2016; San et al., 2017). However, these roles have been identified to vary based on the project. The roles may also vary with regards to the type and aspect of procurement under consideration. Some projects tend to narrow the roles they play by diverting some of the roles to other individuals. These notwithstanding, project managers are a very essential part of project implementation.

Despite the importance of the project managers, the available literature has not delved deep into the subject matter to provide a comprehensive and detailed overview of their roles. Furthermore, it is worth noting that there are also some challenges that project managers encounter in performing their duties. These challenges are also somewhat absent from the conventional literature. After a preliminary review of the literature, the known studies that attempted to provide such evidence of the roles and challenges of a project manager were by (Meng and Boyd, 2017; Mossalam and Arafa, 2016; San et al., 2017). However, these studies did not provide project specific roles to indicate the dynamics with their roles and the level of importance they play in specific projects. These studies are not near enough to provide enough evidence to influence the effective operations of project managers.

It is further identified after surfing through search engines such as google and google scholar that studies on the roles of a project manager in a project as large as the Kejetia rehabilitation project was virtually non-existent. This research will therefore provide empirical data on the roles as well as an assessment of the challenges of the project manager. This will fill the knowledge gap as well as help proffer recommendations to alleviate the challenges faced by project managers in the procurement of works. Even though the study will focus on the Kejetia rehabilitation project,

project managers can adopt recommendations to strengthen and guarantee the implementation of roles.

1.3 Research aim and objectives

The aim of the study was to explore the operations of the project manager in the Kejetia Rehabilitation project with regards to procurement of works. To achieve this broad aim, the under listed specific objectives were set:

1. To identify the roles of the project manager in the procurement of works under the Kejetia Rehabilitation project;
2. To identify the challenges that may undermine the operations of the project manager in the procurement of works under the Kejetia Rehabilitation project; and
3. To identify ways of improving the operations of the project manager in the procurement of works under the Kejetia Rehabilitation project amidst the challenges.

1.4 Research questions

The general research question to be answered is how does the project manager in the Kejetia Rehabilitation project operates in performing procurement of works? This general research question is accompanied by specific questions indicated below:

1. What are the roles of the project manager in the procurement of works under the Kejetia Rehabilitation project?
2. What are the challenges that affect the operations of the project manager in the procurement of works under the Kejetia Rehabilitation project?
3. How can the project manager in the procurement of works under the Kejetia Rehabilitation project perform his or her duties well amidst the challenges?

1.5 Scope of the study

The study being a case study will concentrate on the Kejetia Rehabilitation project. This project is located in the Kumasi Metropolitan Assembly in the Ashanti Region of Ghana. As the project name suggests, the specific location of the project is Kejetia, which is noted for its cluster of economic activities.

1.6 Methodology

The research will be guided by the social constructivism school of thought, which stems from the need to understand a phenomenon and gather information behind the scenes. This philosophical basis will help understand and explore the research from the perspective of respondents and provides room to delve into one particular case. Therefore, the study will employ a qualitative research design. An Interview guide and schedule will be used to gather the primary data for the analysis.

Furthermore, in terms of sampling, a non-probability sampling method will be adopted preferably the purposive sampling method which is tied to the case study research approach (ie. Kejetia Rehabilitation project). It should be noted that a fully blown methodology would be presented in chapter three, which will provide a systematic process to be followed to achieve the results. The in-depth methodology will help ensure replicability, reliability and validity of results.

1.7 Organization of the study

The study is organized into five chapters. The chapters are logical linked and addresses issues pertinent to the achievement of the research objectives. The chapter one serves as the introduction and provides a brief background on project management and pinpoints the research problem. Chapter one further explains the objectives; research questions; justification of the study; and the scope the study.

Chapter two presents the review of existing literature on the topic. This review aims at breaking down and understanding of relevant concepts pertaining to project management and procurement. The review of existing knowledge on project management is expected to provide some methodological and theoretical indicators for this study and also clarify the identified research problem.

Chapter three recounts the activities and strategies employed in gaining access to respondents. Hence, the chapter looks at the methods and approaches of data collection and analysis comprising the research design, sample size determination and sampling techniques, among others. Chapter Four clearly spells out the techniques for analyzing and interpreting the data collected. The chapter further provide analysis of data collected giving evidence as to why particular techniques were used in the analysis of the data collected.

Finally, Chapter five conclude the study. Significant findings under each research question are identified and discussed. The chapter ends with limitations and suggestions and recommendations for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The chapter reviews existing knowledge and is anticipated to offer relevant theoretical and methodological indicators for the study; and strengthen the research problem. Thus, the review of the current knowledge on the research area will help develop the analytical methods and the methods for data collection. It is pertinent to note that, review of the relevant literature on project management and procurement is germane to determining what is known and unknown about the chosen research topic and keep abreast with current research approaches, trends and debates.

This chapter commences with the segregation and analysis of concepts relating to the research topic and finally postulates a working definition for this thesis. Next, this chapter presents the stages of project management and stakeholder management in project management. In addition, the public procurement process in Ghana is reviewed. The chapter concludes with the summary of key issues and findings from the review.

2.2 DEFINITION OF KEY CONCEPTS

2.2.1 Project

Many systems are usually implemented through the development of projects (Munk-madsen, 2006). Project is derived from two “latin” words: pro and “jacer” which means forward and throw respectively. Project can therefore be said to be anything that is thrown forward in the form of a proposal. The meaning of project has recently graduated to include the processes and

the people involved in bringing the proposal into fruition (Munk-madsen, 2006). Projects are usually terminated after their completion and are used to serve public utility (Samset, 2003).

The definitions of a project will be assessed based on two dimensions. Thus, the dictionary point of view and the scholarly research point of view. According to (Collins Cobuild, 1987) a project is any conceived plan that is intended to be implemented in the present or may be implemented in the future. Furthermore, the Cambridge Dictionary (2018) defines a project as a piece of planned work or an activity that is finished over a period of time and intended to achieve a particular purpose². These two definitions are similar and share characteristics such as the intent to implement a set of activities either at present or in the future. Dictionary definitions have been argued in the literature to be insufficient to be used for any scholarly work because of its somewhat vague and intuitive nature. Therefore, scholarly articles have been reviewed to identify their take on the definition of a project.

Several publications such as (Highsmith, 2004; McConnell, 1998; Page-Jones, 1985) did not conceptualise a project. However, Weiss & Wysocki (1992) define a project to be any complex activity or sets of activities that are unique, has a beginning and an end date and involves people that work within a budget to achieve a goal.

If priority is given to the sequence, it can be noticed that the first two characteristics are the somewhat implicit in the dictionary definitions. This scholarly definition shows that the authors of journal articles and books cannot use dictionary definitions as a yardstick. The definition by Weiss & Wysocki (1992) provides much more details as to the characteristics of a project.

Furthermore, a much more recent definition of a project have buttressed the definition by Weiss & Wysocki (1992). A project, simply put, is a piece of work to produce a specific, one-off product of some kind that is not part of routine work (Levitan, 2014). Assembling a car on a production line is not a project because although the output (a car) is a product and it is specific, it is not one-off. However building a kit car in one's garage is a project because it fulfils all three criteria.

Owing from the above definitions, a project is defined in this study as *a set of activities stemming from a unique concept that is implemented now or in the future to bring about change.*

2.2.2 Construction of projects

The management processes of a construction project exhibit some differences from many other projects. The differences are basically in their characteristics and how they operate. According to (Chartered Institute of Building, 2002), construction projects normally involve a lot of capital and are complex to operate and coordinate. Again, construction projects are openly implemented and have challenges with rainfall, heat and other weather related challenges (Gould and Joyce, 2003; Jekale, 2004; Project Management Institute (PMI), 2007). Furthermore, (Bennett, 2003) brings a different dimension to the construction project school by suggesting that construction projects usually need to work within a complex legal frameworks to ensure they do not endanger the public.

2.2.3 Project Management

Project management comprises all the activities geared towards the management of people and resources. According to (Project Management Institute (PMI), 2004), projects can be effectively managed if the constituents of the projects are comprehensively identified, objectives are

concisely stated and the time and cost of project are strictly adhered to. Also, the stakeholders ought to be managed in project management to balance their expectations.

Projects have to be well planned and managed for its implementation to be successful (Archibald, 2004). However, project management is slightly different from general management. The main difference between the two is the types of work that need to be managed. Again, project management involves projects, which are unique as stipulated earlier, and general management involves managing operations. The organization of projects change throughout the implementation of the project and ends when the goal is achieved (Carmichael, 2004; Project Management Institute (PMI), 2004). Both project and management involve the implementation of decisions and allocation of resources to achieve goals. Project management can work in every industry (Cleland and Ireland, 2002).

2.2.4 Procurement

Most definitions of concepts are defined to best suits specific needs and may be biased (Mak, 2014). This section therefore presents the varied definitions of procurement and ends with a working definition. According to the business dictionary, procurement is the act of obtaining or buying goods and services. The process includes preparation and processing of a demand as well as the end receipt and approval of payment³. This definition was supported by Investopedia that added the involvement of purchase planning, standards and specifications determination, supplier research and selection, financing, price negotiation, and inventory control to procurement⁴. Furthermore, procurement can be defined as any process that involves acquiring goods, works or

³ <http://www.businessdictionary.com/definition/procurement.html>

⁴ <https://www.investopedia.com/terms/p/procurement.asp>

contractors to perform a service (The International Bank for Reconstruction and Development/The World Bank, 2004).

Governments also purchase works and services as a way of performing its responsibilities. In participating in the market, the government also attempts to regulate the purchasing power process to ensure social justice. Procurement by government therefore moves beyond giving out contracts but also a detail of the qualification of contractors need and the criteria to used to assess applications (McCruden, 2004).

As a way of summary, procurement is defined in this study as *the activity that occurs to enable a company or organization to purchase goods and services to enable it achieve a stipulated goal.*

2.3 STAGES OF PROJECT IMPLEMENTATION AND MANAGEMENT

Furthermore, dividing a project into phases makes it possible to lead it in the best possible direction. Through this organisation into phases, the total workload of a project is divided into minor components, which makes it very easy to monitor. The following enumerates a phasing model that has been useful in practice. It includes six phases suggested by (Baars, 2006):

1. Initiation phase

This consists of the beginning phases and is where the idea is experimented to identify if it is workable. This stage involves the writing of a proposal by the project leader. The proposal must include a plan to solicit funds or grants for the project.

2. Definition phase

The definition phase follows the initiation phase and is where the constituents of the project are stated clearly. Again the expectations of all stakeholders in the project is identified and analysed. The requirements to implement the project are also defined in this phase.

3. Design phase

After defining the requirements, the design phase encompasses the process of making choices out of the aforementioned requirements. Prototypes and, drawings and charts are used to exhibit the design of the project.

4. Development phase

The development phase follows the design and is where the materials needed are obtained. Suppliers may be invited to bid for the supply of materials within a specific timeframe. Implementation ought to be ready after the development phase.

5. Implementation phase

This is the phase where the project is put into action. Construction is done with strict deadlines to achieve the desired result. This stage is when the project manifests physically for people to see.

6. Follow-up phase

This stage is mostly neglected by many planners and developers. The follow-up phase includes activities such as writing publications, training beneficiaries and evaluating the project after time of completion. The follow-up provides information to feedback into future projects.

2.3.1 Roles of a project manager

A project manager plays numerous roles dependent on the stages of the project development as enumerated below. As explained in the first chapter, the project manager's role may differ based on the size of the project. This section therefore beefs up the problem statement and provides a basis for which the questionnaires will be formulated to compare with the responses from the field.

The first step of project management is to meet with clients and work with them to build a plan (Study.com, 2018). This includes where to get raw materials at the best price, the budget, the timeline, and the specifications for the product. Then a project manager will either assemble or oversee an existing team to see the project through to completion. Throughout the course of the project, the project manager will assess the progress of the endeavor, troubleshoot complications, and regularly update relevant parties (Study.com, 2018). Below is a summary of the roles of a project manager as suggested by Society of Project Managers (2018).

- Preliminary Services such as development and consultation with the clients of the project
- Designing and management of the Services required for the success of the project
- Documentation of contract
- Monitoring of construction works
- Post Construction Management Services

2.4 STAKEHOLDER MANAGEMENT IN PROJECT IMPLEMENTATION

According to (Beringer et al., 2013), stakeholder management is very important when viewed from an academic or a professional point of view. Stakeholder actions can influence the outcome of a project and the project can influence the development of stakeholders. Again, stakeholders

management afford project leaders with the opportunity to employ the effective participation of those who have stake in the project through activities such as resource allocation (Purvis et al., 2014).

In order to carry out stakeholder management, it is pertinent to identify the individuals who have influence, interests and power in the project's setting and to understand what motivates them (Carlos et al., 2015). The behavior of the stakeholders must also be understood to employ actions that meet their expectations (Beringer et al., 2013).

Stakeholders in every project include:

- **User Groups** – people who use the resources or services in an area
- **Interest Groups** – people who have an interest in, an opinion about, or who can affect the use of, a resource or service
- Beneficiaries of the project
- Decision-Makers traditional authorities, unit committees, district assemblies and CSOs among others
- Those Often Excluded from the decision-making process and benefits of projects

2.5 PUBLIC PROCUREMENT IN GHANA

According to the Public Procurement Act, 2003 (Act 663), any activity that enables the acquisition of goods, works and services by a company or an individual for the use by government or individuals through a contract is Public Procurement

Prior to the enactment of the Public Procurement Act, 2003 (Act 663), Ghana National Procurement Agency (GNPA) and Ghana supply Company Limited (GSCL) were the main agents that procured all public goods for the government since there was no comprehensive

procurement guidance (Anvuur et al., 2006; Verhage et al., 2002). These bodies do not regulate procurement but purchase goods and services on behalf of public entities. According to the Public Financial Management Reform Program (PUFMRP), procurement system in Ghana has

- No comprehensive public procurement policy
- There was no central body with technical expertise to oversee/regulate sound procurement practice
- There was no comprehensive legal regime to safeguard public procurement
- Absence of clearly defined roles, responsibilities and authority for procurement entities
- No rules and regulations to guide, direct, train and monitor public procurement
- National Procurement Agency (NPA) and Supply Company Ltd procure on behalf of government for PEs

The (PUFMARP) was launched in 1996 by the Government of Ghana with the aim of improving the overall public financial management in Ghana. Furthermore, the Public Procurement act, 2003, (Act 663) has established Public Procurement Authority (PPA) as a body corporate charged with the oversight responsibility for the effective implementation of the Act. The object for PPA is to secure a judicious, economic, and efficient use of public funds in a fair, transparent and non-discriminatory manner while promoting a competitive Local industry.

2.5.1 Methods of Procurement in Ghana

There are various methods of procurement provided under the law for use by public procurement entities. The choice of particular method is based on the amount involved (threshold) and the circumstances surrounding the procurement. These are Competitive Tendering (Section 35 & Part IV of Act 663), Request for quotations (Sections 42-43 of Act 663), two-Stage Tendering

(Sections 36-37 of Act 663), Restricted Tendering (Sections 38-39 of Act 663) and Single Source Procurement (Sections 40-41 of Act 663). Details of the thresholds for the stated types of procurement in Ghana per the Public Procurement Amendment Act 2016 (Act 914) is presented in Table 2.1 below.

Table 2.1: Thresholds for Procurement Methods

Procurement method	Contract value threshold
1. International competitive tender	
(a) Goods	<u>Above GHC 10,000,000.00</u>
(b) Works	<u>Above GHC 15,000,000.00</u>
(c) Technical services	<u>Above GHC 5,000,000.00</u>
2. National competitive tender	
(a) Goods	<u>More than GHC 100,000.00 up to GHC 10,000,000.00</u>
(b) Works	<u>More than GHC 200,000.00 up to GHC 15,000,000.00</u>
(c) Technical services	<u>More than GHC 50,000.00 up to GHC 5,000,000.00</u>
3. Price Quotation	
(a) Goods	<u>Up to GHC 100,000.00</u>
(b) Works	<u>Up to GHC 200,000.00</u>
(c) Technical services	<u>Up to GHC 50,000.00</u>
Restricted tender	Subject to approval by the board
Single source procurement and selection	Subject to approval by board

Source: Public Procurement Amendment Act, 2016(Act914) Fifth Schedule.

2.6 Conceptual framework

The study adopts a conceptual framework that summarizes the literature while providing a roadmap for the whole study. The conceptual framework has been diagrammatically presented to ensure that the objectives and aims can be visibly seen. This framework will help construct the

subsequent chapter where methods will be picked to achieve research objectives. Figure 2.1 presents the conceptual framework.

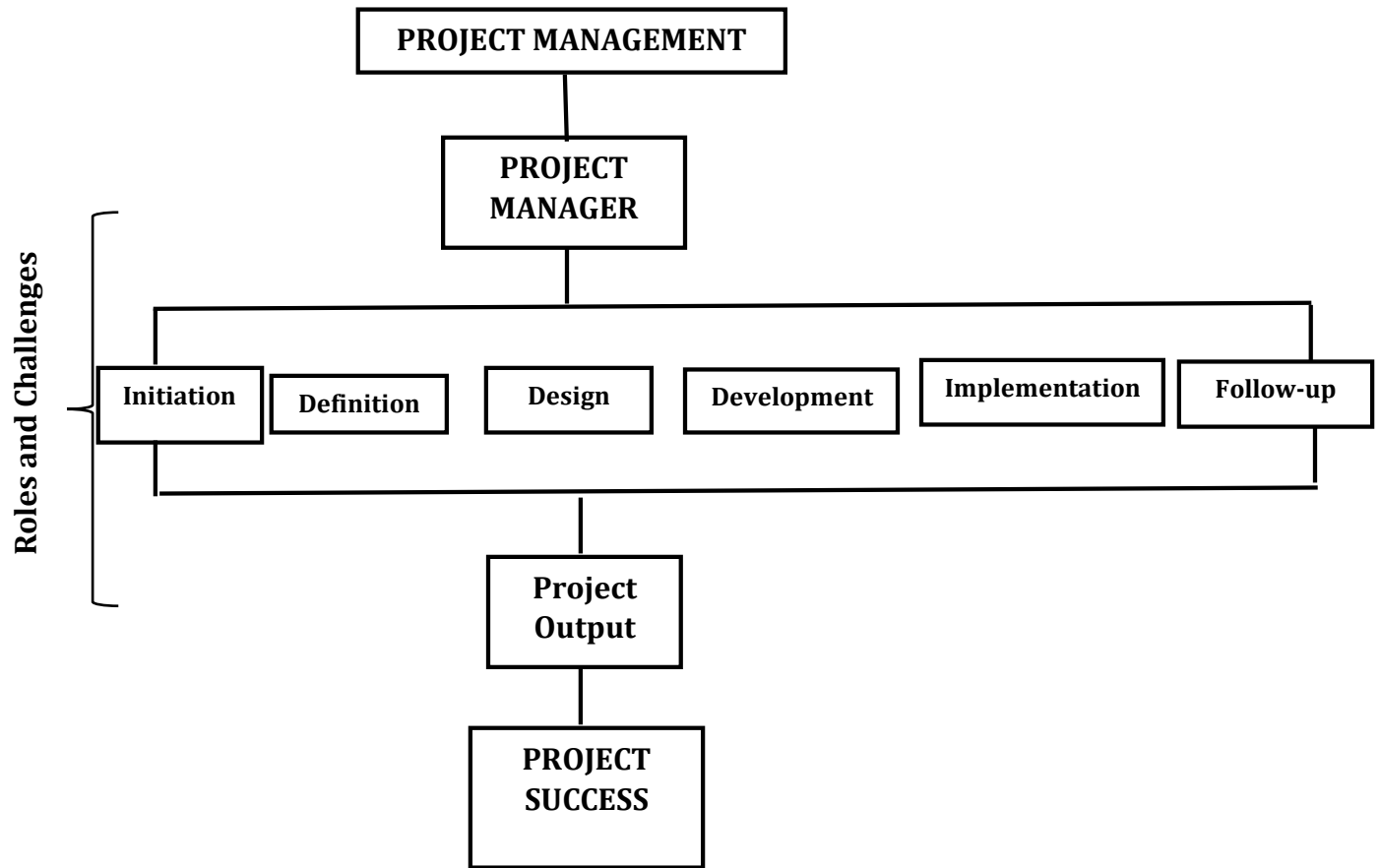


Figure 2.1: Conceptual framework

Source: Author's construct, July 2018

Figure 2.1 above shows the path per the literature reviewed to achieving a successful project. Project management involves numerous individuals and stakeholders. However, this study focuses on the project manager. His role can span over the six phases of the project from the initiation, definition, design, development, implementation and follow-up phases. The successful execution of their roles under each of the phases may have an influence on the project's success.

That notwithstanding, after all the phases there is an output whether physical or through services. The outputs then show the success of the project.

Basically, the project manager performs his roles under the phases of the project. It is also worth noting that assessing their roles without investigating their challenges may undermine the success of the project. As a result, the study will also assess the challenges all with the overarching aim of achieving a successful project.

2.7 Summary of Relevant literature

The literature review in this chapter has provided relevant knowledge on the meaning of key terms used in the study. It has also helped identify the existing literature on project management and procurement in Ghana. This helped to draw up the conceptual framework of the study buttressing the research problem. The review has also served as a foundation upon which the next chapter will build on to provide methods to help gather and analyse data to achieve the research objectives.

CHAPTER THREE

RESEACH METHODOLOGY

3.1 INTRODUCTION

The second chapter looked at a review of relevant knowledge on project management and procurement. Having reviewed literature, it was established that there was indeed a lacuna in the area of the roles and challenges of a project manager in a project such as the Kejetia Rehabilitation Project. It has been established in chapter two that project management is an important part of any project and their roles may transcend the obvious. The chapter also identifies the conceptual approaches that will help in tackling the research problem.

The aim of this chapter is to establish the methods, tools and techniques that will aid in the construction of data collection instruments, data collection process and data analysis. Thus, the chapter constitutes the blueprint for the remainder of this thesis. Research design, choice of study area, key research variables, data need and sources, sampling techniques and sample size determination are examples of key issues that will be discussed in this chapter. In addition, data collection methods and instruments will also be captured in this chapter.

The chapter begins with the profile of the study area. However, the profile of the Kejetia Rehabilitation project will be conducted in the next chapter of the study. After the profile of the study area, the appropriate research design for the investigation of the roles and challenges of the project manager is outlined. The research design will serve as a guide as to how the research questions and sub-questions of the study will be tackled. The selection of the study areas will follow next. Key research variables/issues, data needs and sources, sampling techniques and sample size determination, data collection methods and instruments will follow in that sequence.

3.2 PROFILE OF KUMASI

3.2.1 Location and Size

Kumasi Metropolis is one of the thirty (30) districts in Ashanti Region. It is located between Latitude 6.35°N and 6.40°S and Longitude 1.30°W and 1.35°E and elevated 250 to 300 meters above sea level (Ghana Statistical Service, 2014). Geographically the study is within the Kumasi Metropolis which is bounded to the North by Tafo Municipality and to the South by Asokwa Municipality, to the East by Oforikrom Municipality and to the West by Kwadaso Municipality. It is approximately 270km north of the national capital, Accra. It has a surface area of approximately 214.3 square kilometers, which is about 0.9 percent of the region's land area. However, it accommodates about 36.2 percent of the region's population.

3.2.2 Political Administration

The Kumasi Metropolitan Assembly (KMA) was established by Legislative Instrument 1614 of 1995 under Local Government Law 1988, NDPC law 207, which replaced the Local Government Act 462, 1993. The LI, 1914 which was amended as LI 1805, 2005 divided the Metropolitan Assembly into 10 Sub-Metropolitan District Councils namely Asawase, Asokwa, Bantama, Kwadaso, Manhyia, Nhyiaso, Oforikrom, Suame, Subin and Tafo.

In 2012, LI 2112 carved out Asawase Sub-Metropolitan District Council from KMA to create the Asokore Mampong Municipal Assembly. Presently, Kumasi Metropolis currently has five sub-metropolitan districts councils which are Manhyia North, Manhyia south, Subin, Bantama and Nhyiaeso.

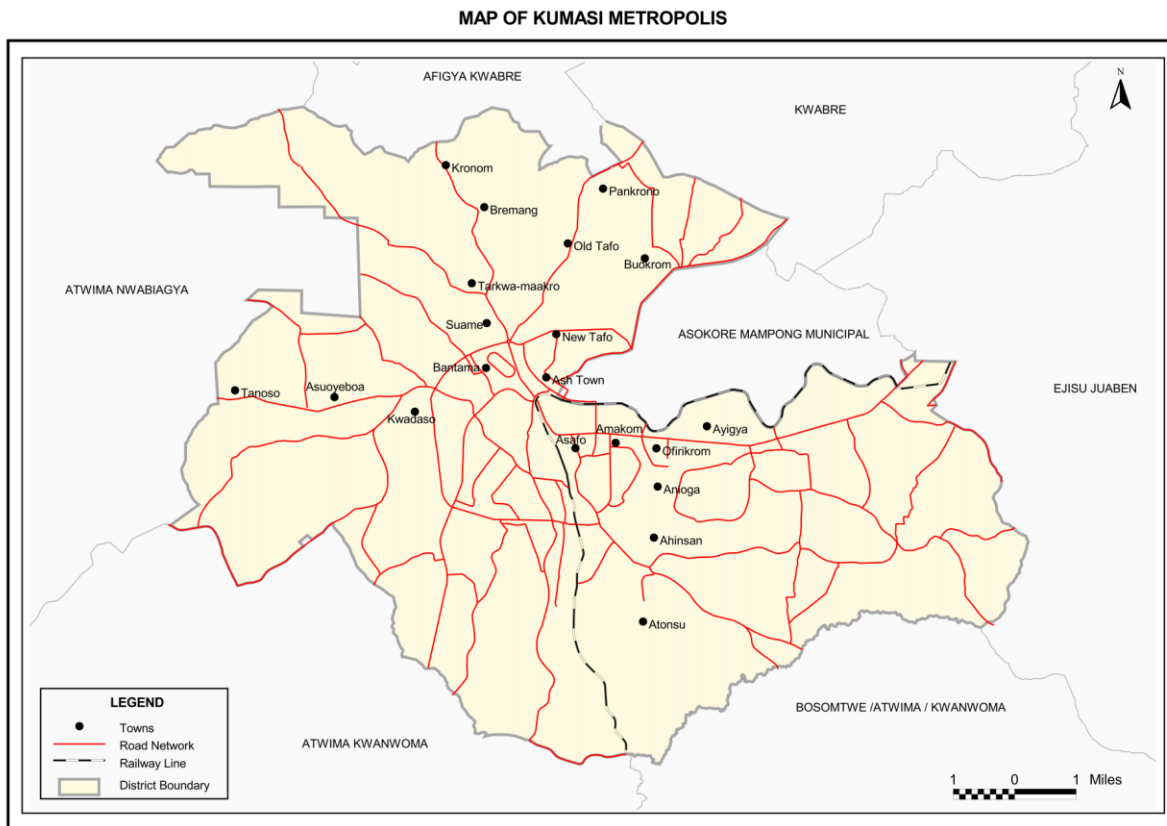


Figure 3.1: Kumasi Metropolitan Map

Source: Ghana Statistical Service, 2010 Population and Housing Census

3.2.3 Population statistics

The information on the age and the sex distribution of the population by age groupings is presented in table 3.1 below. The age group 15-64 comprises 1,095,190 representing 63.3%. This depicts that the area is predominantly youthful. Again, 61,457 are above 65 years and 573,602 are between 0-14 years.

Table 3.1: Distribution of population by age, sex and sex ratio

Age group	Both sexes	Male	Female	Sex ratio
All Ages	1,730,249	826,479	903,770	91.4
0 – 4	201,845	102,779	99,066	103.7
5 – 9	182,418	91,621	90,797	100.9
10 – 14	189,339	89,994	99,345	90.6
15 – 19	190,110	88,382	101,728	86.9
20 – 24	204,246	98,561	105,685	93.3
25 – 29	177,485	82,882	94,603	87.6
30 – 34	141,002	67,048	73,954	90.7
35 – 39	111,774	53,042	58,732	90.3
40 – 44	88,829	43,266	45,563	95
45 – 49	64,099	29,724	34,375	86.5
50 – 54	54,706	24,594	30,112	81.7
55 – 59	35,897	16,806	19,091	88
60 – 64	27,042	12,514	14,528	86.1
65 – 69	17,152	7,407	9,745	76
70 – 74	18,749	8,015	10,734	74.7
75 – 79	10,514	4,442	6,072	73.2
80 – 84	7,194	2,722	4,472	60.9
85 +	7,848	2,680	5,168	51.8
All Ages	1,730,249	826,479	903,770	91.4
0-14	573,602	284,394	289,208	98.3
15-64	1,095,190	516,819	578,371	89.4
65+	61,457	25,266	36,191	69.8
Age-dependency ratio	58	59.9	56.3	

Source: (Ghana Statistical Service, 2014)

3.3 RESEARCH DESIGN

An appropriate methodology is relevant to complement and gain understanding of the information collected (Mouton, 2001). However, conventional literature has explained that a research philosophy serves as the broader bracket within which the research design and methodology finds its roots. This study adopted the *social constructivism* philosophy, which employs the research process to adopt an approach to identify and collate information behind the scenes. In addition, a *qualitative design* was adopted under the social constructivism philosophy.

This design involves the use of mainly qualitative research methods, approaches and tools. The qualitative design will measure results in words and provide triangulation of responses to address the research questions. It is worth noting that though the study is purely qualitative, some quantitative tools such as descriptive statistics can be used to profile and present an overview of respondents. This does not make the study mixed but qualitative.

Under the qualitative research design, a *case study approach* was adopted for the study. This approach is best used to understand a phenomenon into detail. Case study research is very flexible and affords the research the ability to delve deep into situations to understand the relationships that exists in reality (Phil and Heather, 2001). Though it is difficult to generalize case studies, the strategic sampling of the study areas and respondents coupled with the peculiar ability of the study phenomenon ensures the ability to generalize.

It is worth noting that, this study had no intention of generalizing the findings to all rehabilitation projects (see study project selection in section 3.3.1). The study was focused on understanding the roles and challenges of a project manager under the Kejetia Rehabilitation project and to proffer recommendations to alleviate the challenges.

3.3.1 Selection of Study Area and Project

Considering the subject matter under study, resource constraints and time limitations, decisions with respect to where to conduct a piece of research becomes core. The factor that influenced the choice of the study area was accessibility to project and the size of the project. As already explained under the research problem, a project of this nature has not been studied to understand the roles a project manager plays. This leads to the selection of the Kejetia Rehabilitation project.

The sampling method adopted here was therefore purposive sampling. No probability sampling technique was adopted to influence a generalization of findings.

3.3.2 Sampling Frame and Sample Size Determination

A sampling frame is the list of all members that has the probability of being sampled to become members of the sample size. With regards to this study, the sample frame was unavailable since management of the project felt the information was very sensitive. Furthermore, since the total number of construction workers were not available to sample, a non-probability stance was adopted to help obtain the views of the construction workers. The convenience and accidental sampling techniques were used to gather the information at the project site (Kejetia Rehabilitation project). Management were made aware of the reasons for collecting the data, which helped to gather enough information. A point of saturation was obtained with the result being the sample size. A sample size of 10 construction workers were interviewed to help understand their perception of the roles and challenges of the project manager and how the challenges can be minimized.

With regards to the project manager, a census was adopted since there was only 1 project manager.

3.4 KEY RESEARCH ISSUES/VARIABLES

This section describes the key issues/variable that were investigated in order to achieve the objectives of the study. The key variables of the study include Nature of Kejetia rehabilitation project, perception of construction workers on the roles and challengers and specific roles and challenges according to stages of project implementation and management and recommendations. Table 3.2 provides information on the variables and the sources of data.

Table 3.2: Variable, Data Source and Method of Data Collection

Objectives	Variables	Data Source	Method of Collection
1. To determine the roles of the project manager in the procurement of works under the Kejetia Rehabilitation project.	1.1 Nature of Kejetia rehabilitation project 1.2 Perception of construction workers on the roles 1.3 Specific roles according to stages of project implementation and management 1.4 Monitoring and evaluation activities	-Construction workers - Project Manager	Questionnaire
2. To assess the challenges that may undermine the operations of the project manager in the procurement of works under the Kejetia Rehabilitation project.	2.2 Perception of construction workers on the challenges 2.2.2 Specific challenges according to stages of project implementation and management	-Construction workers - Project Manager	Questionnaire
3. To suggest ways of	3.1 Suggested strategies	-Construction	Questionnaire

improving the operations of the project manager in the procurement of works under the Kejetia Rehabilitation project amidst the challenges.	by project manager 3.2 Suggested strategies by construction workers	workers - Project Manager	
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Source: Researcher’s Construct, July 2018

3.5 STUDY POPULATION AND UNIT OF ENQUIRY/ANALYSIS

According to Bhattacharjee (2012) the unit of analysis of a study refers to a person, an object, or an organization, which is also referred to as the target of the investigation. The author suggests that the means of understanding the unit of analysis is basically essential in achieving the stated research objectives since it informs the type of data to be ascertained, from whom to collect and the processes through which the data would be collected. In this respect, the units of enquiry of the study were the construction workers and project manager. The study population however are all the construction workers of the kejetia rehabilitation project.

3.6 METHOD OF DATA COLLECTION

The following methods of data collection were employed in the research.

3.6.1 Desk Study

For the purpose of this study, secondary data in the form of maps and population data were collected from published and unpublished reports and articles among others through a desk study. This helped underscore issues under study. A critical review of literature on the topic helped in identifying the key approaches, methods and tools to be employed for the study.

3.6.2 Pilot Survey

A pilot survey was undertaken to help identify the location of the project and to pretest the interview schedule designed for the survey.

3.6.3 Survey on Project manager and construction workers

Based on the information obtained from literature, interview schedules were prepared and administered. Data collected included basic information on demographic data (marital status, age of respondents, place of origin, and educational status among others). With respect to their knowledge on the roles and challenges livelihoods, data were gathered based on the stages of project implementation and management.

3.6.4 Observation

Personal observation was employed as a means of triangulating information obtained from the different methods used. This method was combined with all methods above in the process of collecting data. The observation was focused on the challenges faced by project managers.

3.7 Tools of Data Analysis

The data collected from primary and secondary sources was analyzed to provide answers to the research questions using both quantitative and qualitative methods. Activities included the following: Data editing, coding of responses

Editing of questionnaires was the first activity after collection. This was carried out to detect and examine errors in completed questionnaires in order to ensure completeness, accuracy and to resolve inconsistencies among questionnaires.

After data editing, it was necessary to group or classify data under various categories or patterns that were consistent with the objectives of the study. This was carried out using the Statistical Package for Social Sciences (SPSS) version 21. This was followed by application of the SPSS for frequency analysis and other measures of central tendencies, which were further analyzed based on reasons from the field, researcher's understanding of the issues, among others. Tools that were mostly used in the SPSS were the charts and tables. In the end, the effective mix of the two qualitative and quantitative analysis provided answers to the research questions and research objectives in a manner that presents a good judgment and enhance the validity of the research outcome. The study uses a quantitative strategy instead of qualitative.

3.8 SUMMARY

The chapter presented the profile of the study area and the methods adopted to collect and analyse data to help achieve the study objectives. The research instruments were constructed in tandem with the write-up of the chapter (see appendix). The philosophy and design adopted will be used in the analysis stage in the next chapter.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION

4.1 Introduction

The cosmopolitan nature of Kumasi is well appreciated and presented in the previous chapter, which was dedicated to discussions on the study's geographical context. This chapter presents the results of the data collected. The analysis is done from the perspective of the project manager and the construction workers. The two were complemented to achieve the research objectives. The analysis have been qualitatively done and responses presented in a manner that helps respond to the research questions.

4.2 Bio-demographic data of construction workers

The bio-demographic data of the construction workers in the kejetia Rehabilitation Project was collected. This was done to ascertain a basis and gain an overview of the respondents. Furthermore, this data was collected to determine whether there was a correlation or relationship between some bio-demographic variables and the perception of construction workers on the roles and challenges of a project manager. As stipulated in the earlier chapter, the study intended to interview 10 construction workers. Because of the nature of the work at the project site, a convenience sampling technique was used to interview the workers who were ready to answer the questions. As a result, all 10 was collected ensuring a 100% response rate. Variables considered were the age of the workers, gender, marital status, educational level and number of dependents. The construction workers interviewed had a minimum age of 18 and a maximum age of 37. This meant that all the respondents were within the working age group with none being a child. Organisations such as the International Labour Organization have frequently

reported that construction workers mostly in developing countries sometimes employ children. This they refer to as child labour. From the result, none of the respondents were children. Majority of the respondents were between the ages of 20-39, which depicts the youthful exuberance needed to be a construction worker.

Furthermore, it was identified that 90% of the respondents were males while 10% was female (see table 4.1 for details). This further buttresses the fact that the work of construction is labour intensive and therefore favours males than females. In addition, majority of the respondents were single (50%) while one respondent was divorced. The higher number of single respondents was as a result of majority of the respondents being in their early 20s. In the Ghanaian setting, this is quiet normal with people getting married mostly in their early 30s.

Table 4.1: Bio-data counts of construction workers

Age of respondents									
	Below 15	15-19	20-29	30-39	40-49	50-59	60+	Total	
Number	0	1	5	4	0	0	0	10	
Percentage	0%	10%	50%	40%	0%	0%	0%	100%	
Mean			Median	Minimum		Maximum			
25			26	18		37			
Gender of respondents									
				Gender of respondent		Total			
				Male	Female				
Number				9	1	10			
Percentage				90%	10%	100%			
Marital status of respondents									
					Marital status of respondent				Total
					Single	Married	Divorced	widowed	
Number					5	4	1	0	10
Percentage					50%	40%	10%	0%	100%
Educational level of respondents									
								Educational level of respondent	Total
		Never		Nurser	Primar	JHS	SHS/T		

		y	y		technical/vocational	
Number	6	3	1	0	0	10
Percentage	60%	30%	10%	0%	0%	100%
	Number of own children		Number of Relatives			
Mean	3.00		2.00			
Median	3.00		2.00			
Minimum	.00		.00			
Maximum	4.00		4.00			

Source: Field Survey, September 2018

The somewhat limited number of married respondents translated into the number of children of the respondents. The average number of children of the respondents was 3 while the average number of relatives to be catered for was 2. This output implied that the workers had some dependents to cater for by working in construction. The motivation for working in construction translated into the work attitudes when the project site was visited. Again, the educational level attained by the respondents was ascertained. The statistics indicated that majority of the respondents did not gain basic education (60%) and as such have never attended school. However, 30% attended a nursery while 10% obtained primary education. The nature of work of most of the construction workers do not require formal education or qualification. The respondents were therefore satisfied with the work being done since they felt it was the best available.

It was further identified from the study that, the construction worker's educational level affected their knowledge on information sought. Some of the respondents felt no need knowing the

details of the background of the project. However, practical questions on the work of the project manager was well received.

4.3 Background of the Kejetia Rehabilitation Project

In 2010, the KMA placed the Kejetia and Central market on tender citing the constant fires and the dilapidated nature of the market as reasons for redevelopment. The Mayor by then, Samuel Sarpong, on the 31st December 2010, placed an advertisement in the Ghanaian Times newspaper, inviting foreign investors to apply for the contract. The Brazilian company; Contracta Eng. Ltd. came forward and won the contract. Regardless of the many protest and law suits raised about this project, the then president Mahama cut sod for the project which will be constructed in phases; phase 1, 2 and 3 to begin on the 15th July, 2015 with working terms that demanded that in 30 months (by January 2018), the 1st phase be completed. The traders and drivers occupying the Kejetia terminal were thus evicted and relocated for the project, which is still ongoing (see figure 4.1 for a pictorial evidence).



Figure 4.1: Proposed Kejetia/Central Market Redevelopment Project

The main source of fund for the project is a loan claimed from the French government for US\$298 million. Thus, the project manager indicated that the source of funding was from the Government of Ghana. The project is expected to last over 3 years with the phase-one involving the re-construction of the Kejetia Terminal and building of 10,000 stores. The second and third phases entail the renovation of the Central Market, which is to be done in two parts. As already indicated the construction company is Brazilian thus corroborating the response from the project manager that it is from outside Ghana. The project manager also indicated that the project is made up of 201-300 employees, which is a substantial contribution to the workers with some from Ghana.

Again, the project manager indicated the benefits to be accrued from the project. The project manager agreed with all the benefits listed except for the intention to secure political votes from the market women. Table 4.2 below presents the responses from the project manager.

Table 4.2: Project manager responses on background of project

		AGREE	DISAGREE
1.	Sources of funding		
	District Assembly		✓
	Market Tolls		✓
	Government of Ghana	✓	
	DANIDA		✓
	Ghanaian NGO		✓
	Foreign NGO		✓
	Private Sector		✓
2.	Expected duration of the project		
	1 year		✓
	2 years		✓
	3 years		✓
	Over 3 years	✓	
3.	Origin of construction company		
	Within Ghana		✓
	Outside Ghana	✓	
4.	Number of workers in the project		
	1-100		✓
	101-200		✓
	201-300	✓	
	301-400		✓
5.	Expected Benefits		
	Increased sales	✓	

	Reduction in crime	✓	
	Sustainability of the city	✓	
	Increase in mobility	✓	
	Secure political votes from market women		✓
	Increase in tax base	✓	
	Providing livelihood opportunities	✓	
	Providing employment	✓	

Source: Field Survey, September 2018

4.4 ROLES OF THE PROJECT MANAGER

The roles of the project manager was ascertained in tandem with the first research objective. To achieve this, four key questions were posed to respondents. Questions were posed to the project manager and the construction workers. The construction workers were asked to provide their perception on the questions in relation to the role of the project manager. Table 4.3 provides the responses from the project manager while table 4.5 presents that of the construction workers.

In terms of the measures adopted to sustain the project after its completion, the project manager respondent positively to the seven options provided. However, the project manager mildly agreed with the initiation of a maintenance fund and the use of KMA tax force to ensure sustainability of the project. The project manager indicated that:

“The maintenance fund may be disbanded after the project is complete and with the rising corruption, there is a high likelihood the fund may not serve its purpose” (Project Manager, 5th September, 2018).

Again, with the growing complaints of market women about the KMA tax force, the project manager indicated that a different entity may come in to enforce laws hence, *agree* and not *strongly agree*.

Furthermore, with regards to the number of scheduled evaluations after the completion of the project, the project manager provided an emphatic answer of once a year. The implication is that the project be carefully monitored after completion to guarantee its success. However, it can be inferred that evaluating a project once a year is woefully inadequate following the volatile nature of traders in Kumasi. It is suggested that evaluations may be increased after completion to ensure a swift response to challenges that may arise. In addition, the project manager responded to the primary stakeholders of the project. There was a strong agreement to market women, the Government and the Kumasi Metropolitan assembly being primary stakeholders. They are direct beneficiaries of the project. However, the project manager indicated that the Chiefs and Troto drivers though they had a direct stake in the project, were not as involved as the aforementioned. Also, the project manager was adamant about the GPRTU indicating that:

“As an institution, GPRTU have interest in the project but are not direct beneficiaries” (Project Manager, 5th September, 2018).

Lastly, a list of roles were supplied to the project manager to indicate the one's undertaken. Again, the scale of 1 to 5 was given to test the intensity of the roles listed (see table 4.3). It was identified from the data that, the project manager strongly plays 8 out of the 12 roles listed. However, the roles of drawing a business plan, evaluating the project after completion and managing financial resources is done in tandem with other personnel. Again, the role of identifying stakeholders was not a sole role of the project manager since the stakeholders are identified and consulted before the project is initiated.

Table 4.3: Project manager’s perspective on project

No.		1	2	3	4	5
1.	Measures to sustain the project after completion					
	Maintenance committee					✓
	Maintenance fund				✓	
	Frequent monitoring					✓
	Frequent evaluation					✓
	Scheduled renovation work					✓
	Taxation of market women for maintenance					✓
	Use of KMA tax force				✓	
2.	Number of scheduled evaluation after project completion					
	Once a year					✓
	Twice year	✓				
	Three times a year	✓				
	Four times a year	✓				
	Five times or more	✓				
3.	Primary stakeholders of the project					
	Market women					✓
	Chiefs				✓	
	Government of Ghana					✓
	District Assembly					✓
	Trotro drivers				✓	
	GPRTU			✓		
4.	Roles of the project manager					
	Feasibility assessment					✓
	Drawing a business plan				✓	
	Identification of stakeholders			✓		
	Engaging stakeholders					✓
	Drawing a working condition regulation					✓
	Ordering of materials and tools					✓

Employing construction workers					✓
Expelling construction workers					✓
Evaluating project after completion				✓	
Writing project reports					✓
Creation of project team					✓
Managing financial resources for the project				✓	
<i>NB: The scale for the levels are 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree</i>					

Source: Field Survey, September 2018

4.4.1 Construction worker’s perception on the roles of the project manager

The construction workers were asked to provide their perception on the roles of the project manager whom they work with. Responses were triangulated with that of the project manager’s (presented earlier). With regards to the measures to sustain the project after completion, the construction worker’s were aloof and had little idea on the strategies. This was mainly due to their educational background and their weak motivation to get involved. As a result, majority were either neutral or disagreed with the measures listed. However, some agreed based on hearsay. The two measures that the construction workers felt will definitely be adopted is the use of KMA and taxation of market women. They indicated that: *these measures were already being employed before the project and will continue since the government get money through taxation (Construction Workers, 5th September, 2018).*

In addition, the construction workers had some ideas about the number of schedule evaluations projected to be implemented. About 50% were of the view that it will be done yearly, 30% suggested twice a year while 20% suggested three times a year. As such, once a year had a mean score of 3.0 ranking 1st and being the most agreed upon time. On the other hand, none thought of

beyond three times a year which resulted in a mean score of 1.0. The construction workers based their suggestions mainly on resources indicating that there will be limited evaluations because of the cost involved and the continuous fight against corruption by the current government. The primary stakeholders of the project as suggested by the construction workers were in tandem with the suggestions of the project manager. Again, the construction workers strongly disagreed (80%) that GPRTU is a primary stakeholder resulting in the least mean score of 1.3 (see table 4.4).

Finally, the construction workers presented their views on the project manager. It can be observed from the statistics that the construction workers gave much precedence to practical roles since they were the functions they saw the project manager play. For instance, all the construction workers were neutral and not sure the project manager performed any feasibility assessment, identified stakeholders or created the project team. They were however justified when the project manager indicated that the identification of stakeholders is not a solitary responsibility. Again, all construction workers strongly agreed that the project manager orders materials and tools and has the ability to employ and expel staff. These functions were easy to respond to since they see the project manager perform them often. Again, 80% strongly agreed that the project manager engages stakeholders. Some of the engagement and meetings are at the project site all to the visibility of the workers. The foregone implies that the construction workers have a fair idea about the roles of the project manager. However, much more zeal should be adhered on the part of the workers to become a part of the project.

Table 4.4: Construction worker’s knowledge on project

No.		1	2	3	4	5	Total	Mean
1.	Measures to sustain the project after completion							
	Maintenance committee	0%	40%	30%	20%	10%	100%	3.0
	Maintenance fund	0%	30%	40%	10%	20%	100%	3.2
	Frequent monitoring	20%	10%	60%	10%	0%	100%	2.6
	Frequent evaluation	20%	10%	60%	10%	0%	100%	2.6
	Scheduled renovation work	10%	10%	10%	30%	40%	100%	3.8
	Taxation of market women for maintenance	0%	0%	10%	10%	80%	100%	4.7
	Use of KMA tax force	0%	0%	0%	10%	90%	100%	4.9
2.	Number of scheduled evaluation after project completion							
	Once a year	50%	0%	0%	0%	50%	100%	3.0
	Twice year	70%	0%	0%	30%	0%	100%	1.9
	Three times a year	80%	0%	0%	20%	0%	100%	1.6
	Four times a year	100%	0%	0%	0%	0%	100%	1.0
	Five times or more	100%	0%	0%	0%	0%	100%	1.0
3.	Primary stakeholders of the project							
	Market women	0%	0%	10%	10%	80%	100%	4.7
	Chiefs	0%	0%	0%	0%	100%	100%	5.0
	Government of Ghana	0%	0%	0%	10%	90%	100%	4.9
	District Assembly	0%	10%	10%	40%	40%	100%	4.1
	Trotro drivers	10%	0%	20%	50%	20%	100%	3.7
	GPRTU	80%	10%	10%	0%	0%	100%	1.3
4.	Roles of the project manager							
	Feasibility assessment	0%	0%	100%	0%	0%	100%	3.0
	Drawing a business plan	0%	0%	60%	40%	0%	100%	3.4
	Identification of stakeholders	0%	0%	100%	0%	0%	100%	3.0
	Engaging stakeholders	0%	0%	0%	20%	80%	100%	4.8
	Drawing a working condition	0%	0%	50%	50%	0%	100%	3.5

regulation								
Ordering of materials and tools	0%	0%	0%	0%	100%	100%	5.0	
Employing construction workers	0%	0%	0%	0%	100%	100%	5.0	
Expelling construction workers	0%	0%	0%	0%	100%	100%	5.0	
Evaluating project after completion	40%	50%	10%	0%	0%	100%	1.7	
Writing project reports	0%	0%	20%	80%	0%	100%	3.8	
Creation of project team	0%	0%	100%	0%	0%	100%	3.0	
Managing financial resources for the project	0%	0%	0%	10%	90%	100%	4.9	
<i>The scale for the levels are -2= strongly disagree, -1= disagree, 0= neutral, 1= agree and 2= strongly agree</i>								

Source: Field Survey, September 2018

4.5 CHALLENGES OF THE PROJECT MANAGER

The challenges the project manager faces was ascertained from the perspective of the project manager and the construction workers. Responses from both groups were complemented to understand some practical challenges that a project manager of such a large project faces. This section enable the achievement of the second research objective of the study. A set of challenges were presented to the project manager to ascertain the level of agreement and intensity. From the data collected, it was identified that the major challenges that the project manager faces from a personal perspective was the delay in delivery of equipment and machinery (strongly agree). This challenge was mainly because of the bureaucratic bottlenecks associated with supply and delivery in Ghana. Also, the location of the project makes transportation very difficult because of the traffic in the Central Business District of Kumasi. Other challenges that the project manager agreed to were: financial challenges, long hours at work, rainfall, procurement issues and project

risks. The project manager however indicated that the challenge of long hours at work was a necessary evil since they are paid. Again, the project manager intimated that:

“The amount of concentration and time dedicated to such a large project is different from other projects. This is because any mistake may be calamitous” (Project Manager, 5th September, 2018).

Furthermore, the project manager was neutral to issues of inflation, government policies and political interference citing limited knowledge as the reason. Finally, the project manager indicated that the project manager does not face challenges with construction worker riots and community attitudes. This means the stakeholder engagement and management has been well done ensuring limited issues from stakeholders.

The project manager was requested to indicate some of the strategies being adopted to alleviate the aforementioned challenges. Some of these strategies were directly tied to the heads of the project and as such the project manager was the best person to indicate whether they are being adopted or not. From the data, it was identified that the project adopts almost all the strategies except surplus budgeting. The project manager indicated that issues directly related to finances are not under his responsibility and therefore could not be sure if this strategy is being adopted. The response was therefore neutral to that strategy. Table 4.5 presents details on the responses from the project manager.

Table 4.5: Challenges faced from the perspective of the project manager

No.		1	2	3	4	5
1.	Challenges faced					
	Financial challenges				✓	
	Unfavorable Government policies			✓		
	Inflation			✓		
	Problems from market women		✓			
	Longer hours at work				✓	
	Construction worker riots	✓				
	Unpaid salaries		✓			
	Challenges with liaising with stakeholders	✓				
	Delays in delivery of equipment and machinery					✓
	Poor attitude of community towards the implementation of the project	✓				
	Accidents at the project site		✓			
	Poor communication between stakeholders		✓			
	Cultural and traditional problems		✓			
	Rainfall				✓	
	Unrealistic deadlines		✓			
	Political influence			✓		
	Lack of technical expertise		✓			
	Procurement difficulties				✓	
	Poorly defined goals	✓				
	Project risk				✓	
	Lack of accountability			✓		
	Improper risk management	✓				
	Ambiguous contingency plans	✓				
	Difficulty in sticking to Budget			✓		
2.	Strategies adopted					
	Regulator stakeholder meetings					✓

Regular monitoring				✓	
Effective Risk management strategies				✓	
Surplus budgeting			✓		
Well structured Communication plan				✓	
Management of stakeholder expectations				✓	
Institution of a Focus strategy				✓	
Accountability enforcement					✓
Risk management plan					✓
On the Job training				✓	
Human resource management					✓
<i>The scale for the levels are 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree</i>					

Source: Field Survey, September 2018

4.5.1 Perception of the challenges of the project manager from construction workers

The construction workers were asked to indicate their perspective on the challenges faced by the project manager. Again, it was observed that the responses given just as that of roles were for practical challenges. The few other challenges that were not visible at the project site were provided based on personal encounter with the project manager and hearsay. From the data, it was identified that the perception of the construction workers was in tandem with that of the project manager. Majority of the construction workers were of the view that long hours at work (70% strongly agree), delay in delivery of equipment (70% agreed) and accidents at the project site (50%) were the major challenges that a project manager had to deal with. As such, long hours generated the highest mean score of 4.6. A peculiar challenge that was identified was the accidents at the project site which generated a mean score of 3.8. The construction workers were of the view that this challenge is the sole responsibility of the project manager who is at the site and must adopt risk mitigating strategies.

Furthermore, the construction workers were limited with regard to the strategies adopted to mitigate the aforementioned challenges. However, the limited information that was given corroborated that of the project manager. Majority (80%) strongly agreed to the fact that regular monitoring is being used to address challenges of accidents and achievement of deadlines which generate the highest mean score of 4.8 (see table 4.6). The implication is that the construction workers are vigilante of the challenges of the project manager. Again, the construction workers were of the view that since the project is aimed at also providing them with their livelihoods, any challenge facing the project manager also affects them. Therefore, they are more careful and work hard to at least reduce some challenges that may derail implementation.

Table 4.6: Perception on challenges from construction workers

No.		1	2	3	4	5	TOTAL	Mean
1.	Challenges faced							
	Delays in the payment of contract sums	0%	0%	40%	20%	40%	100%	4.0
	Unfavorable Government policies	0%	0%	60%	40%	0%	100%	3.4
	Inflation that may lead to contract sum variations	0%	0%	70%	30%	0%	100%	3.3
	Problems from market women	20%	50%	20%	10%	0%	100%	2.2
	Long hours at work	0%	0%	10%	20%	70%	100%	4.6
	Construction worker riots	80%	20%	0%	0%	0%	100%	1.2
	Unpaid salaries	0%	0%	30%	70%	0%	100%	3.7
	Challenges with liaising with stakeholders	10%	40%	50%	0%	0%	100%	2.4
	Delay in delivery of equipment and machinery	0%	0%	20%	70%	10%	100%	3.9
	Poor attitude of community	20%	80%	0%	0%	0%	100%	1.8

	towards the implementation of the project							
	Accidents at the project site	0%	10%	20%	50%	20%	100%	3.8
	Poor communication between stakeholders and project coordinators	20%	40%	40%	0%	0%	100%	2.2
	Cultural and traditional problems	20%	80%	0%	0%	0%	100%	1.8
	Rainfall	80%	20%	0%	0%	0%	100%	1.2
	Unrealistic deadlines	100%	0%	0%	0%	0%	100%	1.0
	Political influence	0%	0%	0%	50%	50%	100%	4.5
	Lack of technical expertise	50%	50%	0%	0%	0%	100%	1.5
	Procurement difficulties	10%	40%	50%	0%	0%	100%	2.4
	Poorly defined goals	70%	30%	0%	0%	0%	100%	1.3
	Project risk	0%	0%	0%	60%	40%	100%	4.4
	Lack of accountability	50%	50%	0%	0%	0%	100%	1.5
	Improper risk management	50%	50%	0%	0%	0%	100%	1.5
	Ambiguous contingency plans	50%	20%	30%	0%	0%	100%	1.8
	Difficulty in sticking to Budget	0%	0%	10%	70%	20%	100%	4.1
2.	Strategies adopted							
	Regular Stakeholder meetings	0%	20%	20%	40%	20%	100%	3.6
	Regular monitoring as the project progress	0%	0%	0%	20%	80%	100%	4.8
	Effective Risk management strategies	0%	0%	0%	60%	40%	100%	4.4
	Surplus budgeting	0%	10%	90%	0%	0%	100%	2.9
	Well structured Communication plan	0%	0%	0%	60%	40%	100%	4.4
	Management of stakeholder expectations	0%	0%	0%	60%	40%	100%	4.4

	Institution of a Focus strategy	0%	0%	10%	60%	30%	100%	4.2
	Accountability enforcement	0%	20%	80%	0%	0%	100%	2.8
	Risk management plan	10%	20%	70%	0%	0%	100%	2.6
	On the Job training	0%	0%	0%	80%	20%	100%	4.2
	Effective Human resource management	0%	0%	0%	70%	30%	100%	4.3
	<i>The scale for the levels are 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree</i>							

Source: Field Survey, September 2018

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents a summary of the results of the study. The summary is presented based on the objectives of the study. A conclusion is also presented for the whole study.

5.2 SUMMARY OF RESULTS

The results were summarized based on the objectives of the study. Details have been presented below.

5.2.1 Bio-demographic data

Variables considered for the bio-demographic data were age of the workers, gender, marital status, educational level and number of dependents. The construction workers interviewed had a minimum age of 18 and a maximum age of 37. This meant that all the respondents were within the working age group with none being a child. Again, majority of the respondents were between the ages of 20-39, which depicts the youthful exuberance needed to be a construction worker. Furthermore, it was identified that 90% of the respondents were males while 10% was female. This further buttresses the fact that the work of construction is labour intensive and therefore favours males than females. In addition, majority of the respondents were single (50%) while one respondent was divorced.

Again, data collected indicated that majority of the respondents did not gain basic education (60%) and as such have never attended school. However, 30% attended a nursery while 10% obtained primary education. The nature of work of most of the construction workers do not

require formal education or qualification. The respondents were therefore satisfied with the work being done since they felt it was the best available.

5.2.2 Roles of the project manager

In terms of the measures adopted to sustain the project after its completion, the project manager respondent positively to the seven options provided. However, the project manager mildly agreed with the initiation of a maintenance fund and the use of KMA tax force to ensure sustainability of the project. The project manager indicated that the maintenance fund may be disbanded after the project is complete and with the rising corruption, there is a high likelihood the fund may not serve its purpose.

The major roles of the project manager are:

- Feasibility assessment
- Drawing a business plan
- Engaging stakeholders
- Drawing a working condition regulation
- Ordering of materials and tools
- Employing construction workers
- Expelling construction workers
- Evaluating project after completion
- Writing project reports
- Creation of project team
- Managing financial resources for the project

5.2.3 Challenges of the project manager

From the data collected, it was identified that the major challenges that the project manager faces from a personal perspective was the delay in delivery of equipment and machinery (strongly agree). This challenge was mainly because of the bureaucratic bottlenecks associated with supply and delivery in Ghana. Also, the location of the project makes transportation very difficult because of the traffic in the Central Business District of Kumasi. Other challenges that the project manager agreed to were: financial challenges, long hours at work, rainfall, procurement issues and project risks.

5.3 STRATEGIES ADOPTED TO ALLEVIATE CHALLENGES

The project manager was requested to indicate some of the strategies being adopted to alleviate the aforementioned challenges. Some of these strategies were directly tied to the heads of the project and as such the project manager was the best person to indicate whether they are being adopted or not. From the data, it was identified that the project adopts almost all the strategies except surplus budgeting.

Below is a list of the strategies adopted:

- Regulator stakeholder meetings
- Regular monitoring
- Effective Risk management strategies
- Well structured Communication plan
- Management of stakeholder expectations
- Institution of a Focus strategy
- Accountability enforcement

- Risk management plan
- On the Job training
- Human resource management

5.4 RECOMMENDATIONS

Some recommendations have been proffered to help improve the performance of project managers. These recommendations are generic and are owing to the challenges facing project implementation in Ghana.

5.4.1 Time performance and interpersonal skills

Interpersonal influence is the only skill component that has an impact on the project time performance. Flexibility is a key factor in interpersonal influence as it allows project managers to adapt their behaviour to different situations to elicit the desired responses from others. Therefore, people with high interpersonal influence not only being perceived as pleasant and productive, but also have the ability to control their environment.

Due to its detrimental impacts, many studies have been conducted to investigate the causes of delay in the construction industry. Lack of communication between the main project participants is seen as one of the key factors that causes project delays. The study therefore recommends that project managers must exhibit good interpersonal influence and skills to improve the time performance of projects.

5.4.2 Performance improved through sincerity

Project cost performance can be affected by many factors, such as geographical locations, types of contract, design change, completeness of design documents, cost control mechanisms, quality of estimates, project management, external environmental.

An important skill component is apparent sincerity, which is needed to create favourable impressions so that others perceive that there are no concealed motives behind any behaviour exhibited. Such perception is crucial in negotiation scenarios involving a sensitive issue such as costs, especially considering the fragmented nature of the construction industry where different parties are compelled to work together in a project, but often have differing agendas and expectations.

5.4.3 Strategic scheduling of activities

Scheduling every minute or every micro-activity of a construction project will fail. It would only result in an enormous and confusing number of activities, and project overview will be lost. A critical function of the schedule is to maintain a clear and accurate overview of project progress and delivery. Making a gigantic checklist is not the way to go. And it sure is not scheduling. Project managers must therefore divide the work to be done in manageable parts, or in work packages.

5.5 CONCLUSION

The study sought to assess the roles and challenges of a project manager in a project as large as the Kejetia Rehabilitation project. Responses were solicited from both the project manager and construction workers. The results indicated that the roles of the project manager are much more complicated depending on the type of project involved. As such, some challenges are faced in performing the roles. The strategies that are adopted to help solve the challenges are also presented. It is concluded that, a project manager has to involve stakeholders especially construction workers since their perception on the project can either derail or help ensure a successful implementation of a project.

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Appendix 1: Project Manager Interview schedule

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF ART AND BUILT ENVIRONMENT
DEPARTMENT OF BUILDING TECHNOLOGY

**INTERVIEW SCHEDULE FOR THE PROJECT MANAGER OF THE KEJETIA
REHABILITATION PROJECT**

**RESEARCH TOPIC: ROLES AND CHALLENGES OF A PROJECT MANAGER AT THE
CONSTRUCTION STAGE IN PROCUREMENT OF WORKS IN GHANA: A CASE STUDY
OF THE KEJETIA REHABILITATION PROJECT**

Introduction:

I am Asibey and the research aims to understand the roles and challenges of a project manager in the construction of works. The hope of the research is that the results of the study would help the involved institution to respond to any challenges. The results would also contribute to the formulation of more-targeted strategies to help ensure the smooth performance of duties by the project manager.

SECTION A: BACKGROUND OF THE KEJETIA REHABILITATION PROJECT

The questions below are intended to ascertain the background of the project. Please tick whether agreed or disagreed per the variable under each question.

		AGREE	DISAGREE
1.	Sources of funding		
	District Assembly		
	Market Tolls		
	Government of Ghana		
	DANIDA		
	Ghanaian NGO		
	Foreign NGO		

	Private Sector		
2.	Expected duration of the project		
	1 year		
	2 years		
	3 years		
	Over 3 years		
3.	Origin of construction company		
	Within Ghana		
	Outside Ghana		
4.	Number of workers in the project		
	1-100		
	101-200		
	201-300		
	301-400		
5.	Expected Benefits		
	Increased sales		
	Reduction in crime		
	Sustainability of the city		
	Increase in mobility		
	Secure political votes from market women		
	Increase in tax base		
	Providing livelihood opportunities		
	Providing employment		

SECTION B: ROLES OF THE PROJECT MANAGER

Please tick the level of agreement with the understated issues. The scale for the levels are The scale for the levels are 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

No.		1	2	3	4	5
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1.	Measures to sustain the project after completion					
	Maintenance committee					
	Maintenance fund					
	Frequent monitoring					
	Frequent evaluation					
	Scheduled renovation work					
	Taxation of market women for maintenance					
	Use of KMA tax force					
2.	Number of scheduled evaluation after project completion					
	Once a year					
	Twice year					
	Three times a year					
	Four times a year					
	Five times or more					
3.	Primary stakeholders of the project					
	Market women					
	Chiefs					
	Government of Ghana					
	District Assembly					
	Trotro drivers					
	GPRTU					
4.	Roles of the project manager					
	Feasibility assessment					
	Drawing a business plan					
	Identification of stakeholders					
	Engaging stakeholders					
	Drawing a working condition regulation					
	Ordering of materials and tools					
	Employing construction workers					
	Expelling construction workers					

	Evaluating project after completion					
	Writing project reports					
	Creation of project team					
	Managing financial resources for the project					

SECTION C: CHALLENGES OF THE PROJECT MANAGER

Please tick the level of agreement with the understated issues. The scale for the levels are The scale for the levels are 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

No.		1	2	3	4	5
1.	Challenges faced					
	Financial challenges					
	Unfavorable Government policies					
	Inflation					
	Problems from market women					
	Longer hours at work					
	Construction worker riots					
	Unpaid salaries					
	Challenges with liaising with stakeholders					
	Delays in delivery of equipment and machinery					
	Poor attitude of community towards the implementation of the project					
	Accidents at the project site					
	Poor communication between stakeholders					
	Cultural and traditional problems					
	Rainfall					
	Unrealistic deadlines					
	Political influence					
	Lack of technical expertise					
	Procurement difficulties					
	Poorly defined goals					

	Project risk					
	Lack of accountability					
	Improper risk management					
	Ambiguous contingency plans					
	Difficulty in sticking to Budget					
2.	Strategies adopted					
	Regulator stakeholder meetings					
	Regular monitoring					
	Effective Risk management strategies					
	Surplus budgeting					
	Well structured Communication plan					
	Management of stakeholder expectations					
	Institution of a Focus strategy					
	Accountability enforcement					
	Risk management plan					
	On the Job training					
	Human resource management					

THANK YOU VERY MUCH FOR YOUR TIME!

Appendix 2: Construction workers Interview schedule

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF ART AND BUILT ENVIRONMENT
DEPARTMENT OF BUILDING TECHNOLOGY**

INTERVIEW SCHEDULE FOR THE CONSTRUCTION WORKERS

RESEARCH TOPIC: ROLES AND CHALLENGES OF A PROJECT MANAGER AT THE CONSTRUCTION STAGE IN PROCUREMENT OF WORKS IN GHANA: A CASE STUDY OF THE KEJETIA REHABILITATION PROJECT

Introduction:

I am Asibey and the research aims to understand the roles and challenges of a project manager in the construction of works. The hope of the research is that the results of the study would help the involved institution to respond to any challenges. The results would also contribute to the formulation of more-targeted strategies to help ensure the smooth performance of duties by the project manager.

Informed Consent:

[The construction workers must complete this section before the interview commences].

After listening to/reading the introduction, I agree to participate in the study.

Date.....

Signature.....

Thumbprint.....

SECTION A: BIO DATA

Cell Phone Number: +233 (0) (Collect only if the respondent is willing to give it out)

1. Age of respondent: Specify and indicate the category.....

- (a) Below 15 [] (b) 15-19 [] (c) 20-29 [] (d) 30-39 [] (e) 40-49 [] (f) 50-59 []
 (g) 60+

2. Gender of respondent: (a) Male [] (b) Female []

3. Marital status of respondent: (a) Single [] (b) Married [] (c) divorced [] (d) widowed []

4. Educational level attained: (a) Never [] (b) Nursery [] (c) Primary [] (d) JHS []

(e) SHS/Technical/Vocational []

SECTION B: PERCEPTION OF THE ROLES OF THE PROJECT MANAGER

Please tick the level of agreement with the understated issues. The scale for the levels are The scale for the levels are 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

No.		1	2	3	4	5
1.	Measures to sustain the project after completion					
	Maintenance committee					
	Maintenance fund					
	Frequent monitoring					
	Frequent evaluation					
	Scheduled renovation work					
	Taxation of market women for maintenance					
	Use of KMA tax force					
2.	Number of scheduled evaluation after project completion					
	Once a year					

	Twice year					
	Three times a year					
	Four times a year					
	Five times or more					
3.	Primary stakeholders of the project					
	Market women					
	Chiefs					
	Government of Ghana					
	District Assembly					
	Trotro drivers					
	GPRTU					
4.	Roles of the project manager					
	Feasibility assessment					
	Drawing a business plan					
	Identification of stakeholders					
	Engaging stakeholders					
	Drawing a working condition regulation					
	Ordering of materials and tools					
	Employing construction workers					
	Expelling construction workers					
	Evaluating project after completion					
	Writing project reports					
	Creation of project team					
	Managing financial resources for the project					

SECTION C: PERCEPTION OF THE CHALLENGES OF THE PROJECT MANAGER

Please tick the level of agreement with the understated issues. The scale for the levels are The scale for the levels are 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

No.		1	2	3	4	5
5.	Challenges faced					
	Delays in the payment of contract sums					
	Unfavorable Government policies					
	Inflation that may lead to contract sum variations					
	Problems from market women					
	Long hours at work					
	Construction worker riots					
	Unpaid salaries					
	Challenges with liaising with stakeholders					
	Delay in delivery of equipment and machinery					
	Poor attitude of community towards the implementation of the project					
	Accidents at the project site					
	Poor communication between stakeholders and project coordinators					
	Cultural and traditional problems					
	Rainfall					
	Unrealistic deadlines					
	Political influence					
	Lack of technical expertise					
	Procurement difficulties					
	Poorly defined goals					
	Project risk					
	Lack of accountability					

	Improper risk management					
	Ambiguous contingency plans					
	Difficulty in sticking to Budget					
6.	Strategies adopted					
	Regular Stakeholder meetings					
	Regular monitoring as the project progress					
	Effective Risk management strategies					
	Surplus budgeting					
	Well structured Communication plan					
	Management of stakeholder expectations					
	Institution of a Focus strategy					
	Accountability enforcement					
	Risk management plan					
	On the Job training					
	Effective Human resource management					

THANK YOU VERY MUCH FOR YOUR TIME!