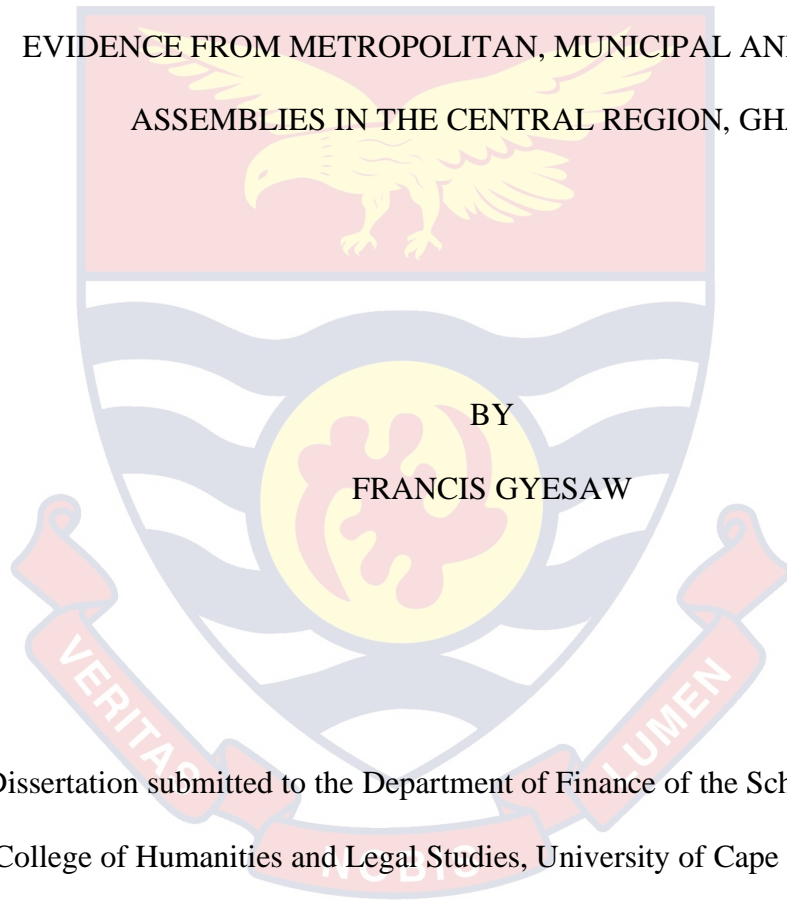


UNIVERSITY OF CAPE COAST

CRITICAL SUCCESS FACTORS FOR PUBLIC PRIVATE PARTNERSHIP:

EVIDENCE FROM METROPOLITAN, MUNICIPAL AND DISTRICT  
ASSEMBLIES IN THE CENTRAL REGION, GHANA



BY  
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College of Humanities and Legal Studies, University of Cape Coast, in partial  
fulfillment of the requirements for award of Master of Business Administration

Degree in Finance.

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## DECLARATION

### Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature ..... Date.....

Name: Francis Gyesaw

### Supervisors' Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's Signature ..... Date.....

Name: Prof. Daniel Agyapong

## ABSTRACT

The purpose of the study was to examine perception on critical success factors for Public Private Partnership, evidence from Metropolitan, Municipal and District Assemblies in the Central Region of Ghana. The study examined financial and non-financial factors considered in PPP implementation. The study used a cross-sectional descriptive research design. The study employed quantitative approach and data collection was done using questionnaires. A total of 186 respondents out of a population of 352 were selected using simple random sampling technique. Analyses of the data were done using both descriptive and inferential analyses. The study revealed that the financial factors of PPP project implementation were economic, funding and budgeting factors, and that of the non-financial factors were good governance and social support factors.

The study finally revealed that economic and political factors in terms of cost fluctuation and delay in giving permit and licenses respectively had negative implication on investment. On the other hand, economic, political and technological factors in terms of cost fluctuation, delay in giving permit and licenses and reliance on outmoded technology respectively had a positive implication on cost. From the study, MMDAs must pay particular attention to public safety and health in PPP project implementation as well as factoring cost fluctuations into their budget since these affects both investment and cost. MMDAs must upgrade themselves in order to take advantage of modern technology.

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## DEDICATION

To my parents



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## LIST OF ACRONYMS

BBO	Buy Build Operate
BOO	Build Own Operate
BOOT	Build Own Operate Transfer
BOT	Build Operate Transfer
BTO	Build Transfer Operate
CSFs	Critical Success Factors
DBFO	Design Build Finance Operate
DBM	Design Build Maintain
ERF	Economic Risk Factor
ERP	Economic Recovery Programme
JV	Joint Venture
LP	Lease Purchase
MMDAs	Metropolitan Municipal and District Assemblies
O & M	Operation and Maintenance
PESTLE	Political, Economic, Social, Technological, Legal and Ecological
PPP	Public Private Partnership
PPPs	Public Private Partnerships
PRF	Political Risk Factor
SLEPT	Social, Legal, Economic, Political and Technological
SPSS	Statistical Package for Social Sciences
SRF	Socio – cultural Risk Factor
TRF	Technological Risk Factor

VFM Value for Money



## CHAPTER ONE

### INTRODUCTION

The traditional provider of public services, provider of development projects, and controllers of service delivery institutions in any country is its government. The activities of any government are primarily funded by resources from public sources, especially taxes and levies. This has forced most governments to resort to new methods of mobilising funds to meet the demands of their citizens and notable among them is Public Private Partnership (PPP). PPP is a long-term contractual agreement between a private and public sectors whereby resources and risks are shared in order to develop facilities needed by citizens.

In Ghana, for instance, the PPP policy has been in implementation since its approval in 2011 and it has been marred with challenges such as poor project technical and financial feasibilities, unstable macro-economic policies, high level of bureaucracy, inadequate competent personnel and unfavourable policies. In this light, the purpose of the study was to examine the critical success factors influencing PPP in selected district assemblies in Central Region, Ghana. This section presents the overview of the study which includes the background to the study, statement of the problem, purpose of the study, research objectives, research questions, significance of the study, delimitations, limitations and organisation of the study.

#### **Background to the Study**

The traditional provider of public services, provider of development projects and controllers of service delivery institutions in any country is its

government (Montanheiro, 2008). The activities of any government are primarily funded by resources from public sources, especially taxes and levies. In recent times, most governments have faced ever-increasing disparities between public sector capacity to generate resources and the demands of their citizens for provision of developmental projects (Palmer, 2009). This has forced most governments to resort to new methods of mobilising funds to meet the demands of their citizens and notable among them is the Public Private Partnership (PPP). As a new funding method, the PPP has provided tremendous contributions to countries which have adopted them and as such, is currently a popular phenomenon and a global trend (Abiodun, 2011).

The PPP is primarily seen as a long-term contractual agreement between a private sector and a public sector whereby resources and risks are shared in order to develop facilities needed by citizens in respective countries (Kaliannan, Awang & Raman, 2010). Similarly, the PPP is regarded as a contract between two parties, private sector and public sector, whereby the private sector assumes long-term financial, technical and operational risks in the design, financing and operation of a given project (Abiodun, 2011). The public sector, on the other hand, purchases the costs of providing new infrastructure or rehabilitation of infrastructure, coupled with a flow of services for a short-term period. PPP is therefore seen as a win-win affair for both parties in many countries thus, leading to its universal recognition since its adoption (EPU, 2010).

The idea of PPP is quite simple; the public sector holds the mandate to provide services to its citizens and in turn, contracts a private entity to ensure those

services are delivered to the citizens (Zhang, 2005a). In most developed countries, for instance, PPP projects have contributed immensely to the provision of basic welfare amenities, infrastructure development and maintenance and these projects have seen governments, private parties and the general public alike enjoy diverse benefits (Ishmail & Rashid, 2007). In this regard, countries like the United States of America, China and Germany have acknowledged the PPP mechanism as one of the key tools required for a speedier public-sector service development (Montanheiro, 2008).

In the United States of America, for example, the PPP model has been adopted for over four (4) decades with success. Other countries such as United Kingdom, Singapore, Australia, Malaysia, Poland and Hong Kong have also enjoyed recent successes with the PPP model (Nossman & Elliot, 2008; Wegrzyn, 2015). Similarly, in developing countries, especially Nigeria and Ghana, PPP is seen as an increasingly popular choice for policymakers in implementing significant public projects (Ho, 2006; Ke, Wang, Chan & Cheung, 2009). This is primarily because of the limited and/or shortage of financial resources required by various governments to solely execute developmental projects in respective countries.

In some African countries like South Africa, Nigeria, Egypt and Ghana, their governments have been stretched for resources with the present economic climate but PPP has enabled them to utilise alternative private sector sources of finance while simultaneously gaining the skills and management expertise which the private sectors bring on board (Owusu, 2010). In Ghana, for instance, the PPP

policy has been in implementation since its approval in 2011. In this regard, the Government of Ghana cannot match the pace of current economic growth trends without the involvement of its private sector through PPP projects. Since its adoption into the country, PPP has been used by incumbent governments at various levels such as regional, metropolitan, municipal, district, among others (Buertey & Asare, 2014).

Studies have revealed that, PPP have been used to complete developmental projects such as generation of power, construction projects, management of waste, provision of social amenities, among others in all the various levels of governance in Ghana (Owusu, 2010; Osei-Kyei& Chan, 2015). In this manner, district assemblies within the Central region cannot be excluded from the numerous benefits associated with PPP. As such, staff in these district assemblies are likely to hold various perceptions on the critical success factors for PPP thus, identifying these perceptions could contribute to the establishment of relevant laws, regulations and guidelines which would assist in efficient procurement frameworks for best PPP practises in Ghana as a whole.

### **Statement of the Problem**

MMDAs in Ghana of which the Central region is no exception are increasingly faced with service delivery deficits in terms of basic education, primary health care, housing, poor drinking water, limited access to electricity, poor sanitation, poor road network (Annual Report of RCC, Central Region, 2019). These Assemblies are financially weak and rely heavily on financial transfers and assistance from Central government to meet the growing infrastructural service

demands. Evidence from the Auditor General's report on MMDAs from 2014 to 2017 indicate that MMDAs have little to show for Internally Generated Fund mobilization over the years.

There is also the problem of erratic release of the District Assemblies Common Fund to the Districts and as such the government is in arrears in terms of DACF releases to the MMDAs to finance their infrastructural needs (Annual Report of RCC, Central Region, 2019). Again, many of these MMDAs are also not able to meet the strict conditionalities of Donors to source for Donor Funding themselves.

Notwithstanding the problems associated with the traditional funding sources to MMDAs, an alternative financing source in recent times have emerged called Public Private Partnership. With PPP arrangement, MMDAs by agreement partners a private sector entity to provide infrastructural services to the people. Despite this innovative financing option called Public Private Partnership, MMDAs especially in the Central Region (a region noted to be the 4<sup>th</sup> poorest region in Ghana (Ghana Statistical Service Survey, 2012) are not using it to improve on infrastructural service delivery.

Further, there are extensive literatures on perception on critical success factors for PPP in several countries (Zhang, 2005a; Montanheiro, 2008; Saqib, Farooqui & Lodi, 2008; Palmer, 2009) but only a few of them are attributable to Ghana (Owusu, 2010; Buerthey & Asare, 2014; Osei-Kyei & Chan, 2015). Among these literatures, those in Ghana have failed to look at perception of workers in district assemblies with regards to the critical success factors for Public Private Partnerships. Additionally, research is yet to be conducted on this topic focusing on



staff in MMDAs within the Central region of Ghana, despite diverse perceptions held by them about PPP. Therefore, these limitations in existing literature have created a gap which the study sought to fill.

### **Purpose of the Study**

The purpose of the study was to examine the critical success factors influencing Public-Private Partnership in Metropolitan, Municipal and District Assemblies (MMDAs) within the Central Region.

### **Research Objectives**

Specifically, the following objectives are developed to:

1. examine the financial factors of PPP projects.
2. analyse the non-financial factors considered in PPP implementation.
3. examine the risk factors considered in implementing PPP project and their implications for investment and cost.

### **Research Questions**

Based on the research objectives, the study will be guided by the following research questions:

1. What are the financial factors of PPP projects?
2. What are the non-financial factors considered in PPP implementation?
3. What are the risk factors considered in implementing PPP project and their implications for investment and cost?

### **Significance of the Study**

The study examines the perception on critical success factors for Public-Private Partnership (PPP) in MMDAs within the Central region. The drive for the study was to increase understanding of the critical success factors required for successful implementation of PPP projects in Ghana, especially Central region. The outcome of the study will assist policy makers to establish relevant laws, regulations and guidelines in order to develop efficient procurement framework for best practices of PPP in Central region and Ghana, as a whole. Additionally, the study will also help policy makers in Ghana to look at potential variations in opinions about PPP as a way of financing infrastructure in the various district assemblies.

Finally, the results of the study would augment existing literature related to critical success factors for PPP in Ghana although the study was limited to MMDAs within the Central region. It will serve as a guide for further research on innovative ways of dealing with PPP for the overall academic well-being of the nation and Sub-Saharan African countries.

### **Delimitations**

The study was examined within the framework of examining perceptions on critical success factors for Public-Private Partnership. It focused on managerial staff in district assemblies within the Central region of Ghana who are directly involved in PPP implementation. Therefore, the outcome of the study cannot be generalised for the whole country. This is because district assemblies other than those in Central region are not included in the study.

## **Limitations**

Research designs come with some weaknesses which could affect a study's results. The study employed the descriptive research design and as such, its results could also be affected by weaknesses associated with the design. One of the major weaknesses was that, participants may not be truthful in providing objective responses which could affect the study's findings.

## **Organisation of the Study**

The study has been organised into five chapters. Chapter one presents the introduction of the study which comprises the background to the study, statement of the problem, purpose of the study, research objectives, research questions, significance of the study, delimitations and limitations as well as the organisation of the study. Chapter two focuses on the review of relevant literature in relation to PPP. Chapter three deals with the description of the study's research methods which comprise the research approach, research design, study area, population and sampling procedure, data collection instrument, data collection procedures, pilot test, data processing and analysis. The results and discussion of data was done in chapter four. Chapter five presents the summary of key findings of the study, conclusions and recommendations to authorities and policy makers. The chapter concludes with recommendations for further research.

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

This chapter reviews literature which informs the problem statement. Thus, this chapter sets out the theoretical foundation of the study into three sections. The first section presents and discusses the theoretical foundations including the theories and concepts relating to financial and non-financial factors as well as risk factors in PPP implementation. In order to provide a rationale and context for the study's objectives identified in the previous section, a review of the relevant literature on financial and non-financial factors as well as risk factors in PPP implementation was carried out. The second section examines empirical literature of interest to the topic while the last section deals with conceptual framework and conclusions from both the theoretical and empirical literature.

#### Theoretical Review

This section presents the theory underpinning the study to give it solid foundation. Thus, the expectancy theory will be used to underpin the study since it clearly explains the study's research objectives.

#### Expectancy Theory

The expectancy theory was propounded by Victor Vroom in 1964 (De-Sanctis, 1983). According to the theory, an individual behaves in a certain way based on what he/she expects from a selected behaviour. It explains the processes an individual goes through to make choices. In this regard, an individual focus on intent, as an immediate precursor to a particular behaviour. The theory suggests

that, if one can determine the factors that impact intention, then he/she can predict the outcome of an event or behaviour more accurately. This means that, an individual makes choices based on how he/she perceives an outcome of a given event or situation and thus, expect the outcome to be equal to his/her perception. The theory therefore implies that, an individual will feel his/her perceptions are positive if the outcome of an event or situation is in line with his/her predictions and vice versa.

Additionally, the theory proposes that, by changing an individual's perceptions of potential outcomes, one can change his/her intents. Vroom was of the view that, one chooses a behaviour based on an expected outcome and the value he/she associates with that outcome (Borders, Earleywine & Huey, 2004). This means that, the level of willingness to behave in a particular way is dependent on; the extent to which the individual believes a consequence will follow and the value the individual place on the consequence (Chiang & Jang, 2008). This implies that, an individual will be willing to behave in a particular way if he/she feels that the perceived outcomes will be more attractive. Thus, how an individual perceives a behaviour or situation influences his/her thinking or attitude towards that situation or behaviour.

The theory further proposes that, the potential negative impact of a particular action may act as a barrier to an individual's recommended action, as such, the cost-benefit analysis will take place and that will inform the individual to weigh the action's expected effectiveness against the perception that the said action may be expensive, dangerous and unpleasant (Borders, Earleywine & Huey, 2004).

This mean that, an individual will take action if he/she perceives that, the benefits associated with the action outweighs its negativities/costs. Therefore, the readiness of an individual to take an action is mostly influenced by several factors and notable among them is his/her perception or intent towards the outcome of the action. The expectancy theory is therefore used for predicting the outcome of an event or behaviour and that influences an individual's choice.

This theory has been widely used in several studies because of its importance but it has also faced some criticisms. For instance, according to Borders, Earleywine and Huey (2004), the theory focuses on limited cognitive processes which is a weakness. They explained that, an individual chooses from a variety of options and thus must hold different perceptions towards those options before finally making decisions. Among the potential options for decision making, some may appear more attractive than others. In spite of this and other criticisms, the expectancy theory was used to underpin the study because of its relatedness to the study's objectives.

The implication of the expectancy theory to the study is that, people hold diverse perceptions towards Public Private Partnership (PPP) projects. Thus, the outcomes of these projects influence the way they perceive critical success factors for PPP. This means that, an individual will be keen to know or identify the various critical success factors of PPP if they perceive that the outcomes of those PPP projects implemented in their respective administrative divisions will be successful or valuable (Chiang & Jang, 2008). It is noted that, PPP projects implemented in the various administrative divisions in Ghana have received conflicting responses

from both the general public and staff. This is because, these projects have been overly successful in some divisions and unsuccessful in other divisions. Therefore, the theory proposes that, staff in district assemblies within the Central region have various perceptions on critical success factors for PPP projects since some PPP projects have been implemented in those districts in recent times.

### **Concept of Public-Private Partnerships**

Literatures have revealed several definitions for Private Public Partnerships. PPP is defined as a form of co-operation of public and private sectors aimed at achieving public expectations with regards to the provisions of public goods and services. Also, PPP is defined as a form of collaboration between private sector and public sector with the aim of realising a project which is traditionally provided by the public sector for mutual benefits (Khanom, 2010). Similarly, Kappeler and Nemoz (2010) defined PPP as an arrangement between two parties (Private and Public) whereby the private sector provides finance, project designs and operates infrastructural assets which are primarily provided by the public sector.

Ismail (2013) defined PPP as a contract between a public sector and a private party whereby the private party assumes substantial financial, operational and technical risks in implementation of a project. PPP is seen as a form of public-private sector involvement where the private party brings in commercial innovation, skills and capital into service deliveries which the public party is primarily responsible for providing (Meidute & Paliulis, 2011). A study by Chien (2014) revealed that, there are different types of PPPs which are used around the world. The study found that, many of the PPPs operate similarly but under different

names depending on the country where it is used and the situations in which they are approached.

Chen (2014) added that, the types of PPPs include Design Build Finance Operate (DBFO), Design Build Maintain (DBM), Build Operate Transfer (BOT), Operation and Maintenance (O&M) and Build Own Operate (BOO). Similarly, Liu and Wilkinson (2011) added that, other types of PPPs comprise Build Own Operate Transfer (BOOT), Buy Build Operate (BBO), Build Transfer Operate (BTO), Joint Ventures (JV), Leasing (L) and Lease Purchase (LP). According to Brown, these types of PPP are implemented for various reasons in several countries.

#### **Overview of PPP in Ghana**

In Ghana, a study by Kwakye and Fouracre (1998) revealed that, PPP was adopted in 1983 when the Economic Recovery Programme (ERP) was introduced into the country. They stressed that, some key policies with the ERP ensured the development of an open and liberalised economy, drastic reduction in state participation in the economy thus making the economy dominated by the private sector. As such, more measures were put in place to ensure that economic development projects were carried out through collaborations with the government and private parties.

Therefore, an increasing awareness of the need to involve the private sector in policy formulation led to the establishment of private sector associations which provided rooms for private sector participations (Dove, 2007). Moreover, the ERP ensured that both the private and public sectors collaborate to carry out



developmental projects which led to the implementation of Public Private Partnerships (PPPs) in the country.

### **PPP Implementation in Ghana**

The motive behind the implementation of PPP is to bring public and private sectors together to carry out developmental projects for mutual benefits (Ismail & Rashid, 2007). In Ghana, for instance, PPP has been used to implement numerous projects in various administrative levels or divisions such as national, regional and district levels. In spite of these benefits, PPP projects have struggled to live up to expectations due to several factors. As such, the general public in addition to staff in various district assemblies in Ghana hold diverse perceptions on factors for PPP success. It is in this view that the study seeks to examine staff perception on factors for PPP projects in district assemblies within the Central region of Ghana.

### **Empirical Review**

This section presents the empirical studies related to the study and stated study's objectives. Review of existing literatures were carried out in a bid to clearly explain the objectives of the study

### **Financial factors in PPP project implementation**

This section reviews literature in relation to the first objective of the study. Studies have revealed that several factors notably financial factors are considered prior to adopting PPP projects in a bid to be successful (Ameyan & Chan, 2015; Ismail, 2013; Wong & Wong, 2012). It is to note that, little studies exist on financial factors for PPP projects but however, these studies revealed some factors which have been considered relevant (Vining & Boardman, 2008). For instance, Vining

and Boardman (2008) did a study on Public-Private Partnership in Canada and focused on identifying the financial factors influencing the adoption of PPP projects. The study analysed views from workers in a public institution in Canada using frequencies and percentages. The study found that, costs, revenue, market share, budget constraint and cash flows of projects were some of the major financial factors workers perceive are considered prior to adopting PPP.

Similarly, Ismail, Takim and Nawawi (2011) presented a paper in an international conference on, “Evaluation criteria for Value for Money (VFM) of PPP bids”. The study considered the financial factors prior to adopting PPP in a bid to evaluate VFM in PPP projects. The study revealed that, costs of projects, market share, debt repayment period, cash flows and source of finance were the key financial factors considered when evaluating VFM in PPP projects. Other studies by Agrawal (2010), Ng, Wong and Wong (2012), Ismail (2014) and Wibowo and Alfen (2014) obtained same or similar results.

In Ghana, Osei-Kyei, Dansoh and Ofori-Kuragu (2014) did a study in a bid to identify the various reasons for adopting PPP for construction projects. The study adopted the survey design and used questionnaires to solicit for data from respondents (workers). Though the study failed to indicate the sample size used, respondents were asked to rate their perception on 17 factors identified from literature. Data was analysed using descriptive statistical tools such as frequencies and percentages. The study found that, workers revealed five (5) major financial factors such as administrative costs, allows for shared financial risks, ease of raising

funds, reduces public sector budget constraint and cash flows prior to adopting PPP in construction projects in Ghana.

In a study titled, “Identifying macro-environmental critical success factors and key area for improvement to promote Public-Private Partnerships in infrastructure in Kenya”, Wibowo and Alfen (2014) used a descriptive survey design and adopted the quantitative method. By looking at financial factors considered prior to adopting PPP as part of the study’s objectives, it was found that, availability of financial market, repayment of debt, favourable investment market, realistic cost/benefit assessment and sound financial package were the major factors perceived vital prior to adopting PPP projects. The study further indicated that, workers perceive PPP projects to perform successfully when these financial factors are considered.

This finding was similar to a study by Hwang, Zhao and Gay (2013) which looked at factors, critical risks and preferred risk allocation influencing PPP project implementation from the perspective of contractors in Singapore. The study found that, contractors perceived sound financial package, favourable investment market, availability of financial market, macro-economic indicators such as inflation rate, exchange rate and interest rate, cash flows and costs of projects as major financial factors influencing PPP implementation. The study therefore concluded that, contractors who fail to consider these financial factors struggle to successfully implement PPP in their construction projects.

Moreover, Ameyan and Chan (2015) did a study in Ghana on the implementation of PPP water supply projects. The study adopted an exploratory

research design using the quantitative method. The study failed to define the population and research instrument adopted in collecting data however, findings revealed that, favourable investment market, availability of financial market, market share and source of finance were the major financial factors considered prior to implementing PPP water supply projects in Ghana.

It could therefore be seen from the scanty literature reviewed that, financial factors such as costs, revenue, market share, favourable investment market, sound financial package, among others were considered in various countries such as Canada, Singapore, Kenya, Ghana prior to adopting PPP in projects (Ameyan & Chan, 2015; Ismail et al., 2011). Despite these findings, inappropriate research methods were used in some studies (Osei-Kyei et al., 2014) whereas some also failed to describe the various methods used (Hwang et al., 2013). Also, none of the studies were found to focus on district assemblies in Ghana in spite of the wide use of PPP in implementing projects. This study therefore, seeks to bridge the gap in literature by examining the financial factors in PPP implementation in district assemblies within Central region.

### **Non-financial factors considered in PPP project implementation**

In bid to clearly explain the second objective of the study, this section reviews existing literature in relation to the non-financial factors considered in PPP project implementation. Li, Akintoye, Edwards and Hardcastle (2010) defined non-financial factors as, “those few key areas of activity in which favourable results are absolutely necessary for a particular manager to research his/her own goals”. These non-financial factors primarily assist organisations to successfully implement

projects and as such play crucial roles in PPP projects (Ameyan & Chan, 2015; Kulatanga, Amaratunga & Haigh, 2008). Similarly, Tang, Atkinson and Zou (2012) defined non-financial factors as those important activities which ensure that favourable outcomes are attained from a project.

Several studies conducted on non-financial factors for PPP implementation have revealed that these factors do exist and they are found in all the stages of the PPP project implementations. For instance, Jacobson and Choi (2008) examined the non-financial factors that contribute to successful PPP projects. The study adopted a qualitative analysis using observations and in-depth interviews. The study found that, ten (10) non-financial factors contribute to PPP implementations and they include open communication and trust, willingness to compromise, respect, community outreach, political support, expert advice and review, risk awareness, establishing clear roles and responsibilities, having specific plan/vision and commitment.

Further, Jooste (2010) conducted a study by evaluating the success of PPP projects in three (3) countries comprising Canada, South Africa and Australia. The study used an empirical metrics and discovered that, stakeholders in these countries perceived a competitive PPP market, a growing but well-controlled flow of PPP projects, acceptance of PPP model, opinions of central field actors, identifying and understanding client/owner requirements and having an efficient project development process, as the major non-financial factors for PPP implementation.

Furthermore, Abdul-Aziz (2010) conducted a study in Malaysia on ten (10) Housing projects under PPP: perspective from the government agencies. The study

adopted both interviews and structured questionnaire to solicit for information from government agencies. Though the study failed to describe the design and approach used, it found that, there are fifteen (15) non-financial factors considered for PPP housing projects which consist of constant communication, accountability of profit sharing, robust and clear agreement, reputable developer, social accountability by parties, negotiation skills, ample time to evaluate proposal, political influence, consistent monitoring, partners compatibility, realistic projections, action against errant partner and adequate negotiation staff.

Another study by Ke, Wang, Chan and Cheung (2010) revealed that, planning, construction and operational stages are the stages involved in procuring PPP projects which form the entire lifecycle of the project. As such, the study found that, these stages are influenced by non-financial factors such as efficient management of resources, good governance, government support in providing guarantee, transparency of procurement process, technical feasibility of projects and appropriate risk allocation and sharing. The study concluded that, non-financial factors are inevitable in PPP projects thus play crucial roles in the success of PPP projects.

A study by Jefferies, Gameson and Rowlinson (2010) revealed fifteen (15) non-financial factors for PPP implementation to include existing strategic alliance, good resource management, political stability, community support, transfer of technology, feasibility study, selecting the right project, consortium structure, environmental impact, technical innovation in overcoming project complexity, efficient approval process and developed economic/legal framework. Likewise,

Jefferies (2012) investigated non-financial factors using the BOOT scheme and considered the same factors examined by Jefferies et al. (2010). The study found other non-financial factors to include negotiation, client outcome, business diversification, competition, teamwork, asset delivery, bid feature, project identification and investment growth.

Further, Abdul-Aziz and Kassim (2011) carried out a study that focused on PPP housing projects and relied on the 15 non-financial factors postulated by Abdul-Aziz (2010). They extended the study by examining the objectives as well as the non-financial factors crucial for implementation of PPP projects. The study failed to indicate the theory underpinning the study likewise failing to describe the research methods used. However, the study found that, good governance, financial accountability, favourable legal framework, action against errant developers and effective communication channels are the major non-financial factors for PPP housing project in Malaysia.

Some studies have found non-financial factors for PPP implementations to comprise: well-structured legal mechanism for dispute resolution, employment of highly skilled and competent workers, efficient and well-structured mechanism for payments, availability of financial market, periodic evaluation of services delivered, appropriate and effective communication channels, financial accountability and transparency, sound economic policy, stakeholder consultations, stable macroeconomic indicators, constant monitoring of project performances, favourable legal framework and good governance (Zhang, 2005a; Abdul-Aziz, 2010; Hwang et al., 2013).

According to Mladenovic, Vajdic, Wundsich and Temeljotov-Salaj (2013), considering the various stages of PPP projects and the diverse objectives of PPP, different parties have different perceptions on how to manage PPP projects successfully. They stressed that, there are diverse perceptions of people regarding the various non-financial factors for PPPs which have been well documented and comprehensively discussed in several countries over the past decades. These non-financial factors include open communication and trust, transparency of procurement process, appropriate risk allocation and sharing, availability of financial markets and favourable legal frameworks.

Also, a study by Ismail (2013) in Malaysia on examining the perceptions of stakeholders on non-financial factors (CSFs) needed for the general implementation and preparatory stage of PPP projects. The study relied on a questionnaire, a primary data collection instrument but failed to describe the respondents and how they were sampled. The study found that, non-financial factors for PPP project implementation comprised good governance, commitment and responsibility of parties, availability of financial markets, favourable legal frameworks, sound economic policy, appropriate risk allocation and risk sharing, authority sharing between parties, political and social support, transparency of procurement process, mutual benefit objectives and technical feasibility of projects.

Similarly, an article titled, “Public-Private Partnerships in the water sector” by Mandri-Perrot and Stiggers (2013) used a descriptive survey design and adopted the mixed approach. Although the study failed to describe most of the major research methods such as population, sample size, data collection instrument and



analytical tools used in the study, it found that, commitment and responsibility of both parties (public and private institutions), good governance and technical feasibility of the project were the major non-financial factors for PPPs in the public sector. On the other hand, the private sector considers favourable legal frameworks, availability of financial markets and good governance as the most crucial CSFs for PPP implementation.

Ismail, Azzahra and Harris (2014) did a study on the rationale for PPP implementation in Malaysia using the quantitative research approach and a descriptive-exploratory research design. The study failed to indicate the theory adopted, population, sample size and the data collection instrument used. Despite these shortcomings, the study revealed that, government support in providing guarantee, tax exemptions or reductions on PPP projects, incumbent government's willingness to share risks and availability of flexible legal frameworks are some of the non-financial factors for PPP implementations.

Additionally, Shrestha, Chan, Aibinu and Chen (2017) conducted a study to look at the efficient risk transfer in PPP wastewater treatment projects. The study relied on a structured questionnaire because it adopted a quantitative research approach and focused on a descriptive-survey design. Though the study failed to describe the population, purposive sampling technique was used to select respondents for the study. The study discovered that, appropriately allocating and sharing risks, favourable legal frameworks, having well-organised public agency and strong private consortium are the key non-financial factors for the implementation of PPPs.

From the reviews above, several non-financial factors were considered in PPP projects' implementations (Ismail et al., 2014; Mandri-Perrot & Stiggers, 2013; Shrestha et al., 2017). Despite these findings, most of the literature either failed to adequately describe the research methods used (Abdul-Aziz & Kassim, 2011; Zhang, 2005; Abdul-Aziz, 2010) or some key components of research methods were not discussed (Hwang et al., 2013; Mladenovic, 2013). Similarly, none of the literature indicated the theory underpinning their respective studies. Although non-financial factors are considered when implementing PPP projects in district assemblies within the Central region, none of the studies reviewed were in relation to the study area under consideration. In view of these, a gap has been created in literature of which the study seeks to fill by examining the non-financial factors considered during PPP project implementation in Central region.

### **Risk factors considered in PPP project implementation**

The complexities of PPP projects coupled with the need to meet users' demands have made risk inevitable in these projects. Risk is the uncertainty and severity of events and outcome of the event in relation to something of value (Aven & Renn, 2009). Other scholars have defined risk as the function of probability and impact (severity) of an event (Albertine, 2017; Aqlan & Lam, 2015; Šotić & Ivetić, 2016). These definitions imply that, risk is inevitable in PPP projects primarily due to the environment within which these projects are implemented. As such, various scholars have identified numerous risk related issues such as theft, fraud, corruption, pollution among others which mostly have adverse impacts on several

aspects of the project in terms of finance: funding, costs, investment attractiveness (Benes, Stary & Oketch, 2014; Indráková, 2009; Smith & Gannon, 2008).

Moreover, since risks are seen as inevitable in PPP projects, scholars have found key factors which can be used in identifying and assessing them in bid to provide measures to eliminate or minimise them drastically (Demirag, Khadaroo, Stapleton & Stevenson, 2010; Liu & Wilkinson, 2011). For instance, a study conducted by Broadbent and Asare (2008) on PPP in the UK's National Audit Service revealed that, most PPP projects comprising about (70%) were delivered late while, as much as (73%) comes with costs which exceeds the initial budget whereas, about (22%) of these projects were completed late and about (24%) were delivered in excess of the budget. They then concluded that, the major reason for these demerits lies behind the risk associated with it which was assessed by the inflation on construction costs, chance of changes in tax laws and availability of insurance on risks taken.

It is to note that, various scholars have grouped these minor risk related issues into major subsections notably social, legal, economic, political and technological risk respectively (SLEPT) (Kenny, 2009; Ling & Hoang, 2010; Sachs & Tiong, 2007). Other scholars have also classified these minor risk issues under the acronym 'PESTLE' which comprises: political, economic, social, technological, legal and economic risk (Kaplan & Mousley, 2011; Smith & Gannon, 2008). Other risk factors include financial, weather, managerial, technical and operational risk (Ameyaw, 2014; Ameyaw & Chan, 2013). It is to note that, this study focuses on "SLEPT" and as such, is extensively discussed below:

## Social Risk

Social risks in PPP projects are various risk factors that affect communities around them (Baghdadi & Kishk, 2015). They primarily arise from grievances and dissatisfaction of non-governmental stakeholders and external communities. Social risks include human right violations of a workforce, labour issues and public health issues (Baghdadi & Kishk, 2015; Faridi & El-Sayegh, 2016). Some studies have revealed that, social risk occurs in PPP project implementation if there are reduction in workforce, health concerns and land allocation challenges (Hall & Lobina, 2009; Marques & Berg, 2011). Other studies have identified social risk to include reputational damage, exposure to legal action, security problems, user boycotts and lack of user acceptance (Gavin, 2010; Bekefi, Jenkins & Kytyle, 2012; Porter & Kramer, 2015).

Further, project delays, project abandonment, safety regulations, major modifications due to stakeholder pressure and health and safety issues are some key social risk factors associated with PPP project implementation (Tonn & Steiefel, 2013). These risk-related issues generally have negative impact on PPP project success in terms of costs, revenue and financial performance. Gunningham, Kagan and Thornton (2014) added that, failure to manage these risk related issues can have enormous economic costs, damage project reputation and expose the entire project to other major risks. As such, to ensure the success of PPP projects, stakeholders need to ensure that these social risk issues are identified and addressed accordingly.

Also, citizens consider the government as responsible for the provision of quality services and as such expect the former to be socially responsible to them

even though the government does not have total control over these projects (Tohidi, 2011). On the other hand, the private partners in PPP projects may have an advantage of establishing the conditions of the project and greater access to information on these projects during their implementation periods. This in turn complicates the control of the state and society thus exposing the project to social risk (Stella, Aggrey & Eseza, 2014). In this light, the need to manage social risk is increasingly becoming an area of focus to both academic researchers and policy makers of PPP projects in various countries.

### **Legal Risk**

Legal risks, according to Shretha and Martek (2015), are risks emanating from legal and regulatory systems. Some existing studies have revealed that, legal risks in PPP projects are critical in all stages of the project thus are a major concern in terms of implementing PPP projects in various countries (Chen & Dolio, 2008; Choi, Chung & Lee, 2010; Li, 2010). A study by Li (2010) in China, for instance, revealed two (2) types of legal risks to include institutional and behavioural risks. Li referred to institutional risks as those associated with non-existent, ambiguous and changing laws, while behavioural risks are linked to non-normative behaviours thus how people respond to institutional risks.

Moreover, some studies have revealed major legal risks which affect PPP projects implementation to include changing or uncertain regulatory or legal policies, changes in tenure systems and land policies, changes in market and trade policies and changes in fiscal, monetary and tax policies (Chan, Lam, Wen, Ameyaw, Wang & Ke, 2015; Ke, Wang & Chan, 2010; Li, 2017). Li (2017)

explained that, any change in the above factors directly impacts on existing PPP projects thus unfavourable changes impact negatively and vice versa. He added that, PPP projects usually span over long periods as such, any change in an existing policy or system associated with a PPP project would have negative effects.

Similarly, a study by Xu, Yang, Chang, Yeung and Cheng (2015) found legal risk factors to include changes in laws, policies and regulatory frameworks. They added that, legal risks could be very detrimental to the growth and survival of PPP projects if not properly addressed. Hake, More, Shekade and Mohite (2016) stressed that, in most instances, any change in any policy, law or legislation by an incumbent government tends to favour them more than private investors which in turn discourage investment and escalate project costs. Thus, the presence of legal risks poses more harm than good to PPP project implementation and as such requires more attention.

### **Economic Risk**

Economic risk is seen as the likelihood that macroeconomic conditions will affect a given investment (Estache, Antonio & Saussier, 2014). It centres on macroeconomic situations that could lead to significant loss for a business (Banerjee, Foster, Ying, Skilling & Wodon, 2008; Estache, Antonio & Garsous, 2012). These risks can come from poor government regulations, market price fluctuations, unfavourable tax rates/policies, forces of demand and supply and political instability (Estache & Garsous, 2012). Also, other risk factors such as interest rate fluctuations, material costs, cost fluctuations, inflation, exchange rate volatility and unfavourable economic policies basically affect financial

performances of PPP projects. Additionally, restriction on repatriation of funds is an economic risk factor which affects the soundness of PPP projects.

According to Gonzalez-Navarro and Quintana-Domeque (2011), the prime objective for implementing PPP is basically to minimise the funding gap, but, however, the presence of economic risks could affect the attainment of this objective. In PPP project financing, the possibility that the project output may not have a project value largely depends on economic risk (Marin, 2009; Pi, Jiancai & Zhou, Yu, 2012). As such, government and its key stakeholders must ensure that these factors are identified and addressed as best as possible. PPP project implementation requires extensive and comprehensive economic analysis in bid to ensure its success. Conducting economic analysis would expose policy makers to economic risk related issues in PPP projects which would go a long way to improve financial performances and invariably overall performances of the project (Baghdadi & Kishk, 2015).

### **Political Risk**

Political risk is seen as a phenomenon that presents an interface between a political environment and an organisation (Karim & Alkaf, 2015). It is basically regarded as an “unwanted political activity” (Xiao & Zhang, 2011) which can be grouped under two folds: risk arising from social events and government activities and risk arising from government actions (Indráková, 2009). Liu and Wilkinson (2011) added that, political risk factors occur when local governments influence different stakeholders on PPP policies. Cui, Xuan and An (2010) argued that, political risk which emanates from too much government interference poses

negative consequences on the success of PPP projects. They explained that, the private individuals/investors whose contributions are vital to PPP projects will be unwilling to invest in projects marred with political interferences thus affecting project successes.

Wibowo and Mohammed (2010) also opined that, with political risk, investment returns could suffer greatly as results of political instability or changes in a given country. Political instability emanates from changes in government, policy makers which affects investment returns, increase project costs and reduces financial performances. In view of this, existing studies have revealed various political risk factors to include changes in laws and policies, excessive government interference, delay in permits and license, termination of concession by incumbent government, strong opposition from political parties, excessive contract variations, delays in construction times, delay in disbursement of funds and poor political decision-making processes (Chen, 2009; Wibowo & Mohammed, 2009; Jin & Zhang, 2011; Karim, 2015; Xu et al., 2009).

It is to note that, good political leadership ensures successful implementation of PPPs through accountability and transparency (Meithedute & Paliulis, 2011). On the other hand, negative political influences can significantly weaken PPP project arrangements (Shrestha, 2016). In the Ghanaian context, failures of most PPP projects have been in several district assemblies and this have been attributed to various risk issues of which political risk is of no exception. This could be as result of the scanty literature existing on political risk issues in Ghana thus creating a research gap. This study therefore adapted the risk factors identified



in literature to examine the political risk factors district assemblies in Ghana consider when implementing PPP projects.

### **Technological Risk**

Technological risk is the likelihood that technology failures would disrupt an activity or event (Barrett, 2016; Farah, 2011; Jackson, 2012). The reliance on technology in our modern environment practically exposes organisations and projects to numerous risk related issues (Morales, 2014). Farah (2011) revealed that, technological risks include computer attacks, cost of installing and maintaining sophisticated technology and lack of skilled personnel to handle technological software and machinery. Failure to handle technological risks can negatively affect the revenue of an institution if not managed (Al-Ahmad & Mohammad, 2013). Debreceny (2013) added that, technological risk occurs as results of lack of expertise, loss of data through theft and system glitches or malfunction. He added that, these risks pose threats to financial performances of firms which are exposed to them.

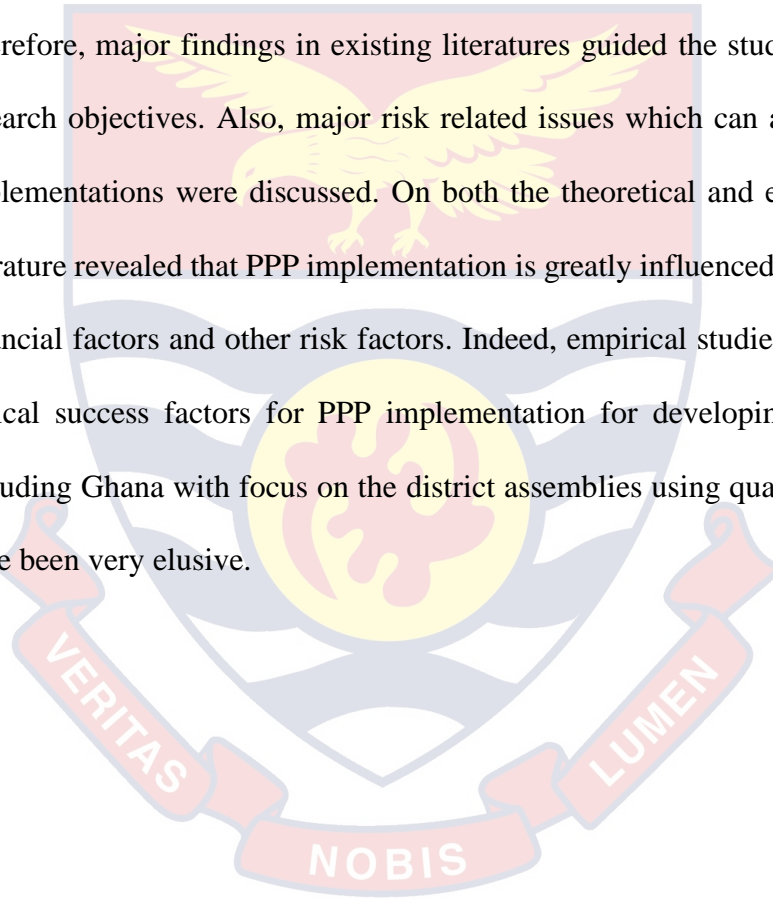
The contributions of technology in our modern-day PPP projects' implementation can never be overemphasised. Technology has improved completion time of PPP projects, reduced material wastage, reduced total number of labour forces required and minimised overall project costs (D'Aquila, 2013; White, 2014). Despite these merits, technology also comes with various risk factors which could endanger these projects (Farah, 2011; Gill, 2012) and invariably escalate project costs, reduce projected revenue and decline financial performance.

Moreover, PPP projects are exposed to numerous technological risk related issues arising from frequency of technological changes, access to technology, reliance on obsolete technology, system unavailability (Choi & Shin, 2014; Iovan & Dinu, 2014), project software failure (Elzamly & Hussin, 2014), technology maintenance, equipment quality, technology malfunction, infrastructural levels and cost of acquiring technological tools (Baghdadi & Kishk, 2015; Gartner, 2015; Gill, 2012; Morales, 2014; Saffer, 2014). These scholars concluded that, technological risks have adverse impact on costs, revenue generation, and financial performances of PPP projects.

From the above discussion, it could be deduced that, several risk factors such as social, financial, legal, environmental, economic, technological, among others are considered when implementing PPP projects (Barrett, 2016; Baghdadi & Kishk, 2015; Morales, 2014; Ogunsanmi, 2013; Saffer, 2014). As such, failure to identify and manage these risks could negatively impact on PPP projects in terms of costs, revenue and financial performance. Despite these negative impacts as found in existing literature, studies on risk identification in PPP projects implemented in district assemblies in the Central Region of Ghana remain scanty. This study therefore seeks to add to existing literature by examining the risk factors (SLEPT) in PPP projects focusing on district assemblies within Central region. It is to note that, factors identified in the existing literature guided the study in achieving this objective.

## Chapter Summary

This section reviewed literatures related to the study's research objectives. It was revealed that financial and non-financial factors are levers that project managers can rely on to increase the possibilities of meeting expectations or reaching projected goals successfully. As such, these factors are perceived to play significant roles in PPP project successes in various countries including Ghana. Therefore, major findings in existing literatures guided the study in achieving its research objectives. Also, major risk related issues which can affect PPP project implementations were discussed. On both the theoretical and empirical side, the literature revealed that PPP implementation is greatly influenced by financial, non-financial factors and other risk factors. Indeed, empirical studies on analysing the critical success factors for PPP implementation for developing countries cases including Ghana with focus on the district assemblies using quantitative approach have been very elusive.



## CHAPTER THREE

### RESEARCH METHODS

#### Introduction

This chapter will deal with the procedure to be employed to achieve the objectives of the study. The purpose is to state how this study will be carried out and to provide evidence that the study will through the appropriate scientific method of investigation. The chapter consists of sub-topics such as the introduction, research approach, research design, study area, population, sampling procedures, data collection instrument, data collection procedures, and data processing and analysis as well as summary of the chapter.

#### Research Approach

The study is quantitative in nature and adopted a quantitative approach in which quantitative data will be collected and analysed in order to describe the specific phenomenon in its current state. Quantitative approach is chosen because it enabled the study to assess the financial, non-financial and risk factors for PPP implementation. It is used to obtain information concerning the current status of the financial, non-financial factors and other risk factors for PPP implementation.

#### Research Design

The study adopted a descriptive research design due to the study's objectives. This design was employed because it produces a precise representation of persons, situations and events (Creswell, 2013). The design is purposely meant for collecting detailed and factual information to explain an existing phenomenon. For instance, examining the perceived financial factors of PPP projects, as an

objective, required the views and opinions of a representative staff about this phenomenon. The strengths of this design include: it allows for gathering in-depth information for either qualitative or quantitative research, it makes it possible to obtain rich data from a wide range of respondents, it gives a good statistical results, it provides greater confidence with respect to asking specific questions and it can be used in describing a study's variables (Creswell, 2014).

In spite of these strengths, a descriptive design has some weaknesses such as delays in ensuring a representative sample and it also difficult to conduct since commitments are required (Creswell, 2014; O'Reilly & Parker, 2013). Further, there is a limit to the number of questions required in any questionnaire. Despite these weaknesses coupled with the availability of other major research designs such as exploratory and explanatory designs, the descriptive design more appropriate because, concrete data are needed from respondents in bid to answer the study's research objectives.

### **Study Area**

The study was carried out in the confines of Central region. This region is regarded as one of the sixteen (16) administrative regions of Ghana and is known for having mining and tourist sites, fishing and education. There are twenty - two (22) Metropolitan, Municipal and District Assemblies (MMDAs) in this region (Local Government Act, 2016, Act 462). The twenty-two (22) MMDAs in the region comprise of one (1) metropolitan, six (6) municipal and fifteen (15) district assemblies and they include Cape Coast Metropolitan, Agona West Municipal, Assin Fosu Municipal, Awutu Senya East Municipal, Effutu Municipal,

Komenda/Edina/Eguafo/Abirem Municipal, Mfantseman Municipal, Upper Denkyira East Municipal, Abura/Asebu/Kwamankese, Agona East, Ajumako/Enyan/Essiam, Asikuma/Odoben/Brakwa, , Assin South, Assin North, Awutu Senya West, Ekumfi, Gomoa East, Gomoa Central, Gomoa West, Twifo-Ati Morkwa, Twifo/Heman/Lower Denkyira, and Upper Denkyira West District Assemblies respectively.

### **Population**

The study's population consisted of staff in all the 22 MMDAs in Central Region, Ghana. However, due to the nature of PPP, it was relevant to have a target population who are directly associated with PPP projects implementation and as such their perceptions are needed in order to achieve the purpose of the study. In view of this, the target population consisted of staff (2 each), specifically the Head and his/her Deputy/Assistant, from selected departments/units such as Finance, Physical Planning, Works, Central Administration, Development planning, Procurement, Budget and Internal Audit in all the district assemblies in the region. As such, the target population summed up to three hundred and fifty-two (352) staff from all the selected units.

### **Sampling Procedure**

Considering the size of the study's target population, it was impractical to collect data from all the members. It was therefore necessary to select a sample to represent the entire population. As such, the study sampled 186 staff from the target population size of 352 using the Slovin's formula, ( $n = \frac{N}{1+Ne^2}$ ) for sample size determination, where n = sample size, N = population size, and e = margin of error.

The simple random sampling technique was employed to select the respondents for the study. This sampling technique was chosen because of the study's approach, design and it also minimises costs, has greater accuracy of results and ensures a speedy data collection (Gravetter & Forzano, 2011).

Further, respondents had various levels of educational qualifications ranging from certificates to degrees. Also, the respondents had considerable level of experiences with the least among them having not less than four (4) years of working experience in respective positions. The respondents also consisted of ages between the ages of 30 years to 65 years.

### **Measurement of Variables**

The financial factors for PPP projects were measured using the cost, economic viability, macro-economic indicators, sources of funding, budget and cash inflows of the intended project (Vining & Boardman, 2008). More specifically, cost of the project looked at interest payment on capital secured and maintenance cost of the project among others.

Non-financial factors were operationalized using open communication and trust, community outreach, clear roles and responsibilities, transparency in procurement process, and technical expertise (Jacobson & Choi, 2008).

The risk factors were measured using social, legal, economic, political and technological risk (Kenny, 2009; Ling & Hoang, 2010). The cost and investment variable were measured using a two (2) item questions (Barrett, 2016; Baghdadi & Kishk, 2015).

## Data Collection Instrument

Structured questionnaire, a primary data collection instrument, was used to collect data from respondents because of the quantitative approach adopted by the study. The structured questionnaire is paramount when one wants to reach a large number of respondents, minimise costs and also reduce biases associated with interviewees (Gravetter & Forzano, 2011). On the other hand, low responses rates, clarity issues and possible literacy issues are some disadvantages associated to the use of questionnaires. The content of the questionnaire was prompted by the research objectives and it was personally developed following a thorough review of related literatures on the study.

A 5-point rating scale statement with 1 representing least agreement and 5 representing highest agreement was used to solicit for information from respondents. This rating scale supported by (Ameyan & Chan, 2015; Kulatanga et al., 2008; Ismail, 2013; Mladenovic, 2013). The questionnaire was categorised into five (5) parts with Part A requesting for socio-demographic information about respondents. Moreover, Parts B, C, D and E focused on the study's objectives. With Part B, for instance, respondents were asked to rate their level of agreement with the financial factors of PPP (Objective 1). Part C solicited for information about non-financial factors considered in PPP (Objective 2). Also, respondents were made to rate the risk-related factors (SLEPT) which can affect PPP project implementation in Part 4 and finally, with Part 5, respondents were asked to rate their level of agreement in terms of the implications of risk factors on investment attraction and cost.



## Validity and Reliability

In a quantitative research, there is a need for the collection of objective data that replicate the reality of situations (Saunders & Lewis, 2009). As such, the best way to evaluate a primary source is to use the concepts of validity and reliability. Validity which determines how items in the collection instrument represent the phenomenon being measured was ensured by carefully scrutinising the research instrument in order to identify possible conflicting, ambiguous and grammatical errors with some questionnaire items. Thus, modifications were made to ensure straight forward and more meaningful items were used to achieve the purpose of the study. Also, a pilot test was carried to check and eventually correct any unclear, deficient and biased items which were still in the collection instrument.

Moreover, Reliability is tested to find out the extent to which measurement of a particular test is repeatable. A pre-test was conducted on the items (37) in the questionnaire and obtained a Cronbach Alpha of .886 which indicated an acceptable reliability. This is because, in statistical analysis, the closer the value to 1, the more acceptable its reliability value and it is more acceptable if the value is 0.7 and above. In view of this, both validity and reliability of the data collection instrument (questionnaire) were achieved.

## Data Collection Procedures

To ensure a faster data collection exercise, endorsed introductory letters will be sent to appropriate authorities in these district assemblies to seek for permissions to carry out the exercise in their respective district offices. Based on the promises that no one would fall prey to information leakages, permissions were issued by the

authorities to carry out the collection exercise in their district offices. A period of two (2) weeks was allocated in order to ensure a maximum and timely response rate. The major setback encountered during the exercise was unfavourable time periods due to busy work activities of the respondents. However, this difficulty was minimised when respondents were allowed to fill the questionnaires at their own convenience. Some of the authorities assisted in the collection of the completed questionnaires from the respondents.

### **Data Processing and Analysis**

At the completion of the entire data collection exercise, credible checks were conducted to edit and ensure error-free data. After this rigorous exercise, the data was processed through Statistical Package for Social Sciences (SPSS) software version 22. After processing, the data was then analysed using the principal component analysis, regression and descriptive statistical tool which consists of frequencies, percentages, means and standard deviations in order to achieve the purpose of the study. Also, the results obtained from the analysis will be displayed in tables and interpreted.

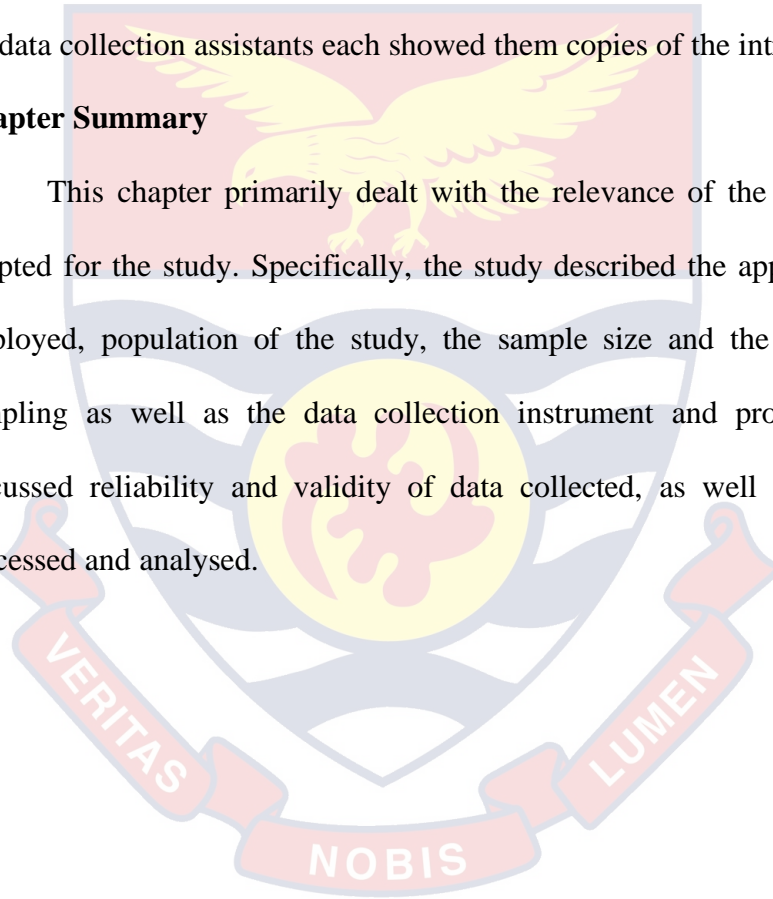
### **Ethical Considerations**

Some general agreements have been shared by researchers about what is proper and improper in the conduct of scientific inquiry (Saunders, Lewis & Thornhill, 2009). To ensure ethical clearance, the study obtained both permission and introductory letters from the Central Regional Co-ordinating Council, Cape Coast to facilitate the questionnaire administration in the MMDAs in the region..

After obtaining permission, the respondents were adequately educated about what was being investigated and this heightened the chances of their participation. Also, the respondents were assured of complete anonymity and confidentiality. Confidentiality, for instance, was achieved by assuring respondents that the study was pursuing a genuine academic exercise devoid of any deception and leak of information to the general public. To further assure respondent of ethics, the data collection assistants each showed them copies of the introductory letter.

### **Chapter Summary**

This chapter primarily dealt with the relevance of the research methods adopted for the study. Specifically, the study described the approach and design employed, population of the study, the sample size and the method used for sampling as well as the data collection instrument and procedures. It again discussed reliability and validity of data collected, as well as how data was processed and analysed.



## CHAPTER FOUR

### RESULTS AND DISCUSSION

This chapter presents the analysis of the data collected from the field. Specifically, it presents the findings of the study. This chapter is divided into sections. The first section deals with the demographics of the respondents while the second, third and fourth sections deal with the objectives of the study.

#### Demographics of the Respondents

From Table 1, the results indicate that hundred and fifteen (115) of the respondents representing about (61.8%) were males whereas seventy-one (71) of them representing (38.2%) were females. Thus, this implies that male respondents were more than their female counterparts in the MMDAs in the area understudy. This means that males are mostly found working in the MMDAs than their female counterparts.

**Table 1: Demographics of the Respondents**

Demography	Characteristics	Frequency	Percentage (%)
<b>Gender</b>	Male	115	61.8%
	Female	71	38.2%
	<b>Total</b>	<b>186</b>	<b>100%</b>
<b>Age</b>	Below 31 years	50	26.9%
	31-40 years	70	37.6%
	41-50 years	40	21.5%
	Above 50 years	26	14.0%
	<b>Total</b>	<b>186</b>	<b>100%</b>
<b>Educational Qualification</b>	Diploma/College Cert.	35	18.8%
	First Degree	80	43.0%
	Master's Degree	60	32.3%
	Others	11	5.9%
	<b>Total</b>	<b>186</b>	<b>100%</b>

Source: Field data, Gyesaw (2019)

Table 1 also present the age categories of the respondents in the MMDAs contacted. From the results, it can be seen that seventy (70) of the respondents representing about (37.6%) were between the ages of 31 to 40 years while fifty (50) of the respondents representing about (26.9%) were below thirty-one (31) years. In addition, forty (40) of the respondents representing about (21.5%) were between the ages of 41 to 50 years. Finally, twenty-six (26) of the respondents representing about (14.0%) were above 50 years. Furthermore, the results in Table 1 show that the respondents between the ages of 31 and 40 years were more followed by those below the ages of 31 years up to those who were above 50 years. This implies that majority of the respondents were in their youthful age and for that matter they can contribute immensely to the success of the MMDAs in particular and the country at large.

Table 1 further indicates the level of education of the respondents in the MMDAs. From the results it can be shown that, eighty (80) of the respondents representing about (43.0%) were in the first degree education rank whereas sixty (60) of them representing about (32.3%) were in the master's degree education rank. In addition, thirty-five (35) of the respondents representing about (18.8%) were in the diploma/college certificate rank level of education. Lastly, eleven (11) of them representing about (5.9%) were in the other education rank as indicated in Table 1. This by implication suggests that majority of the respondents in the MMDAs contacted have high level of education which is good for human capital development and success of the MMDAs as well as economic development within the community and the country at large.

### Financial Factors of PPP Projects

The various dimensions of the financial factors were investigated using principal component analysis (PCA). This was necessary in providing understanding of how the MMDAs construe the financial factors for PPP implementation. Prior to executing the PCA, it was important to investigate the suitability of the dataset for this analysis. This was done using Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy. The result of KMO test as shown in Table 2 supported the use of principal component analysis due to the adequacy at 0.812 which is greater than the acceptable value of 0.7 recommended by Pallant (2011).

**Table 2: KMO and Bartlett’s Test**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	347.383
	df	55
	Sig.	.000

Source: Field data, Gyesaw (2019)

Furthermore, Table 2 revealed that the Bartlett’s test of sphericity ( $\chi^2 = 347.383$ ;  $df = 55$ ) showed that the p value was significant at 0.000, meaning that the population was not an identity correlation matrix. These two tests supported the use of principal component analysis in investigating the dimensions of financial factors for PPP implementation in the study area (Pallant, 2011).

**Table 3: Total Variance Explained**

Components	Initial		
	Total	% of Variance	Cumulative %
1	3.871	35.190	35.190
2	1.913	17.390	52.579
3	.990	8.999	61.578
4	.849	7.721	69.299
5	.746	6.784	76.083
6	.630	5.726	81.809
7	.527	4.793	86.602
8	.483	4.390	90.991
9	.414	3.762	94.753
10	.322	2.926	97.680
11	.255	2.320	100.000

Source: Field data, Gyesaw (2019)

The total variance explained table revealed that 3 components of the extracted financial factors were reduced to 4 components with 52.58% as its cumulative variance explained of the total variance. These 2 components came as a result of the benchmark eigenvalue of 1, meaning all the components with an eigenvalue less than this benchmark was neglected. The first component had an eigenvalue of 3.24 and a variance of 35.19%, the second component with an eigenvalue of 1.913 and a variance of 17.39%.

**Table 4: Rotated Component Matrix**

	Component	
	Economic Factors	Funding & Budgeting
Interest payment on capital secured	.856	
Economic viability of projects	.760	
Macro-economic indicators	.692	
Maintenance cost	.591	
Investment or financial markets	.494	
Budgets		.853
Sources of funding		.771
Budget allocation		.760
Cash inflows		.436

Source: Field data, Gyesaw (2019)

Table 4 presented on the rotated component matrix of the financial factors for PPP projects among MMDAs. The rule of thumb was that only factor loadings with values not less than 0.4 were retained in this table. Varimax rotation was used because the variables were uncorrelated, and this orthogonal rotation method help in maximizing the relationship among the variables, and the dispersion among the factor loadings (Gorsuch, 1983). Factors with high absolute values are deemed to have greater contribution to the extracted variable retained. By this, the aim of the principal component analysis was fulfilled by classifying and reducing the 11 financial factors into 2 components. The two-factor components were titled economic factors and funding/budgeting factors.

The first component which explained a variance of 35.19% is economic factors of PPP projects. The number and nature of variables loaded on this factor as shown in Table 4 did not come as a surprise. This simply because interest



payment of any capital secured for projects, favourableness of the investment environment, economic viability of projects, project maintenance cost and availability of investment or financial markets are very essential for PPP projects. More specifically, before the commencement of a PPP project, there is the need to consider the various economic factors that goes into the project (Ameyan & Chan, 2015, Osei-Kyei, Dansoh & Ofori-Kuragu, 2014).

The second component which was project funding and budgeting factors. This component explained a variance of 17.39%. The factors that load under this component were budgets of project, sources of funding for the projects, cash inflows for any projects. These factors are not surprising to be seen very under this factor because PPP projects demand an adequate preparation in terms of identifying and concluding on the possible funding sources, budget and how the funds will be appropriated for the project. This finding is supported by Wibowo and Alfen (2014), Zhao and Gay (2013).

### **Non-Financial Factors**

The various dimensions of the financial factors were investigated using principal component analysis (PCA). This was necessary in providing understanding of how the MMDAs construe the financial factors for PPP implementation. Prior to executing the PCA, it was important to investigate the suitability of the dataset for this analysis. This was done using Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy. The result of KMO test as shown in Table 5 supported the use of principal component analysis due to the adequacy at 0.873 which is greater than the acceptable value of 0.7 recommended by Pallant (2011).

**Table 5: KMO and Bartlett’s Test**

<b>KMO and Bartlett's Test</b>			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.873
Bartlett's Test of Sphericity	Approx. Chi-Square		525.847
	df		55
	Sig.		.000

Furthermore, Table 5 revealed that the Bartlett’s test of sphericity ( $\chi^2 = 525.847$ ;  $df = 55$ ) showed that the p value was significant at 0.000, meaning that the population was not an identity correlation matrix. These two tests supported the use of principal component analysis in investigating the dimensions of non- financial factors for PPP implementation in the study area (Pallant, 2011).

**Table 6: Total Variance Explained**

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5.600	50.906	50.906
2	.920	8.365	59.270
3	.851	7.732	67.002
4	.778	7.076	74.078
5	.717	6.518	80.596
6	.495	4.500	85.096
7	.469	4.262	89.358
8	.372	3.380	92.737
9	.327	2.970	95.708
10	.248	2.256	97.964
11	.224	2.036	100.000

Source: Field data, Gyesaw (2019)

The total variance explained table revealed that 11 components of the extracted financial factors were reduced to one component with 50.91% as its

cumulative variance explained of the total variance. This one component came as a result of the benchmark eigenvalue of 1, meaning all the components with an eigenvalue less than this benchmark was neglected. This one component had an eigenvalue of 5.60 and a variance of 50.91%.

**Table 7: Component Matrix**

	Component Good Governance and Social Factors
Favourable legal framework	.778
Good governance	.758
Commitment levels of the partners	.758
Trust, community and effectiveness of communication channel	.747
Technical expertise	.711
Resources allocation and management	.690
Understanding of clients/owner requirement	.671
Clarity of the roles and responsibilities	.650
Transparency of the procurement processes	.647

Source: Field data, Gyesaw (2019)

Table 7 presented on the rotated component matrix of the non financial factors for PPP projects among MMDAs. The rule of thumb was that only factor loadings with values not less than 0.4 were retained in this table. Varimax rotation was used because the variables were uncorrelated, and this orthogonal rotation method help in maximizing the relationship among the variables, and the dispersion among the factor loadings (Gorsuch, 1983). Factors with high absolute values are deemed to have greater contribution to the extracted variable retained. By this, the aim of the principal component analysis was fulfilled by classifying and reducing

the 11 non-financial factors into 1 component. The one factor component was titled good governance and social factors.

This factor is composed of nine sub-factors; favourable legal framework, good governance, commitment level of partners, trust, technical expertise, resource allocation and management, understanding of owners/clients' requirements, clarity of role, and transparency in procurement process. This result shows the importance of government of creating policies that drive the development of infrastructure and public services through the utilization of PPP procurement method. In addition, an earlier study showed the very importance of political support, in the implementation of PPP projects (Dulaimi et al., 2010). The study also concluded that this is relevant especially in countries where governments' influences are strong. In the implementation of PPP projects the support of political leaders and citizens, are vital to the success of the arrangement

Moreover, social support should assist the process and allow smooth management of the facilities in terms of payment of tolls and other commitments from the public. Therefore, the political leaders are expected to do a thorough assessment of the cost and associated benefits of the projects, to determine the outcome of the process.

### **Examining Risk Factors in PPP Project Implementation**

This section also presented the results concerning the risk factors of the PPP project implementation of the MMDAs in the Central Region of Ghana which addressed the third objective of the study as indicated in Table 8. Here, risk factors such as socio-cultural risk factors, legal risk factors, economic risk factors, political

risk factors and technological risk factors were considered. For individual representation of these factors, differences in means were done to select the highest dimensions of the various risk factors to be included in the analysis. To achieve the objective of the study in relation to the stated question, the results are presented in the form of descriptive statistics. In examining the risk factors, the respondents were presented with a set of measuring items captured under the objectives and they were to respond to each item using the same five point rating scale measurement. From Table 8, as presented below, an aggregated mean (M) and standard deviation (SD) were calculated for individual items in the questionnaire as well as the overall measuring indicator for the purpose of comparison.

The results in Table 8 showed that, the picture that emerged from the analysis of responses given by respondents in relation to legal risk factors suggested that on average, when MMMDAs under take a project, a consideration is given to a risk factor relating to “Laws and regulations regarding projects implementation” with a mean and standard deviation of (M = 4.09, SD = 0.842) which is the highest among the legal risk factors. This implied that, laws and regulations are very important in implementing PPP projects in MMDAs. A lot of projects are being abandoned as a result of lack of proper laws and regulations in MMDAs which in effect affect development in various regions of the country. The result confirmed the findings of Shretha and Martek (2015) and Xu, Yang, Chang, Yeung and Cheng (2015).

Furthermore, the respondents gave a quite high approval ratings of (M =3.47, SD = 1.251; M= 3.47, SD= 0.937) respectively to both socio-cultural and

political risk factors to the statements “Assemblies consider public safety and health issues when implementing PPP projects” and “ The assemblies deal with delays in permits and license to implement PPP projects”. The results implied that, issues relating to safety and health is of interest to MMDAs and the country at large and any PPP projects implementation take into consideration the safety and health of the people who are beneficiaries. In the same way, delays in permits and license really affect many important projects as it is happening in the country and in the end waste resources. Thus, delays in permits and license affect any successful projects. The results confirmed the findings of Faridi and El-Sayegh (2016), Baghdadi and Kishk (2015), Karim and Alkaf (2015), Jin and Karim, 2015), Zhang (2011), Wibowo and Mohammed (2009).

In addition, the next approval rating which has a mean and standard deviation of ( $M = 3.45$ ,  $SD = 1.114$ ) was given to the statement “Assemblies consider cost fluctuations in relation to the projects being undertaken” which is highest among the economic risk factors. Here, the result implied that economic turbulence of the country affect PPP project implementation in MMDAs. Thus, cost fluctuations resulting from inflation and exchange rate changes are threat to projects undertaken in the country. Therefore, cost fluctuations affect PPP project implementation in MMDAs. The result confirmed that of Baghdadi and Kishk (2015), Estache, Antonio and Saussier (2014), Estache and Garsous (2012).

**Table 8 - Results of Risk Factors of PPP Projects**

Statement	N	M	SD
Public safety and health issues (Social Risk Factor)	186	3.47	1.251
Laws and regulations (Legal Risk Factor)	186	4.09	0.842
Cost fluctuations (Economic Risk Factor)	186	3.45	1.114
Delays in permits and license (Political Risk Factor)	186	3.47	0.937
Reliance on outmoded technology (Technological Risk Factor)	186	3.19	1.179

Note: N represents sample size; M represents mean and SD represents standard deviation

Source: Field data, Gyesaw (2019)

Finally, the respondents in their views on technological risk factors indicated that "Reliance on outmoded technology" with a mean and standard deviation of (M = 3.19, SD = 1.179) is rated the highest among all the technological risk factors affecting PPP project implementation. By implication, from the results, it can be said that, many MMDAs, in the country still resort to the outmoded form of technology in this technological era which can delay any successful projects. That is, many MMDAs are not performing up to expectations due to heavily reliance on outmoded form of technology and this is evident in most MMDAs in the various Regions of the country. These results confirmed the findings of Barrett (2016), Jackson (2012), Farah (2011). In comparison, the results suggest that, in implementing PPP projects, MMDAs consider laws and regulations to be the highest and reliance on outmoded technology to be the least in relation to other risk factors considered above. Over all, risk factors have implications on PPP project implementations.

### Implications of Risk Factors on Investment Attractiveness

This section presented the results concerning the implications of risk factors in attracting investment in MMDAs. This was done by way of regression analysis based on the various risk factors considered above. Table 9 presents the model summary indicating R Square of (0.732) and Adjusted R Square of (0.701). The Adjusted R Square indicated that (70%) of the variations in investment was explained by the model. Table 10 which is the ANOVA test indicated the significance differences among the variables. The ANOVA test indicated that, there are significant differences among the risk factors as wells as their implications on investment.

**Table 9 - Model Summary**

Model	R	R Square	Adj. R Square	Std. Error
1	0.876	0.732	0.701	0.847

Source: Field data, Gyesaw (2019)

**Table 10 - ANOVA**

	Model	Sum of Sq.	df	Mean Square	F	Sig.
1	Regression	33.488	5	6.698	9.327	0.000
	Residual	130.502	182	0.718		
	Total	186.090	185			

Source: Field data, Gyesaw (2019)

From Table 11, the coefficient of social risk factor in terms of the MMDAs considering public safety and health issues is positive (0.384) which is statistically significant at 1 percent significance level. This indicated that 1 percentage point increase in public safety and health will increase investment attraction by 0.384 percentage point holding all other factors constant. As seen earlier on, this result implied that when MMDAs focus on public safety and health in implementing PPP



project, investment attraction will be boosted leading to development in the communities and the country at large. These results still confirmed findings of Faridi and El-Sayegh (2016), Baghdadi and Kishk (2015), Karim and Alkaf (2015), Jin and Karim, 2015), Zhang (2011), Wibowo and Mohammed (2009).

**Table 11- Regression Results (Dependent variable: Investment)**

Variable	Coefficient	Std. Errors	T-statistic	Sig.
Constant	1.350	0.549	2.458	0.016***
SRF	0.384	0.079	4.861	0.000***
LRF	0.147	0.109	1.349	0.181
ERF	-0.071	0.008	-8.875	0.000***
PRF	-0.369	0.094	-3.926	0.000***
TRF	-0.117	0.077	1.519	0.135

Note: \*\*\* denote significance at 5% and SRF represents socio-cultural risk factor, LRF represents legal risk factor, ERF represents economic risk factor, PRF represents political risk factor and TRF represents technological risk factor.

Source: Field data, Gyesaw (2019)

Further, the coefficient of economic risk factor in terms of the MMDAs considering cost fluctuations of PPP project implementation is negative (-0.071) which is statistically significant at 1 percent significance level. This indicated that 1 percentage point increase in cost fluctuations will decrease investment attraction by -0.071 percentage point holding all other factors constant. As seen earlier on, this result implied that cost fluctuations have negative consequences on investment and if not checked can affect many PPP project implementations. Thus, if MMDAs do not deal with cost fluctuations, the ability to attract investment for assemblies' projects will be trampled upon. These results still confirmed findings of Baghdadi and Kishk (2015), Estache, Antonio and Saussier (2014), Estache and Garsous (2012).

Finally, the coefficient of political risk factor in terms of the Assemblies dealing with delays in permits and license to PPP projects implementation is negative (-0.369) which is statistically significant at 1 percent significance level. This also indicated that 1 percentage point increase in delays in permits and license will decrease investment attraction by -0.369 percentage point holding all other factors constant. The result implied that, political interferences causing unnecessary delays in giving permits and license to execute projects have negative consequences on investment and if not dealt with wholly can affect many PPP project implementations. Thus, if MMDAs do not deal with delays in permits and issuance of license for commencement of projects, it will crowd out investment. These results still confirmed findings of Faridi and El-Sayegh (2016), Baghdadi and Kishk (2015), Karim and Alkaf (2015), Jin and Karim, 2015), Zhang (2011), Wibowo and Mohammed (2009).

### **Implications of Risk Factors on Cost**

This section presented the results concerning the implications of risk factors on cost associated PPP projects in MMDAs which are presented in Table 14. This was also done by way of regression analysis based on the various risk factors considered above. Table 12 presents the model summary indicating R Square of (0.741) and Adjusted R Square of (0.711). The Adjusted R Square indicated that (71%) of the variations in cost was explained by the model. Table 13 which is the ANOVA test indicated the significance differences among the variables. The ANOVA test indicated that, there are significant differences among the risk factors as well as their implications on cost.

**Table 12 - Model Summary**

Model	R	R Square	Adj. R Square	Std. Error
1	0.756	0.741	0.711	0.765

Source: Field data, Gyesaw (2019)

**Table 13 - ANOVA**

	Model	Sum of Sq.	df	Mean Square	F	Sig.
1	Regression	7.722	5	1.544	8.027	0.000
	Residual	165.122	182	0.907		
	Total	186.071	185			

Source: Field data, Gyesaw (2019)

**Table 14 - Regression Results (Dependent variable: Cost)**

Variable	Coefficient	Std. Errors	T-statistic	Sig.
Constant	2.038	0.617	3.303	0.001***
SRF	-0.079	0.008	-9.861	0.000***
LRF	0.030	0.123	0.244	0.809
ERF	0.194	0.096	2.041	0.042***
PRF	0.190	0.105	1.810	0.073***
TRF	0.436	0.087	5.011	0.003***

Note: \*\*\* denote significance at 5% and SRF represents socio-cultural risk factor, LRF represents legal risk factor, ERF represents economic risk factor, PRF represents political risk factor and TRF represents technological risk factor.

Source: Field data, Gyesaw (2019)

From Table 14, the coefficient of social risk factor in terms of the MMDAs considering public safety and health issues is negative (-0.079) which is statistically significant at 1 percent significance level. This result still indicated that 1 percentage point increase in public safety and health will decrease cost by 0.079 percentage point holding all other factors constant. Contrary to the result in Table 11, this result implied that when MMDAs focus much on public safety and health needs in implementing PPP project, cost associated with compensation payment

and others will be reduced leading to development in the communities and the country at large. These results still confirmed findings of Faridi and El-Sayegh (2016), Baghdadi and Kishk (2015), Karim and Alkaf (2015), Jin and Karim, (2015), Zhang (2011), Wibowo and Mohammed (2009).

Moreover, the coefficient of economic risk factor in terms of the MMDAs considering cost fluctuations of PPP project implementation is positive (0.194) which is statistically significant at 5 percent significance level. This indicated that 1 percentage point increase in cost fluctuations will increase cost associated with PPP project implementation by 0.194 percentage point holding all other factors constant. The result implied that cost fluctuations have negative consequences on cost of implementing projects and if not checked can affect many PPP project implementations in MMDAs. Thus, if MMDAs do not deal with cost fluctuations, the cost of implementing projects at the assemblies will rise unreasonably and this will affect PPP projects at the MMDA level. These results still confirmed findings of Baghdadi and Kishk (2015), Estache, Antonio and Saussier (2014), Estache and Garsous (2012), Gonzalez-Navarro and Quintana-Domeque (2011).

Additionally, the coefficient of political risk factor in terms of the Assemblies dealing with delays in permits and license to PPP projects implementation is positive (0.190) which is statistically significant at 10 percent significance level. This also indicated that 1 percentage point increase in delays relating to giving out permits and license for projects execution will increase associated cost with the projects by 0.190 percentage point holding all other factors constant. The result implied that, political interferences causing unnecessary delays

in giving permits and license to execute projects have negative consequences on cost and if not dealt with wholly can affect many PPP project implementations. Thus, if MMDAs do not deal with delays in permits and issuance of license for commencement of projects, project cost will escalate leading to project abandonment. These results still confirmed findings of Faridi and El-Sayegh (2016), Baghdadi and Kishk (2015), Karim and Alkaf (2015), Zhang (2011), Wibowo and Mohammed (2009).

Finally, the coefficient of technological risk factor in terms of the MMDAs relying on outmoded form of technology in PPP project implementation is positive (0.436) which is statistically significant at 1 percent significance level. This indicated that 1 percentage point increase in reliance on primitive technology will increase cost associated with PPP project implementation by 0.436 percentage point holding all other factors constant. The result implied that outmoded technologies are rather associated with delays and long processes which increase cost components of projects to be undertaken, hence negatively impacting on cost and thereby affecting successful project implementation and if not checked can affect subsequent development in MMDAs. Thus, if MMDAs do not upgrade themselves into modern technologies, future development agenda can be retarded in surrounding communities. These results still confirmed findings of Barrett (2016), Jackson (2012) and Farah (2011).

### **Chapter Summary**

This chapter presented the analyses of the data presented from the field based on the stated objectives. The analyses were done using descriptive, principal

component analysis, regression analysis and were presented in the form of tables. The results of the study based on the first objective in relation to financial factors of PPP project implementation showed that financial factors were reduced into economic, funding and budgeting factors. In addition, in relation to the second objective, the results showed that the non-financial factors were reduced into good governance and social support factors. Regarding the third objective in relation to the risk factors, the study showed that, on average, “MMDAs considering laws and regulations” being a political factor was suggested by the respondents to be the highest and “reliance on outmoded technology” being a technological factor was suggested to be the least.

Finally, on the basis of implications of risk factors on investment, the study showed that socio-cultural factors in terms of MMDAs considering public safety and health issues had positive and statistically significant implications on investment and economic factors in terms of cost fluctuations had negative and statistically significant implications on investment. Political factors in terms of delays in giving permits and license had negative and statistically significant implications on investment. In addition, for cost implications, the study showed that, socio-cultural factors in terms of public safety and health issues had negative and statistically significant implications on cost and economic factors in terms of cost fluctuations had positive and statistically significant implications on cost. Political factors in terms of delays in giving permits and license had positive and statically significant implications on cost. Technological factors in terms of reliance

on outmoded technology had positive and statically significant implications on cost.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

The purpose of this chapter is to present the summary, conclusions and recommendations of this study. The summary presents a brief overview of the objective, research methods and findings made in the study. On the other hand, the conclusions encapsulate the overall outcomes regarding the findings of the study in the light of the research questions. The recommendations also present specific remedies to be implemented by specific institutions. The chapter also offer some suggestions for further research in the area of the above topic of interest.

#### Summary

The concept of PPP which brings both the public and private sectors together to carry out developmental projects for mutual benefits has been developing through centuries. In this regard, a number of its projects in some countries, especially the developing ones, have performed below expectations as seen early on. This is because, a number of factors affect the outcomes of PPP projects during their life cycles. They suggested that, some of these factors include poor project technical and financial feasibilities, unstable macro-economic policies, high level of bureaucracy in the public sector, inadequate competent personnel to participate in PPP projects, unfavourable policies, among others. Among the related literature reviewed, those in Ghana have failed to look at perception of workers in district assemblies with regards to the critical success factors for Private Public Partnerships. Additionally, research is yet to be conducted on this topic focusing on



staff in MMDAs within the Central region of Ghana, despite diverse perceptions held by them about PPP.

This study therefore examined the critical success factors influencing Public-Private Partnership in Metropolitan, Municipal and District Assemblies (MMDAs) within the Central Region of Ghana. The study used a cross-section data set from the MMDAs under study. The study employed a descriptive research design and a sample size of 186 was considered. The study also employed both descriptive statistics and econometric techniques in analysing the data collected. The results of the study based on the first objective in relation to financial factors of PPP project implementation showed that financial factors were reduced into economic, funding and budgeting factors. In addition, in relation to the second objective, the results showed that the non-financial factors were reduced into good governance and social support factors.

Regarding the third objective in relation to the risk factors, the study showed that, on average, “MMDAs considering laws and regulations” being a political factor was suggested by the respondents to be the highest and “reliance on outmoded technology” being a technological factor was suggested to be the least. Finally, on the basis of implications of risk factors on investment, the study showed that socio-cultural factors in terms of MMDAs considering public safety and health issues had positive and statistically significant implications on investment and economic factors in terms of cost fluctuations had negative and statistically significant implications on investment. Political factors in terms of delays in giving permits and license had negative and statically significant implications on

investment. In addition, for cost implications, the study showed that, socio-cultural factors in terms of public safety and health issues had negative and statistically significant implications on cost and economic factors in terms of cost fluctuations had positive and statistically significant implications on cost. Political factors in terms of delays in giving permits and license had positive and statically significant implications on cost. Technological factors in terms of reliance on outmoded technology had positive and statically significant implications on cost.

### **Conclusions**

The results obtained in this study clearly indicated that the main objective of examining critical success factors influencing Public-Private Partnership in Metropolitan, Municipal and District Assemblies (MMDAs) within the Central Region of Ghana was achieved. Based on the results obtained in this study the following conclusions were reached.

The results of the study in relation to the first objective revealed that financial factors affect PPP project implementation in MMDAs. Specifically, the major financial factors to consider in PPP projects are economic, funding and budgeting factors. This implied that, budget preparation or consideration for total cost of undertaking a project in MMDAs is key to MMDAs in any PPP project implementation. Also, the ease of raising the required funds is key to PPP project implementation which must be considered by all MMDAs.

Furthermore, the results in relation to the second objective revealed that non-financial factors affect PPP project implementation in MMDAs. Specifically, the non-financial factors that MMDAs must pay attention to when it comes to PPP

projects were good governance and social support factors. These results implied that any PPP project implementation and success of it depends on the commitment levels of project partners. In addition, identification of related risk associated with the projects to be undertaken is key to any PPP project implementation in MMDAs.

Moreover, the study in relation to the third objective found that risk factors such as socio-cultural factors, legal factors, economic factors, political factors, and technological factors affect project implementation in MMDAs. Specifically, the study found that, on average, “MMDAs considering laws and regulations” being a political factor was suggested to be the highest and “reliance on outmoded technology” being a technological factor was suggested to be the least. The results implied that laws and regulations and reliance on outmoded technology determine the success of any PPP project implementation in MMDAs and must be taken seriously.

Finally, on the basis of implications of risk factors on investment, the study showed that socio-cultural factors in terms of MMDAs considering public safety and health issues had positive and statistically significant implications on investment and economic factors in terms of cost fluctuations had negative and statistically significant implications on investment. Political factors in terms of delays in giving permits and license had negative and statistically significant implications on investment. These results implied that, when MMDAs focus on public safety and health in implementing PPP project, investment attraction will be boosted leading to development in the communities and the country at large. Also, the results implied that, cost fluctuations have negative consequences on

investment and if not checked can affect many PPP project implementations. The results further implied that, political interferences causing unnecessary delays in giving permits and license to execute projects have negative consequences on investment and if not dealt with wholly can affect many PPP project implementations.

In addition, for cost implications, the study showed that, socio-cultural factors in terms of public safety and health issues had negative and statistically significant implications on cost and economic factors in terms of cost fluctuations had positive and statistically significant implications on cost. Political factors in terms of delays in giving permits and license had positive and statically significant implications on cost. Technological factors in terms of reliance on outmoded technology had positive and statically significant implications on cost.

These results implied that when MMDAs focus much on public safety and health needs in implementing PPP project, cost associated with compensation payment and others will be reduced leading development in the communities and the country at large. The results also implied that cost fluctuations have negative consequences on cost of implementing projects and if not checked can affect many PPP project implementations in MMDAs. The results further implied that outmoded technologies are rather associated with delays and long processes which increase cost components of projects to be undertaken, hence negatively impacting on successful cost of project implementing and if not checked can affect subsequent development in MMDAs.

## Recommendations

Based on the results obtained from the study, the following recommendations are made.

MMDAs must pay attention to economic, funding and budgeting factors as financial factors when implementing projects. Specifically, MMDAs have budget or consider cost of undertaking any project in order to determine ease of raising funds for the projects. This can be done through having experts to draw out feasible budget and to analyse cost aspects of the projects.

Also, there is the need for MMDAs to consider good governance and social support factors as non-financial factors when implementing PPP projects. Thus, MMDAs must make sure that partners involved in project implementation show maximum commitment for a successful project as well as identifying all risks associated with the projects. This can be done through frequent monitoring and having experts to deal with the associated risks of the projects.

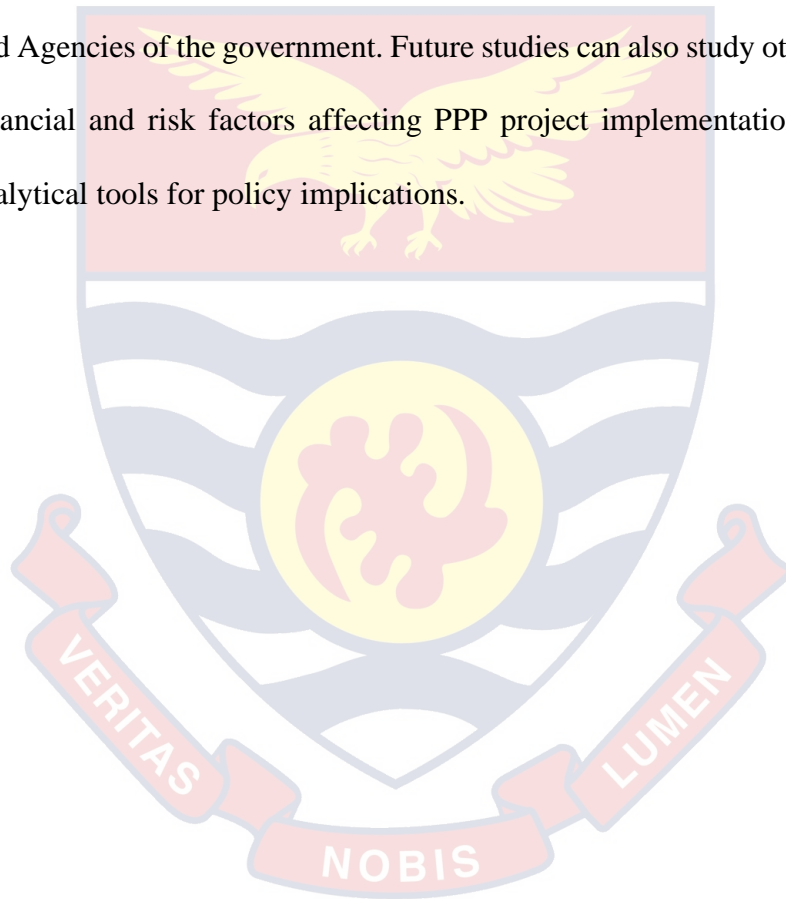
Further, MMDAs must pay particular attention to types of risk factors which have the potential of influencing the project undertaken especially political factors relating to laws and regulations and avoiding unnecessary delays in giving permits and license for projects execution. This can be done through avoiding political interferences in projects undertaken by the MMDAs.

Moreover, MMDAs must pay attention to public safety and health in PPP project implementation as well as factoring cost fluctuations into their budget since these affect both investment and cost. MMDAs must be abreast with the modern

technologies in their activities. This can be done by upgrading themselves in order to take advantage of the new modern technology.

### **Suggestions for Further Research**

Future research could be geared towards the studying of PPP project implementation in MMDAs in other regions of the country to establish consistency in results as well as studying other institutions particularly Ministries, Departments and Agencies of the government. Future studies can also study other financial, non-financial and risk factors affecting PPP project implementations using different analytical tools for policy implications.



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Dear Sir/Madam,

I am carrying out my Dissertation work on the topic **“Perceptions on Critical Success Factors for Public-Private Partnership. Evidence from Metropolitan, Municipal and District Assemblies in the Central region, of Ghana”**. Your views are very much important to the study. Every information you provide would remain highly confidential. Thanks for accepting to participate in the study.

**PART A: SOCIO-DEMOGRAPHIC INFORMATION**

1. Sex: Male  Female
2. Age: Below 31 years  31-40   
41-50 years  above 50
3. Level of Education: Diploma/College Certificate   
First-Degree   
Post Graduate (Masters)   
Other (Specify).....
4. Years spent in Organisation: .....



**PART B: FINANCIAL FACTORS OF PUBLIC-PRIVATE PARTNERSHIP**

On a scale of 1-5, please rate your level of agreements: **1= least agreement, 2=**

**moderate agreement, 3= agree, 4=high agreement, 5= highest agreement**

	Statement	1	2	3	4	5
1	The district assembly considers the availability of investment or financial markets					
2	They indicate Cash Inflows for any projects undertaken					
3	District assemblies consider the Budgets or total costs of any projects they embark on					
4	There is ease with which funds can be raised from both internal and external sources					
5	Budget allocated for projects is considered					
6	The economic viability of projects in terms of profit or return, revenue potentials is considered					
7	The assembly takes into consideration the interest payment of any capital secured for projects undertaken					
8	The favourableness of the investment environment is also considered					
9	The macro-economic indicators such as inflation rate, exchange rate and interest rate are also taken care of					
10	The assemblies consider the source of funding for the projects being undertaken					
11	The assemblies take into consideration the maintenance cost after projects completion					

**PART C: NON-FINANCIAL FACTORS CONSIDERED IN PPP PROJECT IMPLEMENTATION**

On a scale of 1-5, please rate your level of agreements: **1= least agreement, 2= moderate agreement, 3= agree, 4=high agreement, 5= highest agreement**

	<b>Factors</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	District assemblies consider the clarity of the roles and responsibilities associated with PPP projects					
2	Resource allocation and management during PPP project implementation are considered					
3	They consider trust, community and effectiveness of communication channels when implementing PPP projects					
4	Transparency of the procurement processes is important to district assemblies					
5	There is consideration for good governance when implementing PPP projects					
6	The favourableness of legal frameworks is also considered when implementing PPP projects					
7	There is a consideration on how risks can be identified and shared among actors					
8	The technical expertise of the workers is considered when implementing PPP projects					
9	Identification and understanding of client/owner requirement are of importance to the assemblies					
10	The commitment levels of the partners to the project is considered					
11	There is commitment on the part of the partners involved in the projects being undertaken					

**PART D: CONSIDRATION OF RISK FACTORS IN PPP PROJECT  
IMPLEMENTATION**

On a scale of 1-5, please rate your level of agreements: **1= least agreement, 2= moderate agreement, 3= agree, 4=high agreement, 5= highest agreement**

	<b>RISK FACTORS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SOCIO - CULTURAL RISK</b>						
SR1	The assemblies consider public safety and health issues when implementing projects					
SR2	Exposure to legal actions and projects delay are considered when implementing PPP projects					
SR3	Lack of user acceptance is also considered during PPP project implementation					
SR4	Security problems associated with the project are considered					
<b>LEGAL RISKS</b>						
LR1	Risk issues such as ambiguous and changing laws are considered					
LR2	Changing or uncertain regulatory or legal policies are dealt with					
LR3	Changes in market and trade policies associated with the project					
LR4	Permits and licences are given for projects to be undertaken					
LR5	There are laws and regulations regarding projects implementations					
LR6	There are bye-laws within the district assemblies PPP implementation					

<b>ECONOMIC FACTORS</b>						
EF1	The assemblies consider unfavourable economic policies such as tax rates which can affect PPP project implementation					
EF2	Cost fluctuations of the project is also considered					
EF3	Exchange rate and interest rate volatilities are also considered					
EF4	The assemblies have enough resources to sustain the projects					
EF5	Purchasing power of the people are considered during projects planning					
EF6	There are tax exemptions associated with some projects					
EF7	The assemblies have the ability to collect the budgeted IGF					
<b>POLITICAL FACTORS</b>						
PF1	Possible government interferences in the PPP project implementation is considered					
PF2	The assemblies deal with delays in permits and license to implement PPP project					
PF3	Strong opposition from political parties are also considered					
PF4	Delay in disbursement of funds are also considered when implementing PPP projects					
PF5	The people do understand the political system to propel assemblies' projects					

TECHNOLOGICAL FACTORS					
TF1	Cost of installing and maintaining sophisticated technology are taken care of				
TF2	There is lack of skilled personnel to handle technological software and machinery				
TF3	There is system unavailability glitches or malfunction				
TF4	There is reliance on outmoded technology				
TF5	There is access to regular internet connections to facilitate projects				
TF6	Most people in the assemblies are computer literate				

### IMPLICATIONS OF THE RISK FACTORS OF PPP ON INVESTMENT & COST

On a scale of 1-5, please rate your level of agreements: 1= least agreement, 2= moderate agreement, 3= agree, 4=high agreement, 5= highest agreement

	STATEMENT	1	2	3	4	5
1	Risk factors of PPP have effects in terms of attracting investments into the assemblies					
2	Risk factors of PPP have effects in terms of cost associated with the projects undertaken by the district assemblies					

**THANK YOU FOR YOUR PARTICIPATION!!!**

