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**EVALUATING VALUE FOR MONEY IN PUBLIC PRIVATE PARTNERSHIP
INFRASTRUCTURE PROJECTS: A CASE STUDY OF KUMASI METROPOLITAN
ASSEMBLY**

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DECLARATION

Student’s Declaration

We have read the University regulation relating to plagiarism and certify that this report is all our own work and do not contain any unacknowledged work from any other source. We also declare that we have been under supervision for this report herein submitted.

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DEDICATION

We dedicate this study to our parents and all who contributed one way or another to the financing of our education and helping make this research project complete and successful.

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ABSTRACT

An efficient Public Private Partnership system could ensure value for money in government disbursement, which is vital to a country facing enormous developmental challenges. Therefore, the research aims to evaluate the value for money in Public Private Partnership infrastructure projects of Kumasi Metropolitan Assembly. Descriptive research method and purposive sampling procedures were employed to obtain data from 167 respondents within KMA and its Sub-Metros top and lower level management within KMA. The findings disclosed that all the eighteen (18) factors identified ensures VFM Public Private Partnership infrastructure projects, however, the findings revealed highly levels of awareness of efficient risk allocation, competitive tender, output-specification and optimal use of asset/facility and project efficiency. This research further observed in achieving better performance or financial sustainability, cost and effectiveness cannot be abandoned. Moreover, better cooperative environment leads to better the participants' capabilities and characteristics which also lead to an effective cooperation between the private and public sectors. Furthermore, favourable cooperation effectiveness also influences cost and effectiveness directly. Finally, cooperative environment is also significantly influence by stable macroeconomic condition. Moreover, the study also revealed that Lack of accountability and transparency in PPP projects, Lack of appropriate bidding or incorrect utilization of the limited bidding process coupled with inadequate skilled personnel in PPP project activities, Lack of top management supports and inadequate measures for monitoring and evaluation are major challenges in the public procurement. It was recommended that to ensure value for money, proper bidding and selection procedure, managements support for VFM programme at all levels of administration should be encouraged and PPP regulatory authorities in collaboration with public entities (KMA) must ensure compliance through rigorous monitoring and evaluation of the procurement policy to ensure VFM.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Numerous literature reviewed have asserted that the development of a country cannot be achieved without a meritocratic, professional, and effective public service capable of delivering value-for-money services (Haque, 2009; Saxena, 2011). The overall socio-economic objectives of the government are realized through the public sector by designing and implementing programmes and policies. Precisely, the public sector executes four tasks, (i) making economic and social policies; (ii) designing and implementing public programmes; (iii) raising revenue; and (iv) managing accountability. In brief, the public sector is responsible for providing goods and services to citizens; organization and delivers services and produces goods to citizens, organizations, or other government institutions.

Robert and Chan (2017) reported that key infrastructure projects are executed through Public–Private Partnerships (PPP) around the world. Yuan et al. (2012) opines that the public sector, private sector, and other stakeholders substantially benefit from a well-executed PPP projects. Xiong et al. (2017) also numerated important infrastructure developments such as water conservancy facilities, sports facilities, waste-to-energy facilities, and transportation among others which are procured through PPP. Xiong et al. 2015b posited that the public sector must seek to ensure Value for Money (VFM) to accomplish win-win results for all of the stakeholders in delivering PPP since consumers want cost-effective public goods and services and the private

sector also demands adequate guarantees for suitable profit because of the long-term period of financing and high sums of investment required for PPP projects.

In Ghana, Ghana Public Private Partnership, Act 2020 (Act 1039) sets the bases for PPP process. The Act was enacted to offer development, implementation and regulation of public private partnership, arrangements between contracting authorities and private parties for the provision of infrastructure and services, to establish institutional arrangements for the regulation of public private partnerships, and to provide for related matters. That is it was enacted to harmonize PPP and service to ensure secure judicious, economic and efficient use of state resources. Furthermore, Public Private Partnership Act grants a comprehensive legislative framework intended to eradicate the defects and organizational weaknesses, which were intrinsic in public procurement in Ghana. The Public Private Partnership, Act 2020 (Act 1039) was converted on the five (5) basic pillars namely: comprehensive, transparent, legal and institutional framework; clear and standardized procurement procedures and standard tender documents; independent control system; proficient procurement staff; and anti-corruption measures (Anvuur and Kumaraswamy, 2006).

However, Lamily and Bookie (2013) admitted that Public Private Partnership is engulf by many abnormalities such as delay in payment for completed projects, contract variations, poor management of contract and failure to adhere to the Act . Osei-Tutu et al. (2012) also contended that non-conformity of the Act in the public institutions is predominant. On this basis, Anvuur and Kumaraswamy, (2006) contended that there should be a framework to guide the implementation of the PPP Act and other alternative procurement arrangements and modalities

to reform, and improve the possibility for attaining value for money in the Public Private Partnership process.

In executing PPP projects, Compliance, Safeguards, Risk Allocation, Affordability And Sustainability, Fairness And Transparency and the one that cannot be left out is Value for Money (VFM) (Shaoul, 2002; Bell, 2002; HM Treasury, 1997; Ismail and Pendlebury, 2006). Civil Service College, (2010) states that value for money is as a result of the best balance of benefits and costs on the basis of total cost of ownership. However, value for money does not certainly imply that the lowest tenderer must always be awarded a contract. Public procurement can achieve value for money when the lowest whole of life cost, clearly defining relevant benefits and delivering on time are pursued. Basic conditions through which value for money can be achieved in the tendering process are fostering competition, preventing waste, transparency and accountability.

1.2 Statement of the problem

Regardless of the Public Private Partnership Law, Act 2020 (Act 1039) enacted to eliminate the deficiencies and organizational weaknesses inherent in Public Private Partnership projects in Ghana, a wider consultation amid stakeholders had discovered that there is extensive perception of corruption and inefficiencies in the public sector. This has necessitated for pay stern attention to redeem the public trust in the procurement system. A report from the World Bank (2003a) stated that PPP projects have about 50-70% portion of the national budget (after personal emoluments). Hence an efficient Public Private Partnership system could ensure value for money in government expenditure, which is essential to a country facing enormous developmental

challenges. Hence, the study aims evaluate the value for money in Public Private Partnership infrastructure projects of Kumasi Metropolitan Assembly.

1.3 Purposes of the Study

The purpose of the research is to evaluate value for money in Public Private Partnership infrastructure projects in Kumasi Metropolitan Assembly in the Ashanti Region. Specifically, this research sought to find out:

1. To evaluate the factors that ensures value for money in Public Private Partnership infrastructure projects of Kumasi Metropolitan Assembly
2. Determine and verify the relationships among VFM drivers during PPP project implementation.
3. To identify the challenges facing Kumasi Metropolitan Assembly in ensuring value for money in Public Private Partnership infrastructure projects delivery
4. To examine the measures put in place to ensure value for money in Public Private Partnership infrastructure projects delivery in Kumasi Metropolitan Assembly

1.4 Research Questions

The research was guided by the following questions:

1. What are the factors ensuring value for money in the Public Private Partnership projects at the Kumasi Metropolitan Assembly?
2. What are the relationships among VFM factors during PPP project implementation?

3. What are challenges do KMA encounter in ensuring value for money in PPP infrastructure project and how can the challenges be addressed?
4. How can value for money in PPP infrastructure projects be achieved in Kumasi Metropolitan Assembly?

1.5 Significance of the study

The findings of the study will complement to the current body of knowledge in ensuring value for money in the PPP infrastructure projects in public institutions. In addition, the findings of this research may be useful to the management and staff of Kumasi Metropolitan Assembly in strengthening the acquisition, implementation and integration of infrastructure delivery practices in administration. Moreover, the study would also inform government policymakers with regard to designing changes to streamline the delivery of infrastructure in public sector. Finally to other researchers, it will contribute or serve as bases for further research and also as a valuable reference

1.6 Limitations of the study

This study is faced with a lot of limitations that will make the applicability of the findings quite restricted. In the first instance, the Public Private Partnership consists of the public sector and the private sector; however the study concentrated only on the public sector for which the public sector could have added. Secondly, the analysis was done in one institution Kumasi Metropolitan Assembly which may not be a true reflection of what is happening in all the other public sectors in the other regions, and for that matter other government institutions, therefore, it may not be a good inference tool but could only be used as a guide for future study. Thirdly, the study adopted

survey research methods which employed the use of questionnaire to collect data from the respondents. One of the limitations associated with the use of questionnaire is that the respondents may not provide all the needed information because they may think that the study will expose the flaws that are associated with ensuring value for money in the public sector infrastructure project at the Kumasi Metropolitan Assembly. This weakness might have affected the results of the study.

1.7 Organisation of the study

This study is organised into five chapters. Chapter one covers the background to the study, objectives, research questions, significance of study and research scope, definitions of terms as well as organisation of study. Chapter two describes the review of literature relevant to the research theme, providing insight into previous studies relating to the research area. Chapter three describes the methodology including research design, sample and sampling procedure, method of data collection and method of data analysis. Chapter four presents analysis of data while chapter five describes the summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter aims at providing a focus for the study as well as the basis for the assessment of the findings. The literature will be reviewed on both conceptual and the empirical perspectives on the factors ensuring value for money in Public Private Partnership projects.

2.1 Definition of Concepts

2.1.1 Private-Public Partnership

Private-Public Partnership (PPP) is defined within the Ghanaian context as “a contractual arrangement between a public entity and a private sector party with clear agreement on shared objectives for the provision of public infrastructure and services traditionally provided by the public sector” (MOFEP 2011). Considering this definition, Osei-Kyei et al. (2014) pointed out three key features of Ghana’s PPP.

First, it is a contractual arrangement between a contracting authority (public entity) and private consortium. The contracting authorities are mostly the metropolitan, municipal, and district assemblies (MMDAs), and ministries, departments, and agencies (MDAs). The private partner could be a developer or a multi-stakeholder consortium not run by the government (Pallister and Law 2006). It is worth noting that the private partner could also be either a nonprofit or profit-oriented consortium as well.

Second, the arrangement involves the sharing of responsibilities and risks. This feature implies that there should be mutual agreement of objectives and responsibilities among parties. Hence,

no partner should have authority over the other, and each partner should bargain on its own behalf (Akintoye et al. 2003).

Lastly, PPP transaction involves a project which is conventionally provided by the public sector. Traditionally, there are specific public infrastructure projects which are provided by the government such as transportation projects (railway, highways, etc.), public hospitals, prisons, public recreational centers, housing, etc. These physical public infrastructures when adequately financed, constructed, and operated by the private sector could only be termed as PPP in Ghana.

2.1.2 Value for money

VFM is defined as “the optimum combination of whole-life costs and quality (or fitness for purpose) to meet the user’s requirement,” which, put in another way, can be described as improving services by having projects cost the same amount of money as the public sector is willing to spend to deliver similar projects (Grimsey and Lewis 2005).

Value for Money in the public sector involves consideration of the contribution to be made to advancing government policies and priorities while achieving the best return and performance for the money being spent (Bauld & McGuinness, 2006, p. 20). This means that public procurement entities can choose to award a contract based on other criteria other than the lowest price. One of the factors considered is the whole life cycle cost (Raymond, 2008). All public procurement of goods, works and services, must be based on Value for Money assessment, having due regard to propriety and regularity. Value for Money is not about achieving the lowest initial price, but the optimum combination of whole life costs and quality (World Bank, 2003). Behan (1994) points out the real Value for Money is how much

the goods or service purchased cost to own and use. Barnett et al, (2010) indicate that Value for Money.

2.2 Infrastructure projects as it relates to social and economic development

The American Heritage Dictionary, defines the term “infrastructure” as the basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools, post offices, and prisons. But then in the broad scale, infrastructure can be referred to all basic inputs and requirements needed for the proper functioning of the economy (UN HABITAT, 2011).

As Grimsey & Lewis (2002) and UN HABITAT (2011) stated, infrastructure is easier to recognize than define, and it is mostly described in respect of its characteristics, which usually refers to its longevity, scale, inflexibility and high investment costs. Infrastructure is further described as a term which implies credibility, low cost production, confidence, and market competitiveness because of its far reaching effects towards achieving overall economic development, enhancement of trade and poverty reduction (Geethanjali, 2007). Effective investments in infrastructure is known to offer key input to ensuring economic activities, growth and moreover offering basic services to industry and households (Threadgold, 1996).

2.2.1 Categorization and characterization of infrastructural facilities

Infrastructure can be categorized into hard infrastructure and soft infrastructure. Hard infrastructure refers to the physical structures or facilities that supports or enables the working of the society and economy, these include infrastructure in transport (e.g., ports, roads, railways); energy (e.g., electricity generation electrical grids, gas and oil pipelines); telecommunications

(e.g., telephone and internet); and basic utilities (e.g., drinking water supply, hospitals and health clinics, schools, irrigation, etc)

Table 1: Categorization of infrastructure facilities and their related associated features

Service	Associated Features
Transportation	Road, bridges, tunnels, rail tracks, harbors, etc
Power/Energy	Power plants, transmission and distribution lines.
Telecommunications	Telephone exchanges
District Heating	Plant, network
Water supply	Dams, reservoirs, pipes, treatment plants, etc
Waste water disposal	Waste water treatment plants
Irrigation	Dams, canals
Garbage disposal	Engineered Landfills

Table 1 shows the categorization of various infrastructure services and their associated features. While the soft infrastructure refers to those non-tangibles supporting the development and operation of hard infrastructure, such as policy, regulatory, and institutional frameworks; governance mechanisms; systems and procedures; social networks; and transparency and accountability of financing and procurement systems (Bhattacharyay, 2009). This research is centered on the hard infrastructure projects that are procured under the PPP and the reason for this is borne out of the underlying role that it plays as it pertains to ensuring nations achieving their social and economic development objectives.

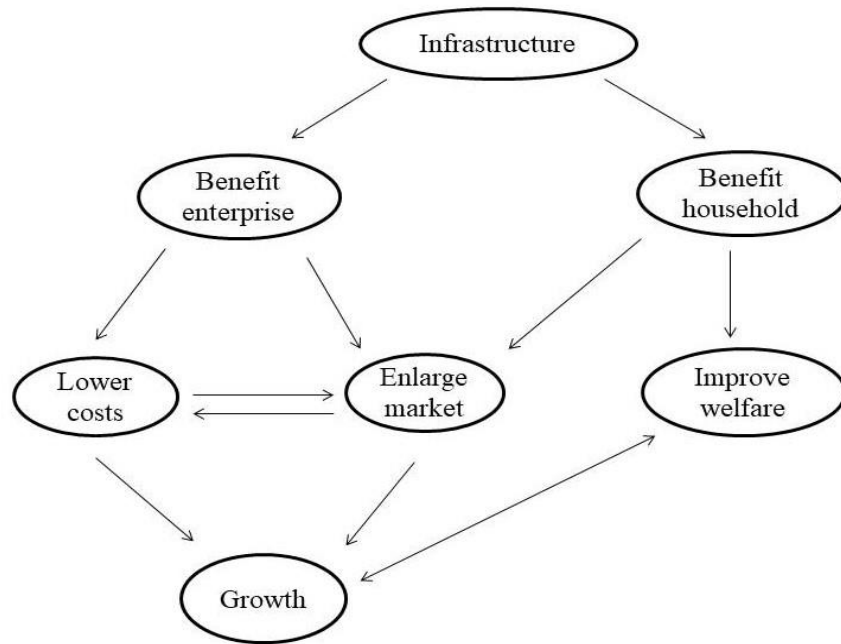
2.2.2 The role of infrastructure to national development

The relationship between infrastructure and the economy is evidently critical to promoting inclusive growth and sustainable development and moreover, the linkage between the economy and infrastructure is multi-faceted and multi-dimensional in the context that economic growth provides both the need and the reason for, and the needed resources to fund the provision of the various types of infrastructure (Nepad, 2011).

The importance of the provision of effective infrastructure for ensuring development in both the developed and developing economies cannot be over emphasized. As in the case of the developed nations, effective infrastructure has generally been found to be a major determinant of growth and productivity. Whilst in that of developing economies, its relevance is much more emphasized and glaring as infrastructure is considered to play an important role in promoting growth and productivity and reducing disparities between rich and poor regions (Briceno-Garmendia & Estache, 2004).

Figure 1 describes the interlinking relationships between infrastructure to ultimately ensure growth and also improve the welfare of the citizenry. In the economic context, infrastructure ensures economic growth by benefitting the business enterprises through enlarging the markets for their products and lowering their costs of production, while in the social aspect, the provision of infrastructure benefits the households through improving their welfare and condition of living.

Figure 1: The relationship between infrastructure to economic growth and improving welfare of the citizenry



Source: Prudhomme (2004).

2.3 Private-Public Partnership in Ghana

2.3.1 Historical and Legislative Evolution of PPP in Ghana

Public Private Partnership in Ghana dates back to the early 1990s when it was largely assumed that the private sector is more efficient in delivering goods and services than the public sector. This assumption influenced successive governments' engagement with the private sector in the course of governance history in the country. However, governments' engagement with the private sector took a dramatic turn under the Presidency of John Agyekum Kufuor in 2000 when a whole Ministry was created for Private Sector Development, enabling the government to successfully and completely partner with the private sector to ensure development.

This was followed by the development of policy guidelines for Public-Private Partnership in 2004 to officially integrate the two sectors into the development process. In 2009 when Prof.

John Atta Mills came into office, the Ministry of Private Sector Development ceased to be a substantive ministry. It was subsumed under the Presidency and overseen by a Minister of State in charge of Private Sector Development and Public Private Partnerships. In June 2011, the Minister of Finance and Economic Planning, Dr. Kwabena Duffour, launched the National Policy on Public Private Partnership to provide clearly developed guidelines for all aspects of PPP projects in the country. The National Policy on PPP provided guidelines on how PPP projects are developed and implemented; starting from the project identification level to monitoring and evaluation (Dowopkor, 2014). In 2015, a PPP Bill was approved by Cabinet and laid before Parliament for consideration.

This historical evolution of PPP in Ghana is underpinned and sustained by a corresponding legislative development. There are two main legal frameworks that bind and regulate all PPP-related activities in Ghana. These include the National Policy on Public-Private Partnerships (2011) and the Ghana PPP Bill (2013) which was awaiting passage into an Act. The National Policy on PPP (2011) was adopted to provide the initial framework for a better organization and implementation of PPP in the country and has four main categories including conceptualization and operationalization; roles and responsibilities; the various phases of the PPP process, and finally the management of PPP contracts. Like the National Policy on PPP, the Memorandum to the Ghana PPP Bill stipulates the purpose: to provide institutional support to help galvanize private sector participation in the provision of public infrastructure and services through PPP arrangements. The Bill further aims to set standards under which PPP could be effectively practiced in Ghana and also complement Government's effort to improve quality, affordability and timely execution of projects that come under the partnerships forged between the government and the private sector.

On 29th December, 2020 the Public Private Partnership bill was passed by the legislature and assented by the president. The Ghana Public Private Partnership Act, 2020 (Act 1039) was enacted to provide for the development, implementation and regulation of public private partnership arrangements between contracting authorities and private parties for the provision of infrastructure and services, to establish institutional arrangements for the regulation of public private partnerships, and to provide for related matters.

2.3.2 The increasing importance of public-private partnerships

Although governments increasingly use PPPs, these arrangements still constitute a relatively small component of total public sector investment. The United Kingdom figure of 12% mentioned above is one of the largest. Some countries also informally state that they do not foresee PPPs exceeding 15% of total public investment, one reason being the rather cumbersome process of creating a PPP (OECD, 2008). However, notwithstanding difficulties, countries such as Australia, Germany, Korea and South Africa, as well as France, Portugal and Spain, increasingly use PPPs. As noted above, there is a divergence in definitions regarding what constitutes a PPP. This also leads to different figures regarding the number of PPPs in the world. As such, not all the figures are comparable, but they do give an indication of the wide extent to which countries use PPPs. According to Deloitte (Ireland) (2009), infrastructure projects constitute the largest sector by number of deals internationally, followed by health care and education, while the United Kingdom is by far the leading country implementing projects, followed by the rest of Europe in second place. Furthermore, PPP activity reached a peak during the period 2003-07, before slowing down due to the onset of the international financial crisis and recession. According to Public Works Financing, road PPPs represent almost half of all PPPs in value (USD 307 billion out of USD 645 billion) and a third in number (567 out of 1 747). Second

is rail and third is water. The PWF database also confirms that Europe represents about half of all PPPs in value (USD 303 billion) and a third in number (642).

2.3.3 Motivations for Adopting PPP in Ghana

Generally, governments globally have different reasons for adopting the PPP concept for infrastructure development, and the variations in reasons mostly occur between developing and developed countries (Cheung et al. 2009; Osei-Kyei et al. 2014). It is always important for practitioners to understand the motivations behind PPP adoption in a host country as this will aid them to develop performance objectives which meet the needs of the society and national policy.

Essentially, the Ghanaian government has its own key reasons for adopting the PPP concept. The major basic reasons for PPP in Ghana are that PPP promotes the quick delivery of public infrastructure projects; it reduces government financial burden; and lastly, it allows for shared risks (Osei-Kyei et al. 2014).

2.3.4 Benefits of PPP to local Assemblies

Participants at the local assembly level extol the benefits of PPP arrangements to the successful administration of local governance. The major and regular source of funds for the administration of local governance is largely the District Assembly Common Fund (DACF). The DACF has been in existence for almost twenty-four years now and serves as a pool for national resources to support the country's decentralization and local government development activities (OA-DACF, 2015:4). The DACF supports Ghana's decentralization process and helps in the provision of basic socioeconomic infrastructure and services needed for development at the District levels. Yet, it is faced with untimely release of funds by the Ministry of Finance (MoF) and has become highly politicized, therefore creating controversies in its disbursement (OA-DACF, 2015).

Assemblies are therefore largely dependent on Internally Generated Funds (IDFs) in order to take care of the numerous developmental and associated challenges that face their localities every day. This is where PPP comes in handy. Except Awortwi (2004, 2012) and some few other literatures, the majority of research works that have evaluated PPP projects mostly examined it from the central government level. These works examine how PPP eases central government's financial burden (especially in the area of infrastructure) and frees resources for spending in other sectors (particularly the social sector). PPP benefits were assessed around the three major stakeholders discussed under the theoretical framework section and are presented below;

Benefit to the governments:

- Reduces financial burden on infrastructure
- Fulfilling campaign promises and the social contract
- Revenue generation for local Assemblies (IGF)
- Brings efficiency into public sector governance
- Build Operate Transfer facilities revert back to local authorities
- Reduces governmental bureaucracies
- Learn new developmental and project ideas from the private sector

Benefit to the Private sector:

- Avenue for investment
- Profit generation opportunity
- Increases the level of efficiency through implementation
- Identification of ideas and potential business opportunities
- Opportunity for business expansion

Benefits to Communities:

- Employment and job creation opportunities
- Poverty reduction
- Beneficiaries of PPP facilities and services
- Knowledge/technology transfer benefits communities
- PPP with local content clauses improves livelihood at the communal level
- Benefits from proper monitoring and evaluation of projects that lead to quality

2.4 Value for money

VFM is defined as “the optimum combination of whole-life costs and quality (or fitness for purpose) to meet the user’s requirement,” which, put in another way, can be described as improving services by having projects cost the same amount of money as the public sector is willing to spend to deliver similar projects (Grimsey and Lewis 2005). It usually explained in terms of the 3Es of economy, efficiency and effectiveness (Glynn, 1985; and Glynn and Murphy, 1996). Glynn (1985, p. 29) defines economy as ‘acquiring resources of an appropriate quality for the minimum cost’. It is concerned with minimizing the cost of resources acquired or used, having regard to appropriate quality (Hyndman and Anderson, 1995; and Kloot, 1999). Efficiency is defined as ensuring that ‘maximum output is obtained from the resources devoted, or conversely, that a minimum level of resources is devoted to a given level of output’ (Glynn, 1985, p. 29). Effectiveness is defined as ‘ensuring that the output from any given activity is achieving the desired results’ (Glynn, 1985, p. 30). To evaluate effectiveness, one needs to establish the extent to which the desired goals of (public sector) projects are being achieved. This

is not a very straightforward procedure because some (political, for example) goals may not be initially apparent.

2.4.1 Value for money (VFM) in PPP contracting

Value for Money in the public sector involves consideration of the contribution to be made to advancing government policies and priorities while achieving the best return and performance for the money being spent (Bauld & McGuinness, 2006, p. 20). This means that public procurement entities can choose to award a contract based on other criteria other than the lowest price. One of the factors considered is the whole life cycle cost (Raymond, 2008).

One of the major reasons why governments enter into PPP agreements is to achieve “value for money.” The UK Treasury defines “value for money” as the “optimum combination of whole-of life costs and quality (or fitness for purpose) of the good or service to meet the user’s requirements” (quoted in World Bank 2013:8). Three things stand out in this definition of VFM; cost, quality and user’s assessment of both. User’s assessment of a PPP project in terms of quality may include the feasibility, affordability and economic viability of the project. The financial cost, in a VFM analysis, must reasonably commensurate with the quality of the project as determined by the user. The World Bank underscores the significance of VFM analysis in PPP programs, noting that the Organization for Economic Co-operation and Development (OECD) study found that 19 out of 20 countries engaged in PPP projects apply some kind of VFM assessments in project proposals in OECD countries. VFM analysis in PPP projects in developing countries like Ghana still faces challenges as a result of developing expertise in this area but also because of poor transparency in PPP arrangements.

In general, prior studies on VFM of PPP projects can be classified into two types: first, studies that actually assess the VFM achieved from PPP projects (see e.g. National Audit Office, 1997, 1999, 2003; Arthur Andersen and Enterprise LSE, 2000; Ball et al., 2000; Audit Commission, 2003; Parker, 2003; Ismail and Pendlebury, 2006); and, second, studies that examine VFM determinants or mechanisms for evaluating VFM (see for instance Arthur Andersen and Enterprise LSE, 2000; Tanaka et al., 2005; Yuan et al., 2008; Cheung, 2009; Takim et al., 2009; Asenova et al., 2010; Ismail et al., 2011).

One of the popular methods for assessing VFM is by comparing the whole life net present costs (NPC) of the project as financed under the conventional procurement method, or the PSC, against the NPC of the PPP project (Heald, 1997; Shaoul, 2002). The option with the lowest NPC is assumed to yield the greatest financial benefits. According to Owen and Merna (1997), the VFM test has three stages of decisions and possible outcomes to be considered. First, decide whether to proceed with the project at all. Second, if it is decided to proceed, then decide whether to use PPP or traditional procurement. Third, if PPP is chosen, decide on which private supplier is preferred to provide the service.

However, Broadbent et al. (2002) claimed that this assessment of VFM is based on the assumption that there is a possibility of having public funds to spend for the provision of the public services. If that is not the case then a PSC may not be relevant. Grout (2003) also argued that the framework used to assess VFM is flawed as it does not compare like with like. Likewise, Froud and Shaoul (2001) identified four main limitations in the procedures for determining whether the projects demonstrate VFM. The limitations include poor quality of the information provided, problems facing the determination of the best option, risk transfer problems and lack of comparability between the PSC and PPP option. Furthermore, in deriving at the present value

cost the discount rate used is also questionable (Pollock and Vickers, 2000; Wynne, 2002). In particular, Wynne (2002) claims that the 6 per cent discount rate used in the UK since 1992 does not reflect the actual current economic situation. His analysis of 11 PPP hospitals in the UK shows that none of the hospitals would be considered to provide VFM if the discount rate used had been changed to 5 per cent instead of the normal rate of 6 per cent (Wynne, 2002). Tanaka et al. (2005) reviewed the VFM assessment technique for PPP projects in the UK and revealed that the main shortcoming of the VFM technique is due to the lack of transparency towards the general public. Therefore, Tanaka et al. (2005) suggested that for developing countries to adopt the VFM technique currently being used in the UK some considerations need to be taken into account. Accordingly, the authors proposed a VFM risk assessment methodological approach.

2.4.2 Factors that ensure Value for Money in Public Private Partnership

Previous researchers have conducted numerous studies to identify the VFM factors of PPP projects. The relationships among VFM factors that significantly contribute to increasing the VFM of PPP projects, however, are often understated or ignored. This study adopted the procedure used by Cui et al. (2019) to explore the identification and categorization of VFM factors.

First, Cui et al. (2019) primarily assembled a list of 26 tentative factors from leading international journals or other academic publications. Second, factors that were mentioned by less than two researchers were moved to an undetermined list. Finally, to avoid the subjective identification of the VFM driver list and provide a proper categorization of VFM factors, a combination of face-to-face interviews and a two-round Delphi-type survey process was employed to analyze the previously mentioned undetermined list and properly classify any VFM factors.

Cui et al. (2019) conducted face-to-face interviews with experts from research institutions and directors of past and present PPP projects between October 10 and 19, 2016. After several discussions with nine experts, the research group identified 18 VFM factors (Table 2) and divided the 18 factors into five categories: participators' abilities and characteristics, consumer's demand achievement, cooperation of public and private sectors, cost and effectiveness, and cooperative environment.

Table 2: VFM factors for the PPP infrastructure project

CODE	VALUE FOR MONEY FACTORS	
VFF1	Output-based specification	McKevitt (2015), Cheung et al. (2009, Morillos and Amekudzi (2008)), and Ismail (2013)
VFF2	Efficient risk allocation (allocating the risk to the party best able to manage it)	Ismail (2013), Nisar (2007), Santandrea et al. (2016), Yuan et al. (2009) and Cheung et al. (2009)
VFF3	Perceptions and acceptance of stakeholders	Ameyaw et al. (2015) and McKevitt (2015)
VFF4	Competitive tender	Nisar (2007), McKevitt (2015), Chou and Pramudawardhani (2015) and Chan et al. (2009)
VFF5	Long-term nature of contracts	Morallos and Amekudzi (2008), Ismail (2013) and Santandrea (2016),
VFF6	Optimal use of asset/facility and better services delivery`	Chan et al. (2009), Ismail (2013), Chou and Pramudawardhani (2015), Nisar (2007), and Henjeweale et al. (2014)
VFF7	Private sector technical innovation and transfer	Chan et al. (2009), Ismail (2013), Cheung et al. (2009), and Chou and Pramudawardhani (2015)
VFF8	Skills and expertise of both public and private sectors	Morallos and Amekudzi (2008), Cheung et al. (2009), Nisar (2007) and Ismail (2013)
VFF9	Improve buildability and maintainability	Chou and Pramudawardhani (2015) and Chan et al. (2009)
VFF10	Complementary advantages of public–private partnerships	Santandrea et al. (2016), Chan et al. (2009), Nisar (2007) and Hu et al. (2014)
VFF11	Stable macroeconomic condition	Yuan et al. (2009) and Ameyaw et al. (2015)
VFF12	Environmental consideration	Ameyaw et al. (2015) and Ismail (2013)
VFF13	Nature of financial innovation	Chan et al. (2009), Ismail (2013), Ameyaw et al. (2015) and Chou and Pramudawardhani (2015)
VFF14	Product or service meeting users’ demand	Santandrea et al. (2016) and McKevitt (2015)
VFF15	Service delivery on time or in advance	Ameyaw et al. (2015), Ismail (2013), Chan et al. (2009), Chou and Pramudawardhani (2015), and Nisar (2007)
VFF16	Low project life-cycle cost	Henjeweale et al. (2014), Ismail (2013), Chou and Pramudawardhani (2015), and Chan et al. (2009)
VFF17	Performance-based payment mechanism	Morallos and Amekudzi (2008), Ismail (2013) and Santandrea et al. (2016)
VFF18	Favorable legal framework	Yuan et al. (2012), Chowdhury (2011) and Ameyaw et al. (2015)

2.4.3 Categorization of factors of Value for Money

Two rounds of a Delphi-type survey with different experts from academia and practice were conducted from December 2 to 23, 2016. Thirty-two (32) experts from public and sectors, institutions and consultancies responded to the invitation to participate in this Delphi-type survey. The experts were asked to independently sort and divide the 18 factors into five categories. The specific VFM factors were allocated to an appropriate category only when half or more of the experts agreed. Eleven VFM factors were categorized into groups in the first-round survey, and eight in the second-round survey. After categorization, the nine experts were invited to judge the reasonableness of the five categories and reach a consensus. Finally, on the basis of this agreement regarding the results from the Delphi-type survey, the 18 VFM factors were classified into five groups, as shown in Table 3.

Table 3: Categorization of the VFM factors

Category	Code	Factors
Consumers' demand achievement	CAC	VFD1, VFD3, VFD6, VFD14
Cost and effectiveness	CEF	VFD15, VFD16, VFD17
Cooperative environment	CEN	VFD12, VFD11, VFD18
Cooperation of public and private sectors	CPS	VFD10, VFD2, VFD5, VFD13
Participants' ability and characteristic	PCH	VFD4, VFD7, VFD8, VFD9

As the PPP approach focuses on output specifications, participators' abilities and characteristics provide a wider opportunity to stimulate public and private parties to develop innovative solutions and improve their capacity to meet these service specifications. Private sector technical innovation and transfer was ranked among the top-five important VFM factors (Ismail 2013; Cheung et al. 2009). The public and private sector's abilities to manage the delivery and

operations of a project were seen to be critical to the success of the PPP (Morallos and Amekudzi 2008). In addition to those of the public and private sectors, other stakeholders' perceptions and acceptance should also be focused on because of their significant influence on VFM (McKevitt 2015). For the special purpose vehicle (SPV) in PPP projects, ongoing operational, maintenance, and refurbishment requirements become a single party's responsibility for the whole life-cycle period. Thus, buildability and maintainability can be improved through better integration of the design, construction, and operational requirements. To meet consumer demands, PPP projects pave the way for the government to choose excellent private sector providers through a competition process and leave more space for the private sector to employ its techniques and managerial skills. Therefore, end-users are more likely to make optimal use of an asset/facility and receive better service delivery (Liu and Wilkinson 2011). The asset utilization provided by PPP projects usually reduces the cost of government through output-based specifications that meet user demands. Additionally, the payments received by the private sector are linked to the quality and timing of output delivery. PPP projects that employ innovative funding techniques show significant complementary advantages compared with traditional procurement by allocating the risks to the party best able to manage them over the contract period. Long-term contracts are seen to be a key condition for delivering VFM because the contract's time frame should be long enough to recover the initial investment. The long contract period also allows for the development of alternative approaches for service delivery and enables the service provider to focus on the whole life-cycle cost (Morallos and Amekudzi 2008). In terms of cost and effectiveness, whole-life consideration improved efficiency by bundling the design, construction, and maintenance of public facilities with the performance-based payment mechanism. SPV should provide a service at the agreed-upon price that meets the quality standards of the

government to avoid providers attaining greater profit by reducing the service standards or increasing the service price (Goodliff 2002). The aforementioned factors are all regarding a specific PPP project; however, macro level factors also play important roles in driving VFM for PPP projects. From the perspective of risk management, political and macroeconomic instability are the most significant risk factors when undertaking PPP projects, not only for risk management and allocation but also for the long-term nature of the contract, complementary advantages of the public–private partnership, and financial innovation because they all depend on the stability and completeness of the economic, environment, and legal frameworks (especially PPP-related specific laws). Therefore, a stable macroeconomic environment, sound economic policy, favorable legal framework, and political and social supports related to PPP development are important to achieve VFM in PPP projects. In addition, achieving VFM focuses not only on the financial value for money but also on sustainable development of PPP, which includes environmental and social sustainability (Atmo and Duffield 2014).

2.5 Challenges in ensuring value for money in public procurement

The study outlines some of the major challenges confronting public institutions in ensuring value for money in procurement. These are discussed in the subheadings as follows:

2.5.1 Lack of proper knowledge, skills and capacity

The shortage of skills has been a re-concurrent theme in public discussion. According to Sheoraj (2007), skills and capacity shortages have been identified as the single greatest impediment to the success of public procurement in South Africa. Adequate capacity in the form of appropriate structures with fully skilled and professional PPP management personnel is a key success factor for PPP projects. In some government entities, the quality of PPP projects management

personnel's skills and ability are well below standard. Migiro and Ambe (2008) assert that many PPP projects management actors in the South African public sphere have attended a number of training workshops on projects management, but they still lack the appropriate knowledge for proper implementation. McCarthy (2006) contends that there is a lack of capacity and knowledge by procurement management actors to handle procurement processes that have led to bad governance. The South African government embarks on programmes that educate practitioners, but implementation of its programmes always falls short.

2.5.2 Non-compliance with policies and regulations

In Ghana, PPP project was previously guided by the Public Procurement Act, 2003 (Act 663) before the pass of Public Private Partnership Act, 2020 (Act 1063). Compliance with these policies and regulations is a problem. As indicated by Mathee (2006), some of the practices relating to non-compliance with the rules and procedures relate to the tendency not to utilise a competitive process for both quotations and bids, and incorrect utilisation of the preference points system. Van Zyl (2006) also asserts that there is a lack of appropriate bid committees; use of unqualified suppliers, passing over of bids for incorrect reasons; utilisation of the incorrect procurement process in respect of the thresholds; extensions of validity periods; and incorrect utilisation of the limited bidding process. Furthermore, Ambe and Badenhorst-Weiss (2011b) noted that there are inadequate controls and procedures for the handling of bids; appointment of bid committee members not aligned to policy requirements; and insufficient motivation for deviations from supply chain management procedures.

2.5.3 Inadequate planning and linking demand to the budget

Many government entities are still faced with the challenges of improper planning and linking demand to budget (Ambe & Badenhorst-Weiss, 2011a). Cost-effective procurement depends on

a specialist's skills to ensure that buying requirements are reliably determined, appropriate contract strategies are developed, contracts are well managed and opportunities are seized to secure the best deals at the right time and at the right price. The importance of drawing up accurate and realistic strategic plans cannot be overestimated.

Some government entities cannot properly quantify the needs of those requiring their services or properly estimate costs, nor accurately track, control or report on expenditure (Luyt, 2008). Luyt (2008) also indicated that there is a need to monitor the delivery of services properly to ensure that scarce resources are efficiently and effectively procured. Poor planning and budgeting have also affected the implementation of procurement. It is therefore vital that procurement practitioners adequately link demand planning to budget.

2.5.4 Accountability, fraud and corruption

Accountability constitutes a central pillar to public procurement (Soudry, 2007). Without transparent and accountable systems, the vast resources channelled through public procurement systems run the danger of being entangled with increased corruption and misuse of funds (Jeppesen, 2010). According to Mahlaba (2004), fraud and corruption cost South African tax payers hundreds of millions of rand each year. Over the last few years, the impact of fraud has led to the promulgation of special legislation and improvement in existing legislation that led to the creation, among others, of the Directorate of Special Operations, commonly known as the Scorpions, the Asset Forfeiture Unit, the Public Protector, the Special Investigation Unit, Commercial Crime Units, Internal Audit Units, Special Investigation Units within departments, and the appointment of forensic consultants (Mahlaba, 2004).

According to Boateng (2008), since 1994, South Africa has enjoyed unprecedented social and infrastructural programmes. Yet, the majority of people who had hoped freedom would bring with it relative socio-economic liberation and improvement are feeling increasingly bitter towards government over issues that include a lack of perceived quality of governance, service delivery failure, fraud and corruption in some spheres of the economy and disillusionment with empowerment policies (De Lange, 2011). The Public Service Commission Committee (2011) indicated that a total of 7 766 corruption cases had been reported through the National Anti-Corruption Hotline since its inception in September 2004 up till June 2010. Corruption, incompetence and negligence by public servants were to be blamed (De Lange, 2011). About 20 per cent of government's procurement budget alone went down the drain each year. This was because officials had their fingers in the till, overpaid for products and services or failed to monitor how money was spent (De Lange, 2011). Hence, there is an urgent need to rethink innovative ways of curbing corruption and some other administrative malpractices within South African spheres of government. To fight the scourge of maladministration, mismanagement of finances, fraud and corruption, government needs to strengthen and review existing internal control systems to detect deficiencies.

Elodie (2005), emphasized that the disclosure of information should be differentiated depending on the stage of the public procurement process, that is, the identification of needs, the preparation for bidding, the bidding process, the award of contract or the contract management. Providing information on the public procurement process can be seen as positive for competition since it is likely to attract more competitors, which reduces the price and improves the quality of services provided to society. The importance of documentation and records management has also been emphasized by the Public Private Partnership Act, 2020 (Act 1039). They emphasized that

documentary records, both in print or electronic format, are essential for efficient and effective management of procurement activities, provide evidence in support of decisions and actions taken, and provide an audit trail for verification of transparency, accountability and effectiveness.

2.5.5 Land ownership and administration

In Ghana there is a challenge in relation to PPP contracting as there is sometimes tension between tradition and modernity in both social and governance processes. One of the major challenges to PPP projects, especially in the BOT/DBO categories, is land ownership (Seidu, 2013). In Ghana, land is owned by traditional authorities and not the government and can only be leased out by the latter and not the former; normally for ninety-nine (99) years. There have been instances where private investors are unduly overburdened financially by paying monies to both the local assemblies and the traditional authorities at the same time.

There are poor land administration laws in Ghana and this has often affected existing PPP arrangements and has the potential to undermine similar projects in future. The government and the traditional authorities need to work together and closely in order to address these challenges. Closely related to this issue are chieftaincy disputes over land and where the private investor will have to deal with two or more different traditional authorities in looking for a piece of land to invest. This affects the local authorities' ability to generate revenue that is sufficient to help them deal with local level administrative issues without depending on central government's meager District Assembly Common Fund (DACF).

2.5.6 “Ancestral Space” and “Occupational Gifting”

The majority of the PPP arrangements at the local government level are within the area of sanitation (toilet facilities, hand wash and drying facilities, urinals, etc.) and also markets. The markets are one of the major sources of revenue for local assemblies and most of the PPP arrangements go into that area: In Tamale the Central, Aboabo and Sheanut markets are clear examples; in Kumasi it is the Tafo, Kejetia and Afiakobi markets; in Takoradi it is the Kojokrom market and in Cape Coast it is the Kotokruba market. Markets are therefore central to the revenue generation prowess of these assemblies and a potential sector for PPP contracts. Yet, there are different perceptions about the role and the kind of attachment market women who sell in these markets develop over time.

To the market women specifically, and the sellers broadly, these markets have a social-cultural value and significance dating back to their great grandparents and which goes beyond the ordinary politics associated with them. A study by Seidu (2013) revealed that these markets constitute an “occupational gifting” where families train their young ones and mentor them to inherit from them after sometime when they leave the scene. It therefore becomes an “ancestral space” where sellers have buried umbilical cords of their young ones and spiritual concoctions to guarantee entitlements and success. In specific reference to the Kotokruba market, he notes that it was built by the British colonial masters around the 1930s and families have seen the spaces they occupy since then as their economic groves and have established chains of contracts linking them to other families in Burkina Faso and older established trade routes.

This often explains why some sellers do not want to move from the old trading site for a new market to be constructed. They see this as complete truncation of an age-old socio-economic

tradition sacrificed for political expediency. They will rather prefer to sell in old unhygienic stalls to a modern mall that takes away their ancestral and spiritual bondage from them.

2.5.7 Politicization and continuity of PPP projects

PPP arrangements are inherently political since they involve arrangements between the government and the private sector. However, too much politics has the tendency of undermining the efficiency and continuity of the process and the project. Politics, both in its positive and negative forms, has manifested itself in the PPP designing and implementation stages at the local government level. Politics came out strongly in three different categories: in the award and renewal of PPP projects; in the selection of PPP project beneficiaries, and finally in the termination and continuity of PPP projects. Seidu (2013) reported that individuals and private companies that are awarded PPP projects are normally members of the party that is in government. In cases where a project is already awarded, but subject to renewal from the local assembly, the beneficiary individual or company risks losing the project if there is a change of government in the process.

2.6 Strategies to improve value for money in procurement

Several strategies have proposed to promote compliance level with code of ethics on public procurement. Some of the proposition put will be discussed in the following subsections.

2.6.1 Monitoring and evaluation

Controlling the performance of the procurement function and ensuring its efficiency and effectiveness is essential to the management of the procurement process. It is vital to evaluate how well the PPP project process has gone, identify any weaknesses or problems and agree actions to prevent similar problems in the future. Evaluation may include a formal audit. Project

monitoring is an essential part of project management and control linked to compliance with Act 1039 and performance outcomes such as value for money, professionalism and code of conduct in procurement. This will involve the management of entity, staff of PPA, private sector, oversight bodies (internal and external audit), civil society (including NGOs), project beneficiaries, and media (PPA Annual Report, 2008).

2.6.2 Sanctions for non-compliance with code of conduct in public procurement

The adherence to the provisions of the Act and Regulations by public officials is obligatory and therefore failure to do so is considered an offence which is subject to sanctions. Officials suspected of non-adherence to the rules and regulations and found guilty following investigations would be suspended and his or her benefits including salary withheld while officials found misappropriating government funds regardless of the value were to be summarily dismissed. Hence section 92 of the Public Procurement Act 2003, establishes that contravention of any provision of the Act is an offence and stipulates the penalties to be applied while section 93 of the Act defines corrupt practices in terms of article 284 of the Ghanaian constitution, and the Criminal Code, 1960 (Act 29). The Act also stipulates that any tenderer, supplier, contractor or consultant who attempts to influence a procurement process, or the administration of a contract by any unfair method, will be subject to sanctions which may include debarment of the company from Government of Ghana contracts.

2.6.3 Training and professional development on procurement regulations

Public Procurement Oversight Authority (PPOA, 2007), posits that the procurement regulations were meant to ensure that efficient training had been offered to professionals to serve in procurement. It was also revealed by the study by the PPOA that the available expertise at the

procurement units did not meet the need for specialized procurement knowledge despite there being steps towards developing a professional procurement workforce.

Public procurement is increasingly recognized as a profession that plays a key role in the successful management of public resources, and a number of countries have become increasingly aware of the significance of procurement as an area vulnerable to mismanagement and corruption and have thus made an effort to integrate procurement into a more strategic view of government efforts. As part of the efforts to adopt a long-term and strategic view of their procurement needs and management, most countries have resorted to using their annual procurement plans as a possible problem solver (Mahmood, 2010). Sauber et al., (2008) emphasize that procurement professionals need to acknowledge and devise strategies for managing procurement challenges. The professionals must be seen as champions of efficiency and effectiveness and must acknowledge the challenges and their various forms, and their sources. The requirements to educate professionals and equip them with new and higher-level skills have consequently become urgent. According to Peterson and Van Fleet (2004), a skill is the ability either to perform some specific behavioral task or the ability to perform some specific cognitive process that is related to some particular task. However, Lan, Riley and Cayer, (2005), report that finding, hiring and retaining dedicated, energetic, and ethical employees with special skills is always hard. While we understand that professionalism is a key mechanisms for, and primary targets of institutional change, the precise role of professions and professional service firms in processes of institutional change remain under-theorized.

The procurement exercise follows steps according to the PPOA of 2007. These steps must be observed in order to ensure that all the stakeholders involved in the procurement exercise obtain fair treatment. The steps include; planning for the required procurement over a given period,

identifying the source of the items, highlighting specifications/initiation of procurement, determination of procurement procedure, Sourcing (soliciting) offers, evaluation of offers, post qualification, commencement of contract, contract performance (delivery) and management, record keeping and accountability, payment and post contract performance (PPOA, Act, 2007).

2.6.4 Involvement of Top Management and Stakeholders in Ethical Procurement Practices

Public procurement malpractices could be limited through the employment of stakeholders such as civil society organizations to be part of the procurement process. The current status of the procurement system requires the creation of three bid committees, namely the bid specification committee, the evaluation committee and the adjudication committee. For the purpose of compliance and to minimize unethical and corrupt practices, stakeholders should be involved in the evaluation and adjudication process. This will ensure and support open governance. Open governance creates the conditions for effective collaboration between governments and citizens in a process that enhances legitimacy and accountability of public decision-making. Therefore, stakeholder involvement will also encourage public servants to be more deliberate about decisions they make and will provide citizens as well as stakeholders with the opportunity to hold their leaders accountable. It will improve the efficiency of government institutions, reduce fraud and waste of public finances, strengthen the management of natural resources and ensure better service delivery.

2.6.5 Compliance with Ethical Procurement Practices

Kangogo and Kiptoo (2013) conducted a study on factors affecting ethical standards in public procurement in Kenya and recommended that frequent independent procurement audits and rigorous monitoring to ensure compliance to the procurement code of conduct as a way of enhancing the ethical standards in public procurement. Further, the study recommended that

proper documentation of all public procurement activities ensures complete audit trails to trace fraudulent (unethical) procurement practices. Consequently, the adherence to the provisions of the Act and Regulations by public officials is obligatory and therefore failure to do so is considered an offence which is subject to sanctions. According to Section 92 of Ghana Public Procurement Act 633 (2003), officials suspected of non-adherence to the rules and regulations and found guilty following investigations would be suspended and his or her benefits including salary withheld while officials found misappropriating government funds regardless of the value are to be summarily dismissed. Hence, Section 92 of Act 2003, (Act 663) establishes that contravention of any provision of the Act is an offence and stipulates the penalties to be applied while Section 93 of the Act defines corrupt practices in terms of article 284 of the Ghanaian constitution, and the Criminal Code of Ghana, Act 29 (1960).

2.7.0 Theoretical framework

2.7.1 Principal Agent Theory

At the foundation of the agency theory is the assumption that there is an asymmetry of information between the two parties to a relationship in a given decision-making situation when one of the parties, referred to as the agent, acts on behalf of or represents the other party, referred to as the principal. The analysis of the agency theory helps identify the relativity and mutability of the subject matter of the cognition. The entity participating in the principal-agent relationship can be an individual person, entire groups of people, the state administration or an enterprise. Each party may have different (more precise, fuller) information on the subject of the relationship.

In contracts or organizations, individuals or entities make decisions on behalf of other individuals or entities. It is usually problematic to determine whether agents are making

decisions because they believe in those decisions to be in the best interest of the principal or in their own selfish interest, especially when they are getting paid for their work. Often, the private sector (i.e., the agent) will be self-seeking and neglect the objectives of the public sector (i.e., the principal) in PPP deals. The public and private sectors have conflictual goals. Awortwi (2012) outlines three of these conflicts: while the public sector may be concerned with attaining better services at less cost, the private sector may be concerned with performing fewer tasks for higher remuneration. Second, the private sector usually has more expertise than the public sector and therefore understands the project details better. This could lead to a situation where an uninformed public sector could pay too much for poor quality service. Lastly, the control of project knowledge and expertise puts the private sector in a position to act in an opportunistic manner and for their own selfish interest in entering into contractual agreements with the public sector. These assumptions are underpinned by the Principal Agent Theory. The public sector is tied down by information asymmetry, adverse selection issues and opportunism while private contractors face recovery risks and dereliction of payment responsibility for services delivered (Awortwi, 2012). This, therefore, puts the private sector in a situation where they act principally to satisfy their selfish interest rather than the collective interest (i.e., both their interest and the interest of the public sector in PPP arrangements).

2.7.2 Rational Choice Theory

There are theories concerning value for money of private public projects. However, the requirement for a project to demonstrably provide VFM before it can go ahead with PPP procurement is based on the rational choice theory which explains the rational for preferring one mode of procurement over another due to its being the optimal choice (Green, 2002; Moll and Hoque, 2006). The rational choice theory provides a framework to consider the social and

economic behaviour in choosing the most cost effective means without ignoring the quality. In particular, according to Green (2002) in opting for PPP procurement, the expected outcomes of the public sector and the desired production and profits generated by the private sector provides are considered to ensure both parties successfully achieved their optimal choice from the PPP arrangement.

This is consistent with the underlying concept of VFM in PPP which refers to the “optimum combination of whole-life costs, benefit, risks, and quality (fitness for purpose) to meet the user requirement and getting the best possible outcome at the lowest possible price” (Li and Akintoye, 2003; Grimsey and Lewis, 2004; English, 2006). As earlier mentioned, VFM is one of the fundamental requirements before it can be decided that a project should be delivered via a PPP scheme (HM Treasury, 1997; Bell, 2002; Shaoul, 2002; Wynne, 2002; Edwards and Shaoul, 2003; Sciulli, 2008; Unit Kerjasama Awam Swasta, 2009). Based on the theory the present study focuses on the determinants for VFM as perceived by key players in PPP that are public and private sectors in ensuring optimum achievement of VFM from PPP projects in Ghana.

Other theories concerning PPP include economic theory. In economics theory, public–private partnerships have been studied through the lens of contract theory. The first theoretical study on PPPs was conducted by Oliver Hart. From an economic theory perspective, what distinguishes a PPP from traditional public procurement of infrastructure services is that in the case of PPPs, the building and operating stages are bundled. Hence, the private firm has strong incentives in the building stage to make investments with regard to the operating stage. These investments can be desirable but may also be undesirable (e.g., when the investments not only reduce operating costs but also reduce service quality). Hence, there is a trade-off, and it depends on the particular situation whether a PPP or traditional procurement is preferable. Hart's model has been extended

in several directions. For instance, authors have studied various externalities between the building and operating stages, insurance when firms are risk-averse, and implications of PPPs for incentives to innovate and gather information.

In other theoretical approaches Infrastructure PPPs can be understood at five different levels: as a particular project or activity, as a form of project delivery, as a statement of government policy, as a tool of government, or as a wider cultural phenomenon. Different disciplines commonly emphasize different aspects of the PPP phenomena. Engineering and economics primarily focuses on concerns such as overall project costs and quality, and compare P3s to the traditional ways of delivering large infrastructure projects. In contrast, public administrators and political scientists tend to view PPPs more as a policy brand and a tool for governments to achieve their objectives.

2.8 Conceptual Framework

Nissen et al. (2014) was of the view that PPP promotes knowledge sharing and progress thereby enhancing innovation processes and the abilities of the members. For a typical project, organizational capabilities should be driven by the partners' cooperation model and its history (Jin and Zhang 2011). Close public-private cooperation, in which public and private partners work together interactively, is important to achieve satisfying public sector procurement by providing effective public goods and services (Verweij 2015). To ensure the superior performance of PPP projects, organizational relationships should be characterized according to trust and cooperation (Indridason and Wang 2008). Osei-Kyei and Chan (2016) demonstrated that long-term relationships and partnerships are critical to the success of PPP projects.

2.8.1 Statement of Hypotheses

Consequently, the present study proposes the following hypotheses:

H1: Cooperation of public and private (CPS) sectors significantly influences cost and effectiveness (CEF) in PPP projects.

H2: CPS significantly influences participants' ability and characteristic (PAH) in PPP projects.

H3: Cooperative environment (CEN) positively affects CPS in PPP projects.

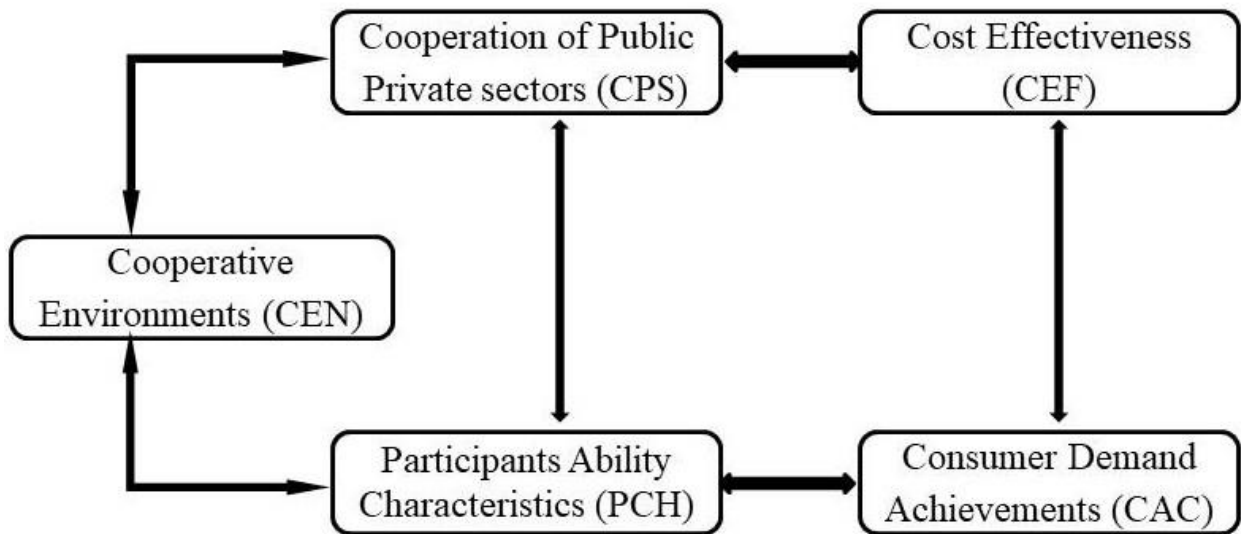
H4: CEN positively affects PAH in PPP projects.

H5: PAH significantly affects the consumer's demand achievement (CAC) in PPP projects.

H6: CAC significantly influences CEF in PPP projects.

Consequently, the resultant hypotheses constitute the conceptual model that becomes the basis for the further SEM and is shown in Fig.2

Figure 2: conceptual framework



2.9 Background of Kumasi Metropolitan Assembly

The Kumasi metropolis is centrally located in the Ashanti Region of Ghana. Its unique central position makes it accessible from all corners of the country. It is the second largest city the

country and the administrative capital of Ashanti. It is a fast growing Metropolis with an estimated population of more than two million people and an annual growth rate of about 5.4%. The metropolis is about 254 kilometres; its physical structure is basically circular with a central located commercial area. The city is divided into nine (9) sub-metros namely

2.9.1 The Establishment of Kumasi Metropolitan Assembly

Kumasi became the capital city of the new Asante State built from a voluntary amalgamation of about a dozen city states. The Asanteman Traditional Council, the traditional governing authority of the old Asante Kingdom, was restored by the British Colonial Authority in 1935 and Kumasi became the seat of the Council though without political powers which were kept by the British Colonial Government with its seat in Accra (Adu-Boahen, 1971).

Kumasi Metropolitan Assembly (KMA) was established by Local Government Establishment Instrument (L.I 1434, 1988) to manage the metropolis. This L.I was over time amended to L.I 1614, 1995 and then L.I 1805, 2010. The Legislative Instrument 1614, 1995 defined the Metropolis to consist of the following Sub-Metropolitan District Councils; Bantama, Subin, Manhyia, Asokwa. Through L.I 1805, Oforikrom, Tafo-Pankrono, Nhyiaeso, Kwadaso, Suame, and Asawase were added bringing the number to ten.

These Councils have secretariats headed by Metropolitan Directors which manage their day-to-day business for effective co-ordination and harmonisation. Heads of the Sub-Metropolitan District Councils (SMDCs) have to refer major actions to the Metropolitan Co-ordinating Director. The SMDCs are further divided into 24 Town Councils and have a total of 419 Unit Committees.

2.9.2 Membership of the Metropolitan Assembly

The Kumasi Metropolitan Assembly is one of the twenty-seven administrative districts in the Ashanti Region. The Assembly is made up of 87 members, out of which 60 are elected from the various electoral areas in the Metropolis, while the remaining 27 are appointed by the President in consultation with traditional authorities. A Metropolitan Chief Executive, who is also a member of the Assembly, is the Mayor of Kumasi and head of the Kumasi Metropolitan Assembly.

2.9.3 Political and administrative structure of KMA

The KMA has two main arms responsible for the political and management functions of the Metropolis. The political structure is defined by an 87-person assembly. Sixty (60) of the assembly members represent electoral constituencies, 27 serve as appointees of the president and the head (the Metropolitan Chief Executive) is nominated by the president but has to be approved by at least a two-thirds majority. The Mayor of the Metropolis has massive power of administering the metropolis and this is seen in the recent decongestion exercise in the metropolis.

The metropolis is further divided into nine sub-metropolitan districts, ostensibly to facilitate the decentralization system in Ghana. Beneath the level of the sub-metros are 24 town councils and 419 unit committees. These sub-district political/administrative structures constitute bodies of the metropolitan assemblies in Ghana and perform functions assigned to them by the instruments setting up the Assemblies or delegated to them by the Assemblies. Town councils are established for settlements with population between 5,000 and 15,000 but these are markedly different in size, sometimes exceeding 50,000 depending on the Metropolitan Assemblies. The town councils

are essentially rallying points of local enthusiasm in support of the development objectives of the District Assembly (Ministry of Local Government and Rural Development 1996).

The unit committees form the base structure of the New Local Government System. A unit is normally a settlement or a group of settlements with a population of between 500-1000 in the rural areas and a higher population (1,500) for urban areas. Unit Committees being in close touch with the people, play the important roles in education, organization of communal labour, revenue raising and ensuring environmental cleanliness, registration of births and deaths, implementation and monitoring of self-help projects among others. The sub-metro structures therefore assist the metropolis in grass root planning or the bottom-up approach to planning within the decentralized system. There is therefore a linkage between the top (Metropolitan Assembly and the grass root (unit councils).

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter defines the methodology of this study. Methodology offers a comprehensive basis to a study concerning how the study is conducted. This chapter explains the procedures used in the collection and presentation of data for the study. The main topics included in this chapter are research strategy, research design, population, sample size determination, questionnaire design, questionnaire content and data analysis.

3.1 Research design

The appropriate survey considered for this study was descriptive survey. According to Mugenda and Mugenda (2003) a descriptive survey attempts to collect data from members of a population in order to determine the current status of that population with respect to one or more variables. The major tools used in collecting data in descriptive survey design are the questionnaire, interview and observation. This descriptive survey will aid in collecting data to evaluate the factors of value for money in PPP infrastructure projects as well as identifying the challenges facing Kumasi Metropolitan Assembly in ensuring value for money in the infrastructure projects delivery and the measures put in place to ensure VFM.

3.2 Target population

According to Amin, (2005), Target population refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. The target population was of finance, social welfare and community development, works and physical planning in with

Kumasi Metropolitan Assembly. Kumasi Metropolitan Assembly is a public institution. Kumasi Metropolitan Assembly (KMA) was established by Local Government Establishment Instrument (L.I 1434, 1988) to manage the Kumasi metropolis. This L.I was over time amended to L.I 1614, 1995 and then L.I 1805, 2010. The Legislative Instrument 1614, 1995 defined the Metropolis to consist of the following Sub-Metropolitan District Councils; Bantama, Subin, Manhyia, Asokwa. Through L.I 1805, Oforikrom, Tafo-Pankrono, Nhyiaeso, Kwadaso, Suame, and Asawase were added bringing the number to ten.

3.3 Sample and sampling techniques

Orodho, (2002) described sampling as selecting a given number of subjects from a defined population as representative of that population. The selected sample represents the general the population. According to Sarantakos (2007), the accurate sample size in a research is of prime importance. Bryman and Bell (2007), posit that the ideal sample should be large number to serve as adequate representative of the population and small enough to be selected economically, that is in terms of subject availability. Purposive or judgmental sampling was used in selecting respondents within the Kumasi metropolitan Assembly. This gives accurate information on ensuring value for money in infrastructure projects within the Assembly. A sample of 200 respondents was selected within the KMA and its sub- metros. However, 167 (83.5%) out of the 200 respondents were acquired.

3.4 Data collection instrument

The tool for collecting of the data was questionnaire. Questionnaires are an inexpensive way to gather data from a potentially large number of respondents. Often they are the only feasible way to reach a number of respondents large enough to allow the researcher statistically analyze the

results of the study. A well-designed questionnaire that is used effectively can gather information on both the overall performance of the test system as well as information on specific components of the system.

3.5 Variables and measurement procedure

Questionnaire was administered to collect the primary data from the various respondents in order to get more information from them. The study implemented the survey questionnaire established by Cui et al. (2009) without any alterations. The basis for adopting the measure developed by Cui et al. (2009) is that the measures have received recognition by the noble institutions being academics and industry and moreover, a number of researches published in reputable journals used the same measure (Cheung et al., 2009; Ismail, 2013). The questionnaire contained 40 questions which consisted two sections: (1) respondents' socio-demographic characteristics; (2) questions designed to elicit respondents' opinions on the degree of awareness and importance of each VFM factors in PPP infrastructure projects and the degree of agreement to the challenges in achieving VFM. The degree of awareness was described by a five-point Likert-type scale (1 = highly unaware; 2 = unaware; 3 = neutral; 4 = aware; and 5 = highly aware) and the degree of importance was described by a five-point Likert-type scale (1 = extremely important; 2 = important; 3 = neutral; 4 = important; and 5 = extremely important) . Some the respondents were located in their offices while others were reached online.

3.6 Data collection procedure

Questionnaire was administered to collect the primary data from the various respondents in order to get more information from them. The design and contents of the questionnaire was constructed on the research questions and objectives. The questionnaire was overseen personally by the researchers.

3.7 Data processing and analysis.

Data obtained from the study was analyzed using percentages to analysed the personal information of the respondents. All other questions were grouped according to the issues raised in the research question. In this study the data that was gathered from the field of study was edited to ensure that the questionnaire had been properly completed and contained accurate information. The data was then coded and entered on the computer. The Statistical package for the Social Science (SPSS) was used for data coding, entry and analysis. The data analysis and presentation was done by using relevant descriptive statistics such mean score and standard deviation. Moreover, the Structural Equation Model (SEM) was used to establish the relationship among the factors of Value for money.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter labels the results and discussion of the questionnaire of the study concerning “evaluating value for money in public sector infrastructure projects”. This chapter focuses on describing the respondent's characteristics and answers given by the respondent in relation to the questions raised to answer the research questions.

4.1.0 Background information

This section presents background information on respondents such as the gender of respondent, age of respondent, level of educational qualification, and years of experience. Such analyses are vital because the background of the respondents helps to produce confidence in the reliability of data collected; and ultimately the results of the research.

4.1.1 Gender of respondent

Table 4 below depicts the gender distribution of the respondents. From the table, out of 167 participants, majority (n=112; 67.1%) of them were males and the remaining (n=55; 32.9%) were females. This shows male dominance in public sector in the country. This may be as a result of the primitive idea that females are supposed to care for house rather than to get employed hence most of the female feel reluctant work at the public service.

Table 4: Gender distribution

GENDER	FREQUENCY	PERCENTAGE	CUMULATIVE PERCENTAGE
Male	112	67.1	67.1
Female	55	32.9	100
Totals	167	100	

Source: Field Survey, 2022

4.1.2 Age of respondent

Table 5 below shows the age of the respondents, 22 out the 167 respondents representing 13.17% were between the ages 18 – 25 years while 35 out the 167 respondents also representing 20.96% were between the ages 26 - 33years. In addition, 61 out of 167 representing 36.53% were between the ages 34 - 41 years. Moreover, 38 out of 167 respondents representing 22.75% were between the ages of 42 – 49 years while 11 out of 167 representing 6.59% were also 50 years and above. The results on the respondents' age specified that out of the total sample of 167, majority of respondents were between the ages of 26 to 49 years(n=134) representing 80.24% of the total respondents.

Table 5: Ages of respondent

Ages	Frequency	Percentages	Cumulative percentages
18–25	22	13.17	13.17
26-33	35	20.96	34.13
34-41	61	36.53	70.66
42-49	38	22.75	93.41
50 and above	11	6.59	100
Total	167	100	

Source: Field Survey, 2022

4.1.3 Educational Level

To confirm the respondents' involvement in the PPP activities, they were asked to indicate their educational level for which in a way determines their position in the institution. Respondents' involvement PPP activities define the quality of their responses. A glance at table 5 below shows that 38 (24.84%) out of 167 respondents were are Diploma/Professional Certificate holders. In addition, 66 (43.14%) out of 167 respondents were Bachelor's degree holders while 49 (32.03%) out of 167 of the respondents were also Masters/Postgraduate degree holders. It can be concluded that most of the respondents have higher degrees; hence they are likely to be involved in PPP projects.

Table 6: Educational level

Educational level	Frequency	percentages	Cumulative percentages
Diploma/professional	31	18.56	18.56
Bachelor's degree	83	49.7	68.26
Masters/ postgraduate	53	31.74	100
Total	167	100	

Source: Field Survey, 2022

4.2.0 Analysis of the research objectives

4.2.1 Factors to ensuring value for money in PPP projects

In evaluating the factors that ensures value for money in PPP projects in Kumasi Metropolitan Assembly, respondents were interrogated about their awareness of the factors VFM. Table 7 indicates that respondents were highly aware that "Efficiency risk allocation (allocating the risk to the party best able to manage it) ensures VFM in PPP projects". It has the highest mean of 4.72 and standard deviation of 0.6507 and was ranked on top of the other factors. The

respondents also indicated that they were highly aware that Competitive tender ensures VFM in PPP projects. It had a means score of 4.67 with a standard deviation of 0.705 and also ranked 2nd among the factors. Result from table 7 also indicates that respondents were highly aware that Output-based specification ensures VFM in PPP projects (mean: 4.43; SD 0.764) and ranked in the 3rd position. Moreover, Optimal use of asset/facility and project efficiency ensures VFM in PPP projects was ranked 4th with a mean of 4.36 with standard deviation of 0.751. The respondents indicated high level of awareness of the other thirteen (13) factors. This result confirms the findings of Cheung et al. (2009) who investigated the measures that enhance VFM in PPP projects in Hong Kong. Their investigation revealed that the top five VFM measures ranked by the respondents from Hong Kong included (1) Efficient risk allocation (allocating the risk to the party best able to manage it); (2) Output based specification; (3) Competitive tender; (4) Private management skill; and (5) Private sector technical innovation. The difference between the findings of Cheung et al. (2009) and our study was ranked “Output based specification” 2nd followed by “Competitive tender”.

Table 7: Factors ensuring value for money (VFM) PPP projects

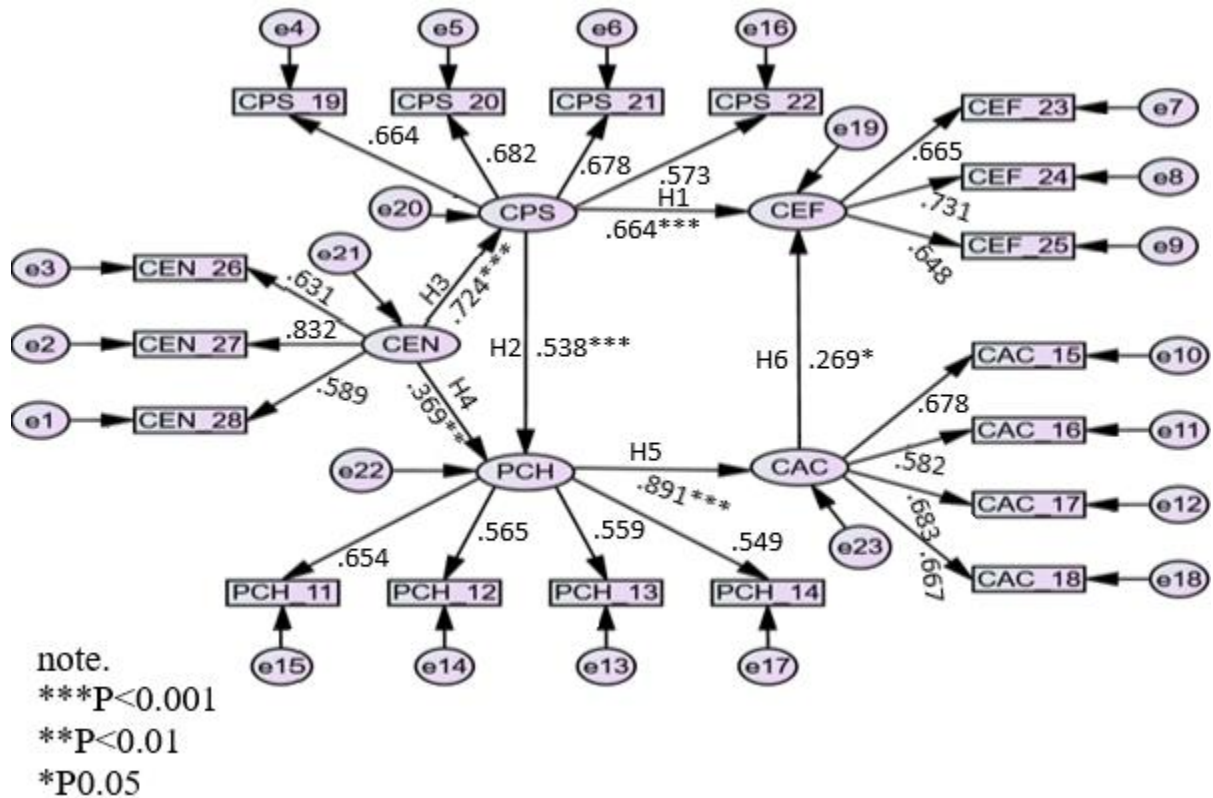
Measures	Mean	Rank	SD
Efficiency risk allocation (allocating the risk to the party best able to manage it) ensures VFM in PPP projects	4.72	1st	0.6507
Competitive tender ensures VFM in PPP projects	4.67	2nd	0.705
Output-based specification ensures VFM in PPP projects	4.43	3rd	0.764
Optimal use of asset/facility and project efficiency ensures VFM in PPP projects	4.36	4th	0.751
Private sector technical innovation ensures VFM in PPP projects	4.27	5th	0.806
Performance-based payment mechanism ensures VFM in PPP projects	4.25	6th	0.813
Product or service meeting users' demand ensures VFM in PPP projects	4.16	7th	0.842
Skills and expertise of the private sector ensures VFM in PPP projects	4.12	8th	0.738
Improve buildability and maintainability ensures VFM in PPP projects	3.76	9th	0.797
Stable macroeconomic condition ensures VFM in PPP projects	3.75	10th	0.840
Long-term nature of contracts ensures VFM in PPP projects	3.72	11th	0.835
Complementary advantages of public-private partnerships ensures VFM in PPP projects	3.68	12th	0.863
Nature of financial innovation VFM in PPP projects	3.64	13th	0.871
Service delivery on time or in advance ensures VFM in PPP projects	3.60	14th	0.812
Low project life cycle cost ensures VFM in PPP projects	3.56	15th	0.887
Environmental consideration ensures VFM in PPP projects	3.47	16th	0.921
Favorable legal framework ensures VFM in PPP projects	3.44	17th	0.920

Source: Field Survey, 2022

4.3 Relationship among VFM drivers

On the basis of the results of the SEM analysis, the six hypotheses are supported, and some relationships were determined.

Figure 3: Final Structural Equation Model with assessment of the standardized path and regression



From the figure 3 above, Cooperative Environment (CEN) has a direct and positive influence on Cooperation of Public and Private sectors (CPS) (path coefficient of 0.724) and Participants' Abilities and Characteristics (PCH) (path coefficient of 0.369), which indicates the significance of the cooperative environment on PPP projects. The results is consistent with the findings of Hayllar (2010) who posited that a good cooperative environment and corporate governance of a public–private partnership project can support a vibrant free market and help attract the private sector investment and participation required for PPP projects. Furthermore, a stable macroeconomic condition is identified as the most important item for Cooperative Environment (path coefficient of 0.832).

Furthermore, Cooperation of Public and Privates sectors (CPS) has a positive effect on Participants' Abilities and Characteristics (path coefficient of 0.538), which confirms the findings of Chowdhury (2011) that efficient cooperation between public and private sectors positively affect operational efficiency and innovative technological and management skills of both public and private players in public services.

Moreover, Cooperation of Public and Privates sectors also has a direct and positive effect on Cost and Effectiveness (path coefficient of 0.664). It is important to note that efficient risk allocation and the long-term nature of contracts, which are the top-two factor loadings (0.682 and 0.678) among the observed variables in CPS, realized a lower project life-cycle cost because both the public and private sectors pay more attention to long-term instead of short-term benefits (Xu et al. 2014).

Participants' Ability and Characteristic (PCH) positively affects Consumer Demand Achievement (CAC) (path coefficient of 0.891), which consistence with the findings of Al-Saadi and Abdou (2016) that skilled and experienced individuals contribute to accomplishing output specifications with sensible indicators and enhancing the quality of service provisions to achieve VFM and maintain effective public service output sustainability in PPP projects. Additionally, private sector technical innovation and transfer contributes the maximal factor loadings (0.654) among the observed variables in Participants' Ability and Characteristic. Furthermore, Participants' Ability and Characteristic is positively influenced by CPS (path coefficient of 0.538), indicating that the cooperation of public and private sectors contributes to improving participants' ability and characteristic in PPP projects.

Consumer Demand Achievement has a positive influence on Cost and Effectiveness (path coefficient of 0.269). Liu et al. (2015) opines that inadequate performance of a PPP project is not costless. Without meeting consumers' demand, there is not only a loss of competitive position far beyond the opportunity costs used for initiating the PPP but also an underachievement of synergistic gains and predetermined positive spillover effects. This finding supports the argument of Cheng et al. (2016) that selecting appropriate investors to meet users' demands can effectively reduce costs and improve efficiency.

Cost Effective is positively influenced by Cooperation of Public and Privates sectors (path coefficient of 0.664), and Consumer Demand Achievement (path coefficient of 0.891) is directly and positively affected by Participants' Ability and Characteristics and indirectly by Cooperative Environment. As an endogenous latent variable in the SEM model, Cost Effectiveness is not the only one of the most critical factors to achieving and enhancing VFM in PPP projects (Eadie et al. 2013) but also is influenced by other variables. In other words, while all of the other VFM drivers directly enhance VFM, they also affect VFM by influencing cost and effectiveness.

4.4 Challenges in Achieving Value for Money in Public Private Partnership Projects

Respondents were inquired to indicate the major challenges in achieving Value for Money (VFM) in PPP projects within KMA. The results are given in the table 8 below.

Table 8 Challenges facing KMA in achieving value for money in PPP infrastructure projects

Challenges to VFM	Mean	Ranking	SD
Lack of accountability and transparency in PPP projects within KMA	3.80	1st	0.886
Lack of appropriate bidding or incorrect utilization of the limited bidding process	3.76	2nd	0.836
Inadequate skilled personnel in the PPP projects activities	3.72	3rd	0.847
Lack of top management supports for VFM programme	3.65	4th	0.888
Inadequate measures for monitoring and evaluation of the PPP projects to ensure VFM	3.63	5th	0.878
Problem of non-compliance with the VFM objectives of the laid the regulations	3.59	6th	0.865
Multiple stakeholders with different and unclear expectations complicate the measurement of value for money	3.56	7th	0.780
“Ancestral space” and “Occupational Gifting”	3.55	8th	0.923
Land Ownership and Land Administration	3.54	9th	0.989
Politicization and Continuity of PPP Projects	3.52	10th	0.8

Source: Field Survey, 2022

From the table 8 above, the respondents agreed that items listed were indeed major challenges in achieving value for money in PPP projects. The Table 7 demonstrates that “Lack of accountability and transparency in PPP projects” with the mean of 3.80 and a standard deviation of 0.886 was ranked highest among the other items. It was followed by “Lack of appropriate bidding or incorrect utilization of the limited bidding process which scored a mean of 3.76 and a standard deviation of 0.836. The respondents also agreed that “Inadequate skilled personnel in the PPP projects activities” (Mean: 3.72, SD: 0.847) also is a major challenge to ensuring VFM in PPP projects.

This finding is consistent with the findings of Ademan (2014) who posited that Lack of accountability and transparency in PPP projects and inadequate skill personal executing PPP

projects were major challenge to ensuring VFM in PPP projects. Also Thai, (2004) indicated that maintained forms and procedures may be convenient and useful tools, but adding value for effort will succeed only with the complete commitment and involvement of top management, along with appropriate personnel.

4.5 Measures employed to ensure value for money in public private projects

Respondents were additionally asked to score the proposed measures Employed in achieving Value for Money (VFM) in PPP projects. The respondents' reports are given in the table 9 below.

Table 9: Measures to enhance value for money in public procurement

VFM Measures to enhance value for money	Mean	SD	Ranking
Pre-disclose the selection criteria to bidders and to forbid the private entity to change them once the process has started	3.86	0.823	1st
Criteria for the selection of private entity should be set and agreed by all the parties	3.78	0.764	2nd
Regular PPP projects audits and monitoring for compliance with activities in KMA	3.74	0.885	3rd
Strong or Consistent enforcement of the prevailing rules and regulations	3.72	0.856	4th
Mechanisms of enforcement should not become a barrier so as to make the system insufficient, bureaucratic and costly	3.68	0.773	5th
Punitive sanctions to procurement officials who fail to comply with the PPP project activities in KMA	3.65	0.867	6th
PPP contract document should be stated in simple language	3.59	0.982	7th

devoid of different interpretations requiring revisions and reviews			
Supplier/Contractor/Consultant who attempts to influence PPP process should be sanctioned and debarred from government of Ghana contract.	3.47	0.776	8th

Source: Field Survey, 2022

In looking for measures that would ensure value for money in PPP projects in KMA, the mean scores of eight items were measured and their rankings are presented in Table 8. The mean for all the variables which enhance value for money in PPP projects was greater than the average mean of 2.5, indicates the importance of these variables.

From table 9 above, “Pre-disclose the selection criteria to bidders and to forbid the private entity to change them once the process has started” with a mean value of 3.86 and a standard deviation of 0.823 was ranked highest among the other items. This was followed “Criteria for the selection of suppliers should be set and agreed by all the parties” (mean: 3.66; SD 0.775) which ranked second. “Regular PPP projects audits and monitoring for compliance with PPP projects guidelines in KMA” (Mean: 3.63; SD: 0.889) was also ranked 3rd. Other important measures to achieving value for money also followed their order of rankings.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.0 Introduction

After carefully analyzing the data in the previous chapter, the summary of the study, its conclusion and recommendations are made in this chapter.

5.1 Summary

This study concentrated on “evaluating value for money in public sector infrastructure projects: a case study of Kumasi Metropolitan Assembly. The objectives this research sought to achieve were;

1. To evaluate factors ensuring value for money in PPP infrastructure projects of Kumasi Metropolitan Assembly
2. To determine and verify the relationships among VFM drivers during PPP project implementation
3. To identify the challenges facing Kumasi Metropolitan Assembly in ensuring value for money in the PPP projects delivery
4. To examine the measures put in place to ensure value for money in the infrastructure projects delivery in Kumasi Metropolitan Assembly

Literature was review based the objectives of the research and assisted in discovery of factors that ensures value for money in PPP projects, the challenges facing Kumasi Metropolitan

Assembly in ensuring value for money in the PPP projects delivery and measures to put in place to ensure value for money in the infrastructure projects delivery in Kumasi Metropolitan Assembly.

The study adopted quantitative research approach where a questionnaire was employed to solicit primary data to answer the research questions. The population of the study consisted of Finance and accounts departments, social welfare and community development, works and physical planning in with Kumasi Metropolitan Assembly and sub metros. Judgmental or Purposive sampling technique was used to sample Two hundred (200) people of the population, of which 167 (83.5 %) responses were used in the analysis. The Statistical package for the Social Science (SPSS) was used for data coding, entry and analysis while structural equation model (SEM) was used to estimate the interrelationships among VFM drivers. The chapters four of the study analysed and discussed the results of the study. This chapter presents the findings of the study in relation to the laid out objectives of the study. Recommendations from the study are put forth.

5.2 Summary of key findings

The study was about evaluating value for money in public private partnership projects. Generally, the respondents agreed that the seventeen (18) factors identified as ensuring value for money in PPP projects were all relevant. The results also found that the top six VFM measures ranked by the respondents were (1) Efficiency risk allocation (allocating the risk to the party best able to manage it) (2) Competitive tender (3) Output-based specification (4) Optimal use of asset/facility and project efficiency ensures VFM in PPP projects (5) Private sector technical innovation (6) Performance-based payment mechanism.

The study also indicates that some VFM drivers are significant because they contribute in increasing value for money and also most importantly influence other VFM drivers. For example, CEN has direct and positive influences CPP while CPP also positively affects PAC. PAC on the other hand also affects CDA positively while CDA also positively influence CEF which also has positive impact from CEF.

Moreover, the result from the study revealed that “inadequate skilled personnel in the procurement sector”, “inadequate measures for monitoring and evaluation of the procurement policy to ensure VFM”, “problem of non-compliance with the VFM objectives of the institution” and “lack of top management supports for VFM programme” “Multiple stakeholders with different and unclear expectations”, “Ancestral Space” and “Occupational Gifting”, “Land Ownership and Land Administration” and “Politicization and Continuity of PPP Projects” were the major challenges to VFM achievement. Additionally, the results further revealed that all the proposed measures to ensure value for money in PPP projects were crucial in enhancing VFM in PPP projects.

5.3 Conclusion

The study has shown that the term ‘value for money’ seems abstract and subjective, and not every PPP projects official can be presumed to be implementing it given that there is a lack of understanding of what it means. A clearer definition of Value for Money is therefore required in order to facilitate its effective implementation in Public procurement.

Value for money is therefore not a choice of goods or services which is based on the lowest bid price but a choice based on the whole life costs of the project or service. Given the limited

resources available to government, ensuring VFM in procurement is key to ensuring the optimum utilization of scarce budgetary resources. VFM is the primary driver for procurement.

5.4 Recommendation

The following recommendations, if implemented, could help to ensure VFM in PPP projects in the country and make it an attractive developmental option in the light of the current government's policy of building one factory in every district through the private sector. The recommendations are:

- A keen attention should be given to the factor "Risk Allocation". Specifically, the evaluation committee of the PPP unit may need to assess each individual PPP project for the type and amount of risks to be transferred to the private sector. Appropriate risk allocation so that risks are assigned to the party best able to manage it and it is believed to reduce the problems encountered in a project. As a result VFM is enhanced due to fewer risks occurring in the project.
- Moreover, the existence of well-established or appropriate "Competitive tender" can create VFM. The more competition in the tendering process, the more the private sector will try to offer a better overall package for the public sector. In Ghana unfortunately there is limited competition between those companies that can handle PPP projects; hence the respondents felt that this VFM measure is relatively more important.
- A clearly defined output based specification enables the milestones and activities in a project to be much more predictable compared to one without hence the effect towards VFM is larger.

- Develop capacity for local assemblies on PPP contracting. Local assemblies should undergo training on PPP arrangements, typologies and VFM analysis in order to apply them in their day to day work.
- Local assemblies should allow communities that will benefit from PPP projects to participate in making decisions that relate to those projects
- There is the need for a PPP law or an Act of Parliament to safeguard indiscrete use of discretion by local authorities.
- There is the need for a proper land laws administration in Ghana in order to avoid the controversy that comes with land ownership and the payment of royalties.
- Explore alternative development approaches that still allow the public sector to work with the private sector in a more efficient and profitable manner for both parties.
- Explore and understand traditional and cultural belief systems in the informal economy and find ways to integrate or navigate around them in PPP arrangements.

5.5 Suggestions for further research

The study assessed factors to ensure value-for-money private partnership infrastructure projects.

- Future research may want to investigate the VFM factors for a particular PPP projects like water, sanitation, market or railway projects
- CEN, which can be controlled by government efforts, is a key causal factor, so CEN should be investigated to derive more practical recommendations to increase VFM in future studies
- Further studies may want to consider the perception of both the public sector and private sector on the importance of value for money drivers of PPP projects

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APPENDIX

QUESTIONNAIRE FOR RESPONDENTS

The purpose of this questionnaire is to gather data for “Evaluating Value for Money in Public Private Partnership Infrastructure Projects: A Case Study of Kumasi Metropolitan Assembly”.

Data collected would be used solely for academic purpose and respondents are assured of confidentiality of information provided.

SECTION A

BACKGROUND OF INFORMATION

1. **Gender:** Male [] Female []
2. **Age (Years):** 18 – 25 [] 26 – 33 [] 34 – 41 []
42 – 59 [] 50 and above []
3. **Education:** Diploma/Professional []
Bachelor’s Degree []
Masters/Post graduate []
4. **Years of Experience:** Less than 5 []
6 – 10 []
11 – 15 []
16 – 20 []
21 and above []

1 = highly disagree, 2 = disagree, 3= Neutral, 4 = agree, 5 = highly agree

Please tick (√)

SN	Factors ensuring value for money (VFM) PPP projects	1	2	3	4	5
1	Competitive tender ensures VFM in PPP projects					
2	Complementary advantages of public–private partnerships ensures VFM in PPP projects					
3	Efficiency risk allocation (allocating the risk to the party best able to manage it) ensures VFM in PPP projects					
4	Environmental consideration ensures VFM in PPP projects					
5	Favorable legal framework ensures VFM in PPP projects					
6	Improve buildability and maintainability ensures VFM in PPP projects					
7	Long-term nature of contracts ensures VFM in PPP projects					
8	Low project life cycle cost ensures VFM in PPP projects					
9	Nature of financial innovation ensures VFM in PPP projects					
10	Optimal use of asset/facility and project efficiency ensures VFM in PPP projects					
11	Output-based specification ensures VFM in PPP projects					
12	Perception and acceptance of stakeholders					
13	Performance-based payment mechanism ensures VFM in PPP projects					
14	Private sector technical innovation ensures VFM in PPP projects					
15	Product or service meeting users' demand ensures VFM in PPP projects					
16	Skills and expertise of the private sector ensures VFM in PPP projects					
17	Service delivery on time or in advance ensures VFM in PPP projects					
18	Stable macroeconomic condition ensures VFM in PPP projects					
1 = extremely unimportant, 2 = unimportant, 3= Neutral, 4 = important, 5 = extremely						

important					
VFM Measures to enhance value for money					
19	Pre-disclose the selection criteria to bidders and to forbid the private entity to change them once the process has started				
20	Criteria for the selection of private entity should be set and agreed by all the parties				
21	Regular PPP projects audits and monitoring for compliance with activities in KMA				
22	Strong or Consistent enforcement of the prevailing rules and regulations				
23	Mechanisms of enforcement should not become a barrier so as to make the system insufficient, bureaucratic and costly				
24	Punitive sanctions to procurement officials who fail to comply with the PPP project activities in KMA				
25	PPP contract document should be stated in simple language devoid of different interpretations requiring revisions and reviews				
26	Supplier/Contractor/Consultant who attempts to influence PPP process should be sanctioned and debarred from government of Ghana contract.				
1 = highly disagree, 2 = disagree, 3= Neutral, 4 = agree, 5 = highly agree					
Challenges facing KMA in achieving value for money in PPP infrastructure projects					
27	“Ancestral Space” and “Occupational Gifting”				
28	Lack of accountability and transparency in PPP projects within KMA				
29	Lack of appropriate bidding or incorrect utilization of the limited bidding process				
30	Lack of top management supports for VFM programme				
31	Land Ownership and Land Administration				

32	Inadequate measures for monitoring and evaluation of the PPP					
33	Inadequate skilled personnel in the PPP projects activities projects to ensure VFM					
34	Multiple stakeholders with different and unclear expectations complicate the measurement of value for money					
35	Politicization and Continuity of PPP Projects					
36	Problem of non-compliance with the VFM objectives of the laid the regulations					