

PUBLIC PRIVATE PARTNERSHIP MODEL FOR IMPLEMENTING PROJECTS  
IN NIGERIA

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Specially dedicated to my *Mother* and *Late Father*

For their roles in my life.

*Awanatu Amope and Isikilu Ajasa Sanni*

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## **ABSTRACT**

The delivery of public works and services through Public Private Partnerships (PPP) has witnessed different challenges in many developing countries. The implementation of PPP in Nigeria provides an opportunity for the government to address the inadequate public infrastructure and facilities, and to reduce government debt profile. This study aims at developing a new approach for effective implementation of PPP projects in Nigeria. The objectives are to identify PPP success factors and to develop an implementation model for effective PPP projects. The study was carried out using both interview and questionnaire survey instruments while the survey is the main research instrument. A total of one hundred and eighty-four (184) respondents provided useful responses and ten (10) interviews were conducted with the experts using semi-structured interview. The SPSS version 20.0 and content analysis were used to analyse both data collected. The results of the questionnaire survey show that the five most important factors for PPP project success are economic viability of the project, sound financial package, commitment and responsibility of public and private sectors, thorough and realistic cost and benefit assessment, and good governance. Then, the PPP model was developed in this study to address the roles and conduct of participants in the implementation of public projects under PPP procurement system. The approach incorporates rigorous planning and decision-making methods into the four implementation stages: project planning, project procurement, project construction and project operation. The model proposes the creation of Federal Project Audit Unit and that the power to approve PPP project should be given to National Planning Commission to reduce bureaucracy and political interference.

## ABSTRAK

Pelaksanaan kerja raya dan perkhidmat awam melalui Perkongsian Awam Swasta (PPP) menyaksikan cabaran yang berbeza di kebanyakan negara membangun. Pelaksanaan PPP di Nigeria memberi peluang kepada kerajaan untuk menangani kekurangan infrastruktur dan kemudahan awam serta menurunkan profil hutang kerajaan. Kajian ini bertujuan untuk membangunkan satu pendekatan baharu bagi pelaksanaan projek-projek PPP yang berkesan di Nigeria. Objektif kajian ini adalah untuk mengenal pasti faktor kejayaan PPP dan membangunkan model pelaksanaan projek PPP yang berkesan. Kajian ini dijalankan dengan menggunakan alat kaji selidik, iaitu temu bual dan soal selidik namun soal selidik merupakan alat penyelidikan utama. Sebanyak 184 orang responden memberikan maklum balas yang berguna dan 10 temu bual dijalankan dengan para pakar menggunakan temu bual separa berstruktur. SPSS versi 20.0 dan analisis kandungan digunakan untuk menganalisis kedua-dua data terkumpul. Dapatan tinjauan soal selidik menunjukkan lima faktor yang paling penting untuk kejayaan projek PPP adalah daya maju ekonomi projek, pakej kewangan yang kukuh, komitmen dan tanggungjawab sektor awam dan swasta, kos menyeluruh dan realistik dan penilaian manfaat, dan tadbir urus yang baik. Seterusnya, model PPP yang dibangunkan dalam kajian ini adalah untuk menangani peranan dan kelakuan peserta dalam pelaksanaan projek-projek awam di bawah sistem perolehan PPP. Pendekatan ini menggabungkan perancangan rapi dan kaedah pembuatan keputusan dalam empat peringkat pelaksanaan: perancangan projek, perolehan projek, pembinaan projek dan operasi projek. Model tersebut menyuarakan pembentukan Unit Audit Projek Persekutuan dan kuasa meluluskan projek PPP diberikan kepada Suruhanjaya Perancangan Negara bagi mengurangkan birokrasi dan campur tangan politik.

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## LIST OF ABBREVIATIONS

ADB	-	African Development Bank
ADF	-	African Development Fund
BASL	-	Bi-Courtney Aviation Services Limited
BLT	-	Build, Lease, Transfer
BMPIU	-	Budget Monitoring and Price Intelligent Unit
BO	-	Build and Operate
BOO	-	Build-Own-Operate
BOOT	-	Build-Own-Operate-Transfer
BOT	-	Build-Operate-Transfer
BOTT	-	Build-Operate-Train-Transfer
BPA	-	Best Practice Approach
BPP	-	Bureau of Public Procurement
BVCF	-	Best value contributing factor
CBN	-	Central Bank of Nigeria
CB4PPi	-	Capacity building for Public Private Partnership Implementation in Nigeria
CCPPP	-	Canadian Council of Public Private Partnership
CIB	-	Construction Industry Development Board
COAG	-	Council of Australian Government
CSF	-	Critical Success Factor
DBB	-	Design-Bid-Build
DBFO	-	Design-Build-Finance-Operate
DBO	-	Design-Build-Operate
EPF	-	Employee Provident Fund
EPU	-	Economic Planning Unit
FAAN	-	Federal Airports Authority of Nigeria

FPAU	-	Federal Project Audit Unit
GDP	-	Gross Domestic Product
HKSAG	-	Hong Kong Special Administrative Region Government
HSR	-	High Speed Rail
IA	-	Infrastructure Australia
ICRC	-	Infrastructure Concession Regulatory Commission
IPP	-	Independent Power Project
IWK	-	Indah Water Konsortium
KLCH	-	Kuala Lumpur City Hall
LCC	-	Lekki Concession Company
MDAs	-	Ministries, Departments and Agencies
MMA2	-	Murtala Muhammed Airport, Terminal 2
NAO	-	National Audit Office
NCPP	-	National Council on Public Procurement
NID	-	National Implementation Directorate
NIQS	-	Nigerian Institute of Quantity Surveyors
N4P	-	National Policy on Public Private Partnership
OM	-	Operation-Maintenance
JV	-	Joint Ventures
PFI	-	Private Finance Initiative
PPP	-	Public Private Partnership
RICS	-	Royal Institute of Chartered Surveyors
SPV	-	Special Purpose Vehicle
WDP	-	Water Desalination Plant
WPA	-	Water Purchase Agreement
VFM	-	Value for Money

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Background of the Study**

The Global Competitiveness Report 2012-2013 ranked Nigeria as 117th in the quality of overall infrastructure highlighted in the twelve pillars of competitiveness among 144 countries across the continents (World Economic Forum, 2012). This report shows that the government's investment in the provision of public infrastructures and other services in Nigeria contributed very little to the development of the public works and utilities. The provision of public works and facilities by the government has been largely through the traditional method of procurement. This traditional method of procurement has been the most common form of executing construction projects by the public sectors in Nigeria (Dada, 2013; Ojo et. al., 2006). The design-bid-build (DBB) contract is the most popular method of this traditional procurement system (Mohammed and Dahiru, 2012). However, the government is now beginning to explore the Public Private Partnership (PPP) procurement method where the private sector investors are given the opportunity to finance and deliver public projects. In this system, the client engages the private investor who will provide the fund and be responsible for the construction, maintenance and operation of the built facilities for the period of concession before returning the asset to the public sector client at the end of the concession period (Zhang, 2006).

Several authors (Li et al., 2005; Leiringer, 2006; Tieva and Junnonen, 2009; Tieva and Junnonen, 2009; Kwak et al., 2009; Syuhaida and Aminah, 2009; Awodele et al., 2010 and Gidado, 2010) had reported some of the benefits of the PPP that makes it attractive for delivering public projects. Leiringer (2006:307) concluded that the PPP as a procurement method is capable of providing “solutions that adhere to best practice and available knowledge and expertise”. While Tieva and Junnonen (2009) stated that the participation of private investors in PPP projects could bring about ‘innovations in services in a long-term perspective’. Also, Li et al. (2005) concluded that the public sectors believed that PPP procurement system could provide the avenue for the citizens to benefit with the increase in government capability and the delivery of projects with innovation, and time and cost reduction of projects during the implementation.

The increase in population, public awareness, and the coming up of elected governments across the sub-Saharan Africa countries resulted in the increase in demand for public services (Awodele et al., 2010 and Gidado, 2010). The provision of these services by governments, especially in the developing countries, has been very difficult due to the limited fund. The other factors such as lack of expertise in public sector and official corruption are part of the problems being faced by individual government in providing new infrastructure and maintaining the existing facilities (Awodele et al., 2010). In order to increase the development of modern infrastructure and to resuscitate the existing dilapidated facilities in Nigeria, the government started implementing the PPP procurement system for the execution of public projects (Awodele et al., 2010).

Recently, there has been increase in private sector participation in providing public assets and services across many countries through partnerships for the purpose of addressing the infrastructural deficit without financial commitment by the government (Syuhaida and Aminah, 2009). This method is adopted so that the limited available resources can be channeled to other sectors (Udechukwu, 2012). While the citizens are calling for improved public services, the public sectors are planning on the best approach to satisfy and meet up with their demand despite the

challenges of inadequate budgeting (Hartmann et al, 2010). However, since the commencement of PPP system for the procurement of public works, the expected increase in the number of projects delivered by the private sector through the system is at low ebb. Other countries that started the implementation of PPP within the same period had achieved more successes than Nigeria. The Vision 2020, Nigeria's blueprint for transformation, was designed:

to make Nigeria one of the 20 largest economies in the world, able to consolidate its leadership role in Africa and establish itself as a significant player in the global economic and political arena.

(African Development Fund, 2010:2)

The success of this Vision largely depends on the rate of development of infrastructure which would have multiplying effect on the economic growth and development. There is no doubt that the vision is being threatened by the lack of infrastructure across the country while the majority of the population have no access to basic public services. Therefore, the country needs to fast-track the development of the social and economic infrastructures so as to maintain its current growth rate and be able to cope with the increase in demand as a result of its population growth. With this goal in mind, Nigeria introduced PPP in 2003 as a new procurement method (Awodele et al., 2010) and the Infrastructure Concession Regulatory Commission Act (ICRC Act) of 2005 was enacted to regulate PPP procurement.

The board of the Infrastructure Concession Regulatory Commission (ICRC) which derives its power from the ICRC Act of 2005 was inaugurated in 2008 to provide legal and regulatory framework for the implementation of PPP in Nigeria. The main function of the Commission is to regulate, monitor and supervise the contracts entered into by the Ministries, Departments and Agencies (MDAs) with the private sector in financing, construction, operation and maintenance of infrastructure projects (Dahiru, 2012). After ten years of the commencement of PPP in Nigeria, very few projects have been completed through the BOT (build operate transfer)

while several others are at various stages of negotiation and construction (Nigeria PPP Review, 2012). This is short of expectation of the citizens who are in serious need of government interventions in social and economic infrastructures. The government is therefore being challenged to rehabilitate the existing infrastructures that are in deplorable situations and also provide new facilities that will meet up with the increasing demand due to population explosion.

Public Private Partnership (PPP) became a procurement option for delivery the public works in early 1980s in United Kingdom (UK) but it later got the legal backing in 1992 (Li et al., 2005). The UK government adopted private finance initiative (PFI) system which is a type of PPP and came up with new policy that provides guideline in promoting private sector's involvement in infrastructure and public services provision (Li et al., 2005). In Austria, there are still varied perceptions and definitions of PPP despite the fact that it has become part of their system in the provision of public facilities (Susilawati et al., 2009). The essential fixture of public private partnership is that the services requirements are defined by the client (public sector) while the private sector investor undertakes the design, building, financing and operation of the facility before handing over the asset at the end of concession period (Akintoye et al., 2001).

The private sector investor also referred to as Special Purpose Vehicle (SPV) company engages the professionals as well also entered into sub-contracts with other firms to undertake works for the construction, maintenance and managing the public asset for a specific period (Kwak et al., 2009). They assist the SPV company to discharge its obligation under the PPP contract agreement. The private sector is increasingly assuming the responsibility of providing public works and services which are the primary responsibilities and duties of governments. In most cases, this system is being used by the government to meet up with the current and future demands of the citizens due to the inadequate budgeting. The public sector decided to adopt this model of procurement so as to respond to the increasing demand for public infrastructures (Li et al., 2001). According to the report of Royal Institute of Chartered Surveyors (RICS), the procurement of public works and services through



public private partnership still remain comparatively low in percentage to the total public investments in infrastructure (RICS, 2013).

In Finland, PPP projects could be noticed in the provision of roads, schools, sport and waste water treatment facilities (Tieva and Junnonen, 2009). While the PFI which originated in England in 1992, has been implemented successfully in United Kingdom and many other countries like Japan, Italy, France, Germany, Australia and USA (Takim et al., 2009). The Malaysian government has advocated for the use of PPP models of Build, Operate and Transfer (BOT); Build and Operate (BO); and Build, Lease, Transfer (BLT) since 1983 but they were not utilized until 2006 through Ninth Malaysia Plan (2006-2010) under the National Privatization Plan (Takim et al., 2009). Germany also had completed 51 PPP projects as at 2007 and about 140 projects were in pipeline (Daube et al., 2008). However, the United Kingdom, Australia and Canada are the leading countries in the implementation of PPP projects in their respective countries (RICS, 2013). Therefore, the implementation of PPP in these countries had seen significant efficiency of PPP as a procurement method.

The 2005 National Audit Office (NAO) report claimed that 2.6 billion pounds a year was still being wasted because of the poor management of public sector construction projects in the United Kingdom (Cartlidge, 2011). Also, despite success recorded in Malaysia housing provision through PPP models, there were reports from few available sources that pointed to the poor outcomes of some the PPP projects (Abdul-Aziz, 2012). Some of the sub-Saharan Africa countries like South Africa, Botswana, Ethiopia, Zimbabwe, Guinea, Uganda, Cameroon and Niger had recognized that PPP could possibly be the better option in moving forward to addressing their infrastructural deficits. South Africa adopted a special PPP method in the water supply system which was known as a build-operate-train-transfer (BOTT) programme and there was no record that it had been implemented anywhere else (Li and Akintoye, 2003). As at 2011, South Africa had implemented about 75 projects using PPP method for providing public works and services at local and national levels. Also, others countries like Egypt, Zambia, Mauritius and Tanzania

had set up government institutions to promote the use of PPP in their respective countries (Minnie, 2011).

In 2003, Nigerian Federal government signed a concession agreement for the re-construction of second terminal of the Murtala Muhammed Airport (MMA2) Lagos (Awodele et al., 2010). Since then, many states had commenced the implementation of this method for the procurement of social and economic infrastructures in their respective jurisdictions (Udechuckwu, 2012). Therefore, the focus is to investigate how to improve this procurement system that involves the use of private sectors in the provision of public facilities.

## **1.2 Statement of the Problem**

The use of public private partnership as an alternative approach for the development and financing of public works and services has increased in the last couple of years (Li et al., 2005). Although, Nigeria is in the early stage of adopting PPP to address infrastructural deficit, the local participants still lack the technical capabilities to deliver public projects through PPP arrangements while some are still being reluctant to exploit this new method (Udechuckwu, 2012; Cheung, 2009). The experience of implementing PPP projects in early stages established ‘that there were gaps in knowledge and skills in the public sector’ (Cartlidge, 2006). The outcome of the implementation of PPP method for the procurement for public infrastructure in Nigeria has recorded a very low performance (Awodele et al., 2012).

The past researches (Awodele et al., 2012; Dahiru, 2012 and Ibem and Aduwo, 2012) have not addressed the roles and conducts of the individual participants in the PPP procurement process at every stage of the implementation. The existing framework does not address all aspects of PPP procurement systems and it does not make provision for complex projects (Dahiru, 2012; Ibem and

Aduwo, 2012; Nigeria PPP Review, 2012). Therefore there is need to critically study the entire PPP process further and to understand the interactions of individual participants in the conceptualization and implementation of the projects. In order to address this, the research is looking at developing a model to be adopted for use in Nigerian construction industry. This model shall incorporate the experiences gathered locally and internationally and fit in with the local factors. Presently, a systematically formulated approach does not exist in Nigeria and this practice will surely benefit the construction industry at large. By examining the present PPP projects, using qualitative and quantitative approaches and involving experienced stakeholders, then there would be better understanding of the implementation process for the PPP projects. With this understanding, the variables can better be isolated and develop framework for implementation of PPP projects in Nigeria. This will help the public and private sectors' participants to plan adequately to prevent poor outcomes of the PPP transactions and there would be value for money.

### **1.3 Research Aim and Objectives**

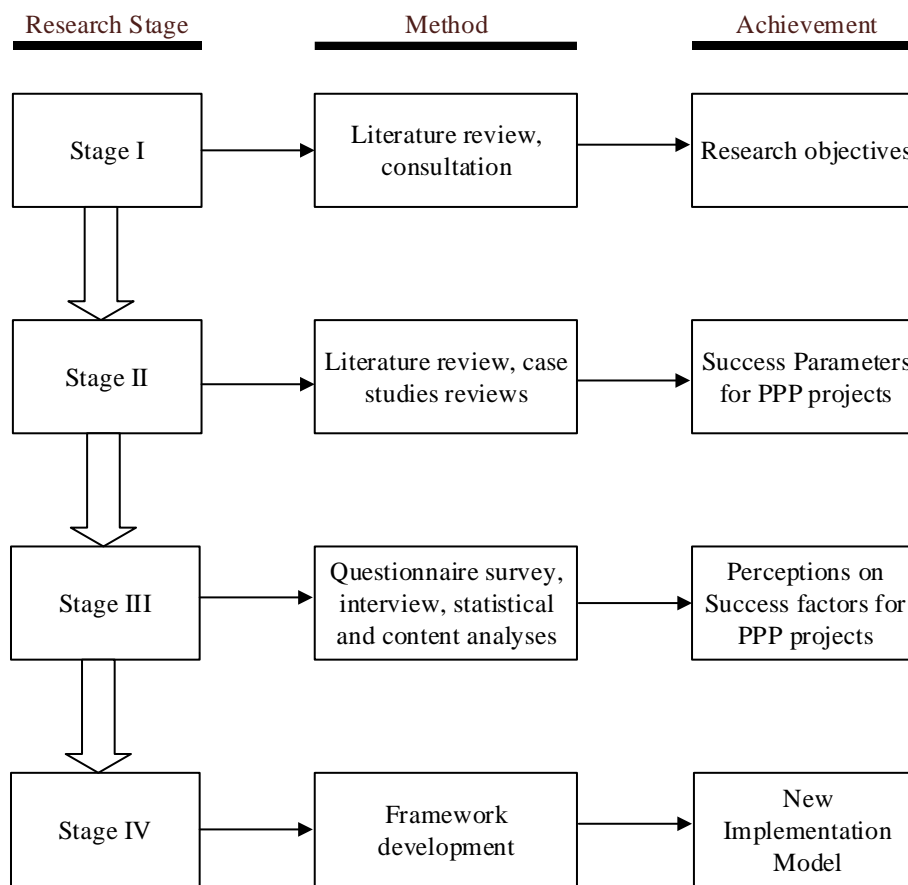
The main aim of this research is to develop a model for the effective delivery of infrastructure and other developmental projects using public private partnership (PPP) procurement system.

The following objectives have been adopted for the research in order to address the issues raised concerning the implementation of PPP procurement method:

- (i) To identify the success factors responsible for effective implementation of PPP projects.
- (ii) To develop a model for effective implementation of PPP projects in Nigeria.
- (iii) To validate the implementation model developed in objective (ii).

## **1.4 Research Method**

The overall research process was undertaken in what could be grouped under initial literature review, further literature review, empirical study and the final documentation of findings (Figure 1.1). The research method was divided into four stages and were used to achieve the objectives of the study. The initial literature review looked at the research problem, stating the research objectives and the background of the study. The next stage involved review of related past studies on the public procurement and public private partnership practice in construction industry. The empirical study involved the collection of research data through interview and questionnaire survey. Then the final part used the information gathered from the previous research stages to develop a new approach for the implementation of PPP projects in construction industry. Stage I produced the research aim and objectives. Then, the success parameters of PPP projects were achieved at stage II of the research while participants' perceptions of PPP success factors were achieved from the stage III of the research activities. Therefore, the new implementation model was produced with the activities carried out in the stage IV of the research process.



**Figure 1.1** Research Process (Source: Author)

## 1.5 Structure of thesis

Chapter One introduced the study by providing the background of the research area which centred on the public procurement and public private partnership system. It then followed by the statement the problem and the objectives of the study in achieving the aim of the research. It also presents the general overview of the research methodology.

Chapter Two is the first part of the literature review with focus on construction procurement and public private partnership practice. The general

concept of public procurement and other issues were reported. It comprises of studies on construction economy, public procurement practices, challenges of infrastructure provisions and its environmental factors. The second part of the literature review focuses on the background of PPP, attributes of PPP, value for money, regulatory body for PPP and risk strategy for PPP system.

Chapter Three presents the report of study on PPP practices from Nigeria and other countries and the experience learnt. The foundation for the development of model was laid in this chapter with the review of relevant studies on PPP implementation. The approaches of some developed countries were reviewed from previous studies for this study and reported in this chapter.

Chapter Four reports the research methodology, the design, methods of data collection and data analysis techniques. This chapter also discusses the details and profiles of the interviewees and respondents that participated in the interview and survey researches as well as the validation process.

Chapter Five presents the results of the content analysis from the interview research conducted, results from questionnaire survey data collected on the empirical study on the PPP implementation in Nigeria. The analysis centres on the information obtained from both the public and private sectors participants in the implementation of PPP projects. It also presents the data obtained from critical view of PPP and factors contributing to success of the system using mean raking technique and factor analysis.

Chapter Six presents the model for the implementation of PPP projects in Nigeria. This model is developed from the reports and empirical research results. It also includes the report of the validation of the proposed framework.

Chapter Seven is the summary of the research activity carried which includes what the study seeks to find out, how the study was carried out, and what the study has found out. Then, it ends with research limitations and the recommendations.

## **1.6 Chapter Summary**

This chapter introduces the study by providing the background of the research area on the public private partnership procurement system. It follows by the statement the problem and the objectives of the study in achieving the aim of the research. It also presents the general overview of the research methodology and the summary of the thesis structure.

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