ASSESSING THE EFFECTIVENESS OF PUBLIC PRIVATE PARTNERSHIP (PPP) PROCUREMENT MODEL FOR INFRASTRUCTURE DEVELOPMENT IN NIGERIA

BY

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DECLARATION

I declare that the work in this thesis entitled "Assessing the effectiveness of Public Private Partnership (PPP) procurement model for infrastructure development in Nigeria" has been carried out by me in the Department of Quantity Surveying. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at this or any other institution.

Buhari Nuhu Danraka	Signature	Date

CERTIFICATION

This thesis entitled "ASSESSING THE EFFECTIVENESS OF PUBLIC PRIVATE PARTNERSHIP (PPP) PROCUREMENT MODEL FOR INFRASTRUCTURE DEVELOPMENT IN NIGERIA" by Buhari Nuhu DANRAKA meets the regulations governing the award of the degree of Master of Science in Project Management of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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ABSTRACT

The study examined effectiveness of Public Private Partnership (PPP) procurement model in Nigeria, following the identification of the factors that measure the effectiveness of PPP procurement model in other countries from literature. A questionnaire survey approach was used to investigate the perception of Nigerian Construction Professionals (having some PPP experience) on their relative effectiveness. Means score values from the 114 survey respondents were used to rank the relative effectiveness and also determine the direction of movement on the PPP equilibrium framework. The independent T-test and Analysis of Variance (ANOVA) were used to test the differences in the Public Private respondent's perceptions as well as the various interest groups perceptions regarding the effectiveness of PPP procurement model in Nigeria. The results showed that the three most effective factors with regard to PPP procurement model were "established demand", "risk apportionment to proper party", and "user fees long-term management". While the least effective factors revealed by the study were "transparent and objective selection criteria", third party consultant involvement", acquisition and procurement addressed by legislation", Clear and objective conditions for renegotiation and positive environmental performance impact. These factors weakened the effectiveness of the PPP procurement model and cemented the location of the model on the equilibrium framework in the industry's interest quadrant. While the independent T-test and ANOVA test indicated significant difference in the perception of Public and Private Sector respondents as well as the various groups' perception response. Based on the findings from the study, it is recommended that stakeholders need to sensitize the populace on the relevance of venturing into PPP arrangement in infrastructure development especially at this time when government is financially handicapped as a result of competing demand coupled by scarce resources.

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ABBREVIATIONS AND DEFINITIONS

ANOVA	Analysis of Variance
BBC	British Broadcasting Cooperation
BBO	Buy-Build Operate
BDO	Build Develop and Operate
BOO	Build-own-operate
BOT	Build Operate and Transfer
BTO	Build-transfer-operate
DB	Design-Build
DBFO	Design, Build Finance and Operate
DBM	Design Build Maintain
DBO	Design Build Operate
DCMF	Design, Construct, Maintain and Finance
DF	Degree of Freedom
HM Treasury	Her Majesty Treasury
ICRC	Infrastructure Concession Regulatory Commission
LL	Lessons Learned
LLPS	Lessons learned Practices
MDA	Ministries, Departments, and Agencies
PPP	Public Private Partnership
PFI	Private Finance Initiative

SD	Standard Deviation
SPC	Special Purpose Company
SPSS	Statistical Package for Social Scientist
SPV	Special Purpose Vehicle
VFM	Value for money

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Public Private Partnerships (PPPs) have emerged over the last two decades as a popular strategy for infrastructure development by Governments Worldwide, primarily to meet ever-growing aspirations of its citizens (Garvin, 2009). Thus developed world are increasingly using various forms of PPP in the face of increasing limitation in capital resources (Ibrahim, 2007). National budgets derived from revenue and taxes are often insufficient to meet the huge investment required to build the much needed public infrastructure projects or renew the fast decaying ones (Ahadzi and Bowles, 2004). This indicates the need for an alternate source of finance to capital projects. As PPPs offer rapid and effective way of offsetting the capital cost of such projects and of meeting immediate infrastructural needs, it became imperative for Nigerian Government to embrace similar funding regimes (Akintoye, 2006). As a result, the application of PPPs in Nigeria is becoming increasingly popular for both new projects and for the operation and management of old facilities (Ibrahim *et al,* 2006). PPP involves partnership between the public and the private sectors for the purpose of delivering facilities and/or operation of service traditionally provided by the public sector. It involves the private sector partner in design, financing, construction, ownership and/or operation of public infrastructure. Blackwell (2004) maintained that the main aim of PPP/PFI (Private Finance Initiative) was to deliver public services of high quality which are more cost effective. Garvin (2009) defined PPP as a long-term contractual arrangement between the public and private

sector where mutual benefits are sought and where the private sector provides operating services and/or puts private finance at risk. PPP is a way of funding capital project without an immediate resort to public purse British Broadcasting Cooperation (BBC, 2011a).

If properly formulated and managed, PPP can provide a number of benefits to the public sectors such as: alleviating the financial burden on the public sector due to rising infrastructure development cost; allowing risk to be transferred from the public to the private sector; and increasing the "value for money" spent for the infrastructure services by providing more efficient, lower cost, and reliable services (Kwak, *et al* 2009). Efficient project delivery under PPP is however according to Dolol and Jin (2009) complex due to presence of uncertainty and risks affecting virtually all aspect of project life cycle; complex project composition and associated functional integration; complex network of relationship among various stakeholders; multi project operation and increased public participation.

The increasing complexity, duration and multitude of parties involved in a typical PPP procurement process have made several studies to be conducted on the PPP procurement process with a view to increasing its effectiveness such as; Chua *et al* (1999); Kee (2002); Zhang (2005); Li *et al* (2005); Xiong *et al* (2006); Ibrahim (2007); Cuttaree (2008); Alinaitwe *et al* (2012); have identified variety of success factors and ranked them in order of importance through survey of industry personnel and academics; Akintoye *et al* (2003) used interviews to determine how best to achieve success in PFI projects in the UK, Akintoye *et al* (2003) further identified and properly allocating risk, curtailing cost

escalation, improving project completion times, introducing innovation and reducing maintenance costs can help lead to successful project. Akintoye *et al* (2003) also identified several challenges to achieving best value such as the high cost of management, lengthy negotiation and complex contractual negotiations; Froud (2003) discussed the risks of PFI Projects and how the private sector must genuinely assume the risk given to it. Froud (2003) argued that value for money could only be achieved if private sector expertise, innovation, competitive efficiency and risk transfer can overcome the increased transaction contracting and negotiation costs; Ibrahim (2007) identified the public and private risks in PPP arrangement and suggested how best to allocate them.

Garvin (2009) looked at PPP procurement process from a different dimension; Garvin (2009) developed a PPP Equilibrium framework and divided the main stakeholders of PPP arrangement into four categories: the State, Society, the Market and Industry each with a corresponding quadrant. Garvin (2009), further defined the "State" as the elected or allotted body governing the jurisdiction in which the project or programme reside, "Society" as citizens living and working within the jurisdiction, The "Market" as the financial system which allows investors to exchange wealth and risk through time, lastly "Industry" as the various enterprises engaged in providing goods and services to the jurisdiction. The basis for the Quadrant Equilibrium framework relies on the proposition that in order for PPP Procurement process to be effective, it must balance the interests of the aforementioned parties.

This study is designed to adapt to Garvin's PPP equilibrium framework and its appraisal templates as a tool for assessing the effectiveness PPP procurement model in Nigeria; this will serve as contribution to development of knowledge and literary presentation in the study area and Nigeria at large. This study differs to Garvin's (2009) as it intends to apply the assessment tool to the Nigerian PPP environment.

1.2 STATEMENT OF THE PROBLEM

There are several debates as to whether PPP as a Procurement model is effective and produce projects that offer better value for money to the tax payer. Dixon *et al* (2005) maintained that to date a lot of project procured through PPP/PFI are subject to debate over its effectiveness though a number of projects have delivered better than the traditional procurement. While Edward and Shoal (2004) concludes that PPP/PFI brought cost and benefit with an unclear balance of advantage. According to BBC (2011b), Treasury select committee said that the scheme was no more efficient than other form of borrowing and it was deceptive that it shielded the tax payer from risk. BBC (2011a) maintained that some of the critiques argued that PPP/PFI scheme are inflexible expensive and do not offer value for money. On the other hand supporters of the PPP/PFI scheme believe it has provided much-needed rigour and efficiency to the building and maintenance of infrastructure and had delivered project which will have not been possible through the public purse (BBC, 2011a). It's disturbing that in spite the attention given to PPP by researchers since it was introduced in the construction industry and

efforts made by governments towards achieving more effective delivery of PPP projects, the projects continues to fail even in countries with long history of its application (Ibrahim *et al*, 2006). Many PPP Projects were held up, terminated or even failed to take up. In Nigeria, several PPP projects have failed at various stages thus questioning the effectiveness of PPP as a Procurement Model.

1.3 SIGNIFICANCE OF THE STUDY

Despite the concerted efforts by governments and scholars worldwide to improve projects delivery through PPP, many such projects continues to fail, courtesy of poor planning and implementation of the projects, weak policies and regulatory framework, bribe and corruption with regards to procurements of projects, poor monitoring and evaluation among others. Even in cases where the projects were successful, the reasons for the successes were according to Li *et al* (2005) not clear. As PPP is increasingly becoming a popular procurement model in Nigeria both at the Federal, State and Local government levels, the need for a study that will identify possible reasons for success and/or failure of such projects with a view to offering possible suggestions on how to promote the successes and prevent the failure has become desirable. This research

initiative will point out the directions that may be helpful or give a greater chance of success of the PPP as a procurement model for infrastructure development in Nigeria.

1.4 AIM AND OBJECTIVES

1.4.1 Aim

The aim of this study is to determine whether Public Private Partnership (PPP) procurement model is effective for infrastructure development in Nigeria.

1.4.2 Objectives

In order to achieve the aim of this research, the objectives are:

i. Identify appropriate measures for assessing effectiveness of Public Private Partnership (PPP) procurement model for infrastructure development;

ii. Assess the effectiveness of the identified measures for assessing effectiveness Public Private Partnership (PPP) procurement model for infrastructure development in Nigeria;

iii. Develop a Public Private Partnership (PPP) equilibrium framework for Nigeria's public private partnership (PPP) procurement model.

1.5 RESEARCH HYPOTHESIS

H_{01}: There is no significant difference between Public and Private respondents' perception regarding the effectiveness of Public Private Partnership (PPP) procurement model for infrastructure development.

H_{02}: There is no significant difference between the various interests groups perception regarding the effectiveness of Public Private Partnership (PPP) procurement model for infrastructure development.

1.6 SCOPE AND LIMITATIONS

1.6.1 Scope

This research is limited in coverage to Public Private Partnership (PPP) in Abuja and Lagos of Nigeria. This is because these areas have the highest concentration of Public Private Partnership projects in the country.

1.6.2 Limitations

Limited number of PPP projects and literature on the study area in Nigeria were some of the limitations that were encountered in the course of the study, time and financial factors were also among the limitations encountered.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 PUBLIC PRIVATE PARTNERSHIP

The world has in the last few years witnessed a dramatic increase in the involvement of private sector in the development and funding of public infrastructure (Saptre, 2006). Techniques often referred to as Public Private Partnership (PPPs) are continuously being developed to bring the public and private sectors together for procurement of public services and/or infrastructure with a view to sharing the benefits and risks associated with such partnership. The joint approach allows the public and private sector partners to blend their special skills and achieve an outcome which neither party could achieve alone (Akintoye *et al*, 2003). Lane and Gardener (2003) have stated that the primary objective of PPP is to facilitate the delivery of high quality public facilities and/or services by the private sector over a period of time at a cost that represents value for money whilst at the same time transferring an appropriate level of risk to the private sector.

Many academics, public agencies and international organizations have various definitions of PPP in a bid to explain this important method of project procurement that is being increasingly adopted worldwide. Her Majesty's Treasury (1998) has defined PPP as an arrangement between two or more entities that enables them to work cooperatively towards shared compatible objectives and in which there is some degree of shared

authority and responsibility, joint investment of shared resources, shared risk taking and mutual benefits.

The Canadian Council for PPP (2004) described PPP as an arrangement between the public and private sectors with clear agreement on shared objectives for the delivery of public infrastructure and/or public services by the private sector that would otherwise have been provided through traditional public sector procurement.

On the other hand, PPP Unit of Federal Ministry of Finance and Economic Development Abuja in its condensed version of PPP Guidance Manual (2006) defined it as a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public need through the appropriate allocation of resources, risks and rewards. Kwak *et al* (2009) gave a general definition of PPP as cooperative arrangement between the public and private sectors that involve the sharing of resources, risks, responsibilities, and rewards with others for the achievement of joint objectives.

Various types of PPP arrangements which vary in terms of the degree of private sector involvement have been used to procure projects depending on the project objectives and requirements (Kwak *et al* 2009). The arrangements can also differ in purpose, service scope, legal structure, risk sharing, finance sources and ownership of properties, Kwak *et*

*al (*2009) added. The United Nations Economic Commission for Europe (2002) has identified Design, Build Finance and Operate (DBFO), Build Operate and Transfer (BOT) and Design, Construct, Maintain and Finance (DCMF) as the PPP contract family. Kopp (1997) espoused the Build-transfer-operate (BTO), Build-operate-transfer (BOT), and Build-own-operate (BOO) as the three main models of PPP being used, also a range of other terms as suggested by David *et al,* (2003) are used to describe variations of BOT, PFI concession types of PPP being used worldwide as follows:

2.1.1 Build/Operate/Transfer (BOT)

The private partner builds a facility to the specifications agreed to by the public agency, operates the facility for a specified time period under a contract or franchise agreement with the agency, and then transfers the facility to the agency at the end of the specified period of time. In most cases, the private partner will also provide some, or all, of the financing for the facility, so the length of the contract or franchise must be sufficient to enable the private partner to realize a reasonable return on its investment through user charges (Kopp, 1997).

At the end of the franchise period, the public partner can assume operating responsibility for the facility, contract the operations to the original franchise holder, or award a new contract or franchise to a new private partner. The BTO model is similar to the BOT model except that the transfer to the public owner takes place at the time that construction is completed, rather than at the end of the franchise period.

2.1.2 Build-Own-Operate (BOO)

The contractor constructs and operates a facility without transferring ownership to the public sector. Legal title to the facility remains in the private sector, and there is no obligation for the public sector to purchase the facility or take title. A BOO transaction may qualify for tax-exempt status as a service contract if all Internal Revenue Code requirements are satisfied (Kopp, 1997).

2.1.3 Buy-Build Operate (BBO)

BBO is a form of asset sale that includes a rehabilitation or expansion of an existing facility. The government sells the asset to the private sector entity, which then makes the improvements necessary to operate the facility in a profitable manner (David *et al,* 2003).

2.1.4 Contract Services Operations and Maintenance

A public partner (Federal, State, or Local Government Agency or Authority) contracts with a private partner to provide and/or maintain a specific service. Under the private

operation and maintenance option, the public partner retains ownership and overall management of the public facility or system (David *et al,* 2003).

2.1.5 Operations, Maintenance and Management

A public partner (Federal, State, or Local Government agency or Authority) contracts with a private partner to operate, maintain, and manage a facility or system proving a service. Under this contract option, the public partner retains ownership of the public facility or system, but the private party may invest its own capital in the facility or system. Any private investment is carefully calculated in relation to its contributions to operational efficiencies and savings over the term of the contract (David *et al,* 2003). Generally, the longer the contract term, the greater the opportunity for increased private investment because there is more time available in which to recoup any investment and earn a reasonable return. Many local governments use this contractual partnership to provide wastewater treatment services.

2.1.6 Design-Build (DB)

A DB according to David *et al* (2003) is when the private partner provides both design and construction of a project to the public agency. This type of partnership can reduce time, save money, provide stronger guarantees and allocate additional project risk to the private sector. It also reduces conflict by having a single entity responsible to the public

owner for the design and construction. The public sector partner owns the assets and has the responsibility for the operation and maintenance.

2.1.7 Design Build Maintain (DBM)

A DBM is similar to a DB except the maintenance of the facility for some period of time becomes the responsibility of the private sector partner. The benefits are similar to the DB with maintenance risk being allocated to the private sector partner and the guarantee expanded to include maintenance (David *et al,* 2003). The public sector partner owns and operates the assets.

2.1.8 Design Build Operate (DBO)

A single contract is awarded for the design, construction, and operation of a capital improvement. Title to the facility remains with the public sector unless the project is a design/build/operate/transfer or design/build/own/operate project. The DBO method of contracting is contrary to the separated and sequential approach ordinarily used in the United States by both the public and private sectors (David *et al,* 2003). This method involves one contract for design with an architect or engineer, followed by a different contract with a builder for project construction, followed by the owner's taking over the project and operating it.

A simple design-build approach creates a single point of responsibility for design and construction and can speed project completion by facilitating the overlap of the design and construction phases of the project. On a public project, the operations phase is normally handled by the public sector under a separate operations and maintenance agreement. Combining all three passes into a DBO approach maintains the continuity of private sector involvement and can facilitate private-sector financing of public projects supported by user fees generated during the operations phase.

2.1.9 Developer Finance

According to David *et al* (2003) the private party finances the construction or expansion of a public facility in exchange for the right to build residential housing, commercial stores, and/or industrial facilities at the site. The private developer contributes capital and may operate the facility under the oversight of the government. The developer gains the right to use the facility and may receive future income from user fees. While developers may in rare cases build a facility, more typically they are charged a fee or required to purchase capacity in an existing facility. This payment is used to expand or upgrade the facility. Developer financing arrangements are often called capacity credits, impact fees, or extractions. Developer financing may be voluntary or involuntary depending on the specific local circumstances.

2.1.10 Enhanced Use Leasing

A EUL is an asset management program in the Department of Veterans Affairs (VA) that can include a variety of different leasing arrangements (e.g. lease/develop/operate, build/develop/operate). EULs enable the VA to long-term lease VA-controlled property to the private sector or other public entities for non-VA uses in return for receiving fair consideration (monetary or in-kind) that enhances VA's mission or programs.

2.1.11 Build Develop and Operate (BDO)

Under these partnerships arrangements, the private party leases or buys an existing facility from a public agency; invests its own capital to renovate, modernize, and/or expand the facility; and then operates it under a contract with the public agency (David *et al,* 2003).

2.1.12 Lease Purchase

A lease/purchase is an installment-purchase contract. Under this model, the private sector finances and builds a new facility, which it then leases to a public agency, the public agency makes scheduled lease payments to the private party and the public agency accrues equity in the facility with each payment (David *et al,* 2003). At the end of the lease term, the public agency owns the facility or purchases it at the cost of any remaining unpaid balance in the lease.

Under this arrangement, the facility may be operated by either the public agency or the private developer during the term of the lease. Lease/purchase arrangements have been used by the General Services Administration for building federal office buildings and by a number of states to build prisons and other correctional facilities.

2.1.13 Sale leaseback

This is a financial arrangement in which the owner of a facility sells it to another entity, and subsequently leases it back from the new owner. Both public and private entities may enter into sale/leaseback arrangements for variety of reasons. An innovative application of the sale/leaseback technique is the sale of a public facility to a public or private holding company for the purposes of limiting governmental liability under certain statues. Under this arrangement, the government that sold the facility leases it back and continues to operate it (David *et al,* 2003).

2.1.14 Tax exempt lease

A public partner finances capital assets or facilities by borrowing funds from a private investor or financial institution, and the private partner generally acquires title to the asset, but then transfers it to the public partner either at the beginning or end of the lease term (David *et al,* 2003). The portion of the lease payment used to pay interest on the capital investment is tax exempt under state and federal laws. Tax-exempt leases have

been used to finance a wide variety of capital assets, ranging from computers to telecommunication systems and municipal vehicle fleets.

2.1.15 Turnkey

A public agency contracts with a private investor/vendor to design and build a complete facility in accordance with specified performance standards and criteria agreed to between the agency and the vendor. The private developer commits to build the facility for a fixed price and absorbs the construction risk of meeting that price commitment (David *et al,* 2003). Generally, in a turnkey transaction, the private partners use fast-track construction techniques (such as design-build) and are not bound by traditional public sector procurement regulations. This combination often enables the private partner to complete the facility in significantly less time and for less cost than could be accomplished under traditional construction techniques. In a turnkey transaction, financing and ownership of the facility can rest with either the public or private partner. For example, the public agency might provide the financing, with the attendant costs and risks. Alternatively, the private party might provide the financing capital, generally in exchange for a long-term contract to operate the facility.

2.2 PPP PROCUREMENT METHOD

PPP arrangements are complex comprising many agreements between three different types of organizations namely, the public sector client, the private sector provider of the

required infrastructure and/or services and financiers/investors (Robinson *et al,* 2010). PPP transactions are often seen as a three way relationship between the public sector clients, the private sector provider of the service generally referred to as Special Purpose Vehicle (SPV) or Special Purpose Company (SPC) and the financiers/investors who provide funding for the project (Robinson *et al,* 2010). A single contract is usually entered between the public sector client and a private sector company (SPV/SPC) specifically established for each project. This company may be owned by a large construction company specializing in PPP projects or other organisations.

The public sector client perceives the need for the project and determines whether the project is suitable for financing on a PPP basis or not depending partly on the political and/or economic circumstances of the country (Saptre, 2006). Once the project is approved to be procured on PPP basis, it moves to advertisement, bidding, negotiations, selection of the best bidder, construction stages and finally to operational and/or service delivery phase (Akintoye *et al,* 2003). The contributions of the public sector client in PPP projects vary widely according to the circumstances of each project but they mostly fall within administrative, economic and political spheres.

The SPV/SPC on the other hand procures expertise for the design and construction of the project as well as the maintenance and operations of the completed project in addition to sourcing the funds required to execute the project from interested financiers/investors thus introducing the third organisation into the project (Robinson *et al,* 2010). The

financiers and investors provide the funds required to execute the project in anticipation of repayment plus interest and/or dividends in the case of shareholders to the project (Robinson *et al,* 2010). Since their returns are tied to the success of the project, the financiers and the investors may influence the design (to ensure that it meets the client's specification), maintenance and operation strategies (to avoid unduly value depreciation during the concession period). The success of a PPP project depends on the selection of the most suitable SPV/SPC which requires a well structured tendering process, an appropriate concessionaire evaluation method, and a set of evaluation criteria (Kwak, *et al*, 2009).

The complexity in contractual relationships between participants and the long concession periods have made PPPs distinct from a traditional infrastructure development routes due to broad range of uncertainties and risks associated with it; assumption of far more responsibilities and much more and deeper risks by the concessionaire than a traditional contract; much more complicated financial issues and difficulty in the allocation of risks and rewards among participants (Kwak *et al,* 2009). The complex nature of PPP project has according to Robinson *et al* (2010) made the use of appropriate management structure vital for their successful implementation. The management structure should reflect the diversity of teams and professionals involved, types of agreement and relationships between the different participants, they added. The scholars have observed that all sectors are sadly littered with PPP programmes and projects that failed completely or at least failed to deliver the intended benefit due to among other things inappropriate

project management structure, inefficient programmes and project that could not balance the interest of the various stakeholders involved.

2.3 ASSESSING PPP PROCUREMENTS EFFECTIVENESS

Public Private Partnership (PPP) came up in the last three decades as an alternative procurement route for infrastructure development. Governments across the globe embrace it as a procurement strategy for the provision of infrastructure due to non-availability of sufficient funds and increase demand for such vital services by the masses. According to Zarewa (2012), it involves the private sector partners in the design, financing, construction, ownership and/or operation of Public Infrastructure.

In a related development, Zarewa (2012) conducted a study titled "Evaluating Lessons learned Practices (LLPS) in Public Private Partnerships Projects in Nigeria. The study evaluated lessons Learned Practices in PPP projects in Nigeria through the use of semi-structured interviews with people from two client organizations and two concessionaires who have participated in 19 PPP projects and case studies of two PPP projects. The interviews have revealed that all the project participants considered LLPs in PPP projects as desirable and useful, the projects participants knowledge in LLPs needed to be improved, the conducts of LLPs was neither formalized or conducted in accordance with best practice or requirements of the LLP concept; there was no framework and/or standard template for the conduct of LLPs, none of the interviewees organizations has a knowledge management strategy for the capture, application and sharing of projects

knowledge; while the level of LLP application in the projects was discovered to be only12%. However, case studies of the two PPP projects conducted thereafter with a view to arriving at more conclusive findings have confirmed the first five findings of the interviews while the average level of application of LLPs per project was below 91%. The finding have further suggested that correct conduct of LLPs in the procurement of PPP projects in Nigeria can lead to a more successful delivery of such projects.

The purpose of lessons learned/exercised is to share and use knowledge derived from experience to promote the recurrence of undesirable outcomes (U.S.A, Health and Human Resource Department, 2006). The implementation of lessons learned Practices (LLP) within organizations are viewed as an important part of knowledge management (KM), having the potential to improve the outcomes of a project (Zarewa, 2012).

Various organizations and scholars have given different names to the LL concept. To Disterer (2002) some of the names they are often called are post project reviews, post-project appraisals, project post-mortem, debriefing, reuse planning, reflection, corporate feedback circle, experience factory, and many other such lessons learned concept, lessons learned system etc.

Lessons learned according to expert are one of the most powerful and cost-effective project management tools available today and are a principle component of an

organizational culture committed to knowledge management and continuous improvement. Lessons learned according to King (2008) will enable an organization to become more efficient and effective in executing projects from conception to completion. It is vehicle for improving individuals and organizational project competency and success.

2.3.1 Factors for Success/Failure of PPP

Public Private Partnerships is underpinned by a government's desire to resolve financial insufficiency by collaborating with the private sector partners to increase efficiency and effectiveness in the delivery of Public Services and facilities, whilst ensuring better risk control and management and increasing certainty of outcomes with ultimate aim of accelerating economic growth, development ad infrastructure delivery; and achieving quality service delivery and good governance.

Project success according to Ibrahim *et al,* (2006) differs to different people depending on their perspective. For instance, the private sector partners will determine their success in PPP arrangement with the amount of profit they were able to maximize after completing a particular project, and also the amount of satisfaction consumers derived and commendations they got for job well done. In contrast, the Public Partners/sectors will determine the success of their engagements through commendations they received and the level of acceptance and popularity the project so executed earned them from the

populace. The Public Partners can also look at the success of a project considering the comparative cost advantage between the traditional procurement and PPP arrangements.

The methodology used for determining success factors opined Ibrahim *et al,* (2006) in practice has been to follow a procedure that attempts to make explicit the key areas that are essential for management success. However, Rowlinson (1999) stated that critical success factors are those fundamental issues inherent in the project which must be maintained in order for team work to take place in an efficient and effective manner, and require day-to-day attention throughout the life the project.

However, Prefontaine *et al* (2000) identified critical success factors for the new collaborative models used for Public Service delivery, which they grouped along six dimensions related to: the projects macro, meso or micro environments, the partners involved, the collaboration process; the project development process; the governance methods used for organizing and managing the project, and the performance used for organizing and managing the project, and the performance level of the collaboration and the service delivery programme that operates. In a related development, Ibrahim *et al,* (2006) conducted a study to explore the success factors of Public-Private Partnerships in infrastructure projects in Nigeria. Following the identification of success factors of PPP applications in other countries from literature, a questionnaire survey approach was used to investigate the perception of Nigerian Construction Professionals (having some PPP experience) on their relative importance based on a six-point Likert rating scale ranging

from 0 “no importance” to 5 “very important”. Mean score values of response data from the 36 survey respondents was used to rank the relative importance and one-way analysis of variance (ANOVA) tests were carried to investigate the level of agreement between the various sub-groups among the respondents.

The results of their study, however, show that the three most important success factors of PPP projects in Nigeria are ‘favourable legal framework, well-organized Public Agency to negotiate on behalf of government and ‘strong private consortium’. Similarly, Dixon *et al* (2005) study in United Kingdom on success criteria revealed the following:

i. efficient and cost-effective procurement process (SPV);
ii. reaching a financial close (lawyers/financiers);
iii. a good quality covenant and certainty of income from end users (investors);
iv. delivery of project on time, to budget and to specification (awarding authority); and
v. Feedback from end-users (project sponsor).

It can be based on the above findings by Dixon *et al* (2005) that stakeholders in PPP arrangement have their varied and separate success factors regarding the contract.

2.3.2 Risk Management / Risk Allocation Preference

Countries across the globe are faced with increased demand for capital expenditure which is not backed-up by adequate resources to execute these projects. It is said that necessity

is the mother of creations. Hence, Countries are devising alternative route to fund these projects. Public Private Partnerships in the words of Ibrahim *et al,* (2006) "involves a risk-sharing contractual arrangement by which the Public ad Private sectors aggregate their competencies and resources in order to offer better infrastructure and Public services". It involves transferring appropriate level of risk to the sector based on agreed terms and conditions.

Risk is part and parcel of any business venture. Risk-taking is one of the essential features of any successful business enterprise. According to Ibrahim *et al,* (2006) risks are parameters which can affect any venture positively or negatively. The ability, approach, expertise and for sight exhibited by the entrepreneurs regarding the risk-taking, risk-management and preference determines to a very area extent the success and/or failure of such venture (Lafiagi, 2008).

In a related development, the identification, understanding and categorizations of these risk involved in PPP arrangement will provide an insight and a light direct and shape the actions and inactions of policy and decision-makers. In the light of the above, Ibrahim *et al,* (2006) identified two (2) types of risk after extensive over-view o related literature by many authorities who wrote in that area. The first according to them is according to the lifecycle phase that a risk occurs during the concession period; and the second is according to the source of origin of each risk.

Furthermore, Muhammad *et al,* (2012) conducted a survey to identify the preferred risk allocation in PPP projects in Nigeria. The results show that the Public Sector preferred to retain most political, legal and social risks; while the majority of micro-level risk and force majeure risks; while the majority of micro level risks were preferred to be allocated to the Private sector. The analysis of risk allocation preference among the respondents indicates that the Public sector was not most able to transfer the PPP risks to the Private sector. The study revealed that it is pertinent that the Private investors should take a more active role in managing the micro level risk. In the same vein, Ibrahim *et al,* (2006) examined the analysis and allocation of risks in Public Private Partnerships in infrastructure Projects in Nigeria. The study investigated the perception of Nigerian construction professionals on the relate importance of the identified risks and their preferences of allocation between the public and private sectors. The results show that the three most important PPP risk factors in Nigeria are unstable government, inadequate experience in PPP and availability of finance. Further still, the respondents risk allocation preference show that while most of the endogenous risk factors could be assigned to the Private sector partners, the Public Sector should retain political and site acquisition risks, while relationship-based risks should be shared between the Private and Public sector partners. The findings of the two studies share some similarities on risk allocation preferences. Therefore, when risks are apportioned appropriately among the stakeholders in PPP arrangement it will reduce unnecessary loss and ensures adequate and effective service delivery.

2.4 POLICY AND LEGISLATIONS ON PUBLIC PRIVATE PARTNERSHIP IN NIGERIA

Every successful Public Policy, Project and/or programme laid down rules and procedures guiding its effective implementation. Public-Private partnership infrastructure delivery according to Dahiru (2011) can produce harmful effects when it is poorly designed and executed. It is a major concern in infrastructure industries especially in Nigeria where the use of PPP project delivery system has become imperative where often the government does not have adequate finances to bridge the critical infrastructure gap and improve investment. Therefore, in Infrastructure Concession Regulatory Commission (ICRC) was established to regulate PPP in infrastructure arrangement in the country.

The Infrastructure Concession Regulatory Commission (ICRC) is the body responsible in regulating PPP infrastructure Projects development in Nigeria. It is a legal regulatory framework on PPP to provide the requisite regulatory within which all Ministries, Departments, and Agencies (MDAs) can effectively enter into partnership with Private sector in the financing, construction, operation and maintenance of infrastructure projects.

The regulatory framework of the ICRC is categorized into Macro and Micro Level frameworks of PPP arrangement in Nigeria (Dahiru, 2011). The macro level framework can be defined as the collective legislations, institutional, and policy framework that governs all PPP in the country.

The ICRC Act according to Dahiru (2011) provides legal provisions governing the establishment of the ICRC to regulate, monitor and supervise all PPP contracts in the country. In furtherance of the government effort to facilitate effective PPP arrangement in the country, the commission ahs subsequently developed the National Policy on PPP to provide clear and consistent process and procedure guides for PPP arrangement (i.e from project identification, evaluation, selection to procurement, operation, maintenance and performance monitoring). The policy is an elaboration of the Government's commitment and policy arrangement required for the development of PPP projects in Nigeria.

The individuals concerns of actual PPP project structures according to Zarewa (2012) make up the micro level consideration involving fair risk management and sharing of strategies, sound project evaluation methodology, and well designed contracts with enforcement mechanism. However, a number of important issues related to strict and uniform regulations of PPP concession agreement have been addressed especially 4(3), 6,10,12,13 and 36 of the legislation involving; consequences when PPP projects are abandoned before the end of the concession period; duration of private ownership and operation; project supervision, the right to use land, construction and operation services; key requirements for the construction, operation and maintenance of the project.

However, section 20 of the legislation, which provides the ICRC to take custody of every concession agreement and monitor the compliance with the terms and conditions of the agreement entered into by the government. The section failed to capture other issues

such as; environmental protection measures; provision of tariffs, fees, tolls and other charges during operation of the projects, transfer of technology; assurance of compliance by the project company; use of national services and goods; and minimum requirement for allocation of risks between the project company and the government. These according to UNCITRAL (2001), should be provided along side contractual obligations coupled with complex organizational structure.

2.5 MEASURES FOR ASSESSING THE EFFECTIVENESS OF PPP MODEL (PPP EQUILIBRIUM FRAMEWORK)

Garvin (2009) addressed the gap in the body of knowledge concerning an evaluation method for PPPs. The PPP Equilibrium Framework and its appraisal templates is a tool presented by Garvin in 2009 at the 25th Annual Conference of Association of Researchers in Construction Management in Nottingham. Garvin (2009) also divided the main stakeholders in PPP into four categories; the State, Society, the Market, and Industry, each with a corresponding quadrant.

The “State” refers to the elected or allotted body, whether it is Federal, State, or Local, governing the jurisdiction in which the project or program resides. This could be a state department or local agency. “Society” is characterized by the citizens living and working within the jurisdiction. “The market” is the financial system which allows investors to exchange wealth and risk through time. Lastly, “industry” encompasses the various

enterprises engaged in providing goods and services to the jurisdiction he added. The basis of this quadrant framework relies on the proposition that in order for PPP's to be successful, they must balance the interests of the aforementioned parties (Garvin 2009). Figure 2.1 shows the Equilibrium Framework.

The applicability of the of the PPP equilibrium Framework as shown in Figure 2.1 Is that the area has been gridded to ensure all movements are of equal distance. This not only allows for more consistent placement, but also guarantees projects are placed correctly with respect to each other. The continuum concept is still intact, as it is still clear that the further from the center, the more the project is in favor of the interest represented by the quadrant. The depiction in Figure 2.1, however, does take a particular stance; it advocates that the long-term success of a PPP programme depends heavily upon establishing a balance between the interests of the state, society, industry and the market. However, the central hypothesis is that programme's or projects must fall within the "range of balance". Otherwise, the programme or project will ultimately suffer from **bias** toward a particular quadrant. Garvin (2009) asserts that the directional measurements given are not as precise as some might hope. However, it would be very difficult to create a standard template to this level of detail that is applicable to all projects and programmes. The movements in each direction are not quantified because such a task may prove to be impossible, as the importance of each issue differs by project.

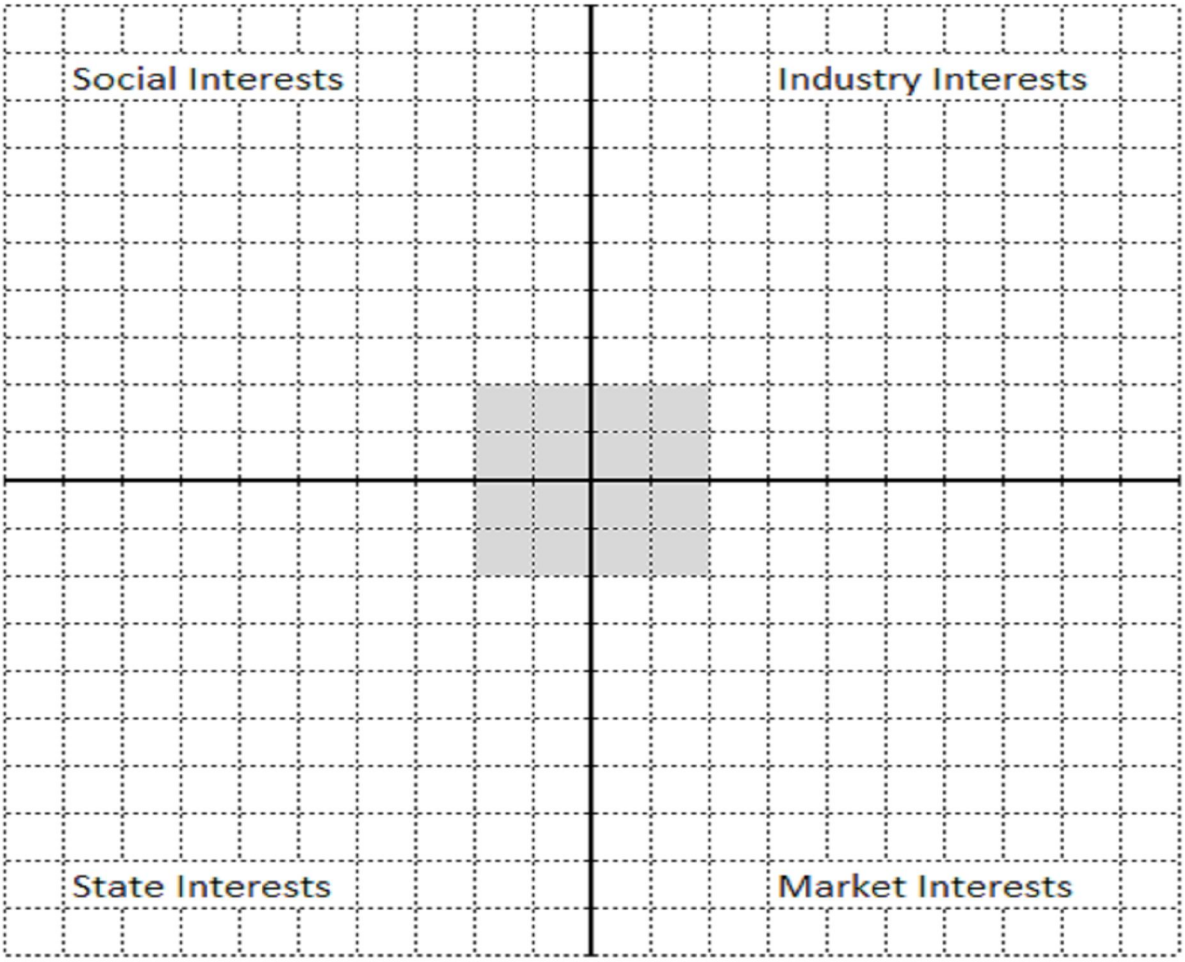


Figure 2.1: PPP Equilibrium Framework

Source: Garvin (2009)

2.6 MEASURES FOR ASSESSING THE EFFECTIVENESS OF PPP PROGRAMME AND PROJECTS (THE PPP PROGRAMME AND PROJECT APPRAISAL TEMPLATES)

With a firm understanding of the equilibrium framework and its usefulness in classifying projects, one can begin to place projects in the space. However, this requires a tool to

guide the placement of the project based on the most important aspects of the contractual agreement. To enable an analysis that is clear and reproducible, Garvin (2009) developed the Programme and Project Appraisal Templates. The appraisal templates provide the ability to identify the key aspects of the project and move the project or programme in the appropriate direction based on how it manages each factor.

2.6.1 Measures for Assessing the Effectiveness of PPP Programme

(PPP Programme Appraisal Template)

The PPP programme appraisal templates in Table 2.1 contains five key elements, each with their own set of specific issues, possibilities for each issue, and the direction that corresponds with each of the possibilities. The PPP Programme Appraisal Template identifies the following as the main element in PPP arrangement (Garvin, 2009).

2.6.1.1 Scope of Work or Services.

Garvin (2009) looked at scope of work or service from three different issues as follows

i. Garvin (2009) states that if the scope of work or service is addressed in the regulatory framework; the locus remains unmoved because this clarifies what the Public sector desires, while also giving the private sector insight into which type of project to develop. If the scope is not addressed, the programme moves to the right in favour of industry and market interest, because the private sector can choose to develop projects of any scope as they see fit.

ii. The second issue Garvin (2009) looked at is the source of definition, which states that if the legislation provides for solicited proposals only, the locus is unmoved. This is because the state determined the specific projects for development, which protects public interest while still allowing for a fair amount of opportunity to the private participants. However, if unsolicited proposals are allowed by the legislation, this clearly benefits the market interests since the market can produce any proposal that is believe can achieve the desired rate of return, moving directionally towards the lower right corner.

iii. Garvin (2009) stated that the presence of either geographical or project delivery restrictions moves the programme location toward the lower left since this clearly protects state interests, by ensuring one region does not receive all the projects, while other do not benefit from improved infrastructure. If no such restriction or limitation exists, No movement will be recorded on the framework.

2.6.1.2 Financing of the project

Garvin (2009) looked at financing from two angles as follows:

i. The question if financing is addressed by the legislation is important. Clarifying this in the legislation is desirable, leaving the locus unmoved. If not addressed, market interests have the freedom to come up with any financing structure, represented by a movement to the lower quadrant of the framework.

ii. If all sources of financing are allowed, the programme is unmoved because the option of using both public and private financing gives project more flexibility and can vary the risk taken by both the public and private sector. If only private sources are allowed, the movement is toward the lower right since market interest dictate if the revenue produced by the project is enough to fully support the financing.

2.6.1.3 Users fee

Garvin (2009) looked at user's fee from two angles as follows:

i. If the topic of User fees is addressed in the legislation, it provides all parties with an idea of what to expect and how to tailor the proposals to comply with the rules. This is beneficial to all parties and leads to a balance of interest, leaving the locus stationary, if user fees are not mentioned, members of industry and the market devise a plan to suit their needs possibly at the expense of the public. This favours the private sector and releases some control from the state, resulting in a right way movement.

ii. If the management of User fees is not addressed, the private sector is at an advantage, again moving the locus to the right, without escalation controls, the market and industry can rates as they please. The existence of escalation control protects the public interest, shielding society from unchecked toll increases and the state from a potential Public opinion crisis as rising tolls usually have a negative effect on the Public's view of PPP arrangement. Since escalation controls provide important services to all parties, the legislation remains unmoved.

2.6.1.4 Acquisition and procurement

Garvin (2009) looked at acquisition and procurement from the following angles:

i. If the acquisition and procurement process is addressed by the legislation, the locus remains unmoved. The State has most likely produced guidelines, which benefit the public sector in terms of transparency and reproducibility, while also given the private sector participants information on how proposals will be evaluated. If not addressed, industry interest are served since they have more latitude to propose project in a manner that they see fit and the state may enter agreements without a rigorous evaluation process.

ii. Literature and government documents agree that a comparative analysis of proposals is critical to the procurement process. If the process is required and defined in the legislation, all parties benefit from the knowledge of the process and transparency of results, leaving the locus unmoved. If a comparative analysis is not addressed in the legislation, the private sector benefits from the fact that the public may not have idea if they are achieving best value for money or competitive project. This situation is undesirable from a public stand point, shifting the programme to the right. Conversely, if a comparative analysis is required, the public gains a better idea of the project and its benefit, resulting in a leftward movement.

iii. If the source selection method is undisclosed or negotiated, the locus moves toward the industry interest quadrant. Any type of negotiation usually benefits the industry, because they are ultimately providing the state with an asset it would not otherwise be

able to produce. Similarly, an undisclosed method gives the industry a chance to be awarded the project without a rigorous and defined process, which is beneficial to industry and a movement away from state interests. If the source selection method is addressed and competitive in nature, the locus stays in the centre. The public benefits from ensuring a competition, which usually lowers costs and improves the quality of proposals, while the industry is not necessarily put at disadvantage by this requirement.

iv. If permitting and property acquisition activities are handled by the state agency, the locus remains unmoved, state and local agencies possess more expertise and resources to obtain permits and property, therefore improving the chances of project success. The private sector is less skilled in these activities. If left to the private sector, the project moves in the opposite direction of private interests, toward the state. This is because the state has less responsibility while the private sector is burdened with the tasks of permitting and property acquisition. Legislation that is silent on the topic benefits the state, as it can choose to aid the process if it desires, or leave the responsibility to the private parties involved.

v. If the programme specifically mentions the procurement and use of third parties consultants to provide resources and advise to the state agency, all party benefit the state gains expertise and added manpower, while the private proposes receive an unbiased third party evaluation.

2.6.1.5 Contract management

Contract management according to Garvin (2009) is the final category in the legislation Appraisal template, contract management governs how the various parties will interact throughout the course of the long-term agreement; therefore it is a desirable aspect of the legislation from the perspective of all stakeholders.

Garvin (2009) considered contract management from the following perspective:

i. If the contract management is addressed by the legislation, the programme remains unmoved on the framework. If omitted, the industry benefits because the state loses some control. In most cases, industry is usually more able to make the rules as the concession goes on, resulting in a movement to the upper right.

ii. A process by which to audit the private participants to ensure compliance is very desirable from a public perspective and is not harmful to the concessionaire Garvin (2009) added. If this process is disclosed and adequately defined in the agreement, the locus stays central, if no process is mentioned or disclosed in the agreement, the public is conceding more leverage and flexibility to the public sector, causing a rightward movement, if auditing is mentioned but undefined, the state has protected its right. At the same, the industry has no guidelines as to what type of auditing to expect, therefore causing the locus to travel towards states interest.

iii. The final issue evaluated in the legislation template is the existence of termination rights. If the public fails to include termination rights in the legislation, this clearly leaves

them without leverage to terminate the operator, benefitting industry, as evidence, in a movement toward the upper tights. Unlimited termination rights maintain the state's control over the project, but provide industry with no assurance that the state will not step in at any time, whether they are performing well or not. Clearly unlimited termination rights moves the programme towards state interests. If termination rights are reasonable and for defined causes the locus is unmoved because the public and private right is protected.

Table 2.1 PPP Programme Appraisal Template

PPP Programme Appraisal Template							
Element	**Issue**		**Impact**	**Element**	**Issue**		**Impact**
Scope of work or service	Addressed by Legislation?	Yes	--		Addressed by legislation?	Yes	--
		No				No	
	Source of Definition	Solicited only	--				
		Unsolicited Allowed					
	Limitations	Mode Restrictions			Comparative	Not addressed	
		Geographic Restriction				Required	
						Required & process defined	
		Project Delivery restrictions			Selection method	Undisclosed	
		No such restrictions	--			Competitive	--
						Negotiated	
Financing	Addressed by Legislation?	Yes	--	**Acquisition & procurement**	Permitting & Property Acquisition	Handled by state	--
		No				Handled by private sector	
						Not addressed	

The only change to the Financial element in the question if it is addressed by the legislation.

Source: Garvin (2009) Are Public-Private Partnerships Effective Infrastructure Development Strategies?

Legend: —No movement from origin Toward industry/market interests

← Toward Social/State Interests
↖ Toward social interests
↙ Toward State Interests
↘ Toward market interests
↗ Toward industry interests

2.6.2 Measures for Assessing the Effectiveness of PPP Projects

(PPP Project Appraisal Template)

According to Garvin (2009), the project appraisal templates in Table 2.2 also contains five key elements, each with their own set of specific issues, possibilities for each issue, and the direction that corresponds with each of the possibilities. The PPP Project Appraisal Template identifies the following as the main element in PPP arrangement.

2.6.2.1 Market Conditions

The first category in the Project Appraisal Template as identified by Garvin (2009) concerns the Market Conditions surrounding the project:

i. If there is established demand in the market condition, the locus remains unmoved because all parties benefit. Market and industry interest are insured adequate volume, while the society and the state gain infrastructure in an area with a clear need. If there is no established demand, the project move towards market interests in the lower right, as the market will decide if the project is successful.

ii. Global risk, exists in all projects, however if they are manageable the locus does not moves, if not the locus moves toward the right as the private parties must take on the responsibility of mitigating them.

iii. Project location is also an important consideration, if the project is in the developed world, it is likely that similar projects exist and all parties are usually capable and knowledgeable, keeping the locus centered. However, the conditions in developing countries usually include a large potential for growth and government that may not be as sophisticated, benefitting, industry and that markets interests. In the case of a developing country, the project moves to the right.

2.6.2.2 Socio-Environmental Conditions

The next category in the Projects Appraisal Template as identified by Garvin (2009) are:

i. Ideally, the demographic impact of the project is diverse. If the project severely impacts a specific subset of people, societal and state interests are likely to be against the project. Therefore, a diverse demographic impact does not move the locus, while a distinct impact pushes the project rightward, away from the public half of the framework.

ii. User fees section concerns the rate charged. If the rate is reasonable and reflects cost of service, the project remains balanced. If the toll rate is unusually high, this favours the private sector, as industry and the market are likely to make more money. High tolls can also be thought of as a movement away from the public interests.

iii. User fees long-term management plan for toll increase is important in PPP. Clearly, a pre arranged and plan benefits all parties and maintain equilibrium without such guidelines, the concessionaire is at an advantage, as they can raise tolls as they please. Therefore the arrow for “No long-term plan” points towards industry interests.

iv. Public and political support: Many felt that government properties are sold to the private at unreasonable cost. This has a close relationship with the development, implementation and sustainability of any public policy (Ibrahim *et al*, 2006). This will lead to a movement on the framework towards the society interest.

2.6.2.3 Acquisition and procurement

The Garvin (2009) Project Appraisal Template moves on to evaluate the acquisition and procurement considerations of the project as thus:

i. Financial and technical benchmarking is a practice that ensures the project is a value for the public, while pushing the industry to develop a solid project. This practice does not move the project location; however, the absence of a financial and technical benchmark promotes industry interests and fails to protect state interests, quantified by a move towards the upper right. For these same reasons, a lack of competition for the project also moves the locus towards the upper right.

ii. Lack of competition of comparable scope for project moves the locus towards the upper right. Without competition the state cannot be sure it is getting best value, while

the industry is content to make the proposal without competition, increasing its chances of getting the project and gaining a better return.

iii. If competition exists and the projects are evaluated based on price and or schedule, the project remain in balance and no movement occurs.

iv. Transparent and objective selection method maintains project balance, discretionary and unclear selection criteria or process give the state more control to develop project they want, without a clear and repeatable process. This is negative from the perspective of the sector and gives more influence to the state as shown by the arrow pointing toward state interests. Although the arrow points toward the state, it is usually in the state's best interest to have a transparent process, which gives the public piece of mind and provides industry with a fair assessment.

v. The guidance and expertise of third party consultants is an important asset for state authorities that may not have extensive experience with public private partnerships. Therefore, all parties benefit from engaging a consultant with proficiency in such project. Without such expertise, the project moves toward industry, who in most cases is at an advantage over state agency.

2.6.2.4 Contract Management

Contract Management is critical to a successful Public Private Partnership arrangement and therefore this category contains more issues than the others. Many articles on PPP

projects rate the allocation of risk as one of the most important factors to success (Aziz 2007, Chua *et al*, 1999, froud 2003, Zhang 2005).

Garvin (2009) viewed Contract Management as follows:

i. Projects that assign the various risks to the property party maintain the range of balance. If risk is unnecessarily transferred to the private sector, this moves the location of the project toward state interests in the lower left quadrant. Although the arrow moves in favour of the State, this could adversely affect the project over the long-term. An unsuccessful project is not beneficial to any of the four parties. Therefore, agreement should be careful to assign risk to the party with the ability to best handle the particular risk.

ii. No-compete provisions have been very damaging to the public in some projects, if this type of provision is both allowed and absolute, it pushes toward market interests. If allowed, but reasonable and with exclusions, the overall balance of the program is maintained, and no movement is necessary.

iii. Clear and objective performance measurements protect the public from poor maintenance and availability while also setting clear standards for the operator, which results in no movement. An absence of performance measurement benefits industry, as the operator can maintain and operate the project as it sees fit, leaving the state powerless and moving the locus toward the upper right. Vague or poorly addressed performance measurement guidelines are not ideal, but do attempt to protect state interests, therefore moving the program towards the lower left.

iv. The issue of termination provision follows the same directions for the same reasons as above. Clear and objective, absent and vague move the locus toward no movement, industry interests, and the state interests, respectively for all the same rationale discussed above.

v. The issue of facility returns provisions follows the same directions for the same reasons as above. Clear and objective, absent and vague move the locus toward no movement, industry interests, and the state interests, respectively for all the same rationale discussed above.

2.6.2.5 Project Performance

The project performance section differs from the others in that the issues do not necessarily move the program locus on one direction or another, however these issues and conditions are critical to determining if the project is successful or unsuccessful. Therefore, the resulting recommendations are either Positive because they increase the chance of success or negative because they decrease the chances of success (Garvin, 2009).

Garvin (2009) considered the Performance of PPP Project as follows:

i. If the project is clearly of high quality and contains innovative aspects, this is a positive attribute, and signals a successful project, that is innovation and quality should be readily

apparent, producing a positive rating. A project of average or marginal innovation and quality is considered negative rating.

ii. Similarly, the price performance of the project should be superior to that of segmented delivery system and readily apparent, result in a positive score. If the project fails to meet this criterion, it is negative sign of project success.

iii. The Service Availability issue includes the development time for a particular project. A facility that moves rapidly through the development process and remains available once opened receives a Positive which slow or delayed availability negative.

iv. Environmental performance is an importance factor facing projects. If the project provides a positive impact to the environment, it receives a positive rating, while a facility that does not benefit the environment scores a negative.

Table 2.2 PPP Project Appraisal Template

PPP Project Appraisal Template							
Element	**Issue**		**Impact**	**Element**	**Issue**		**Impact**
Market Conditions	Established Demand	Yes	--	**Contract Management**	Risk apportionment	Assigned to proper party	--
		No				Transferred	
	Competing Facilities	Yes					
		No					
	Manageable Global Risks	Yes	--		No-compete Provisions	Exist and Stringent	
		No				Non-existent or reasonable	-- 
	Project Location	Developed World	--		Performance Measurement	Clear and objective	
		Developing World				Absent	
						Vague	
Socio Environmental Conditions	Project Type	Greenfield	--		Conditions for renegotiation	Clear and objective	--
		Brownfield				Absent	
						Vague	
	Project Scale	Large (> $1 Billion)			Termination Provisions	Clear and objective	--
		Medium ($10M - $1B)				Absent	
						Vague	
		Small (<$10 Million)			Facility Return Provisions	Clear and objective	--
	Demographic	Diverse	--			Absent	

	Impact	Distinct					
	User Fees	Reflect cost of Service	--				
		Unusually high					
		Long-term management plan	--			Vague	
		No long-term plan					
	Public and Political Support	Positive Support	--				
		Opposition					
Acquisition and Procurement	Financial and Technical Benchmark	Yes	--	**Project Performance**	Quality and Innovation	Readily apparent	Positive
						Marginal	--
						Non-existent	Negative
		No			Price	Readily apparent	Positive
						Difficult to judge	Negative
					Service availability	Rapid and continued availability	Positive
						Slow or delayed availability	Negative
	Competition	No			Environmental Performance	Positive Impact	Positive
		Of comparable Scope	--			Does not benefit environment	Negative
		Based on Price, Technical or schedule	--				
		Factors other than Price					
	Selection Criteria and Process	Transparent and objective	--				
		Discretionary or unclear					
	Third Party Consultant Involvement	Yes	--				
		No					

Source: Garvin (2009) *Are Public-Private Partnerships Effective Infrastructure Development Strategies?*

Legend: —No movement from origin —→Toward industry/market interests

←— Toward Social/State Interests ↖ Toward social interests

↙ Toward State Interests ↘ Toward market interests

↗ Toward industry interests

2.7 REASONS FOR USING PPP AS A PROCUREMENT MODEL

Public Private Partnership (PPPs) is a welcome development especially in Nigeria where there is insufficient funds to execute much required public goods courtesy of mis-management; mis-application, and mis-appropriation of public funds plus including corruption in the public sector and the mono-economic nature of the Nigeria's economy which makes it vulnerable to various internal and external forces. Therefore a well-organized and adhered public private partnership will provide Nigeria will adequate finance to execute effective and efficient public goods, reduced corruption and embezzlement of public funds, create room for competition among the private sector and developed the country-socially and economically.

However, Blaiklock (2003) offered the following reasons for using public private partnerships:

i. To remove the responsibility for funding the investments form the government's balance sheet;
ii. To relive short-term pressure on public finance;
iii. To introduce competition, and thereby ensure that the public sector receives best value for money (VFM);
iv. To take advantage of managerial practices and experience of the private sector;
v. To provide opportunity for innovation in the provision of public services;
vi. To introduce new technologies and encourage technology transfer, and

vii. To restructure public sector service enterprises by embracing private sector capital and practices.

In addition, the public private partnerships procurement allows government and the private sector to learn from other and crate synergistic effects for both parties (*Ibrahim et al*, 2006).

The positive features that influence the attractiveness of public private partnership in the delivery of public facilities and services identified by Li *et al* (2005) are summarized below:

i. Transfers risk to the private partners;

ii. Limit the final service cost

iii. Reduces public sector administration cost;

iv. Reduces public money tied up in capital investment;

v. Solves the problem of public sector budget restraint (Akintoye et al, 2003);

vi. Non-recourse or limited recourse to public funding;

vii. Reduces the total project cost;

viii. Improves build ability

ix. Accelerates project development;

x. Saves time in delivering the project;

xi. Improves maintainability;

xii. Benefits local economic development (HM Treasury, 2000)'

xiii. Transfers technology to local enterprises;

xiv. Facilitates creative and innovation approaches (Birnie, 1999); and

xv. Enhances government integrated solution capacity (Sohail, 2000).

It can be seen above that the benefits of PPPs are enormous and honest political commitment will enable Nigerians to ripe the fruits of this initiative for the betterment of the country and its citizenry.

2.8 SUMMARY AND CONCLUSION

The literature review revealed the existence of a significant number of government documents and scholarly works relating to public-private partnerships. Furthermore, a few of the peer-reviewed journal articles attempt to identify the critical success factors and conditions that make a project successful; these sources will be central to improving the project appraisal template. However, the body of knowledge surrounding public-private partnerships is clearly lacking in Nigeria, an effort to create a framework that systematically evaluates or predicts the success of partnerships at either the program or project level. Therefore, the intent of this research is to improve the PPP Equilibrium Framework, which fills this void by devising a tool that can be applied to PPP projects in order to give insight into the project's chances at success and fairness to the public and private stakeholders.

CHAPTER THREE

RESEARCH METHOD

3.1 INTRODUCTION

This chapter describes the research method chosen to achieve the aim and objectives of the study. This chapter discusses the method employed in the study under the following headings:

i. Survey design and administration
ii. Research population
iii. Sample and sampling technique
iv. Instrumentation
v. Validity of the instrument
vi. Reliability of the instrument
vii. Data collection procedure
viii. Data analysis procedure

3.2 SURVEY DESIGN AND ADMINISTRATION

The study employed descriptive survey design using questionnaire as data collection instrument. The method Olayiwola (2007) opined uses questionnaires and/or interviews for collection of data from a population based on appropriate sampling techniques. From the total population, a carefully selected sample having traits and characteristics of

interest is drawn (Olayiwola, 2007). Inferences are drawn from the study of the sample group using appropriate statistical techniques. Best and Khan (1989) write: “It involves a clearly defined problem and definite objectives. It requires expert and imaginative planning, careful analysis and interpretation of the data gathered and logical and skillful reporting of the findings”.

The questionnaire is divided into three major sections: Section A covers the demographic background of respondents, while Section B requests respondents to rate, on a five point Likert scale, their self perceptions of the level of effectiveness of the identified factors that measure the effectiveness of PPP legislation. Section C also requests respondents to rate, on a five point Likert Scale, their perceptions of the level of effectiveness of the identified factors that measure the effectiveness of PPP at Project level.

3.3 RESEARCH POPULATION

The population of the study is uncertain. This is because there is no database of organizations involved in the Public Private Partnership Projects in Nigeria (Ibrahim *et al*, 2006); This, opined Ibrahim *et al* (2006) is probably the procurement method is still at an evolutionary stage in Nigeria.

3.4 SAMPLE AND SAMPLING TECHNIQUE

The study utilized purposive sampling technique, using 150 questionnaires as the sample size. The category of respondents included the academia, contractors, clients and

consultants. Out of the 150 questionnaires distributed 114 where returned and used for analysis.

3.5 INSTRUMENTATION

The researcher used questionnaire as the instrument for collecting relevant data from the respondents. Questionnaire is define as the statement which the respondent have to react in writing so as to find out their feelings, and opinion on the designed items in the questionnaire (Ekeh, 2003). The questionnaire is chosen by the researcher as a method for data collections for the following obvious reasons:

i. It helped the researcher to distribute the questionnaire to respondents easily in order to meet up with the time factor.
ii. It gave enough time to respondents to respond to the items appropriately
iii. It helped to cover the large area and sample population of the study
iv. It instilled confidence in the respondents to freely give out views they fear might get them into trouble or disapproved by others.

The factors that measure the effectiveness of PPP Procurement model were included in a questionnaire survey instrument. The complete questionnaire comprised three sections; questions about respondents' individual background; questions about the effectiveness of PPP legislative programme; and questions about the effectiveness of PPP at project level. This work presents the analysis of the survey response data relating to the perceived level of effectiveness of the PPP Procurement model in Nigeria based on a five-point Likert

rating scale ranging from 1“not effective” to 5 “very effective”. This type of scale has been used in both general construction management research and in PPP studies such as Soetanto *et al,* (2004), Li *et al* (2005) and Ibrahim *et al* (2006).

As there is no database of organizations involved in PPP projects in Nigeria (probably because the procurement method is still at an evolutionary stage), the questionnaire survey was administered amongst professional working in both private and public sectors in Nigeria.

3.6 VALIDITY OF THE INSTRUMENT

To obtain the content validity, the questionnaire was subjected to thorough scrutiny by the supervisors and other expert in Public Private Partnership (PPP), including language experts for validation as well as language appropriateness and clarity.

3.7 RELIABILITY OF THE INSTRUMENT

The use of various instruments and controlled questions (repetitive questions in different forms for cross-checking to see whether information obtained from the respondent was correct or not) in the study enables the researcher compare the facts and establish the reliability of the instrument. The reliability co-efficient for ascertaining the reliability of the instrument was found to be 0.728 as shown below. This is above the 0.50 level of significance.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
0.728	0.809	37

3.8 PROCEDURE FOR DATA COLLECTION

The data for this research was obtained through the administration of one hundred and fifty (150) questionnaires to the respondents. The administration of the questionnaires was carried out by the researcher and two (2) research assistant within three week. Two weeks were given to the respondents for response. This gives the respondents adequate time to ponder and respond rationally to the items on the questionnaire.

3.9 PROCEDURE FOR DATA ANALYSIS

The study used T-test independent sample and One-Way Analysis of Variance (ANOVA) as data analysis tools. The T-test independent sample was used to measure if differences exist between the perception of Public and Private sector respondents regarding the effectiveness of PPP procurement model in Nigeria. Moreover, the one way analysis of variance (ANOVA) was used to measure perceptions among various interest groups (state, society, industry, and market) on the effectiveness of PPP model in Nigeria. According to

Ekeh (2003) t-test should be used to compare two (2) mean while ANOVA is used to compare mean more than two.

To analyze and evaluate the PPP programme and projects in order to develop the PPP equilibrium framework, the mean score of each factor that measure the effectiveness of PPP is compared against the decision/criteria mean of 3.00 (Garvin 2009). Garvin (2009), added that *A mean score greater than 3.00 (decision/criteria mean) signifies that issue/factor has been managed in a manner that encourages success while a mean score of less than 3.00 (decision/criteria mean) implies that the issue/factor is lacking in that area detracting from overall success.* In other word if on any factor, the mean is found to be greater than the decision mean, that factor will be considered effective and thereby will not gain any movement on the equilibrium framework, if on the other hand, the mean is found to be less than the decision mean, the factor will be considered not effective and will be treated as provided by the Garvin's appraisal template. This may lead to a movement on the equilibrium framework.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 QUESTIONNAIRE RESPONSE

In all, 114 questionnaires were returned out of the 150 distributed, of which 114 were usable. This represents a 76% effective response rate. Of the respondents, 77 (67.5%) primarily worked in the public sector, 37 (32.5%) were from private sector as shown in Table 4.1.

Table 4.1: Distribution of respondents' by category

Respondents' category	***Frequency***	***Percentage (%)***
Public Sector Partner	77	67.5
Private Sector Partner	37	32.5
Total	**114**	**100.0**

Source: *Authors Fieldwork, 2013*

Table 4.2 shows that 40 respondents (35.1%) represented the state (government) interests, 37 respondents (32.5%) represented the interests of the society (public) while 22 respondents and 15 respondents (19.3% and 13.2%) respectively represented the interests of the industry and market. This shows clearly how the interests of all stakeholders in PPP arrangements in Nigeria were represented in the study.

Table 4.2: Distribution of respondents' by interest group

Respondents' interest group	***Frequency***	***Percentage (%)***
State	40	35.1
Society	37	32.5
Industry	22	19.3
Market	15	13.2
Total	**114**	**100.0**

Source: *Author's Fieldwork, 2013*

4.2 DATA ANALYSIS

Statistical analyses were undertaken using the statistical package for social science (SPSS) for windows, version 17.0 (SPSS, 2003). The ranking of the measure of effectiveness of PPP in Nigeria was based on the arithmetic means value score. A lower value indicates a lower level of effectiveness.

4.3 DISCUSSION OF RESULTS

The analysis of data produced mean effectiveness values ranging from 1.81 to 3.79. Tables 4.3 and 4.4 (column 6 and 10 respectively) shows that none of the factors scored a mean value greater than 4.0. Three (3) factors had mean effectiveness between 3.0 and 4.0,

thirty-two (32) factors scored mean effectiveness between 2.0 and 3.0 while the remaining two (2) factors scored means value between 1.0 and 2.0.

Table 4:3 Public and Private Sector Respondents' perceptions on the Effectiveness of PPP procurement model in Nigeria.

Measures of PPP Effectiveness	**Public**		**Private**		**Combined**		
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Rank**
Established demand	3.56	1.42	4.27	0.99	3.79	1.334	1
Risk apportionment assigned to proper party	3.08	1.16	3.16	1.21	3.11	1.170	2
User fees long-term management	3.03	0.90	3.19	0.52	3.08	0.800	3
Auditing process disclosed and defined	2.94	0.82	2.70	1.02	2.86	0.891	4
Provision of solicited proposals only	2.66	1.21	3.24	1.14	2.85	1.214	5
User fees reflect cost of service	2.81	0.81	2.79	0.82	2.80	0.811	6
User fees addressed by legislation	2.79	0.85	2.73	0.80	2.77	0.831	7
Competition of comparable scope	2.77	0.74	2.34	0.91	2.77	0.831	8
Contract management addressed by legislation	2.56	0.73	3.19	1.07	2.76	0.905	9
No Geographical/project delivery restrictions	2.61	0.91	3.03	0.83	2.75	0.900	10
Use of third party consultants addressed and allowed	2.61	0.69	3.00	0.91	2.74	0.788	11
Positive Public and Political Support	2.68	0.75	2.87	2.56	2.74	0.788	12

Project location	2.87	0.89	2.43	0.84	2.73	0.895	13
Clear and objective performance measurement	2.34	1.17	3.51	1.26	2.72	1.314	14
Non-existent or reasonable no-compete provisions	2.65	0.94	2.86	1.27	2.72	1.060	15
Readily apparent price performance	2.64	1.06	2.81	1.10	2.69	1.074	16
Clear and objective termination provisions	2.68	1.07	2.70	0.77	2.68	0.980	17
Permitting and property acquisition handled by state	2.53	0.77	3.00	0.57	2.68	0.744	18
Financial and Technical benchmark	2.66	0.77	2.73	0.69	2.68	0.744	19
Comparative analysis required and process defined	2.82	0.93	2.30	0.52	2.65	0.852	20
Clear and objective facility return provisions	2.65	1.06	2.62	0.86	2.64	0.997	21
Provision of escalation controls	2.75	1.08	2.41	0.64	2.64	0.970	22
Reasonable termination right for defined causes	2.58	0.99	2.70	0.52	2.62	0.856	23
Rapid and continued service availability	2.58	1.15	2.62	1.01	2.60	1.103	24
Scope of work or service addressed by legislation	2.78	1.22	2.19	0.81	2.59	1.135	25
Manageable global risks	2.45	0.99	2.81	0.99	2.57	1.004	26
Allowing all sources of finance	2.60	1.10	2.35	0.86	2.52	1.033	27
Diverse demographic impact	2.52	1.17	2.43	0.96	2.49	1.107	28
Competitive selection method	2.29	0.87	2.73	0.90	2.43	0.902	29
Financing addressed by the legislation	2.49	1.08	2.22	0.67	2.40	0.975	30
Competition based on price, technical and or schedule	2.34	0.91	2.43	1.04	2.37	0.953	31

Readily apparent quality and innovation	2.21	0.98	2.68	1.21	2.36	0.997	32
Transparent and objective selection criteria and process	2.22	1.08	2.22	0.92	2.22	1.028	33
Third party consultant involvement	2.14	0.81	2.38	0.83	2.22	0.817	34
Acquisition and procurement addressed by legislation	2.23	0.97	2.05	0.97	2.18	0.971	35
Clear and objective conditions for renegotiation	1.94	1.62	1.95	1.29	1.94	1.199	36
Positive environmental performance impact	1.81	1.31	1.81	0.87	1.81	1.055	37

SD - Standard Deviation

Table 4:4 Various interest groups perceptions on the Effectiveness of PPP procurement model in Nigeria.

Measures of PPP Effectiveness	State		Society		Industry		Market		combined		Rank
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Established demand	2.98	1.426	4.19	1.050	3.95	1.090	4.73	0.594	3.79	1.334	1
Risk apportionment assigned to proper party	3.48	1.281	2.65	0.851	2.64	0.848	3.93	1.223	3.11	1.170	2
User fees long-term management	3.08	0.378	2.97	0.797	3.27	1.013	3.07	0.631	3.08	0.800	3
Auditing process disclosed and defined	3.18	0.594	2.68	0.944	2.82	1.259	2.53	0.516	2.86	0.891	4
Provision of solicited proposals only	2.45	1.260	2.89	1.125	3.18	1.006	3.33	1.345	2.85	1.214	5
User fees reflect cost of service	2.90	0.441	2.70	1.077	2.61	1.002	3.00	0.378	2.80	0.811	6
User fees addressed by legislation	2.93	0.730	2.65	0.949	2.77	0.869	2.58	0.724	2.77	0.831	7
Competition of comparable scope	2.93	0.417	2.59	0.956	2.41	0.796	3.33	1.047	2.77	0.831	8
Contract management addressed by legislation	2.70	0.648	2.41	0.798	3.05	0.899	3.40	1.298	2.76	0.905	9
No Geographical/project delivery restrictions	2.48	0.716	2.76	1.065	2.77	0.752	3.40	0.828	2.75	0.900	10
Use of third party consultants addressed and allowed	2.70	0.687	2.51	0.692	3.32	0.995	2.53	0.516	2.74	0.788	11
Positive Public and Political Support	2.20	0.516	3.19	0.616	2.91	1.065	2.80	0.414	2.74	0.788	12
Project location	2.85	0.949	2.89	0.843	2.32	0.568	2.60	1.121	2.73	0.895	13

Clear and objective performance measurement	1.88	1.202	2.84	0.898	3.36	1.217	3.73	1.335	2.72	1.314	14
Non-existent or reasonable no-compete provisions	2.18	0.636	3.16	0.958	3.05	1.214	2.60	1.352	2.72	1.060	15
Readily apparent price performance	2.55	1.260	2.73	0.804	2.73	1.077	2.93	1.630	2.69	1.074	16
Clear and objective termination provisions	2.60	0.928	2.76	1.211	2.41	0.504	3.13	0.915	2.68	0.980	17
Permitting and property acquisition handled by state	2.60	0.672	2.46	0.869	3.00	0.617	3.00	0.535	2.68	0.744	18
Financial and Technical benchmark	2.73	0.640	2.59	0.896	2.64	0.587	2.87	0.834	2.68	0.744	19
Comparative analysis required and process defined	2.60	0.955	3.05	0.848	2.50	0.512	2.00	0.378	2.65	0.852	20
Clear and objective facility return provisions	3.18	0.931	2.08	0.894	2.68	0.834	2.27	0.799	2.64	0.997	21
Provision of escalation controls	2.58	1.010	2.95	1.129	2.50	0.740	2.27	0.458	2.64	0.970	22
Reasonable termination right for defined causes	2.88	0.939	2.27	0.932	2.73	0.456	2.67	0.617	2.62	0.856	23
Rapid and continued service availability	2.60	1.008	2.57	1.303	2.73	1.241	2.47	0.516	2.60	1.103	24
Scope of work or service addressed by legislation	2.33	1.163	3.27	1.097	2.23	0.990	2.13	1.260	2.59	1.135	25
Manageable global risks	2.00	0.751	2.95	0.998	2.64	1.093	3.07	0.799	2.57	1.004	26
Allowing all sources of finance	2.33	1.047	2.89	1.100	2.27	0.550	2.47	1.187	2.52	1.033	27
Diverse demographic impact	2.73	1.320	2.30	1.968	2.36	0.848	2.53	1.125	2.49	1.107	28
Competitive selection method	2.10	0.638	2.49	1.044	2.82	0.958	2.60	0.828	2.43	0.902	29
Financing addressed by the legislation	2.28	0.960	2.73	1.170	2.18	0.588	2.27	0.799	2.40	0.975	30

Competition based on price, technical and or schedule	2.05	0.389	2.65	1.184	2.59	0.958	2.20	1.146	2.37	0.953	31
Readily apparent quality and innovation	2.00	0.599	2.43	1.068	2.27	0.456	3.27	1.580	2.36	0.997	32
Transparent and objective selection criteria and process	1.98	0.530	2.49	1.426	2.20	0.690	2.53	1.125	2.22	1.028	33
Third party consultant involvement	2.10	0.304	2.19	1.126	2.18	0.795	2.67	0.816	2.22	0.817	34
Acquisition and procurement addressed by legislation	1.98	0.891	2.51	0.989	2.23	1.193	1.80	0.414	2.18	0.971	35
Clear and objective conditions for renegotiation	1.60	1.128	2.30	1.102	1.08	0.945	2.33	1.633	1.94	1.199	36
Positive environmental performance impact	1.30	0.883	2.35	1.136	1.41	0.590	2.40	0.910	1.81	1.055	37

SD - Standard deviation

4.8 ASSESSING DIFFERENCES IN PERCEPTIONS OF PUBLIC AND PRIVATE SECTOR RESPONDENTS

The null hypothesis which states that there is no significant difference between Public and Private respondents perception regarding the effectiveness of PPP procurement model in Nigeria was used to test difference in the perceptions of the Public and Private sector respondents. This was carried out using an independent T-test as shown in the table below

Table 4.5 shows that significant difference exist between public and private respondents perception regarding the effectiveness of PPP procurement model in Nigeria reason being that the calculated p (sig) value of 0.032 is less than the 0.05 alpha level of significance while the calculated t-value of 2.172 is higher than the t-critical value of 1.96 at df 112. Therefore the Null Hypothesis which states that "there is no significant difference between public and private respondents perception regarding the effectiveness of PPP procurement model in Nigeria" is rejected.

Table 4.5: Independent T-test on the difference between public and private respondents Perceptions regarding the effectiveness of PPP procurement model in Nigeria.

Variable	Category of respondent	N	Mean	S.D	S.E	df	T calculate	T critical	P (sig)
Effectiveness of PPP procurement model in Nigeria	Public	77	95.8442	9.86096	1.12376	112	2.172	1.96	0.032
	Private	37	99.8919	8.04081	1.32190				

P < 0.05, t calculated > 1.96

4.9 ASSESSING DIFFERENCES IN PERCEPTIONS OF VARIOUS INTEREST GROUPS

The null hypothesis which states that there is no significant difference between the various interest groups (state, society, industry and market) perception regarding the effectiveness of PPP procurement model in Nigeria was used to test the difference in the

perceptions of the various interest groups. This was carried out using Analysis of Variance (ANOVA) statistics because it involve more than one variable as shown in the tables 4.6.

The results of the analysis of variance (ANOVA) statistics in table 4.6 revealed significant difference in the effectiveness of PPP procurement model on account of the respondents' interests, reason being that the calculated P values of 0.0000 is less than the 0.05 Alpha level of significance, while the calculated F value of 9.151 is greater than the F critical of 2.60.

Tables 4.6: *Analysis of Variance (ANOVA) statistics on the differences among the various interest groups perception on Effectiveness of PPP Procurement Model in Nigeria.*

One-Way Descriptive

Interest group	**N**	**Mean**	**Std Deviation**	**Std. Error**	**95% Confidence Interval for Mean**		**Minimum**	**Maximum**
					Lower Bound	**Upper Bound**		
State	40	91.9250	9.30781	1.47169	88.9482	94.9018	78.00	115.00
Society	37	100.0811	8.71263	1.43235	97.1761	102.9860	88.00	120.00
Industry	22	97.4091	7.93221	1.69115	93.8921	100.9260	82.00	109.00
Market	15	103.5333	6.92683	1.78850	99.6974	107.3693	89.00	112.00

Total	114	97.1579	9.46683	.88664	95.4013	98.8145	78.00	120.00

Source: SPSS V17.0

ANOVA

	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	2022.575	3	674.192	9.151	.000
Within Groups	8104.583	110	73.678		
Total	10127.158	113			

Source: SPSS V17.0

4.6 DISCUSSION OF FINDINGS

Literature have suggested that for a PPP Procurement model to be effective, the programme (legislation and agreement) and the projects resulting from it, must establish equilibrium among four environments; the State, Society, Industry and Market. This work adapts the framework and the template to develop Nigerians' PPP Procurement Model.

Established demand ranked first as the most effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4: mean value 3.79). This implies the perception of most of the respondents that PPP projects in Nigeria have established

demand and that issue/factor has been managed in a manner that encourages success. This is as suggested by Garvin (2009) that for a PPP to be effective there has to be an established demand for the project. Garvin (2009) further asserts that if there is established demand, the locus remains unmoved because all parties benefit. Markets and industry interests are insured adequate volume, while the society and the state gain infrastructure in an area with a clear need. If there is no established demand, the project move toward markets interests and the market will decide if the project is successful. The mean score of this factor is greater than the decision mean of 3.00 and so no movement will be registered on the framework (Table 4.8).

Risk apportionment assigned to proper party is ranked as the second most effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4: mean value 3.11). This implies the perception of most of the respondents that risk (construction, financing and demand) was properly delegated in PPP projects in Nigeria and that issue/factor has been managed in a manner that encourages success. Many articles on PPP projects rate the allocation of risk as one of the most important factors to success (Chua *et al* 1999, Froud 2002, Zhang 2005, Ibrahim *et al,* 2006 and Aziz 2007). Garvin (2009) asserted that projects that assign the various risks to the proper party maintain the range of balance. If the risk is unnecessarily transferred to the private sector, this move in favour of the state, this could adversely affect the project over the long-term. An unsuccessful project is not beneficial to any of the four parties. Therefore risk should be transferred to the party with the ability to best handle the particular risk. This issue/factor scored a mean which is

greater than the 3.00 decision mean signifying that the issue has been managed in a manner that encourage success and thus balancing interest of the all parties thus no movement will be recorded for this item on the framework (Table 4.8).

The third ranked effective factor with regards to PPP procurement model in Nigeria is *User fees long-term management plan* (Tables 4.3 and 4.4 mean value 3.08). This implies the perception of most of the respondents that there exist long term management plans in most for PPP projects in Nigeria. Garvin (2009) pointed out that User fees long-term management plan for toll increases is important in PPP. Clearly, a pre arranged of plan benefits all parties and maintain equilibrium without such guidelines, the concessionaire is at an advantage, as they can raise tolls as they please. This factor scored a mean which is greater than 3.00 decision mean thus no movement will be registered on the framework because the factor will be treated as if pre-arranged plan that benefits all parties and maintain equilibrium exist and effective (Table 4.8).

Auditing process disclosed and defined is ranked as the fourth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4: mean value 2.85). This implies the perception of most of the respondents that auditing process is not defined nor disclosed in the bill for PPP projects in Nigeria. This is against the believe of Garvin (2009) that a process by which to audit the private participants to ensure compliance is very desirable from a public perspective and not harmful to the concessionaire, if this process is disclosed and adequately defined in the agreement, the locus stays central if no process

is mentioned or disclosed in the agreement, the public is conceding more leverage and flexibility to the public sector, causing a rightward movement, if auditing is mentioned but undefined, the state has protected its right. At the same, the industry has no guidelines as to what type of auditing to expect therefore causing the locus to travel toward state interests. The mean score is less than the 3.00 decision mean thus results to a movement on the framework toward the industry interests (Table 4.7)

Provision of solicited proposal only is ranked as the fifth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.85). This implies the perception of most of the respondents that the bill provides for unsolicited proposals. Garvin (2009) asserted that if the legislation provides for solicited proposal only, the locus is unmoved. This is because the state determined the specific projects for development which protects public interests while still allowing for a fair amount of opportunity to the private participants. However, if unsolicited proposals are allowed by the legislation, this clearly benefits the markets interest since the market can produce any proposals that is believe can achieve the desired rate of return moving directionally towards the lower right corner. This factor scored a mean which is less than 3.00 decisions mean implying that it is not effective and thus will be treated as unsolicited proposals are allowed by the legislation which will move the program toward the markets interests (Table 4.7)

User fees reflect cost of service is ranked as the sixth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.80). This implies the

perception of most of the respondents that the cost of most PPP projects in Nigeria are affordable for some but not for most, variable pricing do not reflects the value of service. If the rate is reasonable and reflects cost of service, the project remains balanced. If the toll rate is unusually high, this favours the private sector, as industry and the market are likely to make more money. High tolls can also be thought of as a movement away from the public interests (Garvin 2009).Scored a mean less than decisions mean signifying a movement toward the market interests (Table 4.8).

User fee addressed by legislation ranked as the seventh effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.77). This implies the perception of most of the respondents that user fee is not addressed in the legislation for PPP projects in Nigeria. Bosso (2008) asserts that if the topic of User fees is addressed in the legislation, it provides all parties with an idea of what to expect and how to tailor the proposals to comply with the rules. This is beneficial to all parties and leads to a balance of interest, leaving the locus stationary, if user fees are not mentioned, members of industry and the market devise a plan to suit their needs possibly at the expense of the Public. This favours the private sector and releases some control from the state, resulting in a right way movement. A mean of 2.77 is less than 3.00 decision mean, this is registers a rightward movement on framework (Table 4.7).

Competition of comparable scope ranked as the eighth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.77). This implies the

perception of most of the respondents that PPP projects in Nigeria were the only one of its kind, so there were no projects to compare them to. Though some did compete against other project proposals, but there was no direct competition for proposals of comparative scope. This is against Garvin (2009) that a lack of competition of comparable scope for project moves the locus towards the upper right. Without competition the state cannot be sure it is getting best value, while the industry is content to make the proposal without competition, increasing its chances of getting the project and gaining a better return. This registers a movement on the framework toward the industry interest (Table 4.8).

Contract Management Addressed by legislation ranked as the ninth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.76). This implies the perception of most of the respondents that many basic concession management issues are not addressed in legislation for PPP projects in Nigeria. Contract management governs how the various parties will interact throughout the course of the long-term agreement; therefore it is a desirable aspect of the legislation from the perspective of all stakeholders. Bosso (2008) if it is been addressed by legislation, the programme remains unmoved on the framework. If omitted, the industry benefits because the state loses some control. In most cases, industry is usually more able to make the rules as the concession goes on, resulting in a movement to the upper right. This factor with a mean score of 2.76 which is less than the decision mean of 3.00 will result in a movement on the framework toward the industry interests (Table 4.7).

No Geographical/Project delivery restrictions ranked as the tenth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.75) The presence of either geographical or project delivery restrictions moves the programme's location toward the lower left since this clearly protects state interests, by ensuring one region does not receive all the projects, while other do not benefit from improved infrastructure. If no such restriction or limitations exist, No movement will be recorded on the framework. This factor scored a mean of 2.75 which is less than the 3.00 decision mean implying some form of restriction. This leads to a movement on the framework toward the state interest (Table 4.7).

Use of third party Consultants Addressed and Allowed ranked as the eleventh effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.74). This implies the perception of most of the respondents that use a Third party analyst/consultant in the legislation is not allowed nor addressed. If the programme specifically mentions the procurement and use of third parties consultants to provide resources and advise to the state agency, all party benefit the state gains expertise and added manpower, while the private proposes receive an unbiased third party evaluation (Garvin, 2009). This factor scored a mean of 2.74 which is less than the 3.00 decision mean thus will treated as not addressed in the legislation given a movement toward the industry interest (Table 4.7).

Positive public and political support ranked as the twelfth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.74). This implies the perception of most of the respondents that there was opposition to the plan to derail negotiations. Many felt that government properties are sold to the private at unreasonable cost. This has a close relationship with the development, implementation and sustainability of any public policy (Ibrahim *et al*, 2006). This will lead to a movement on the framework towards the society interest.

Project location ranked as the thirteenth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.73) Project location is also an importation consideration, if the project is in the developed world, it is likely that similar projects exist and all parties are usually capable and knowledgeable, keeping the locus centered. However, the conditions in developing countries usually include a large potential for growth and government that may not be as sophisticated, benefitting, industry and that markets interests. In the case of a developing country, the project moves to the right (Garvin, 2009). Nigeria is a developing country and the mean score of this factor is 2.73 which is less than 3.00 decisions mean, thus registering a right ward move on the framework toward the market and industry interests (Table 4.8)

Clear and objective performance measurement ranked as the fourteenth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.72). This implies the perception of most of the respondents that no real performance

measurement terms exist in many PPP projects in Nigeria. Garvin (2009) Clear and objective performance measurements protect the public from poor maintenance and availability while also setting clear standards for the operator, which results in no movement. An absence of performance measurement benefits industry, as the operator can maintain and operate the project as it sees fit, leaving the state powerless and moving the locus toward the upper right. Vague or poorly addressed performance measurement guidelines are not ideal, but do attempt to protect state interests, therefore moving the program towards the lower left (Table 4.8).

Non-existent or reasonable no-compete provisions ranked as the fifteenth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.72) No-compete provisions have been very damaging to the public in some projects, if this type of provision is both allowed and absolute, it pushes toward market interests. If allowed, but reasonable and with exclusions, the overall balance of the program is maintained, and no movement is necessary (Garvin 2009), (Table 4.8).

Readily apparent price performance ranked as the sixteenth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.69). This implies the perception of most of the respondents that without competing bidders or comparative analysis, the price paid for many PPP projects in Nigeria will be difficult to judge. Price performance of the project should be superior to that of segmented delivery system and readily apparent, result in a positive score. If the project fails to meet this

criterion, it is negative sign of project success. This factor/issue scored a mean of 2.69 which is less than 3.00 decisions mean signally a negative sign to success (Table 4.8).

Clear and objective termination provisions ranked as the seventeenth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.68). This implies the perception of most of the respondents that termination provisions are unclear, vague or absent for many PPP projects in Nigeria. Clear and objective, absent and vague move the locus toward no movement, industry interests, and the state interests, respectively. This leads to a movement toward the industry interests (Table 4.8).

Permitting and Property acquisition handled by State ranked as the eighteenth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.68). This implies the perception of most of the respondents that the legislation did not give the appropriate agencies the ability to obtain permitting such as environmental permitting and acquire property for projects for many PPP projects in Nigeria. Garvin (2009) If permitting and property acquisition activities are handled by the state agency, the locus remains unmoved, state and local agencies possess more expertise and resources to obtain permits and property, therefore improving the chances of project success. The private sector is less skilled in these activities. If left to the private sector, the project moves in the opposite direction of private interests, toward the state. This is because the state has less responsibility while the private sector is burdened with the tasks of permitting and property acquisition. Legislation that is silent on the topic benefits

the state, as it can choose to aid the process if it desires, or leave the responsibility to the private parties involved. The mean score of this factor is 2.68 which is less than the decision mean. So this factor is will be treated as if it was not handled by the state thus favouring the state interests (Table 4.7).

Financial and Technical benchmark ranked as the nineteenth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.68). This implies the perception of most of the respondents that PPP projects in Nigeria did not require or provide a financial or technical benchmark (no competing proposals). This is against Garvin (2009) which asserts that requiring a financial and technical benchmark is a practice that ensures the project is a value for the public, while pushing the industry to develop a solid project. This practice does not move the project location; however, the absence of a financial and technical benchmark promotes industry interests and fails to protect state interests, quantified by a move towards the upper right. For these same reasons, a lack of competition for the project also moves the locus towards the upper right (Table 4.8).

Comparative analysis required and process defined ranked as the twentieth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.65). This implies the perception of most of the respondents that PPP in Nigeria legislation does not benchmark projects. Proposals are all different, cannot be compared to each other either. Literature and government documents agree that a comparative analysis of proposals is critical to the procurement process. If the process is required and

defined in the legislation, all parties benefit from the knowledge of the process and transparency of results, leaving the locus unmoved. If a comparative analysis is not addressed in the legislation, the private sector benefits from the fact that the public may not have idea if they are achieving best value for money or competitive project. This situation is undesirable from a public stand point, shifting the programme to the right. Conversely, if a comparative analysis is required, the public gains a better idea of the project and its benefit, resulting in leftward movements (Garvin, 2009). This factor scores a mean of 2.65 which is less than the decision mean. Thus it will be treated as if the comparative analysis is not addressed by the legislation given a movement on the framework toward the market and industry interests (Table 4.7).

Clear and objective facility returns provisions ranked as the twenty-first effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.64). This indicates from the perception of the respondents that facility return provisions are not contained in the agreement. Clear and objective, absent and vague move the locus toward no movement, industry interests, and the state interests, respectively for all the same rationale (Table 4.8).

Provision of escalation controls ranked as the twenty-second effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.64). Garvin (2009) without escalation controls, the market and industry can rate as they please. The existence of escalation control protects the public interest, shielding society from

unchecked toll increases and the state from a potential Public opinion crisis as rising tolls usually have a negative effect on the Public's view of PPP arrangement. Since escalation controls provide important services to all parties, the legislation remains unmoved. This factor scored a mean of 2.64 which is less than the decision mean of 3.00. This implies a movement toward the society and State interests (Table 4.7).

Reasonable termination right for defined causes ranked as the twenty-third effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.62). The perceptions of the respondents indicate that termination rights are not part of the PPP legislation. This is not in line with Garvin (2009) who argued that if the public fails to include termination rights in the legislation, this clearly leaves them without leverage to terminate the operator, benefitting industry, as evidence, in a movement toward the upper tights. Unlimited termination rights maintain the state's control over the project, but provide industry with no assurance that the state will not step in at any time, whether they are performing well or not. Clearly unlimited termination rights moves the programme towards state interests. If termination rights are reasonable and for defined causes the locus is unmoved because the public and private right is protected. The mean score of this factor is 2.62 less than 3.00 decision mean, thus will be treated as if the termination right is undisclosed given a movement on the framework toward the industry interest (Table 4.7).

Rapid and continued service availability ranked as the twenty-fourth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.60). The perceptions of the respondents indicate a delivery longer than expected. According to Garvin (2009) the Service Availability issues includes, the development time for a particular project. A facility that moves rapidly through the development process and remains available once opened receives a positive rating while slow or delayed availability negative. This issue scores a mean of 2.60 which is less than the decision mean of 3.00 signally a slow or delayed availability and thus negative to success (Table 4.8).

Scope of work or Service addressed by legislation ranked as the twenty-fifth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.59). The perceptions of the respondents indicate that scope of work or service is not adequately addressed by the PPP legislation thus Garvin (2009) stated that if the scope of work is addressed in the bill; the locus remains unmoved because this clarifies what the Public sector desires, while also giving the private sector insight into which type of project to develop. If the scope is not addressed, the program moves to the right in favour of industry and market interest, because the private sector can choose to develop projects of any scope as they see fit. This factor scores a mean of 2.59 which is less than the decision mean of 3.00. Thus it will be treated as if the scope is not addressed by the legislation and thereby moving the program to the right in favour of industry and market interest (the private sector can choose to develop project of any scope that see fit), (Table 4.7).

Manageable global risks ranked as the twenty-sixth fifth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.57) the perceptions of the respondents indicate that global risks in PPP projects in Nigeria are not manageable. Garvin (2009) asserts that global risk, exists in all projects, however if they are manageable the locus does not moves, if not the locus moves toward the right as the private parties must take on the responsibility of mitigating them. This factor scores a mean of 2.57 which is less than the decision mean, thus global risk are not manageable and registering a right ward movement in the framework toward the industry and markets interests (Table 4.8).

Allowing all sources of finance ranked as the twenty-seventh effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.52) the perceptions of the respondents indicate that only private sources of finance are allowed (no state or federal funds are allowed). If all sources of financing are allowed, the programme is unmoved because the option of using both Public and Private financing gives project more flexibility and can vary the risk taken by both the Public and Private Sector. If only private sources are allowed, the movement is toward the lower right since market interest dictate if the revenue produced by the project is enough to fully support the financing (Garvin, 2009). This factor scores a mean of 2.52 which is less than the decision mean of 3.00 giving it a directional movement towards the market interest (Table 4.7).

Diverse demographic impact ranked as the twenty-eight effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.49) the perceptions of the respondents clearly indicates distinct demographic impact. Garvin (2009) ideally, the demographic impact of the project is diverse. If the project severely impacts a specific subset of people, societal and state interests are likely to be against the project. Therefore, a diverse demographic impact does not move the locus, while a distinct impact pushes the project rightward, away from the public half of the framework (Table 4.7).

Competitive selection method ranked as the twenty-ninth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.49). Though the selection method is competitive, based on the process outlined in the legislation, the perceptions of the respondents show the selection method as a negotiated one. This is not in line with (Garvin 2009) that if the source selection method is undisclosed or negotiated, the locus moves toward the industry interest quadrant. Any type of negotiation usually benefits the industry, because they are ultimately providing the state with an asset it would not otherwise be able to produce. Similarly, an undisclosed method gives the industry a chance to be awarded the project without a rigorous and defined process, which is beneficial to industry and a movement away from state interests. If the source selection method is addressed and competitive in nature, the locus stays in the centre. The public benefits from ensuring a competition, which usually lowers costs and improves the quality of proposals, while the industry is not necessarily put at

disadvantage by this requirement. This factor scores a mean of 2.43 against the decision mean of 3.00 implying its ineffective thus registering a movement toward the industry interest (Table 4.7).

Financing addressed by legislation ranked as the thirtieth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.40). Bosso (2008) stated that the question if financing is addressed by the legislation is important. Clarifying this in the legislation is desirable, leaving the locus unmoved. If not addressed, market interests have the freedom to come up with any financing structure, represented by a movement to the lower right quadrant of the framework. This factor scored a mean of 2.40 which is less than 3.00 decisions mean and thereby will be treated as if it's not addressed by the legislation which will register a movement toward the market interests (Table 4.7).

Competition based on price, technical and or schedule ranked as the thirty-first effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.37) the perceptions of the respondents indicate that judgment was made against other proposals on factors other than price as against the believe of Garvin (2009) that stated if competition exists and the projects are evaluated based on price, technical and or schedule, the project remain in balance and no movement occurs (Table 4.8).

Readily apparent quality and innovation ranked as the thirty-second effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.36). If the project is clearly of high quality and contains innovative aspects, this is a positive attribute, and signals a successful project, that is innovation and quality should be readily apparent, producing a positive rating Garvin (2009). A project of average or marginal innovation and quality is considered negative rating. This factor scored mean of 2.36 which is lower than the decision mean which implies a negative rating (Table 4.8).

Transparent and objective selection criteria and process is ranked as the thirty-third effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4: mean value 2.22). The perceptions of the respondents indicate that no real selection process, no specific weighting given to criteria and proposals are so different it's difficult to compare fairly. Garvin (2009) asserted that transparent and objective selection method maintains project balance, discretionary and unclear selection criteria or process without a clear and repeatable process. This is negative from the perspective of the public sector and gives more influences to the state as shown by the arrow pointing toward state interests. Although the arrow points towards the state, it is usually in the state's best interest to have a transparent process which gives the public peace of mind and provides industry with a fair assessment. This factor scored a mean of 2.22 which is less than the 3.00 decision mean therefore a movement toward the state interest based on the template (Table 4.7).

Third party consultant involvement is ranked as the thirty-fourth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean value 2.22). This implies the believe of most of the respondents that many PPP projects in Nigeria did not use a Third party analyst/consultant to aid them in evaluation, negotiations or decision making The guidance and expertise of third party consultant is an important asset for state authorities that may not have extensive experience with PPP. Therefore, all parties benefits from engaging a consultant with proficiency in such project, without such expertise, the project moves toward industry, which in most cases is at an advantage over state agencies (Garvin, 2007). This factor scores a mean of 2.22 which is less than 3.00 decisions mean, so will register a movement on the framework toward the industry interest (Table 4.8).

Acquisition and procurement addressed by legislation is ranked as the thirty-fifth effective factor with regards to PPP procurement model in Nigeria (Tables 4.3 and 4.4; mean 2.18). The perception of the respondents indicates that several aspect of the acquisition and procurement principles are not addressed in the legislation. Bosso (2008) asserts that if the process is addressed by the legislation, the locus remains unmoved. The state has thought out the process and most likely produced guidelines which benefit the public sector in terms of transparency and reproducibility while also given the private sector participants information on how proposals will be evaluated, if not addressed, industry interest are served since they have more latitude to propose project in a manner that they see fit and the state may enter agreements without a rigorous evaluation process.

The mean score for this factor is 2.18 less than 3.00 decision mean giving it a movement toward the industry interests (Table 4.7).

Clear and objective condition for renegotiation is ranked as the thirty-sixth effective measure (Tables 4.3 and 4.4; mean value 1.94). Conditions for renegotiation are similar to performance measurement and move in the same direction for the same reasons. If they are clear and objective, all parties benefit and no movement occur. Absent of renegotiation benefit industry interests, while poorly addressed renegotiation conditions can be construed in favour of the state interest (Table 4.8).

Positive environmental performance impact is ranked as the thirty-seventh effective factor with regards to PPP procurement model in Nigeria (Table 4.3 and 4.4 mean value 1.81). This is an important concern facing projects. If the projects provide a positive impact to the environment it receives a positive rating, while a facility that does not benefit the environment scores a negative (Garvin, 2009). This issue scores a mean of 1.81 which is less than the 3.00 decision mean which mean most project have no benefit to environment and thus a negative rating to success of the PPP (Table 4.8).

Table 4.7 Evaluation of Nigeria's PPP legislative programme with legislation appraisal template

Element	Issue		Impact	Mean	Movement	Explanation
Scope of work or service	Addressed by Legislation?	Yes	--	2.59	→	The mean of **2.59** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **market and industry interest.**
		No	→			
	Source of Definition	Solicited only	--	2.85	↘	The mean of 2.85 scored by this item is < 3.00 decision mean, implying ineffective. So the item will move the on framework towards the **market interest.**
		Unsolicited Allowed	↘			
	Limitations	Mode Restrictions	←	2.75	↙	The mean of **2.75** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **state interest.**
		Geographic Restriction	↙			
		Project Delivery restrictions	↙			
		No such restrictions	--			
Financing	Addressed by Legislation?	Yes	--	2.40	↘	The mean of **2.40** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **market interest.**
		No	↘			
	Sources Allowed	All	--	2.52	↘	The mean of **2.52** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **market interest.**
		Private only	↘			

		Diversion to public fund allowed	↙			
User Fees	Addressed by Legislation?	Yes	--	2.77	→	The mean of **2.77** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry and market interest**.
		No	→			
	Management	Not addressed	→	2.64	←	The mean of **2.64** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **society and state interest**.
		Escalation controls	--			
		Revenue sharing with state	←			
	Addressed by legislation?	Yes	--	2.18	↗	The mean of **2.75** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		No	↗			

Acquisition and procurement	Comparative analysis	Not addressed	→	2.65	→	The mean of **2.65** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry and market interest.**
		Required	←			
		Required and process defined	--			
	Selection method	Undisclosed	↙	2.43	↗	The mean of **2.43** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest.**
		Competitive	--			
		Negotiated	↗			
	Permitting and property acquisition	Handled by state	--	2.68	↙	The mean of **2.68** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **state interest**.
		Handled by private sector	↙			
		Not addressed	↙			
	Use of 3rd Party Consultants	Addressed and allowed	--	2.74	↗	The mean of **2.74** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		Not addressed	↗			
Contract Management	Addressed by Legislation?	Yes	--	2.76	↗	The mean of **2.76** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest.**
		No	↗			
	Auditing Process	Undisclosed	↗	2.86	↗	The mean of **2.86** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest.**
		Disclosed	↙			
		Disclosed and defined	--			
	Termination Rights	Undisclosed	↗	2.62	↗	The mean of **2.62** scored by this item is < **3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest.**
		Unlimited	↙			

		For cause	--			

Table *4.8 Evaluation of Nigeria's PPP projects with project appraisal template*

Element	Issue		Impact	Mean	Movement	Explanation
Market Conditions	Established Demand	Yes	--	3.79	--	The mean of **3.79** scored by this item is **> 3.00** decision mean, implying effective. So the item will not move on the framework **(No Movement)**.
		No	↘			
	Manageable Global risks	Yes	--	2.57	→	The mean of **2.57** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry and market interest**.
		No	→			
	Project Location	Developed world	--	2.73	→	The mean of **2.75** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry and market interest**.
		Developing world	→			
Socio-Environmental Conditions	Demographic Impact	Diverse	--	2.49	→	The mean of **2.49** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry and market interest**.
		Distinct	→			
	User Fees	Reflect cost of service	--	2.80	↘	The mean of **2.75** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **market interest**.
		Unaffordable or unusually high	↘			
		Long-term managed plan	--	3.08	--	The mean of **3.08** scored by this item is **> 3.00** decision mean, implying effective. So the item will not move on the framework. **(No Movement)**.
		No long term plan	↗			
	Public and Political Support	Positive support	--	2.74	↖	The mean of **2.74** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **society interest**.
		Opposition	↖			

Acquisition and Procurement	Financial and Technical Benchmark	Yes	--	2.68	↗	The mean of **2.68** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		No	↗			
	Competition	No	↗	2.77	↗	The mean of **2.77** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		Of comparable scope	--			
		Based on price technical and or structure	--	2.37	↗	The mean of **2.75** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		Factors other than technical and structural	↗			
	Selection criteria and process	Transparent and objective	--	2.22	↙	The mean of **2.22** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **state interest**.
		Discretionary and unclear	↙			
	Third party consultant involvement	Yes	--	2.22	↗	The mean of **2.22** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		NO	↗			
	Risk Apportionment	Assigned to proper party	--	3.11	--	The mean of **3.08** scored by this item is **> 3.00** decision mean, implying effective. So the item will not move on the framework **(No Movement)**.
		Transferred	↙			
	No compete provisions	Exist and stringent	↘	2.72	↘	The mean of **2.72** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **market interest**.
		Non-existent or reasonable	--			

Contract Management	Performance measurement	Clear and objective	--	2.72	↙	The mean of **2.72** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **state interest**.
		Absent	↗			
		Vague	↙			
	Conditions for renegotiation	Clear and objective	--	1.94	↗	The mean of **1.94** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		Absent	↙			
		Vague	↗			
	Termination provisions	Clear and objective	--	2.68	↗	The mean of **2.68** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		Absent	↗			
		Vague	↙			
	Facility return provisions	Clear and objective	--	2.64	↗	The mean of **2.64** scored by this item is **< 3.00** decision mean, implying ineffective. So the item will move on the framework towards the **industry interest**.
		Absent	↗			
		Vague	↙			
Project Performance	Quality and innovation	Rapidly apparent	Positive	2.36	Negative	The mean of **2.36** scored by this item is **< 3.00** decision mean, implying ineffective. This item implies a **negative impact** of the performance of PPP.
		Marginal	--			
		Non-existent	Negative			
	Price	Readily apparent	Positive	2.69	Negative	The mean of **2.69** scored by this item is **< 3.00** decision mean, implying ineffective. This item implies a **negative impact** of the performance of PPP.
		Difficult to judge	Negative			
	Service Availability	Rapid and Continued	Positive	2.60	Negative	The mean of **2.60** scored by this item is **< 3.00** decision mean, implying ineffective. This item implies a **negative impact** of the performance of PPP.
		Slow or delayed	Negative			

	Environmental performance	Positive impact	Positive	1.89	Negative	The mean of **1.89** scored by this item is **< 3.00** decision mean, implying ineffective. This item implies a **negative impact** of the performance of PPP.
		No benefit to	Negative			

4.7 PPP EQUILIBRIUM FRAMEWORK FOR NIGERIA'S PPP PROCUREMENT MODEL

Figure 4.1 displays the position of Nigeria's PPP legislative Programme in orange star, the final resting place is well to the industry interests off the range of balance, meaning that the legislation favours the industry interests. This position is undesirable from the point of the State, Society and Market, as too much power is given to the industry sector. This is expected to result in projects in which industry makes significant profit at the expense of the State, Society and Market welfare. Similarly to the assessment of the PPP legislation programme, the PPP Projects resulting from it is significantly out of balance as shown by a blue star on the framework, skewed drastically towards industry interests.

In general, PPP procurement model in Nigeria falls within the industry quadrant, this indicate favouring the enterprises engaged in the PPP activity this is likely because the PPP model failed to encourage transparent and objective selection criteria and process, third party consultant involvement, clear and objective conditions for renegotiation and positive environmental performance impact, so also addressing acquisition and procurement by legislation. These factors cement the position in the upper right quadrant. Overall, the agreement did not successfully manage many of the factors that will ensure effectiveness of the PPP procurement model.

The central hypothesis to this work is that better performing projects should be located close to the range of balance, while less effective once lie further from the equilibrium. The locations of the PPP legislative programme and PPP Projects on the framework will determine whether or not the PPP Procurement Model is effective for infrastructure development. With

this said, Projects location on the Framework should somewhat correspond to the legislative programme from which they arise (Garvin 2009).

Garvin (2009) also asserted that some might demand more precise measurement. This is not necessary, nor likely. First, the Framework is intended to serve as a guide to channel the assessment effort not as an instrument to pinpoint exact location. Second, quantifying all the factors involved and establishing correlations between them would be a monumental, if not impossible task. Moreover, its complexity could easily diminish its credibility.

KEYS	
	Scope of work or service addressed by legislation
	Provision of solicited proposals only by legislation
	No Geographical/project delivery restriction
	Financing addressed by legislatn
	Allowing all source of finance
	User fees addressed
	Provision of escalation control
	Acquisition and procurement
	Comparative analysis required
	Competitive selection method

	Permitting and property acquisition handled by state
	Use of third party consultant addressed and allowed
	Contract management addressed
	Auditing process disclosed and defined
	Reasonable termination right for defined cause
	Manageable global risked
	Project location
	Diverse demographic impact
	User fees reflect cost of service
	Positive Public and Political support
	Financial & technical benchmark
	Competition of comparable scope
	Competition based on price, technical and or schedule
	Transparent and objective selection criteria and process
	Third party consultant involvement
	Non-existent or reasonable no-compete provision
	Clear and objective performance measurement
	Clear and objective conditions for renegotiations
	Clear and objective termination provisions
	Clear and objective facility returns provisions

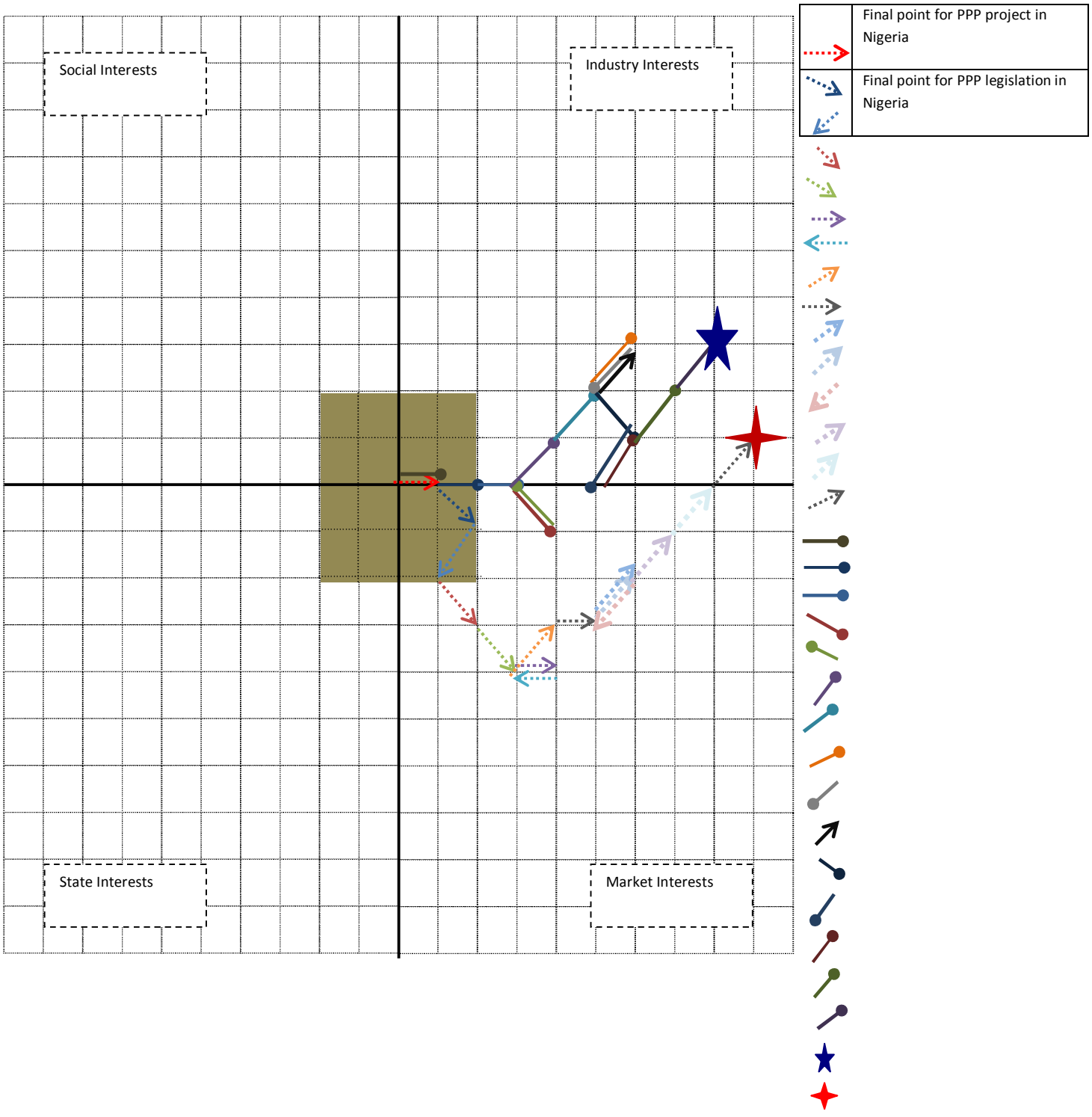

Social Interests
Industry Interests
State Interests
Market Interests
Final point for PPP project in Nigeria
Final point for PPP legislation in Nigeria

Figure 4.1 Developed PPP equilibrium framework for Nigeria's PPP procurement Model

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This is the final chapter of the study and its purpose is to summarise the research findings, make conclusion and recommendations. Within this concept, the research findings are reviewed against the initial aim and objectives of the study. This chapter is discussed under the following headings:

i. Summary
ii. Conclusion
iii. Recommendation

5.2 SUMMARY

Many factors contribute to the effectiveness of PPP procurement model. This research investigated the relative effectiveness of these factors identified from literature relating to the PPP procurement model in Nigeria. Mean score values of response data from survey respondents has been used to rank the relative effectiveness of the factors that assess the effectiveness in the Nigerian PPP environment. The mean score values along with the criteria mean were used to determine the direction of movement of each factor on the equilibrium framework. Three factors - *established demand, risk apportionment assigned to proper party* and *user fees long-term management* - emerge as being the most effective factors with respect to PPP procurement model in Nigeria. The five least effective factors considered by

the respondents for PPP procurement model in Nigeria are *transparent and objective selection criteria and process, third party consultant involvement, acquisition* and *procurement addressed by legislation, clear and objective conditions for renegotiation and positive environmental performance impact.* These factors contributed to the movement on the equilibrium framework away from the range of balance. Independent T test and analysis of variance (ANOVA) were performed to test whether differences exist in the perceptions of the public and private respondents as well as that of the perceptions of the various interest groups respectively. In general, the results show that there is significant difference between public and private respondents' perception as well as that of the various interest groups perception regarding the effectiveness of PPP procurement model in Nigeria.

Furthermore, the study reveals that the effectiveness of PPP in Nigeria is not effectiveness as it was not able to balance the interest of the various stakeholders (State, Society, Industry and Market) involved as suggested by literature. The study also found out that the PPP Procurement model in Nigeria is skewed towards the industry interest which implies that the enterprises (industry) engage in PPP activity drive more benefits than the State, Society and Market.

5.3 CONCLUSION

The transition to world where the propensity of infrastructure development and management is provided by the private sector appears to be underway. Essentially, Government will be the overseers of service rather than the service providers. Will this transition be beneficial to all

the stakeholders involve? This endeavor seeks to answer this question by evaluating whether PPP Procurement model is effective for infrastructure development in Nigeria.

The study also found out the PPP procurement model in Nigeria is skewed towards the industry interests' quadrants implying that the enterprises engage in PPP activity drive more benefits at the expense of the state, society and market.

The T-test and analysis of variance also confirms the above statement as it found out that significant difference exist in the perceptions of the various interest groups with regards to the effectiveness of PPP procurement model. The study also found out the following:

i. The selection criteria and process for the Special Purpose Vehicle (SPV)/Special Purpose Companies (SPC) is discretionary and unclear, so also Competition during the selection process is based on factors other than price, technical and schedule.
ii. User fees for the PPP projects are unaffordable or unusually high as a result PPP projects in Nigeria are faced with negative public and political support.
iii. The guidance and expertise of third party Consultants are hardly involved.
iv. Conditions for renegotiation, termination provisions and facility return provisions are not clear and objective.

5.3 RECOMMENDATIONS

Base on the findings the following recommendations were made with a view to improving the level of effectiveness of PPP Procurement Model in Nigeria.

i. The Infrastructure Concession Regulatory Commission (ICRC), Bureau of Public Procurement, Professional Bodies, The Academia and Other relevant institutions should ensure that the selection criteria and process is very clear and the SPV/SPC should emerge through rigorous competition, this will ensure effective service delivery.

ii. The ICRC and other relevant stakeholders should carry out sensitization campaign on the importance of Private participation in provision of public services through advertisement, seminars, and workshops. They should also ensure that User fees are fixed to reflect cost of services for any PPP project.

iii. The ICRC and other relevant stakeholders should always ensure that the guidance and expertise of third party Consultants are involved PPP arrangement, this is to ensure that the contractual agreement between the parties involved in the contract are safe and binding to avoid unnecessary conflict of interest.

iv. In the contract management aspect, the ICRC and other relevant stakeholders should ensure that conditions for renegotiation, termination provision, and facility return provision are clear and objective, this is aimed at clearing doubts and ambiguities in the entire process.

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APPENDIX 1

Department of Quantity Surveying,

Ahmadu Bello University,

Zaria, Nigeria

Dear Sir/Madam,

Is Public Private Partnership Procurement Model Effective for Infrastructure Development in Nigeria?

This questionnaire is part of a research aimed at assessing the effectiveness of Public Private Partnership Procurement Model for infrastructure development in Nigeria. The questionnaire is designed to elicit information on the level of effectiveness of Public Private Partnership Procurement Model for Infrastructural development in Nigeria.

Your contribution, by completing the attached questionnaire, would be very valuable to the success of this study which will contribute immensely towards determining the factors that will enhance the effectiveness of PPP procurement model for infrastructure development in Nigeria. All the information collected from this survey will be treated with utmost confidentiality and no personal or individual information about you or your organisation will be disclosed in the final report or any publication therefrom.

The reliability of the study depends on your sincerity and solemn judgment. If you have any queries or require further clarification about the questionnaire, kindly contact the researcher at the address or email or mobile number provided below.

Thanking you for your time and response.

Yours faithfully,

Buhari Nuhu Danraka

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QUESTIONNAIRE

INTRODUCTION

Literature have suggested that effectiveness of Public Private Partnership (PPP) procurement model for infrastructure development should be measured from both the legislation guiding its execution and the project resulting from it. Literature also suggested that for a PPP legislation and/or Project to be effective, the interest of the stakeholders which includes the State, Society, Industry and Market involved must balance. The questionnaire is divided into three major sections: Section A covers the demographic background of respondents, while Section B requests respondents to rate, on a five point Likert scale, their self perceptions of the level of effectiveness of the identified factors that measure the effectiveness of PPP legislation. Section C also requests respondents to rate, on a five point Likert Scale, their perceptions of the level of effectiveness of the identified factors that measure the effectiveness of Projects Procured through PPP model. An addendum highlighting the factors that measure the effectiveness of PPP legislation and PPP project are provided as appendix I and II respectively.

SECTION A: DEMOGRAPHIC BACKGROUND OF RESPONDENTS

For each of the following, either writes the requested information or tick (√) the option that is most applicable. Additional spaces are provided for any further comments you may wish to make.

1	*Personal Information*

1a.	Respondent's Name:	1b	Telephone No.	1c	Email:	
1d	Contact Address:				1e	Date

2.	*Which category in the PPP arrangement do you belong to?*
Public Sector partner	Private Sector Partner

3.	*Which interest in the PPP arrangement do you represent?*		
State(Government)	Society(citizen)	Industry(enterprise)	Market(financial system)

SECTION B: FACTORS THAT MEASURE THE EFFECTIVENESS OF PUBLIC PRIVATE PARTNERSHIP (PPP) LEGISLATION

*The following are measures for assessing effectiveness of PPP legislation, using a scale of 1 to 5 where 1 = **Not effective** and 5 = **Very effective,** indicate your perception of the effectiveness of the legislation that govern the PPP project that you have worked on/currently working on.*

S/No	MEASURES OF EFFECTIVENESS OF PPP LEGISLATION	1	2	3	4	5
1	Scope of work or service addressed by legislation					
2	Provision of solicited proposals only					
3	No Geographical/project delivery restrictions					
4	Financing addressed by the legislation					
5	Allowing all sources of finance					

SECTION C: FACTORS THAT MEASURE THE EFFECTIVENESS OF PUBLIC PRIVATE PARTNERSHIP (PPP) PROCUREMENT MODEL AT PROJECT LEVEL

*The following are measures for assessing effectiveness of PPP at project level, using a scale of 1 to 5 where 1 = **Not effective** and 5 = **Very effective,** indicate your perception of the effectiveness of the PPP project that you have worked on/currently working on.*

S/No	MEASURES OF EFFECTIVENESS OF PPP PROJECT	1	2	3	4	5
1	Established demand					
2	Manageable global risks					
3	Project location					
4	Diverse demographic impact					
5	User fees reflect cost of service					
15	Reasonable termination right for defined causes					

6	User fees long-term management					
7	Positive Public and Political Support					
8	Financial and Technical benchmark					
9	Competition of comparable scope					
10	Competition based on price, technical and or schedule					
11	Transparent and objective selection criteria and process					
12	Third party consultant involvement					
13	Risk apportionment assigned to proper party					
14	Non-existent or reasonable no-compete provisions					
15	Clear and objective performance measurement					
16	Clear and objective conditions for renegotiation					
17	Clear and objective termination provisions					
18	Clear and objective facility return provisions					
19	Readily apparent quality and innovation					
20	Readily apparent price performance					
21	Rapid and continued service availability					
22	Positive environmental performance impact					