

Comparing Public-Private Partnership Infrastructure Financing Approach in a Developing and Developed Economy

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Abstract

This study compares the strength of PPP financing approach in a developed country (United Kingdom) and the limitations in a developing country (Nigeria), the largest economy in Africa by GDP. It observes the missing gap between the practices and successes of both countries with the aim of fostering positive outcomes for PPP in Nigeria. Results from the literature analysis assert the critical success factors in the UK as: transparent procurement, quality private consortium, public support, strong political support, apt risk allocation, etc. These present clues to be adopted by the Nigerian economy in maximizing the PPP approach to infrastructure financing.

Keywords: Infrastructure, Public-Private Partnership, Economic Growth, Systematic Literature Review, Developing Economy, Nigeria.

1. Introduction

Infrastructure plays a key role as a driver of economic growth and subsequently improves the quality of living of a community (Carnis and Yuliawati, 2013). Infrastructures are generally defined as facilities required ensuring the smooth operation of a society (Anvuur and Kumaraswamy, 2006). In the developing world, economic growth has experienced a drag due to lack of infrastructure such as electricity generation and distribution, health services and telecommunication networks, amongst others (Trebilcock and Rosenstock, 2015). Infrastructure constraints in Africa has been observed to explain the approximately two per cent decrease in economic growth per annum (Sanusi, 2012).

In developing economies, around one-quarter to one-half of manufacturing firms, as compared to 16 per cent of manufacturing firms in OECD countries state that lack of sufficient electricity facility is a paramount restriction on business (World Bank, 2013). Particularly in Nigeria, which has a national poverty level of 46 per cent by head count (in 2010), only 20 per cent of the country's 193,000km of roads are paved, while at the same time, a sizeable number of railways have gone out of place. This lack of social amenities is due to inadequate financing as one of its causes. No doubt, traditional financing approaches which include multilateral loans, bonds and local deposit money banks, amongst others have achieved some form of development both in the past and at present. However, for Nigeria to achieve its anticipatory level of sustainable growth, other methods of infrastructure financing must be examined, considering the ever-increasing risks and costs of financing that come with these traditional financing approaches (Sanusi, 2012).

Hence the definition of public-private partnership arrangement is discussed. Public-private partnership is a working agreement between the public and private sector to establish and construct projects or policies that would be conventionally be regarded as falling within public sector's responsibilities (Webb and Pulle, 2002). Public-private partnership method of financing has since been employed in projects such as urban rails, bridges and highways amongst many others (Engel, et al., 2010). Many projects considered by the government as worthwhile under a full privatisation scheme are often not financially attractive enough to the private sector. As a result, the government decides to mitigate the associated risks of such projects to make them financially robust enough for the private sector (Anvuur and Kumaraswamy, 2006).

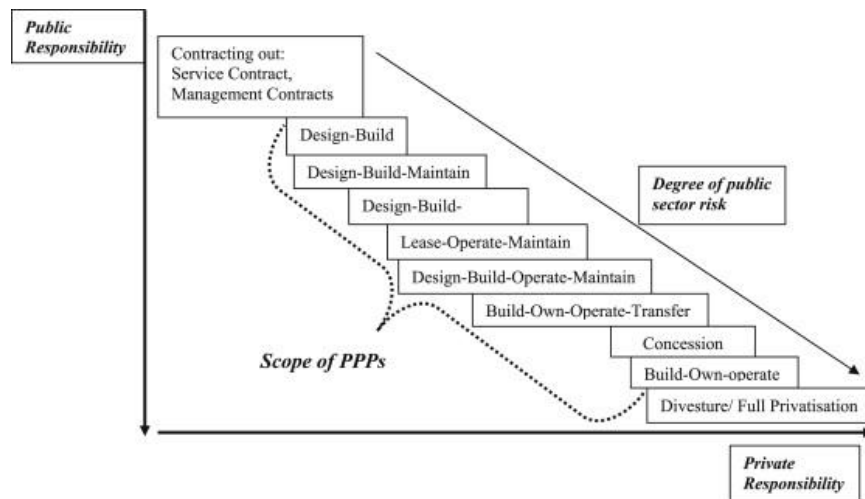
PPP projects can take several forms and usually last for long period of time. It can either be a contract type or it can be based on scheme. PPP contract type include: service contract (1-3 years), management contract (3-8 years), lease contract (5-10 years) and concession contract (10-30 years and above). Projects based on scheme include: Build-Operate-Transfer (BOT), Build-Transfer-Operate (BTO), Build-Lease-Transfer (BLT), Build-Own-Operate (BOO), Rehabilitate-Operate-Transfer (ROT). While 'build' involves construction of the infrastructure, rehabilitate means such infrastructure only goes through some form of refurbishment, 'operate' implies that the private partner takes responsibility for its maintenance and operation. In the circumstances of 'own', the private partner takes full ownership of the infrastructure for the period of time. Hence a contract follows any of the listed patterns. However, concession contracts usually take the form of a scheme (De Vera, et al., 2013). Hence, having several modals of PPP made PPP quite flexible to be embraced.

In a Build-Operate-Transfer PPP arrangement, the building of the project is financed by a group of private investors, whereby the facilities are then operated and managed by the same private investors for about 10, 20 to 30 years, after which these assets are handed over to the government at the end of the arrangement.

Throughout the operation of a project, compensation is paid to the group of private investors to cover both capital outlay referred to as capital expenses (capex), and operation expenses (opex). The government obtains the revenue from user fees, which are used to pay the private partner. This depends on the type of infrastructure being constructed, such as in the case of a toll road where road users are expected to pay fees constantly for the use of the amenity(Engel, et al., 2010).

Figure 1 below summarizes most of the points mentioned above.

Figure 1: A simple PPP model



Source: Roehrich, et al. (2014)

PPPs have been generally classified as first and second generation PPPs. According to Akintoye, et al. (2005) and Albouy and Bousba (1998), first generation PPP projects are marked as free-standing in nature and are accompanied by evident output which are assessed conveniently. Examples of first generation projects include: transportation and power plants projects. The primary rationale behind first generation PPPs is constraint on traditional public financing which has become the driving factor for PPP projects in developing countries.

On the other hand, second generation PPPs explore the possibility of the use of a PPP model and subsequently include education, healthcare, and several other day-to-day infrastructures. With the second generation PPP model, value for money becomes an underlying reason while complexity in the computation of the Public Sector Comparator (PSC) is evident, which was absent in the first generation PPPs (Anvuur and Kumaraswamy, 2006). The World Bank (2011) defines public sector comparator as a tool employed by a government in identifying the best private investment proposal which presents better value for money when compared with the traditional method of funding a project.

The hallmark of PPP infrastructure projects is risk sharing, expectedly between both the parties involved (Ke, et al., 2010). These risks are shared according to the area of strengths of each party or areas where a party has more mitigating techniques (Li, et al., 2005). For instance, the public sector is often observed to bear risks involving macro-economic stability such as inflation and land acquisition amongst many others. The private partners on the other hand often bear risks involved with the construction and maintenance of the assets, and also risk associated with finances. However, PPPs do not take a straight jacketed form, risk bearing can be shared as deemed fit by the public and private sector.

The benefits of PPP programmes have been observed in several economies, for instance, the involvement by the private sector in building public services has been observed to foster high-grade infrastructure investments, especially in countries where it has been formalised. Such quality investments have enabled the public sector to achieve and raise funds for other more demanding public services (Sanusi, 2012). As a result, the turn to PPPs is expected to deliver cost-effective projects and equally meet budget constraints. In essence, most PPP project decisions are primarily premised on value for money (Trebilcock and Rosenstock, 2015).

Statistics reveal that globally, PPP investments had increased from a total investment of 22.72 billion US dollars in 2004 to 134.2 billion US dollar by 2012 (Romero, 2015).

In this research, public-private partnership's strengths and weaknesses are compared between a developed country, the United Kingdom, and a developing country, Nigeria. The aim and contribution of the paper is to highlight and analyse the critical success factors for PPP in the UK, at the same time to investigate the limitations for Nigeria, and then propose the ideas by which the utilization of PPP in Nigeria can be improved. This paper also contribute to the limited literature and research on PPP in Nigeria.

The paper is organized as follows: section 2 presents a background review on the PPP infrastructure financing and the motivation for this research. The methodology of this paper is to carry out a traditional literature review on the existing limitations to the use of PPP in developing countries, particularly Nigeria, which are discussed in section 3. The observed increased in PPP investments over the years in the United Kingdom surely has its success factors. Section 4 provides a literature review of these critical success factors. Also, in this section, recommendations are highlighted on the practical ways in which PPPs can be successfully established in Nigeria. Undoubtedly, the United Kingdom has many current arguments against its Private Finance Initiatives (PFIs), however that is beyond the scope of this study. The marked difference in the success of PPPs in the United Kingdom and Nigeria is conspicuous; hence this study

primarily investigates the possible reasons for the already recorded success in PPP in the UK and PPP constraints in Nigeria. Section 5 concludes the paper.

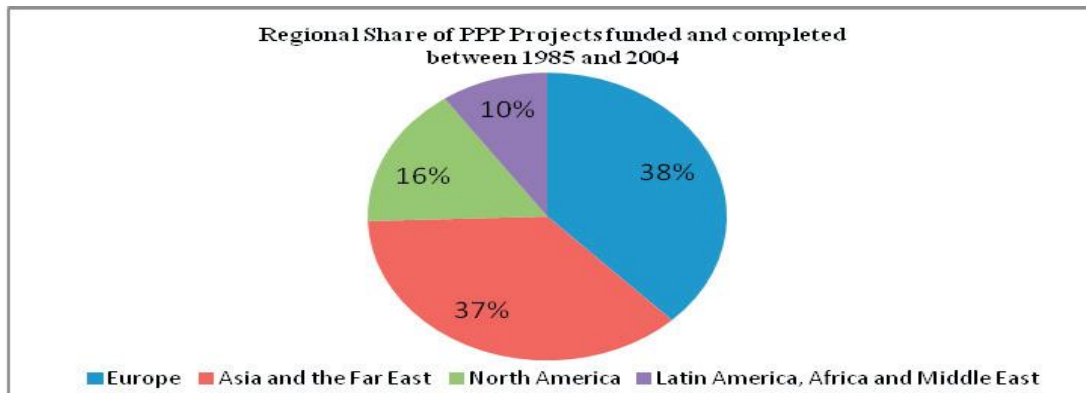
2. Background

There has been a reasonable measure of literature on PPP since the subject became a global discussion. Over the past two decades, public-private partnership financing approach has been considered in the construction and establishment of infrastructure, both in developed and developing economies (Trebilcock and Rosenstock, 2015). In 2012, 139 developing countries had already been involved in the participation of private sectors in the provision of infrastructure (Chou, et al., 2012).

There is empirical evidence regarding the meagre failure rate of PPPs in Australia. The success rate of PPPs in Australia has been observed to be around 88 per cent of projects over the period 2001-2011 (Regan, et al., 2013).

In a larger picture, the proportions of PPP projects funded and completed across the world in the period 1985-2004 are shown in figure 2 below. This figure portrays that higher success rate has been accomplished in Europe. The lowest report of success rate observed is in Latin America, Africa and the Middle East. Briefly, this indicates a gap in PPP achievement of the countries of choice for this study.

Figure 2: Regional share of PPP projects funded & completed between 1985 & 2004



Source: Sambrani (2014)

In 2011, the whole Asian continent had only recorded 104 infrastructure projects completed via PPP, with total investments of approximately 79.38 billion US dollars. In India, PPP projects have been observed to have obtained both viability gap and non-viability gap funding, while China has PPP projects that only obtained non-viability gap funding from the government, an example of such projects includes the Chinese Zhangbei wind power project which enjoyed subsidized interest payments throughout its construction. Viability gap funding (VGF) is a government fiscal policy to enable

delivery of infrastructures via PPP arrangements and it is a subtle way of attracting private investors because it increases the financial feasibility of a project (Vera, et al., 2013).

Ng and Wong (2006) for instance extensively discussed the possibility of the use of non-financial PPPs. Under this circumstance, the private partner is solely responsible for the maintenance of the respective infrastructure and subsequently is reimbursed after its performance output is being assessed, which is different from the popular Private Finance Initiatives (PFI) as operated in the UK. Nonetheless the non-financial PPPs can be adjudged as a form of management contract. An example of the use of non-financial PPPs being employed is found in Hong Kong.

Following the earlier study of PPP infrastructure financing approach, Chou and Pramudawardhani (2015) used mean value, confirmatory factor analysis and dimensional significance to establish a comparison between the categories of PPP driving factors, critical success factors and risk allocation in Taiwan, Singapore, China, Indonesia and the UK, with Indonesia as the baseline. In their study, Chou and Pramudawardhani (2015) found no evidence of similarity in the categories analysed between PPPs in Indonesia and the United Kingdom, although other evidence of similarities were found between Indonesia and countries like China, Singapore and Taiwan.

Later, Ameyaw and Chan (2015) employed fuzzy synthetic evaluation (FSE) approach in examining the riskiness of PPP water supply projects in developing economies and concluded that prominent level of riskiness marks PPP water supply projects in such countries for both public and private partners.

Public-private partnership arrangement for the provision of food and healthcare was investigated by Marks (2013) under the subject of institutional challenges in terms of corruption, which includes incapacity to enhance regulations and keep track of compliance and disregarded institutional priorities amongst others. He argued that previous analytical strategy to such forms of PPP projects such as striking commendable balance between risk and return when carrying out ethical evaluation of PPPs disregarded the institutional and ethical impacts and further suggested that future procurement of food and health PPP projects should take into consideration the limitations of parties involved in the contract.

Some benefits of PPPs have been highlighted in the introduction. HM Treasury (1993) underlined another major rationale behind PPP arrangement, namely, an opportunity to utilize the efficiency and management proficiency of the private sector.

Particularly for construction industries, the required set of skills for PPP projects has been observed to have lasting value-added impact on the development of the industry, and that the accompanying challenges of PPP projects demand a considerable

level of attention to avoid eliminating the benefits derived from such projects (Anvuur and Kumaraswamy, 2006).

3. Methodology

This section reviews the participation of the private sector in the provision of public amenities in Nigeria using the methodology of traditional literature review.

3.1 Private sector participation in the provision of public amenities in Nigeria

Nigeria has remained the largest economy in Africa since 2014, with a GDP of 568,508 million US dollars. Despite this, infrastructure constraints have remained a major factor limiting foreign direct investment (FDI) in Nigeria (World Bank, 2015).

Sanusi (2012) stated that approximately 10 billion US dollars per annum is required to combat the infrastructure need of the country. To achieve this, the country which currently allocates only 7 per cent of its annual GDP to infrastructure development will have to increase this proportion to approximately 12 per cent.

The public sector of the Nigerian economy had been fully developed by the 1970s and 1980s following the nation's independence from the colonial rule. The public sector of the country covers basic sectors such as manufacturing, agriculture, telecommunication amongst others. In 2011, there were over 1500 public enterprises in Nigeria. These enterprises accounted for 50-60 percent of employment and 30-40 percent of total fixed capital investment. However, the yields from these huge investments were meagre and sometimes negative. For instance, in the power sector, additional costs of power generation imposed by the National Electric Power Authority (NEPA), now the Power Holding Company of Nigeria (PHCN) on the economy was estimated at thirteen billion US dollars annually. This had an adverse effect on the entry of private operators that could probably be more effective (World Bank, 2011).

Although the Nigerian Government had approved its privatisation program since 1999 in the initial construction of canals and railways, the public-private partnership arrangement was not formalised until almost a decade later (World Bank, 2011).

In Nigeria, the PPP approach of financing infrastructure was fully formalised barely six years ago as a unit in the country's Infrastructure Concession Regulatory Commission (ICRC). The panel which was enacted by an act of 2005 takes guardianship of concession contracts entered into by the Federal Government and also ensures effectiveness of such contracts. Meanwhile, the office of the Auditor-General of the federation is tasked with the responsibility of financial accountability of PPP programmes in the country (Okaro and Okafor, 2011).

Nigeria adopts the UK's PPP model, which includes Design Build Finance Operate (DBFO), the most widely employed PPP model, whereby the private partner sets out to design, construct, fund and maintain the project for the stipulated period of the contract (Kwak, et al., 2009).

According to the Federal Government of Nigeria, PPP is anticipated to cover implementation of new infrastructure and renovation of existing assets in the following federal facilities: power generation and power transmission/distribution networks, roads and bridges, ports, railways, inland container depots and logistics hubs, gas and petroleum infrastructures, such as storage depots and distribution pipelines, water supply, treatment and distribution systems, solid waste management, schools, urban transport systems, housing and healthcare. However, implementation of PPP projects are not limited to the federal level. State Governments are also allowed to embark on PPP projects, but with a support of guarantee by the Federal Government. A support of guarantee can include the federal government's persuasion to the financial markets to lend to the proposed projects (ICRC, 2015).

Although almost all required infrastructure for a nation's economic growth have been highlighted as facilities that can be established via PPP in Nigeria, it is deemed necessary to investigate to what extent PPP practices have been validated in the country and whether there are any successful PPP projects that have been accomplished in the country.

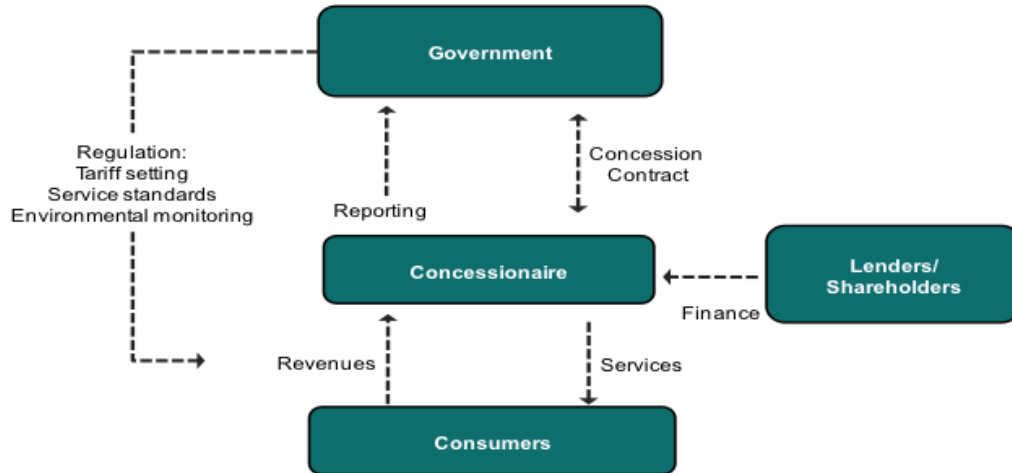
Public-private partnership scheme has been formalised in Nigeria's health care system. However, little or nothing can be said to have been established in the form of validation and implementation. This non-validation might have discouraged the private sector over the years. The meagre participation of private partners in the health sector has been attributed to the inability of policy makers to design policies that match domestic challenges (Anyaehe, et al., 2014). Other limitations of PPP in the public sector will be discussed in section 4.

Research shows that Nigeria has limited experience in PPPs. The most successful story of PPP in Nigeria is recorded in the transportation sector, which is a ports facility. The recently completed Murtala Mohammed Domestic Airport (MMA2) was successfully completed using the PPP scheme. The project which was a redevelopment arrangement was awarded to Bi-courtney Aviation Services Limited in 2003, before the full formalisation of a PPP unit in the country's Independent Concession Regulatory Commission. The commitment of the Federal Government of Nigeria to PPP scheme can be highlighted in its decision to change its contractor when the initial private partner of the project (MMA2) did not make any attempt within the first six months. The domestic airport was built under the build operate transfer model. Four years after the contract was awarded, the facility was commissioned and started full operation a month later,

on the 7th of May 2007. The project which was initially awarded for twelve years have been extended to 36 years(ICRC, 2015).

The concession model used for this successful huge PPP project in Nigeria is based on the following model:

Figure 3.1.1: A PPP concession model



Source: ICRC (2015)

Figure 3.1.3 above shows that the concessionaire (private sector) recovers the costs of construction directly from consumers in the form of user fees as is common in some PPP projects. The concessionaire can be observed to be sitting equally between both the consumers and the government. Lenders are only associated with the concessionaire, while the private partner is expected to report to the government and the government is equally answerable to the private partner in keeping its own part of the contract. Tariffs setting are usually carried out prior to the start of the project. This major success story of PPP in Nigeria is consistent with the conclusion of Anvuur and Kumaraswamy (2006) who state that most developing countries succeed mainly with first generation PPP projects.

Another successful PPP project in the transport sector is the design-build-operate-transfer concession for the 49km Lekki expressway constructed on the Lagos Island, Lagos State Nigeria.

In the past, PPP have also been employed in the construction of a number of power stations. The Mambilla and Zungeru hydro stations were also developed with the participation of the private sector. Power distribution and transmissiion have also been constructed under the management contract of PPP(NEEDS, 2004). However, these only occurred in very few areas of the country.

Besides the major success of the ports facility and the aforementioned projects, a good number of PPP projects are currently being constructed and established in Nigeria. Table 1 shows the ongoing PPP projects in the country. Currently, the World Bank has a number of PPP programme in Nigeria.

As highlighted in the introduction, PPP adopts several models. In Nigeria there is no one particular specific model being employed in implementing projects. Individual PPP projects are carried out using various preferred models. Abbreviations used in table 1 below are represented as follows: BT- Build Transfer, BOT- Build Own Transfer, BOOT- Build Own Operate Transfer, BOO- Build Own Operate and TCN Transmission Company of Nigeria.

Table 1 Ongoing PPP Projects in Nigeria

Ongoing PPP Projects in Nigeria			
S/N	PROJECT	PHASE & PROPOSED MODEL	MINISTRIES DEVELOPMENT & AGENCIES
1	PPP High Voltage Transmission for TCN(a)	Development/ Procurement & BT	TCN
2	PPP High Voltage Transmission for TCN (b)	BT	TCN
3	PPP High Voltage Transmission for TCN (c)	BT, BOT, BOOT, BOO	TCN
4	PPP High Voltage Transmission for TCN (d)	BT, BOT, BOOT, BOO	TCN
5	PPP High Voltage Transmission for TCN (e)	BT, BOT, BOOT, BOO	TCN
6	PPP High Voltage Transmission for TCN (f)	BT, BOT, BOOT, BOO	TCN
7	Concession of the Multi-Purpose Components of the Gurara 1 Dam	Operate and Maintain & Development phase	Federal Ministry of Water Resources
8	Bakalori Irrigation Project	Rehabilitate, Operate and Maintain/ Development Phase	Federal Ministry of Water Resources
9	Jibiya Irrigation Project	Development Phase	Federal Ministry of Water Resources
10	Middle Rima Valley Irrigation	Development Phase	Federal Ministry of Water Resources
11	Dasin Hausa Dam	Development Phase	Federal Ministry of Water Resources
12	Elele Prison Farm	Development Phase	Federal Ministry of Water Resources
13	Tede Dam	Development Phase	Federal Ministry of Water Resources
14	Peremabiri Irrigation and Land reclamation	Development Phase	Federal Ministry of Water Resources
15	Owena Multi-purpose Dam Water Supply	Development Phase	Federal Ministry of Water Resources
16	Development of the Marina Car Park and the Marina Water front	Development Phase	Federal Ministry of Lands, Housing and Urban Development

17	Redevelopment of the Ministry's Land on St. Gregory Road, Onikan-Ikoyi, Lagos	Development Phase	Federal Ministry of Lands, Housing and Urban Development
18	Development of Ministry's Land behind the National Stadium, Surulere, Lagos	Development Phase	Federal Ministry of Lands, Housing and Urban Development
19	Reconstruction, Rehabilitation and Expansion of Lagos-Ibadan Dual Carriageway	Procurement Phase	Federal Ministry of Works
20	Construction of a Bridge over River Niger at Nupeko, Niger State	Development Phase	Federal Ministry of Works
21	Bodo Bonny road with a bridge across Opobo channel to the Island of Bonny in Rivers State	Development Phase	Federal Ministry of Works
22	Keffi-Akwanga-Lafia-Makurdi Road (Nassarawa and Benue States)	Development Phase	Federal Ministry of Works
23	Lokoja-Ajakuta-Ogbulafo-9 th Mile Road	Development Phase	Federal Ministry of Works
24	Akwanga-Jos Road	Development Phase	Federal Ministry of Works
25	Dualisation of Enugu (9 th mile)-Otukpa-Lokoja	BOT & Development Phase	Federal Ministry of Works
26	Phase 1: 2 nd Lagos outer ring Road; Tin Can Island-Igando-Lagos/Otta road interchange-Lagos/Ibadan expressway	Development Phase	Federal Ministry of Works
27	Phase 2: 2 nd Lagos outer ring Road; Lekki-Ikorodu Shagamu/ Benin Expressway	Development Phase	Federal Ministry of Works
28	Abuja-Kaduna-Kano Dual Carriageway	Development Phase	Federal Ministry of Works
29	Lagos-Badagry-Seme Border Expressway	Development Phase	Federal Ministry of Works
30	Shagamu-Benin-Asaba Expressway	Development Phase	Federal Ministry of Works
31	River Benue Bridge @ Ibi, Taraba state	Development Phase	Federal Ministry of Works
32	Ibom Deepsea Port	Development Phase	Federal Ministry of Transport, Nigerian Ports Authority and Akwa Ibom State Government
33	Inland Container Depot, Gombe	Development Phase	Federal Ministry of Transport and Nigerian Shipper's Council
34	Greenfield Highspeed Land Railway Lines across Nigeria	Development Phase	Federal Ministry of Transport
35	Development of 23 Industrial Development Centres Across Nigeria	Development Phase	Federal Ministry of Trade & Industry (Small and Medium Enterprises Development Agency)
36	National Trade and International Business Centre Project.	Development Phase	Fed. Ministry of Trade and Investment (Tafawa Balewa Square Management Board)
37	National Stadium Lagos	Development Phase	National Sports Commission
38	National Stadium Athletes Hostel, Abuja	Development Phase	National Sports Commission

39	Calabar-Kano Gas Pipeline	Development Phase	Federal Ministry of Petroleum Resources/ NNPC
40	National Theatre Masterplan Complementary Facilities Realization	Development Phase	Federal Ministry of Culture, Tourism and National Orientation/National Theatre Management
41	Abuja Medical Mall	Development Phase	Federal Ministry of Health
42	Development of Mechanic Villages	Development Phase	Fed. Ministry of Trade and Investment (National Automotive Council)
43	Establishment of a Multimedia Centre in the FCT	Development Phase	Nigerian Film Corporation
44	Development of Film Screening Theatres	Development Phase	Nigerian Film Corporation
45	Upgrade of the Corporation's Lagos Office Studio and Mini Theatre for Commercial Purposes	Development Phase	Nigerian Film Corporation
46	The Establishment and Take-off of the Film Industry Complex	Development Phase	Nigerian Film Corporation
47	Upgrading of Auditorium to International Screening Standard at NFI	Development Phase	Nigerian Film Corporation
48	Establishment of 3 Film Villages at Miango Plateau State for which 400 hectares of land have been set aside at Akwa Ibom and Ibadan.	Development Phase	Nigerian Film Corporation

Data Source: ICRC (2015)

A close observation of table 1 shows that the country had been embarking on approximately fifty PPP projects as at 2014. Most of these ongoing PPP projects are in the development phase; this shows the country's commitments to the public-private partnership approach of infrastructure financing. The list covers a sizable number of facilities which are needed for the nation's growth, ranging from sports, housing, urban transport systems, amongst many others.

The ICRC (2015) on the 17th of August 2015 reported the University of Abuja governing boards' intentions to construct hostels and ancillary facilities via the PPP scheme. This is still at the embryo stage and not much is known about the commencement of the project. It can be adjudged that PPP financing is permeating into the education sector of Nigeria.

The following section discusses the limitations of PPPs in the Nigeria economy, probable reasons why PPP projects have not been fully established in the country.

4. Discussion of Findings

4.1 Limitations of PPPs in Developing Economies

Earlier discussions in this study underlined that there has been a drag in the validation of PPPs in most developing economies, and the reasons behind these, if not given considerable attention may hike up the cost of PPP projects over the benefits

therein, especially for developing countries that have found it quite difficult to implement in most cases. This section examines the limitations of PPP in developing countries, with some attention being given to Nigeria, the developing country taken for this case study.

One trend in the PPP arrangement in developing economies is the idea of splitting up large infrastructure projects into smaller portions which can allow for participation by small scale contractors (Ng and Loosemore, 2007). Hall (1998) criticized such strategy as a result of the associated risk: mangling of public sector priorities, which implies that only projects that can survive through such framework will be considered for public-private partnership arrangements.

The challenges of PPP in developing countries, the subject of this section will be discussed under three subheadings: institutional corruption, poor risk management and complex nature of PPPs.

1) Institutional Corruption

Marks (2013) described institutional corruption as organizational practices which pose concern about the credibility of an organization or system and consequently about the reliability of the same institution. He emphasized that although the subject of institutional corruption is applicable to both the public and private sectors, it is a more significant in terms of the public sector.

Ogbeidi (2012) established that a major contributory factor to the slack in economic development in Nigeria is the phenomenon of corruption.

The outcome of institutional corruption observed in most developing countries' PPP is generally the lack of trust, which marks the subject of corruption. Both parties involved in the contract lack significant measures of confidence in the other party, that is the public sector on the one hand believes that even in a traditional model of infrastructure construction, projects are often contracted out to the private sector who does not only deliver less quality projects but also fails to be accountable, while the private sector also distrusts the public sector who finds it difficult to keep economic risk such as inflation amongst others low over the years.

The inadequacies of institutional integrity cannot be said to be only applicable to developing countries but also to the developed countries as well. For instance, in the case of Dairy Management Inc. (DMI), in the USA in 2010, a PPP arrangement was found to have covertly involved services of some fast food suppliers to increase drastically the level of cheese in the menu items (Marks, 2013).

However, it is not an understatement to submit that the level of corruption in most developing countries is grave when compared to the developed countries.

2) Poor Risk Management

Heravi, et al. (2012) agree that the level of risk involved in public-private partnership schemes is totally different from those posed by the traditional model of procuring infrastructure.

The World Bank highlighted inappropriate risk administration as a bane to successful PPP infrastructure projects (Zhang, 2005). Examples of PPP projects in developing countries which were delayed as a result of poor risk management includes, Guangzhan-Shenzhen-Zhuhai Superhighway in China and the improvement and remodeling of Malaysia's sewer systems, a 28-year concession arrangement (Ng and Loosemore, 2007; Abdul-Aziz, 2001). Also, currently bearing high level of risk is the Queen Mamohato Memorial Hospital in Lesotho, which is sustained by half of the country's health budgets, invariably diverting a huge fraction of public funds for its maintenance. This agreement is expected to last until 2027 (Romero, 2015).

Under the subject of poor risk administration, risks can be classified as follows:

a) Political Risk

In as much as political support is germane in achieving successful PPP projects, on the other hand, political risk is found to be a constraint to positive outcomes of PPP projects. Political risk involves possible cessation of PPP contracts by the government, abrupt amendment to law or legislation guiding the public and private sector practices. Although political events have led to termination of concessions in the past, future concession agreements still do not contain compensation arrangements for early terminations (Heravi, et al., 2012). Expectedly, potential investors can be discouraged as the outcome of such risk is unplanned costs.

Most developing countries are marked by political instability. Nigeria was reported to have had the most free and fair election ever in its history in March 2015, besides the 1999 elections after 54 years of independence from colonial rule. This is evidenced in (Tignor, 1993) the historical examination of political corruption in Nigeria. Governance in Nigeria is known for continual sentiments. New political regime has been observed to abandon projects already signed into contracts by previous leaders. Another sentiment portrayed by different political administrations is making negatively significant changes to past projects. An example of abandoned project by leaderships in Nigeria is the River Niger Bridge at Nupeko, a bridge intended to connect communities between Niger State and Kwara State. However, this project is now to be completed under PPP scheme (ICRC, 2015).

b) Financial Risk

Financial risk basically takes the form of limited funding. Inaccurate prediction of rate of inflation can increase project costs. Besides, initial budget sometimes does not include possible environmental concerns which can result in limited project financing (Heravi, et al., 2012).

In Nigeria, a major example is the recently completed Murtala Mohammed Airport, Lagos Domestic Terminal. The project was estimated to require 200 million US dollars. The private partner initially obtained support from a single financial institution, this made the project neck breaking. However, four years later, five other financial institutions joined in the support, and this led to the full completion of the project (ICRC, 2015).

Also, in the Nigerian healthcare sector, one major limitation of PPP is the risk of cost. The government of Nigeria is known to charge low user fees for access to health facilities, and at some other times free health care is declared. However, the free healthcare system in Nigeria has produced poor health delivery services, as a result of negligence in the maintenance of health facilities. Hence, those who are rich prefer to use private healthcare facilities. Nonetheless the majority of the masses cannot afford expensive costs of healthcare. Since private sectors are profit oriented, the health sector in Nigeria may be a difficult industry to fully participate in by merely following superficial policies. This is because revenue to cover the private partner's costs may not be easily obtainable (Anyaehe, et al., 2014).

Another record of financial constraints in PPP arrangements in a developing country is the Tehran-Chalus Toll Road project, one of the largest highway project constructed in Iran (Heravi, et al., 2012).

Limited financing for infrastructure projects has always been known to have pernicious effects on the completion of such projects.

c) Construction Risk

One aspect of construction risk for most developing countries is inadequate land acquisition or delayed land procurement for PPP projects, which is often shouldered as the public sector responsibility under PPP arrangements. PPP schemes also neglect environmental approval in some cases, such as in road constructions, where failure to procure approval for road alignment may impede the on-time completion of the projects (Heravi, et al., 2012).

3) Complex Nature of PPPs

Romero (2015) highlighted that PPPs have failed under many circumstances due to the complexity involved in such projects which have led to several renegotiations in the past and even recently. Such renegotiations usually come with significant costs to the public partner. Statistics reveals that on an average, approximately 55 per cent of PPP projects are renegotiated every two years, the resulting consequences are increase in tariffs, which is observed in 62 per cent of the renegotiations. However, the International Monetary Fund (IMF) states that these rework-out often have positive effects on the private partner. Since PPP is a contract between two major stakeholders (Public sector and Private Partners), the additional costs to the public sector, the originator of PPP infrastructure projects cannot be neglected.

Furthermore, the complex nature of PPP projects explains their need for special and specific skills, as well as steep learning curve. These exceptional requirements for successful PPP projects distort the growth of a sustainable PPP environment (Akintoye, et al., 2005).

Anvuur and Kumaraswamy (2006) gave an example of 'catch-22' paradox which restricts local contractors' participation because of their lack of experience. Just like graduate trainees not being hired, they may never have job experience, thus similarly, these local contractors may not have the expected sufficient track record to embark on a PPP project if they are not given the opportunity to participate in the first instance.

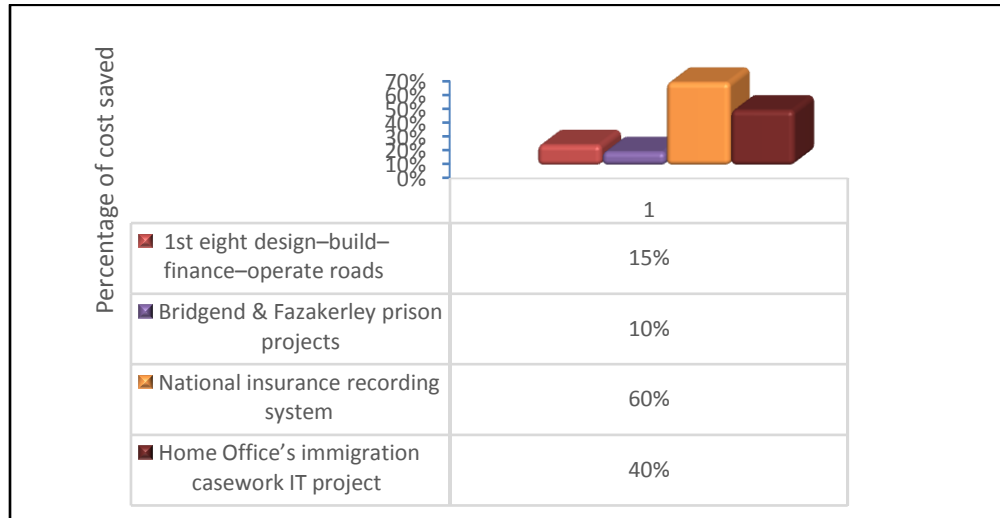
The UK is widely acclaimed as the most successful country in the use of PPPs in establishing infrastructure. The next section will primarily focus on the critical factors behind the established success stories of the UK.

4.2 Critical Success Factors for PPPs in the UK

Following the 2007/2008 global financial crises, there has been a marked increase in the use of PPP by governments worldwide, especially in Europe (Osei-Kyei and Chan, 2015). Public-private partnership in the United Kingdom was formalized in 1992, following the introduction of PFIs (Li, et al., 2005). In terms of public-private partnership approach of financing infrastructures, the United Kingdom is adjudged the most outstanding nation in this regard (Chou and Pramudawardhani, 2015). By the year 2002, the fraction of the UK government's budget assigned to PPP programmes was as much as 11 per cent (Brown, 1999). As a result, in the year 2013, the United Kingdom already recorded over 600 PPPs under the PFI modal, which in monetary terms is equivalent to 100 billion US dollars 'for hospitals, schools, prisons, bridges, roads and military equipment'(Roehrich, et al., 2014).

Evidence of early success stories of PPPs in the United Kingdom in terms of cost savings are portrayed in figure 3.2.1 below.

Figure 3.2.1: Cost savings on some early UK PPP project



Data Source: HM Treasury (1997)

A research conducted by Navarro-Espigares and Martí'n-Segura (2011) also confirms a positively and statistically significant relationship between economic effect and PPP infrastructure projects in the UK. Generally, a PPP project entails the following phases, 'planning, procurement, and contract management' (Bing, et al., 2005). The planning phase involves the development of a business case for the intended project; a business case represents the commercial justification for embarking on a project, which involves feasibility as well as cost-benefit analysis of the project. The procurement stage begins with advertising, (in the UK this is publicized in the Official Journal of European Community; (OJEC)), shortlisted bidders are sent invitations to negotiate (ITN) - a tender document which contains instructions, proposed contractual period and risk matrix amongst other components. The most suited bidder is selected based on 'best and final offer' (BAFO) after which the contract management begins (Bing, et al., 2005).

In the UK, healthcare delivery receives considerable level of attention from PFI (Navarro-Espigares and Martí'n-Segura, 2011). For instance, in England, the Responsibility Deal (RD) of the public health sector which was launched in March 2011 is solely a public-private partnership arrangement. The arrangement also involves voluntary contracts by several businesses. As at January 2015, 753 organizations had signed up at least one of the RD pledges. This has helped in achieving availability and access to primary healthcare and products as well improving cooperation with the authority on health issues (Cécile Knai, et al., 2015).

The impact of PPP in the healthcare sector of the United Kingdom can be appraised, considering its minimal contribution towards reducing the level of addiction of its citizens to alcohol, although there are arguments regarding the validity of this conclusion. It is observed that recent leadership of the country gives less consideration to industry interest when establishing policies around addictive food substance (Cécile Knai, et al., 2015).

There are of course several critical driving factors responsible for the success the United Kingdom have been able to record in its PPP scheme. Rockart, (1982) defined critical success factors as the key areas of operations where optimum outcomes are required so that managerial goals can be achieved (Rockart, 1982).

The critical success factors behind the UK success story in PPPs which is the major rationale behind this study are discussed in turn.

1) Apt Risk Allocation and Sharing

Risk allocation in PPP schemes involves allotment of risks between parties directly involved (Bing, et al., 2005). In the UK, the strategy behind effective allocation of risk is given quality attention. The UK risk allocation design leaves out end users in risk sharing. Risk involved in each stage of the project delivery, probability of occurrence and accompanying commercial consequences are documented in a register. The initial risk sharing structure is communicated in the invitation to negotiate (ITN). Interested private partners then assess the cost of risk management and subsequently set a bid price which may be accepted or rejected by the public sector after careful consideration of profitability measures, such as the net present value amongst others (Bing, et al., 2005). Successful PPP requires the understanding of risk sharing in allocating risk, while extra caution is taken to avoid diverting excess risks to the private sector (Osei-Kyei and Chan, 2015).

The UK employs the following risk classification; macro, meso and micro level risks, as categorized by Li (2003). The public sector is expected to withhold risk which the private partner is incapable of bearing.

In their survey, Bing, et al. (2005) highlighted the following risks as befitting of the UK government, 'nationalization/expropriation, poor political decision-making process, political opposition, and site availability and government stability'. On the other hand, they listed the following risks to be allocated to the private sector, 'tax regulation change, late design changes, residual risk, inflation, the tradition of private sector provision of public services, staff crisis, third party tort liability, influential economic events, the financial attraction of the project, the level of demand for the project, and different working methods' (Bing, et al., 2005). A number of other risks were defined as risks to be shared between the involved parties, including: 'force majeure and legislation change, lack of commitment from a partner, responsibilities and

risk distribution and authority distribution between partnerships'. In this way, the British government has been able to encourage more participation by the private sector in procuring infrastructure.

2) Quality Private Consortium

Another rationale behind the UK's PPP success story is the country's ability to incorporate strong private consortium. Since most PPP projects are capital and labour intensive, the UK government, as much as possible avoids entering into concessions or agreements with a single construction firm (where applicable). The government encourages pulling together of assets by interested private partners, such that a consortium is formed (Osei-Kyei and Chan, 2015). In achieving a strong consortium, two germane factors are required; mechanical and financial strength of interested investors (Zhang, 2005). Another strategy of the government in achieving the desired results in this area is to investigate the compatibility of the group of firms that makes up the consortium. In this way, the risk of failed PPP projects can be reduced (Osei-Kyei and Chan, 2015).

3) Economic Viability

Zhang (2005) highlighted the significance of economic workability in achieving successful PPP projects. The discussion on the commercial viability of a nation revolves around some conditions, including continuous demand and relevance of the public goods and services provided by PPP projects, less competition from other resource-demanding projects, considerable measure of profitability to fascinate investors, long-lasting returns that will be appealing enough to investors and lastly, continuous availability of suppliers required for the running of the project. Most of these listed conditions have been met by the British government. PPP projects embarked upon by the UK government are found to have delivered long-run public services to citizens, for example design-build-transfer-operate roads constructed in the early 1990s are still very much in use by the society.

4) Political support

There are strong relationships between PPP which is a public policy and the political atmosphere of the host community (Li, et al., 2005b). Expectedly, public expenditure of public projects demands appropriate consent from relevant political leaders (Jacobson and Choi, 2008). Besides, international investors are also known to have natural proclivity for economies that have sufficient political support. The OECD (2008) equates poor political support to high political risk, which results in limited competition in the tendering procedure. For instance, Bing, et al. (2005) opined that political stability experienced in the contemporary British government has sustained PPP projects in the country especially in terms of construction projects. Consequently, the increased in the number of PPP projects in the United Kingdom can be explained partly

