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Demystifying Issues Regarding Public Private Partnerships (PPP)

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Abstract
Public-private sector collaboration is an evolving concept which takes many forms around the world, and it is essentially an arrangement by which private entrepreneurs provide support for the provision of public infrastructure. This study explored the collaborative framework of the public-private partnership (PPP) as a change process, highlighted basic characteristics, benefits, key principles of PPPs and its success path; it also clarify the structure, process and delivery system of joint-venture (JV) PPPs and the concession PPPs; while also identifying categories of projects that can benefit from the use of the PPP. It revealed successful attempts by central governments in financing new infrastructure projects through private sector participation due to the paucity of funds while facilitating innovation in infrastructure development. Joint-ventures PPPs which involves the incorporation of a company where the public actor is both the regulator and a shareholder in the joint operating company; it also involves the sharing of the attendant revenues, benefits/loss, and costs but despite been of local value is described as the true PPP. Concession PPP, however, is of national value and involves the transfer of risks to parties most suitable in managing it but the project financing is the sole responsibility of the private actor.
Keywords: Public Private Partnerships (PPPs), Joint Venture PPP, Concession PPP, benefits, PPPs Projects.

1.0 Introduction

Public Private Partnerships (PPP) represents a balance between state ownership and privatisation. Awodele (2012) claimed that PPPs should be regarded as a viable alternative to privatisation and socialisation because they provide the opportunity to alter the institutional milieu without the consequent loss of municipal influence. It has been widely acknowledged as an increasingly important vehicle to deliver public infrastructure development and public service (Adetola, Goulding, & Liyanage, 2011; Akintoye and Beck, 2009; Akintoye, Fitzgerald, & Hardcastle, 1999; Kumaraswamy and Morris, 2002; Tang, Shen, & Cheng, 2010; Zhang, 2005).

Public–private partnerships (PPP) are a rapidly growing means of procuring infrastructure assets and their associated services, signalling a fundamental shift in the relationship between the state and industry (Ahadzi & Bowles, 2004); however, Public-private partnerships (PPP) is not a totally new concept in infrastructure development (El-gohary, Osman, & El-diraby, 2006), the first PPP in modern history was the concession formed in 1854 to construct and operate the Suez Canal (Levy, 1996). In retrospect, public pressure for or against any decision related to the Canal was non-existent in the 19th century (El-gohary et al., 2006).

It is a way of procuring construction infrastructure which places private providers directly into the context of service delivery to the public (Akintoye et al., 1999; Mustafa, 1999) and where project financing rests mainly with the private sector, in which the rationale is to combine the resources of the public and private sectors, in the quest for more efficient service provision (Akintoye, Hardcastle, Beck, Chinyio, & Asenova, 2003). Adetola et al. (2011), Ke, Wang, Chan, and Cheung (2009) and Deloitte (2006) noted that the United Kingdom (UK) has been recognised as the most active market in the World for this partnership, which is widely known as Private Finance Initiatives (PFI), and has also developed the most sophisticated institutional, legal, regulatory, and business structures to support the expansion of this procurement strategy.

Meanwhile, other developed countries of the world had embraced the PPP arrangement also, this include the United States, Singapore, Hong Kong, Australia, Germany, Spain, South Korea, Canada, Ireland, Japan, France, Iran, China and Brazil and international institutions such as the World Bank, the European Investment Bank and the UN (Adetola et al., 2011; Brook; 2001; Chan et al., 2009; Daube, Vollrath, & Alfen, 2008; Deloitte, 2006; Hamilton, 2001; Kouvarakis, 2001; Noorzai, Jafari, Golabchi, & Hamedi, 2016; The PFI Report, 2001); also, we have developing countries such as India, Nigeria, Cameroun etc. that have also activate this collaborative framework as a public service procurement strategy; which has noted by Ahadzi and Bowles (2004) is generating a fair amount of research interest too.

However, likely obstacles to effective implementation of collaborative engagement approaches in developing countries may include an absence of efficient, transparent and participatory policies, mechanisms and institutions in such countries (Akintoye and Beck, 2009). Extant literatures (Ahadzi and Bowles, 2001; D&P Report, 2001; Financial Times, 2002; HM Treasury, 1998; Kinnock, 1998; Modic, 1989; Office for National Statistics, 2000) have however identified budget deficits, ageing or poor infrastructure, growing demand for public sector services, the search for greater efficiency and creativity in the delivery of public services through the use of private sector managerial and technical skills, the desire to introduce competition and the shortage of domestic experience especially in the developing economies as the key drivers behind the public-private collaboration.

The need for an enabling legal and regulatory framework for PPP arrangement cannot be overemphasised;

and this framework must be such that is clear, transparent and predictable for efficient, effective and fair bidding procedures (Asian Development Bank, 1996, 1997; Aziz & Asce, 2008; Harris, 2003). The legal environment where projects operate often influences to a large extent the willingness of the private sector to collaborate in infrastructure project development (Adetola et al., 2011; Aziz & Asce, 2008). Therefore, in order to attract private sector participation, the government has to develop adequate legal and regulatory framework, as well as a financial environment, congenial to investment and attractive to foreign investors (Adetola et al., 2011; Kumaraswamy and Zhang, 2001).

A classical definition of this form of collaboration between the private and public sector is therefore provided by the Canadian Council as: 'A co-operative venture between the public and private sectors, built on the expertise of each partner, that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards' (CCPPP, 2001). The current research, therefore, aims at:

- Exploring the collaborative framework of the public-private partnership (PPP) as a change process with a view to highlighting its essential characteristics, benefits, key principles, and its success path;
- Exploring the basic or characteristics attributes of joint venture (JV) PPP and the concession PPP towards offering a better understanding of its structure, culture, process and delivery system;
- Identifying categories of projects that can benefit from the use of the public-private partnership arrangement.

2.0 Public-Private Partnership (PPP) As A Change Process

Public-private sector collaboration is an evolving concept which takes many forms around the world; and it is essentially an arrangement by which private entrepreneurs participate in, or provide support for the provision of public infrastructure (Adetola et al., 2011). The private sector can be described as that part of an economy which is owned and run by individual persons, groups or business organisations usually as a means of enterprise for profit while the public sector, on the other hand, is the portion of the economy which is owned, controlled and run by the various levels of government (federal, state, region, local etc.) or its agencies (Adetola et al., 2011).

In recent years, the private sector has been playing a significant and lively role through involvement in delivering public services to facilitate innovative projects and development, especially in the developing countries and less developed countries (LDC). The rapid increase in human population in recent times coupled with globalization, technological advancements, changes in social and political environments and the challenges of economic growth and poverty might have led to unprecedented demand on government institutions to provide better and efficient services (Akintoye and Beck, 2009).

It is noteworthy, that national governments have also made several efforts and overtures to the private sector in order to increase private sector participation; which ranges from performing an outright privatisation of previously state-owned industries (Ng, 2000), up to contracting out of services or cleaning to private firms and the use of private finance in the provision of social infrastructure (Sindane, 2000; Tanninen-Ahonen, 2000). The idea of allowing private firms to finance projects or public sector infrastructure resulted in the emergence of Public-Private Partnership (PPP) (Li and Akintoye, 2003) which was collaborated by Olawore (2004) who claimed that stakeholder's expectations and needs throughout the world are rising at a rate with which government revenue alone can no longer cope, hence government revenue needs to be augmented in order to deliver public infrastructure.

Developing countries in Africa, Asia however seems to favour concessions (concession PPP) above the JV PPP for majority of their developmental projects, which as noted by Abednego and Ogunlana (2006) has made public-private partnership (PPP) to becoming inevitable and sustainable approach to improving social infrastructure, thereby helps in providing needed capital investment, operational efficiency and risk absorption which according to Li and Akintoye (2003), Adetola, Goulding, and Liyanage (2011) enhance the value of public assets and making a better use of taxpayer's money. It is widely acknowledged that infrastructure deficit is one of the key factors that prevent the Sub-Saharan Africa region from realising its full potential for economic growth, international trade and poverty reduction (Adetola et al., 2011; Organisation for Economic Cooperation and Development, 2006; World Bank, 2008; 2010). Therefore, many countries are now contemplating Public-Private collaboration as an arrangement between public and private sectors to finance, design, build, operate and maintain public infrastructure, community facilities and related services (Adetola et al., 2011; Akintoye and Beck, 2009; Tang et al, 2010).

In this respect, many countries are now attempting to finance new infrastructure projects through private sector participation. For example, the Government of Nigeria established the Infrastructure Concession Regulatory Commission (ICRC) in 2005 and then ICRC Act which provides for the participation of private sector in financing the construction, development, operation, or maintenance of infrastructure or development projects of the Federal Government of Nigeria through concession or contractual arrangements; and the establishment of the infrastructure Concession Regulatory Commission to regulate, monitor and supervise the contracts on infrastructure or development projects.

Adetola et al. (2011) enumerated similar initiative in Sri Lanka in 1995, which provides for future investment in new infrastructure projects in collaboration with private sector participation taking the form of build, operate and transfer (BOT), or build, own and operate (BOO) arrangements, which Liddle (1997) noted was due to insufficient resources to undertake large investments required for infrastructure projects; and also in China in the 1980s through private participation in infrastructure development (Shajiao B power plant in Shenzhen) which was the first BOT project in China(Adetola et al., 2011); same in India where policies had been formulated to finance road development, metro rail, tourism, ports, civil aviation, power, urban development and agriculture projects through private sector participation (Kumar, 2010); Junee Correctional Centre, a prison in New South Wales, Australia, was procured through the BOO method in 1993 (Adetola et al., 2011; Department of Corrective services, 2006); the Eastern Harbour Crossing Tunnel in Hong Kong was procured through a BOT concession of 30 years, the success of the project was attributed to an established and equitable legal and regulatory system(Adetola et al., 2011; Tam, 1999).

In Africa, we have seen PPP investment in infrastructure, water and sewage systems, transport facilities and educational sector etc., special mention is the first major private sector participation infrastructure in Nigeria is the Murtala Muhammed International (MMI) Airport Terminal project (Babalakin, 2008) for the building of a burnt terminal at a cost of US$250 million on a BOT contract agreement between the Federal Airports Authority of Nigeria (FAAN) and Bi-Courtney Limited (BCL) for an initial concession period of 12 years but was extended to 36 years in February 2007.

Savas (2000) described PPP as an elastic or easily controlled form of privatisation i.e. any act aimed at reducing the role of government or increasing the role of the private sector in satisfying people's needs connotes privatisation. Savas explained further that privatisation can involve delegation (i.e. government may retain responsibility and oversight functions but uses the private sector for service delivery), divestment (i.e. government relinquishes responsibility) and displacement (i.e. private sector grows and displaces government activity). Concession projects embody infrastructural developments, however, extant literature revealed that the definition of infrastructure has been shifting from one focusing on physical fixed assets such as roads, airports, seaports, telecommunications systems, energy, water distribution systems and sanitation (public utilities);and 'softer' types of facilities such as information systems and knowledge bases (Adetola et al., 2011; Button, 2002).

PPP projects (whether JV PPP or concession PPP) are generally challenged with both project management problems which require day-to-day supervision (short-term) as well as partnership problems which require more of a strategic approach (long-term); consequently, PPP projects can be considered to have governance concerns because they deal with monitoring and overseeing strategic direction as well as strategic decision-making (Abednego & Ogunlana, 2006).

2.1 Public Private Partnerships (PPPs): Its Benefits, Key Principles, and Success Path

Ohiani (2014) highlighted the following as benefits of utilizing the public-private partnerships (PPPs) approach in delivering a service or facility for the use of the general public:

1. Value for money: Enhanced "Value for Money" through efficiency, cost-effectiveness, reliable and innovative service.
2. Reduced cost: Help government avoids up-front capital cost & reduced public administration cost.
3. Reduction in project lifecycle costs & project delivery time.
4. Reduce public sector budget deficiencies.
5. Facilitates innovation in infrastructure development.
6. Promote local economic growth & employment opportunities.

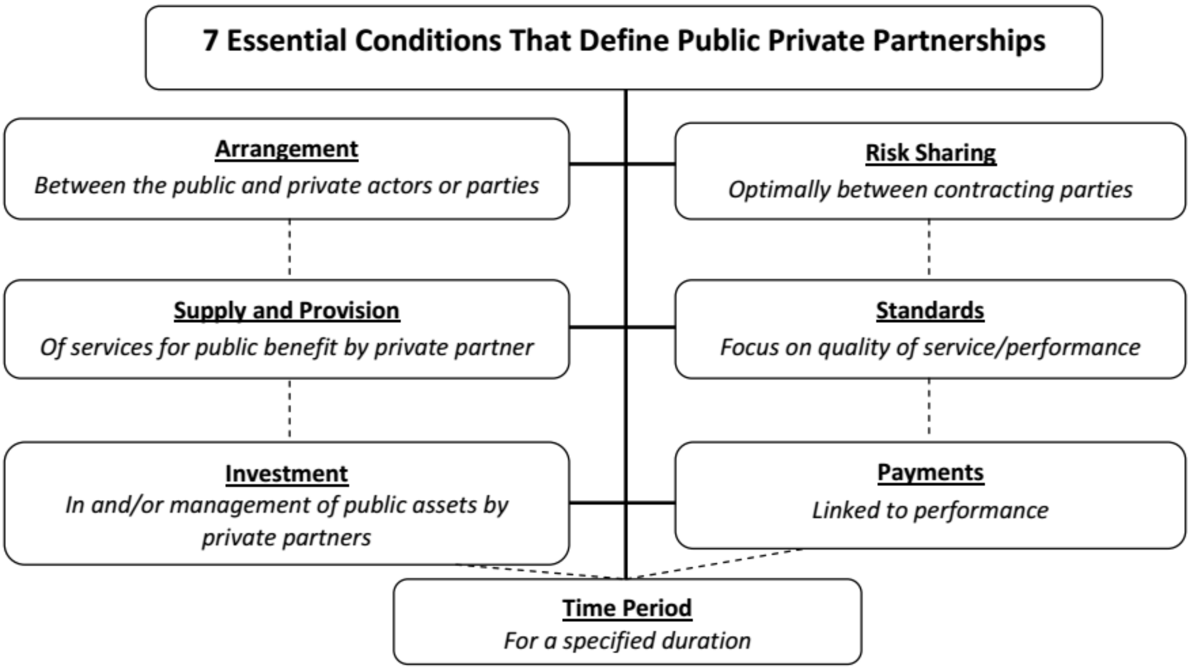

Figure 1: Essential Characteristics of Public Private Partnerships (PPPs)

Ohiani (2014) also highlighted the following as key principles behind the PPPs arrangement which are:

1. Value for Money: Ensure project appraisals take into account not only cost but also risks and service quality.
2. Public Interest: Adequate and prior consultation with end-users and other stakeholders of an infrastructure project as standard.
3. Risk Allocation: Risks are allocated to the party best able to manage them.
4. Transparency: Very high world-class standards of public and corporate governance to enhance credibility and transparency.
5. Competition: Ensure business activities are subject to competition and appropriate commercial pressures, dismantling unnecessary barriers to entry, and implementing and enforcing adequate competition.
6. Capacity to Deliver: Ensure authorities responsible for privately operated infrastructure have the capacity to manage the commercial processes involved and to partner on an equal basis with their private sector counterparts.
7. Output requirements: Concept of "verifiable service standards" to be used as the basis for output or performance based specifications.

For a successful PPPs arrangement, the following are veritable success paths; these include legal and regulatory framework, policy, clear objectives and roadmap, coherent planning framework, human capital development, infrastructural financing framework, institutional framework and capacity.

3.0 Joint Venture (JV) PPPs Vis-À-Vis Concession PPPs

Both JV PPP and Concession PPP are forms of PPPs. Public Private Partnerships (PPPs) is as seen as an effective way to achieve value for money (VFM) in public infrastructure projects (Bing, Akintoye, Edwards, & Hardcastle, 2005). Joint ventures mean that the public and private sectors pool their assets, finance and expertise under joint management. Under this type, the private sector participates more in management (Tang, Shen, & Cheng, 2010). A joint venture company is set up in which a majority of that company is owned by the private sector partner.
The public sector selects a strategic partner through a competitive process that includes a bid to carry out the first phase of work. The typical contract is then over 20 years. Subsequent phases are commissioned by the public sector partner, but carried out by the strategic partner, using the first phase of work as a benchmark to determine the appropriacy of future costs (Awodele, 2012). It implies combining the abilities of both the public and private sectors through a company where they are severally and jointly bound to accomplish a set of projects on the basis of sharing of profit/loss. This type of partnership is often referred to as a 'true' PPP (Bennett, James, & Grohmann, 2000; Bing et al., 2005)

Under the concession-based PPP arrangement, the private partner is responsible for funding the scheme, while their capital investment will be recovered through the operation revenue over the concession period (Ng, Xie, Cheung, & Jefferies, 2007). The concession is when a government grants a private entity the exclusive rights to provide operate and maintain an asset over a long period of time in accordance with performance requirements set forth by the government. The public sector retains ownership of the original asset while the private operator retains ownership over any improvements made during the concession period (Awodele, 2012; Deloitte, 2006).

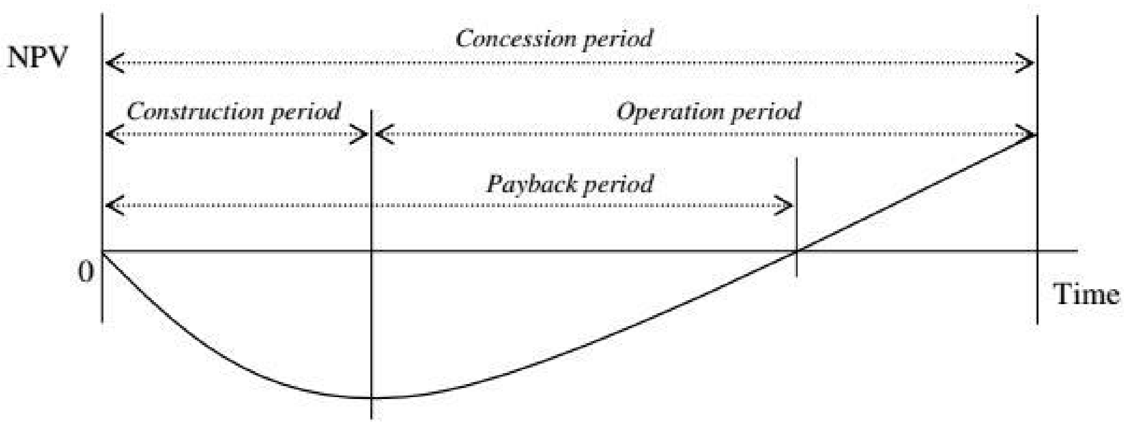

Figure 2: Relationship between the concession period and NPV (Source: Ng et al., 2007)

The two fields in which PPPs appear to be most dominant throughout the world are urban development (JV PPPs) and infrastructural development (concession PPPs) (Bult-Spiering & Dewulf, 2006). They further noted that public infrastructure is vital to a nation's production and distribution of private economic output as well as to its citizens' overall quality of life.

3.1 Partnership Derivatives

JV PPPs: The public and private parties to the partnership arrangement both bring in knowledge and resources to the 'table', thereby ensuring the best practice and management know-how from both sides are combined effectively for the success of the objectives of the public-private partnership. There is a transfer of resources from both parties (resources such as material, authority and other symbolic values (Tiong, 1992, and Bennett and Krebs, 1991). Meaning that no matter how small, each participant brings something to the partnership (Awodele, 2012)

Concession PPPs: This can be best described as a form of outsourcing, whereby the public party to the PPP arrangement rewards the most qualified concessionaire with the best proposal for a concession contract to undertake a given infrastructural development project under stated conditions. Here, due to the little synergy between public and private parties, the public client contributes little or nothing to the design and construction of such PPP projects. It involves the public sector purchasing quality services while the private sector maintains or constructs the necessary infrastructure; the private sector supplies designs, builds, finances and covers the costs through charges on the users of the asset (Tang et al., 2010).

3.2 Partnership Culture

JV PPPs: In JV PPP, emphasis is placed on togetherness, alliance, cohesion, and relationship within and among the group or partners; also, pre-eminence is placed on sharing, cooperation, collaboration; which means all parties are equal and have the same opportunities to improve or maintain their well-being (Abednego & Ogunlana, 2006). In this regard, Grantt (1996) asserted that shared authority and responsibility, joint investment, shared risk/liability, shared resources, and rewards, and mutual benefit are the thrust of collaboration.

Concession PPPs: This is basically the transfer of responsibility, obligation, and risks; and even, most importantly the avoidance of responsibilities by the public party to the concession PPP arrangement; or a divided responsibility (Adetola et al., 2011). This is could one of the reasons why the Hong Kong government adopted three sets of criteria to evaluate tenders for its BOT tunnel projects, and assigned weights to these criteria in their order of importance. The sets of criteria and their assigned weights are finance, 65%; engineering, 20%; and planning of operation and transport, 15% (Adetola et al., 2011). The higher weight assigned to the financial criteria in this evaluation reflects the importance of a sound financial plan to the success of an infrastructure project (Zhang and Kumaraswamy, 2001).

3.3 Partnership Basis

Jacobson and Choi (2008) identified open communication and trust, willingness to compromise and collaborate, and respect as important factors for successful delivery of public-private partnership projects. This is supported by Innes and Booher (2004) who emphasised the need for building trust between project stakeholders and resolving conflicts before they become intractable. Two major area of dispute that occurs during the Muritala Muhammed Airport (MMA2) airport concession is the exclusivity clause in the agreement and political involvement at the implementation level.

Tam (1999) also enumerated the failure of the Bangkok Second Expressway System and Bangkok Don Muang Tollway BOT projects in Thailand to be due to immature legal and regulatory system, and the changing foreign investment policy resulting from several changes of government. Bult-Spiering and Dewulf (2006) argues that the public and private sector goals do not necessarily have to be identical for a joint venture to succeed; but the aim has to be compatible and lead to a shared outcome (Bennett et al., 2000).

JV PPPs: It is practically a policy-based partnership with laid down rules for operation but no definite or definable end-point unlike the concession PPP arrangement; it is a type of a relational contracting framework which relies on cooperation, trust and team working. Trust can be described as a firm belief, confidence and hope in the reliability, truth, ability or strength of someone or something. In other words, it is often a firm reliance on the integrity or character of a person or thing (Bies, Sheppard, & Lewicki, 1995); Rousseau, Sitkin, S., Burt, R., and Camerer (1998) also defined trust as a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another. It has been widely acknowledged that trust is an important hallmark of effective organisations, and has a number of important benefits for organisations and their members (Adetola et al., 2011; Bies et al, 1995; Hosmer, 1995; Kramer and Tyler, 1996; Rousseau et al, 1998).

Concession PPPs: It is basically a project-based partnership, more formal than JV PPP and has a clear and definable end-point or termination date; however subject to several disputes or sell off or even premature closure (Kwak, 2002; Tam, 1999; Tam & Leung, 1997). Aziz and Asce (2008) argued that the success of PPP implementation is contingent on the initiation and management of PPPs at the program level. They further listed principles that must characterise PPPs implementation at the program level as availability of PPP institutional/legal framework; availability of PPP policy and implementation units; perception of private finance objectives; perception of risk allocation and contractor's compensation; perception of value-for-money; PPP process transparency and disclosure; standardization of PPP procedures and contracts; and performance specifications and method specifications

The World Bank highlights further the reasons why many partnership projects were not delivered and these include: wide gaps between public and private sector expectations, lack of clear government objectives and commitment, complex decision making, poorly defined sector policies, inadequate legal/regulatory frameworks, poor risk management, low credibility of government policies, inadequate domestic capital markets, lack of mechanisms to attract long-term finance from private sources at affordable rates, poor transparency, and lack of competition (Adetola et al., 2011; Asian Business, 1996)

3.4 Partnership Incorporation

The issue of the relationship between public and private investment has been a focus of attention in the literature since the early 1980s, and it is still the subject of considerable controversy (Adetola et al., 2011; Khan and Reinhart, 1990). Thus, the interaction between project participants is often a key factor in project management. Interactive processes include planning, communication, monitoring and control, and project organisation in order to facilitate effective coordination throughout the project life (Adetola et al., 2011).

JV PPPs: The JV partnership results in the setting up of a registered company/development firm (i.e. a separate corporate legal entity) to manage and carry out mutually developed projects. This implies that JV PPPs are separate legal entities with autonomous tasks and responsibilities (Bult-Spiering & Dewulf, 2006). Four fundamental principles that facilitate its implementation are accountability, transparency, continuous improvement and ownership (DETR, 1999). In this context, accountability and transparency require personal responsibility, answerability and an open approach to decision-making; continuous improvement means that the firm need to embrace the ideas of experiment and change, planning and budgeting in the long run (Akintoye et al., 2003). They have to establish a dynamic framework of planning for sustainable future improvements, cost reductions, and competition. The principle of ownership entails wide community consultations, surveys of service users, open forums, focus groups, etc. (Spencer, 1997). Under JV PPPs, the public actor is both the regulator and a shareholder in the joint operating company; and from this position shares in the operating company's profit and help ensure the wider political acceptability of its efforts to safeguard to safeguard public needs and interests (Bult-Spiering & Dewulf, 2006).

Concession PPP: In concession PPP arrangement, though the private party/firm/company is registered legal entity on its own, however, unlike the JV PPP, no company or development firm needs to be set up as the private entity upon its award of concession carries out the project literally on its own. In this system, a private sponsor finances the design, construction, maintenance, and operation of a public project for a specified concession period, at the end of which it transfers ownership to the government agency, hopefully after recouping its costs and achieving profits (Algarni, Arditi, & Polat, 2007)

3.5 Partnership Direction

JV PPPs: The JV PPP arrangement from the activation of the framework setting it up is controlled and managed by both the Public and Private parties to the partnerships. That is, the direction is public-private (Bult-Spiering & Dewulf, 2006). It implies that there is some shared responsibility between the public sector and private sector for tangible deliverables (Collin, 1998) and leads to the establishment of an enduring and stable relationship among actors; and this implies that the parties are entering into a long-term relationship (Awodele, 2012).

Concession PPPs: In this case, upon the award of the concession, the private parties set its machinery in motion to carry out all assigned work under the contract and solely managed and controlled all facets of the project during the concession period, however, the public sectors remains the clients throughout the lifecycle of such project. Therefore, it is directed towards the public sector (Bult-Spiering & Dewulf, 2006). Caerteling, Benedetto, Doree, and Halman (2008) collaborated this by concluding that the majority of roads (a typical single-use development) are owned by the public sector (federal/national, regional/state and local governments); hence, the entrepreneurial environment of the industry is shaped by the public sector procurement policy and practice. Savas (2000) explained this further in another way by stressing that the public client may retain responsibility and oversight functions but uses the private sector for service delivery.

3.6 Partnership Procurement/Acquisition

JV PPPs: In this PPP arrangement, the public-private parties are both jointly involved throughout the procurement process- request for information, request for (pre) qualification request for proposal, tender evaluation and shortlisting, negotiation and award of concession etc. Bult-Spiering and Dewulf (2006) summarises JV PPPs delivery system as that in which there is joint procurement and shared procurement.

Concession PPPs: However, in this case, the public party puts a service question out to tender which is rewarded with a concession. This service is the availability of a certain product for a certain time, capacity and quality; and the service is obtained by granting a concession, where the concessionaire is also responsible for financing the project (Bult-Spiering & Dewulf, 2006). The entire PPP procurement process may be broken into four main stages; i.e. the planning and feasibility phase, the bidding and negotiation phase, the construction phase, the operation phase and possibly the transfer and/or renegotiation phase (Ahadzi & Bowles, 2004). In practice, this is accomplished by combining a competitive tendering process with an appropriate risk transfer; the client, in this context, is expected to select the most cost-efficient bid, which may include innovative solutions, additional benefits or an element of income generation (Akintoye et al., 2003).

3.7 Partnership Risk Strain

JV PPPs: Risks are shared by both parties according to a pre-determined arrangement. However, there is the need for project participants to identify and understand all potential risks associated with a project in order to ensure that risks are properly allocated to the party with the best financial and technical capabilities to manage them has been widely acknowledged (Adetola et al., 2011; Edwards, 1995; Flanagan and Norman, 1993; Ward & Chapman, 1991)

Concession PPPs: Design, build, finance, maintenance, and operation risks is transferred by the public client to the private party. Abednego and Ogunlana (2006) noted that parties that are involved in an infrastructure project under public–private partnership (PPP) procurement system typically have different perceptions of proper risk allocation, thus, disputes may arise between those parties thus reducing the chances for the project's success. A common objective in PPPs according to Aziz and Asce (2008) is the transfer of project risks to the party that is best able to control and manage the risk. They, however, noted that such risk allocation should be assessed in terms of its effect on the project and the ultimate users. The risks that the private sector is in a better position to control than the government include design risks, construction risks including cost overruns and completion time, and the future O&M cost overruns. On the other hand, governments should be able to retain, for example, a change-of-law risk. Demand risk is another significant risk, the allocation of which is subject to several considerations (Aziz & Asce, 2008).

Li et al. (2005) and Bing et al. (2005) proposed an approach to classifying partnership project risks into three levels: macro, meso, and micro. The macro-level risks are those risks external to the project itself; the meso-level risks are project-related risks; while the micro risks are partly related risks.

3.8 Partnership Cost-Revenue-Benefits (CRB)

JV PPPs: The cost, revenues and other attendant benefits accruing to the mutually developed projects are shared on a pre-determined quota by both parties (public-private). Furthermore, this framework helps to align the interests, rewards and risks of both public and private partners through a long-term contractual relationship (Grimsey and Lewis, 2005). There is some shared responsibility for outcomes or activities (Awodele, 2012; Bult-Spiering & Dewulf, 2006). This view according to Li and Akintoye (2003) is closely related to the analysis by Grantt (1996) who suggested that ideas of shared authority and responsibility, joint investment, sharing liability/risk taking and mutual benefit are at the core of a partnership

Concession PPPs: However, in a concession PPP arrangement, the costs, revenues, and benefits are taken up by the private party during the concession period, however, after this the attendant CRB goes to the public clients. The two fundamental requirements for this arrangement are that the public sector must secure value for money and that the private sector must genuinely assume responsibility for risk (Akintoye et al., 1999). Bult-Spiering and Dewulf (2006) noted that for costs and revenues, there is a lump sum for the public actor and variable for private actors.

3.9 Partnership Product Relevance

JV PPPs: JV projects are usually of local value, relevance and significance. Although it requires multi-actor approach, however, as noted by Bult-Spiering and Dewulf (2006), joint-venture PPPs do not operate at a regional or national level because the main actors involved are local governments, developers, and land or property owners. This implies that it can accrue to itself relevance or value beyond the local area it is confined.

Concession PPPs: Projects established using concession PPP arrangements are both of local, regional and most often national value; this is due to the fact that most concessionary project cut across regions, states both in their significance and embedded public interest, for example, an interstate railway concession project, road construction project, power station etc.; also the majority of roads (a typical concessionary project) are owned by the public sector (federal/national, regional/state and local governments (Caerteling et al, 2008). This Public-Private collaboration as noted by Liu and Cheah (2009) appears to have developed into extensively applied delivery vehicles for large and complex infrastructure projects, crossing international borders and diverse governmental structures to form an essential support for global economic growth.

3.10 Partnership Product Function

JV PPPs: JV PPP arrangements are usually utilised for mixed use development, for example, urban development projects. Examples of urban developments include housing, retail space, office space, hotels, parking, garages and public space as they are located within certain areas and for these mixed-use developments, joint venture PPPs dominate (Bult-Spiering & Dewulf, 2006).

Concession PPPs: However, concession PPP arrangements are mainly used for single use development especially social, transport and other infrastructural developments and as a major boost to the national economy. Social infrastructure involves the construction of new facilities, rehabilitation, expansion or demolition of existing facilities and a good example of a social infrastructure PPP is Her Majesty's Prison Altcourse, which was the first prison to be designed, constructed, managed and financed privately in the UK (Bult-Spiering & Dewulf, 2006). Transport infrastructure, however, includes roads, light railways, and transit systems and a good example of these is the HSL-Zuid in the Netherlands which encompasses the design, realization, maintenance, financing and operation of 100km of the railway (superstructure) and systems for high-speed trains (Bult-Spiering & Dewulf, 2006). Road infrastructure, for instance, can be described as a large technical system consisting of physical components such as roads, bridges and traffic monitoring equipment which forms a network (Caerteling et al., 2011). Adetola et al. (2011) described it as a public space, used by all, and often controlled by the use of signs, regulations and dynamic route information which are organised to optimise traffic flow; and worthy of note is the fact that road infrastructure and another type of single-use development projects appears to be a major sector, a vital component for economic activity, and an important contributor to both Gross Domestic Product and employment (European Union Road Federation, 2007; OECD, 2008).

3.11 Partnership Organizational Structure

JV PPPs: The organisational structure of a JV PPP arrangement can be termed as an equity system or a horizontally organisational complexity structure whereby both the public and private parties to the partnership arrangement has an equal right, weigh and vote in the decision-making process. Its actors include municipalities, developers, owners (Bult-Spiering & Dewulf, 2006).

Concession PPPs: This arrangement can best be described as a vertical organisation structure, whereby the public sector client is both a participant and at the same time an enforcer in order to safeguard overriding public interest. Also, its actors include central governments, provinces, municipalities, consortia (Bult-Spiering & Dewulf, 2006). In this arrangement, the public agencies may play the role of the 'regulator' (Leung and Hui, 2005), 'enabler' by providing the enabling environment for the private partner to operate(Adetola et al., 2011), 'moderator' by balancing market incentives with community interests (Sengupta, 2005) and 'facilitator' by assisting in project completion and reducing the developer's risks (Lynch, Brown,& Baker, 1999). As noted by Bult-Spiering and Dewulf (2006) because of the various interest involved in a concession PPP, this causes vertical organisational complexity because of the hierarchical relations between the different levels of government (national, regional and local).

The failure rate of joint ventures has been high, however, partners are recommended to monitor both the internal and external conditions in the host country. By knowing the key factors, joint ventures can be enacted and sustained properly. Among others, internal factors include partner fit, partner relations, and structural characteristics, while external factors include host country conditions and project risks (Tang et al., 2010).

4.0 Suitable Candidates for PPPs

Aminu and Samuel (2015) enumerated suitable projects that PPPs procurement system can be used for, and this includes:

1. Transport (road, rail, ports, airports)
2. Fixed links (bridges, tunnels)
3. Water resources (filtration plants, irrigation, sewage treatment, pipelines)
4. Tourism (facility development)
5. Health (hospitals and specialized health services)
6. Specialized accommodation facilities (courts, police stations)
7. Educational facilities (schools, museums, libraries)
8. Correctional services (prisons, remand and detention centres)
9. Arts, sport and recreational facilities
10. Convention centres
11. Government office accommodation
12. Social housing

Table 1: Major PPP Projects in Nigeria

S/N	Project/PPP Model	Contracting Authority	Private Partner	Size/Value	Status
1	Akamkpa Toll Road Project- Cross River / BOT	Cross River State Government	Daystar Akamkpa Investment Company Ltd	45km	MOU signed with Cross River State Government
2	Lekki Toll Road / BOT	Lagos State Bridges & Highway Authority	Lekki Concession Company	N50 billion	Financial close achieved
3	Lagos-Ibadan Toll Road / DBOT	Federal Ministry of Works	Bi-Courtney Consortium	105km/ N89 billion	Project renegotiations
4	Katampe District Infrastructure / Design, Finance, Construct & Transfer	Federal Capital Development Agency Nigeria	Deanshanger Project Ltd	N81 billion	Financial close achieved
5	Teragro Benfruit Plant / Lease	Benue State Government	Transnational Corporation of Nigeria	26,500 metric ton capacity plant	Project Agreements executed; operations
6	Tinapa Free Trade Zone / Concession	Cross River State Government	Tinapa Business Resort Limited	265 hectares	Operations stage
7	Akwa Ibom Agro-Industries Ltd/ Concession	Akwa Ibom Investment and Promotion Council (AKHPOC)	Southern Investment Ltd	Estimated at $38million	Feasibility study completed
8	Greater Port Harcourt Housing Scheme	Greater Port Harcourt City Development Authority (GPHCDA)	DSC International	Estimated at N25billion plus N9.5 billion for International Township Services	Construction stage
9	Lagos Urban Light Rail Project/ BOT	Lagos Area Metropolitan Transport Authority	Eko Rail Limited	$550 million	Contract negotiation stage
10	MMII Airport Project/ DBOT	Federal Airways Authority of Nigeria	Bi-Courtney Aviation Services Limited	N34 billion	Construction completed; Operations stage

Note: N – Nigerian Naira; $- US dollar.

5.0 Conclusion

The Public-Private was introduced as an alternative form of service procurement and this can be traced back to ancient Europe in 1438 when the French nobleman Luis de Bernam was granted a river concession to charge fees for goods transported on the Rhine. The transformation of the infrastructure into the market-oriented economy (PPP) became very popular in the 1980's and 1990‘s.

This paper explored the two forms of PPPs (joint-venture PPPs and concession PPPs) identified and

structured these forms of service delivery systems into divisions such as: partnership derivatives, partnership culture, partnership basis, partnership incorporation, partnership direction, partnership procurement/acquisition, partnership risk strain, partnership cost-revenue-benefits (CRB), partnership product relevance, partnership product function, partnership organizational structure for better understanding of their structures and processes.
Findings of this research reveals greater disposition of many nations and institutions towards concession PPPs (as against joint-venture PPPs) which is fast becoming an indispensable and sustainable approach towards improving and providing social infrastructure, thereby helps in providing needed capital investment, operational efficiency and risk absorption in delivering of service and facility for the general use of the society. We also identified the transport sector (road, rail etc.), water and sewage system provision, the tourism sector, health sector, educational facilities, correctional facilities, recreational facilities among others as possible candidates of the PPP contractual framework.

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