

◆ Engineering Research Paper ◆

The Challenges of Public Private Partnership (PPP) Projects in a Developing Country: The Case Study of the Lekki Toll Road Infrastructure Project in Lagos, Nigeria

Christian Azuka Olele,
EdgeGold Concept Services Limited, Lagos, Nigeria
E-mail: oleles@gmail.com

Abstract: In developed and developing countries, government has significant constraints in their ability to make investment in the provision of public infrastructure. This has brought about the involvement of private sector participants in the provision of such services.

Nigeria as a developing country, since the embracement of democracy in 1999 the civilian democratic government took up the application of PPP framework as a medium to providing important infrastructure through the involvement of the organized private sector. In other to make PPP attractive to the private sector in Nigeria, the government set up attractive investment opportunities for PPP investors and also provide fair legal framework where the private sector investor will be allowed to come up with concession companies, have guarantees that compensation will be paid by the government if she defaults.

In the development of PPP infrastructure projects, the private sector participants are exposed to risks associated with assets investment in public projects. As a result, the private sectors generally are inspired to ask for soaring investment guarantees, special considerations and other investment enticements so as to guard their investments.

This paper is aimed at looking at the recent PPP infrastructural developments in Nigeria where the government has clinched the PPP framework policy since the passing of the PPP act 20. And secondly, to look at the benefits associated with the investment of the private sectors in the development of infrastructure.

Keywords

Project Management, Public Private Partnership, PPP, Nigeria, Lekki Toll Road Infrastructure Project, Lekki Concession Company, LCC, LASG,

This paper looks at the challenges of Public Private Partnerships (PPPs). First it looks at the demand for PPP infrastructure and the expected benefits to stakeholders. This is then followed by the following sections: the overview of Lekki Toll Road Infrastructure Project, the demand for PPP Infrastructure and the expected benefits to stakeholders, the regulatory and political context, the environmental and social implications, the stakeholder's interest, involvement and how their needs were managed and overcome.

In many countries, implementing infrastructure development projects have always been an issue because the projects are not always completed, and it results in failure on government or the public sector. Failures in these projects gave way for the formation of PPP Models that making the private sector organizations to synchronize with the public sector to see how project can be embarked upon and be delivered effectively. Today, the government of many countries (both developed and developing) is involved in public-private partnership. Adebajo & Mann (2000) explained that regardless of its enormous advantages, the concept of public-private partnership concept is on the increase, and a report by Jamali (2004) has also listed the following reasons why PPP Projects in many countries are not successful

- Lack of Government Commitment
- Poor Risk Management Policies
- Poor Banking Policies and Unavailability of Loans
- Poorly drafted Regulatory and Legal Framework
- Inadequate Mechanism to Attract Foreign Investors and the Local Private Sector Participants.
- Lack of Transparency and Competition

On the political dimension, Mewu (2009) for example suggested that some projects being conceived under the PPP model had encountered several problems due to political instability in Thailand. Levy (1996) also noted that in the U.S Highway projects under the PPP Model in Washington State and Arizona had encountered problems due to political opposition from congress.

In the PPP Concession model, a separate company is set up for each project and the services are provided as specified in, for example, Design, Build, Operate and Maintain (DBOM) contract. The concession company does not carry out the works by itself, but it subcontracts the design and construction, as well as the operations and maintenance work. Funding for the project is provided by its own equity and external

capital. Wolmer (2002) concluded that PPP models vary from short-term to long-term contract and the variation to these models are identified as follows:

- The duration of Contract
- The Capital Assets Ownership
- Risks Allocation and Responsibilities
- The Value on Return of Investment (ROI)

Hayford (2004) explained that in PPP policies and guidance materials, there are some common principles binding them and are listed as follows:

- Private Sector Confidence: This is an objective of fostering private sector confidence in the ability of government to facilitate PPP projects and properly assess PPP proposals, with a view to encouraging private sector investment by ensuring that enough players are invited for the bidding process especially for smaller social infrastructure projects.
- Safeguarding the Public and Stakeholders Interest: The Public and Stakeholders are interested in their security whereby their interest is protected and this is done by measuring PPP proposals against public interest criteria relating to efficiency, accountability, fairness, public admittance, end user rights, security, confidentiality and right of representation and appeal at the planning stages by affected individuals and the project host communities.
- Competitive Tendering and Probity: There should be assurance that the project will be subject to a tendering process that will be competitive with probity and fairness maintained in the procedure.

The Lekki Toll Road Infrastructure Project – Overview

The Lekki Toll Road Infrastructure Project came into being when Lekki Concession Company (LCC) was incorporated specially to design, finance, rehabilitate, upgrade, operate and maintain the Lekki Toll Road, under a 30-year Concession mandate from the Lagos State Government. LCC's Concession is the first ever Toll Road Public Private Partnership (PPP) scheme and is designed to deliver high quality road infrastructure and related services along 49.4KM of the Eti- Osa Lekki-Epe axis of Lagos. The Project is in two phases: Phase 1 is the construction of the Lekki-Epe Expressway which extends between the intersection of Falomo Bridge (0.15 Km - 49.36Km). The Works include the construction of a new access onto the existing Falomo Bridge, widening of certain parts of the existing road, construction of three new toll plazas and rehabilitation of about 30Km of existing highway. Phase 2 of the project entails construction of 20Km of coastal road from Lagos Bar Beach to Ogumgbo Beach. The works includes construction of new highway, culvert structures, provision of street lightings, and construction of two new toll plazas. The environmental impact assessment of the project has been published; the gazetted road alignment is approved and published.



Figure 1 Admiralty Circle Toll Plaza at CH 3+000 of the Lekki –Epe Toll Road.

Under an Abridged Works Contract dated February 2007, the first twenty Kilometres of road construction has been successfully completed but only twelve Kilometres has been handed back to the Concessionaire (LCC Monthly Report, 2011b).

The Employer's Requirements in the LCC Monthly Reports (2010) and LCC Monthly Report (2011a) describes the Works as being divided into five sections as follows:

- Section 1 (Km 0.2 to 0.4) Falomo. New access onto Falomo bridge;
- Section 2 (Km -0.15 to 3.8) Maroko. Widening to six lanes, including Mobil bridge, Toll Plaza No 1;
- Section 3 (Km 3.8 to 15) Express. Widening of first 2.2Km to six lanes, Toll Plaza No 2 (at Km 13.64);
- Section 4 (Km 15 to 20) Ajah. Widening to six lanes at roundabouts only, two new roundabouts;
- Section 5 (Km 20 to 49.36) Eleko. Widening to six lanes to proposed Toll Plaza No 3 (at Km 23). The Toll Plaza at Km 23 which was designed to be located at the vicinity of Pan African University (Lagos Business School) was cancelled as a result of multiple consultations with stakeholders from the host communities.

The first 20Km up to Ajah is characterised by very heavy traffic with significant encroachment of the Right of Way (Row) by numerous small and medium scale businesses. Most, if not all of these businesses, may be occupying the Row without legal ownership of the land. Another key feature of the first 20Km is the significant difficulty associated with relocation or removal of existing services. In particular, the overhead power lines represent a major issue and it is understood that toll plaza 2

may be repositioned to mitigate problems with moving some of the overhead lines. LASG is responsible for providing to LCC land which is free of occupation and services.



Figure 2 Rehabilitated & Upgraded Section of the Lekki-Epe Toll Road.

The Demand for PPP Infrastructure and the Expected Benefits to Stakeholders

According to Dulaimi (2010), the idea of the private sectors being involved in the provision of basic infrastructures has been identified as an important approach for the government of many countries. Garvin (2009) concluded that PPP refers to the contractual arrangement where the private sector participates in infrastructural development services that could have been provided by the government. A wide range of projects such as hospitals, schools, roads, bridges, prisons, and light rail, water and sewage plants could be implemented using the PPP models. Shen (2006) explained that there is a worldwide trend towards PPP's in providing infrastructural development aimed at generating greater efficiencies and synergies, increased revenues and reduced debts, open doors for foreign investors, enhanced market opportunities and increase in competition.

Bamgbelu (2004) described the advantages of PPP to stakeholders as follows:

- **Value for Money:** it was imagined that the private sector novelty of combining all construction phases will eventually gain synergies. Current proof recommend that this is actually happening on contracts established under the PPP/PFI platform already, and for this reason contributing to a lessening of

costs of operation, improved level of services and the benefits gained from the transfer of risks to the private sector.

- Innovation and Spread of Best Practice: modernization of the private sector is one of the foremost factors of the development of the PPP scheme as the government has come to realize that proficiency and skill does not exist within the sector.
- Flexibility: PPP's have the integral flexibility to be established successfully to different types of infrastructure, and the theory that strengthens PPP can be adapted to many circumstances (Robinson et al, 2011)

The Regulatory and Political Context

The principles of governance are examined to show how it affects processes, decision-makers and the general population of the country. Robinson et al. (2011) explained that the laws governing PPP Projects includes the agendas for controlling, managing and influencing the deployment of financial, staff and physical resources in an effective and fiscal affordable way. These laws and regulations are bound to protect processes such as

- Value for Money, Financial Accountability Processes
- Appraisal and Evaluation Process

These factors will permit the private sector to envisage the project's profitability and make a decision whether the contract is valuable to bid. Clive (2003) is of the view that if the legal and judicial environment is not well classified, investors and project participants will see the project as volatile and extremely risky and run away.

The Environmental and Social Implications

Infrastructure development has in recent time's assumed a central importance in Nigeria's fight to attain social and economic stability. Both the federal government and state government are using infrastructure as the focal point of their administrations and policy enactments. Infrastructure generally has to do with the fixed provision of tangible assets on which other intangibles can be built on. Environmental impacts on the location of the project and in related areas with example (ground water condition, flowing rivers, streams, lakes, or the atmosphere) include consequences on environmental resources attributed to pollutants. Emecheta (2009) explained that infrastructure projects will always have consequential environmental and social impacts during construction and operation of projects. These impacts can be either positive or negative and may consists of continuous effects which is beyond the project at hand or the case of secondary impacts occurs where the effects goes beyond the projects stakeholders.

Stakeholders' Interest, Involvement and How their needs were Assessed

The diagram below shows the key stakeholders in the Lekki Toll Road Infrastructure Project, Lagos, Nigeria which is based on the BOT (PPP) Model.

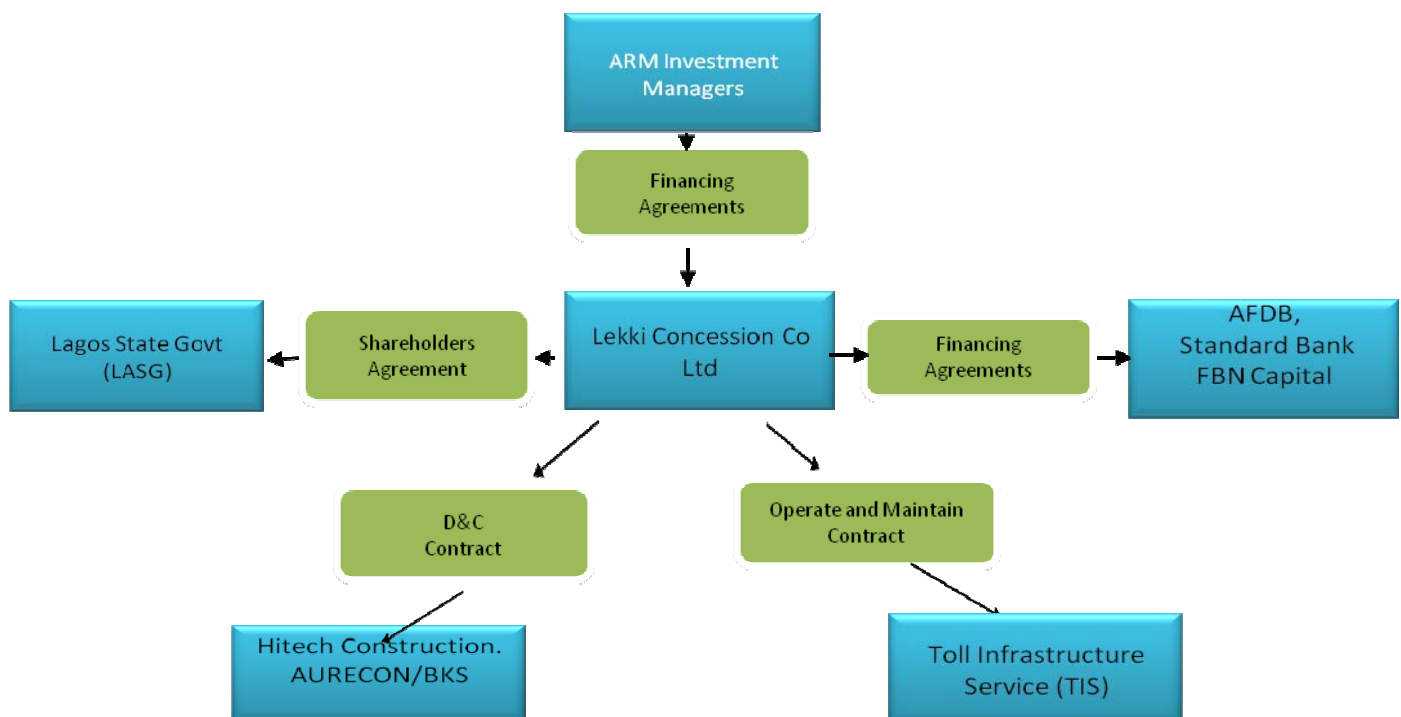


Figure 3 Key Stakeholders in the Lekki Toll Road Infrastructure Project

Private Sector Stakeholder Group:

- Lekki Concession Co Ltd ("LCC")
- Hitech Construction Co Ltd ("Hitech")
- High Point Rendel ("HPR")

The interest of the private sector stakeholder group as follows:

- Provision of Quality Road Infrastructure
- Provision of Safety & Security Improvement Measures on Roads
- Job Creation and Poverty Reduction Measures
- Increase in Cost of Property Rental, Sales and Lease

Public Sector Stakeholder Group:

- Lagos State Government ("LASG")

- Eti-Osa Lekki Local Government Council
- The Lekki Toll Road Users / Local Community

The interest of the public sector stakeholder group as follows:

- Decrease in Traffic Congestion
- Crime Reduction and Increase in Safety as a Result of Reviewed Municipality Scenery
- Rejuvenated Vicinity and Industrial Districts
- Increase in Lease and Other Development Revenues

How Challenges Encountered were Managed and Overcome

For PPP projects be successful, there would be challenges along the line of each phase. Bamgbelu (2004) stated that successful PPPs require sound transaction skills on the part of the public sector, as well as the experienced private sector service provider whom has the interest of the project at heart due to his better understanding and skills. Mittal and Kalampukah (2009) listed the following points as partnership challenges:

- Conflict of interest of partner organizations
- Diversity of underlying goals among partner organizations
- Insurance of Power Balance
- Communication barriers among partner organizations
- Difficulty in Resource Commitment
- Ambiguous Definition of Contracts and Agreements

Also Edwards (2010) explained that PPP projects are faced with challenges like the following:

- High Upfront Cost
- High Procurement Cost
- Inadequate Expert Knowledge
- Citizenry Rejection and Public Opposition

Mittal & Kalampukah (2009) suggested the following measures to overcome the challenges in PPP infrastructure projects:

- Establishment of Open and Informal Communication channel amongst partner Organizations
- Clear Definition of Project Charter
- Develop an Exhausting Risk Management Sharing Plan & Proper Definition of Roles and Responsibilities
- Ensure Proper Commitment of Resources by Partners.

In the Lekki Toll Road Infrastructure Project, high upfront cost, high procurement cost, and engaging & managing stakeholders were the basic challenges encountered. The high cost of materials was discussed with the Engineering, Procurement,

Construction and Maintenance (“EPCM”) contractor and she informed Lekki Concession Company (LCC) that the amount fixed for procurement of materials was submitted in the Bill of Quantities (BOQ) during the bidding process stating that inflation is also the major factor looking at the period at which the priced BOQ was submitted and the contract awarded.

Summary

The paper tackles the comprehensive idea of developing infrastructure through the use of PPPs as an opportunity for enhanced service and investment to achieve profit in return. In the implementation of PPP concepts; one has to understand the need for accelerated infrastructure development; proper constitutional, legislative, and institutional frameworks; also how to develop a PPP through lessons learnt from local and international PPP projects, knowledge and ideology behind funding of PPP projects; the conventional procurement systems and standard contract methods used in PPP projects; the prospect and sustainability of PPPs worldwide, and recent developments in PPP investments in developing countries.

This also provided an overview of the Lekki Toll Road Infrastructure Project starting with the present state of decaying infrastructure in Nigeria, and a vision to improving better fiscal growth in the 55 years of Nigeria’s existence, it is expected that the public and private sectors of Nigerian economy would grab hold of the opportunities offered by sprouting universal affiliations to build stable infrastructures and development in Nigeria. In summary, if the wrong model is chosen or the risk management for each model is inaccurately evaluated there will be a high impact consequences on the parties involved in the Public-Private Partnership Scheme. Therefore, it is clear that the Lekki Toll Road Infrastructure Project has come to stay despite its challenges and many other PPP project are lined up in the country.

Acknowledgements

The author is grateful to the office of Public Private Partnership (PPP), Lagos State Government, Alausa, and Lekki Concession Company Limited (LCC) for providing the available data and reports At least but not the last I express my sincere gratitude to Dr. Samuel Ankrah of The University of Liverpool, UK for his kind constructive review of this manuscript.

Authors introduction

Christian Azuka Olele

Registered Professional Engineering Geologist with the Council of Nigerian Mining Engineers and Geoscientists (COMEG) and Project Manager experienced in the sector of Geotechnical Engineering in Nigeria, West Africa. He received his B.Sc.(2001) and PGdip(2006) degrees in Geology from the University of Port Harcourt, Choba, Nigeria; and his M.Sc.(2012) degree in Project Management from the University of Liverpool, Liverpool, U.K

Christian Azuka Olele supervised several Sub-Structure Projects that has to do with Geotechnics on the Lekki Toll Road Infrastructure Project (Pedestrian Bridges, Falomo Ramp Bridge and Toll Booths & Plazas), Precast & Sheet Piles for Osborne Jetty Terminal, Ikoyi, Lagos.

He is Interested in dealing with Project Managing engineering geology and geotechnical engineering of Projects in Nigeria and African countries. Currently he is heading the construction management team of EdgeGold Concept Services Limited, Lagos

References:

- [1] Adebajo, D. & Mann, R. (2000) 'Identifying Problems in Forecasting Consumer Demand in The Fast Moving Consumer Goods Sector', Benchmarking: An International Journal, 7(30) : 223-230, Emerald, DOI: 10.1108/14635770010331397
- [2] Bamgbelu, O. (2004) the Management, Organization and Interface in Delivering the PPP Obligation, Unpublished MSC Thesis, South Bank University, London.
- [3] Impacts and Policy Lessons, World Bank Working Paper. Available at: <http://rru.worldbank.org/Documents/PapersLinks/1481.pdf>
- Crampes, C., & Estache, A. (1998). 'Regulatory Trade-Offs in Designing Concession Contracts for Infrastructure Networks. Utilities Policy 7(1): 1–13.
- [4] [Dulaimi](#) , M.F. (2010) 'The Execution of Public-Private Partnership Projects in the UAE', Construction Management and Economics, 28 (4) Available at: <http://www.tandfonline.com.ezproxy.liv.ac.uk/doi/full/10.1080/01446191003702492>
- [5] Edwards, S. (2010) Construction Management Ideologies, 2nd edn. New York: Chapman & Hall.

- [6] Emecheta, G.N. (2009) 'Public-Private Partnership: Challenges and Prospects', [Lecture to MBA Students]. University of Agriculture, Markurdi.
- [7] Garvin, M.J (2009) 'Enabling Development of the Transportation Public-Private Partnership Market in the United States ', Journal of Construction Engineering and Management 136 (4) Available at:
http://ascelibrary.org.ezproxy.liv.ac.uk/coo/resource/1/jcemd4/v136/i4/p402_s1?view=fulltext
- [8] Hayford, O. (2004) 'Risk Allocation and the Standardization of Contracts in Public Private Partnerships' [Online]. Available at:
<http://www.allbusiness.com/human-resources/benefits-insurance-benefits/298110-1.html>
- [9] Jamali, D (2004) 'Success and failure Mechanism of public private partnership (PPPs) in developing countries: Insight from Lebanon context'. International Journal of Public Sector Management, 17 (5): 414-430
- [10] Lekki Concession Company (2010) 'May Departmental Report', 5 (6): 3-10. Lagos
- [11] Lekki Concession Company (2011a) August Departmental Report, 8 (3) PP. 3-7. Lagos
- [12] Lekki Concession Company (2011b) September Risk Register: 1-3. Lagos
- [13] Levy, S.M. (2008) 'Public – Private Partnerships in Infrastructure', Leadership and Management in Engineering [Online] 8 (4) Available at
http://ascelibrary.org.ezproxy.liv.ac.uk/leo/resource/1/lmeeaz/v8/i4/p217_s1?view=fulltext
- [14] Mewu, U.M. (2009) 'Risk Management in Public-Private Partnership Road Concession Projects': a case study of Lagos state and Lekki Concession Co Ltd. Unpublished B.Tech Thesis. Lagos State University, Ojo
- [15] Mittal, A., & Kalampukah, P.K (2009) 'Partnership Challenges in Achieving Common Goals- A Study of Public Private Partnership in E-Governance Projects, Unpublished M.SC Thesis, Umea School of Business
- [16] Robinson, H., Carrillo, P., Anumba, C. and Patel, M (2011) Making Public Private Partnership (PPP) Effective for Infrastructure Projects: Role of Governance and Knowledge Transfer' European Financial Review, Available at
<http://www.europeanfinancialreview.com/?p=3948>
- [17] Shen, L.Y. (2006) 'Role of Public Private Partnership to Manage Risks in Public Sector Projects in Hong Kong', International Journal of Project Management, 24: 587-594
- [18] Wolmer, C. (2002) 'Down the Tube: 'The Battle of London's Underground'', London, Aurum Press.
- [19] Zhou, J., Chen, X-G., and Yang, H.W. (2008) 'Control Strategy on Road Toll Pricing under a BOT Scheme.' System Engineering Theory, Pract., 28(2): 148-151



Journal Website: <http://ijgsw.comze.com/>
You can submit your paper to email: Jichao@email.com
Or IJGSW@mail.com