

THE RISKS AND CONSTRAINTS IN THE IMPLEMENTATION OF PFI/PPP IN NIGERIA

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Poverty, corruption, debt, lack of infrastructure and demand for industrial development are today the main issues affecting the progress of most developing nations around the world. These are exacerbated by lack of funding within such economies and the spiral corruption in government funded projects coupled with the lack of managerial and technical expertise. However, with the tide of democracy and economic liberalization in a globalized economy, private foreign direct investment (FDI) in such economies seems to be on the increase. The procurement systems currently used for such opportunities are the Public Private Partnerships (PPP) and Private Finance Initiatives (PFI). This paper describes a part of a global research that is aimed at developing an implementation model for Private Finance Initiative (PFI) and Private-Public Partnership (PPP) in developing countries. The part that the paper focuses on is to identify the constraints and risks in the implementation of PFI/PPP in the Nigeria. Nigeria was chosen, among other key issues, because of its population growth, democratization, policy on economic liberalization and privatization, policy on industrialization, and most importantly the government has recognized its continuous failure to effectively and efficiently provide government funded basic services. The work described in the paper is based upon data and information collected from literature, questionnaire survey, and semi/structured interviews. These enabled statistical analysis and conclusions to be reached and further research recommendations to be made. The paper has identified key constraints and risks associated with PFI/PPP in the Nigerian set up and established a ranking of their importance and severity of effect. This provides a base upon which to develop a model for implementing the two systems in similar environments.

Keywords: PFI, PPP, procurement, risk management.

INTRODUCTION

Today's global population explosion, improved information and communication system, ease of travel and public awareness seem to bring about a spiral increase in demand for public services. Governments across the globe are continuously finding it difficult to fund such a spiral increase of demand, especially in the developing countries. This has resulted in the public sector having to look to the private sector for the funding of projects such as prisons, hospitals, schools, roads, water supply and other infrastructures. As Bennett (1999) indicated that the World Bank has recognized the private sector funding of public projects as a way of solving the increasing demand for services. This is particularly relevant to developing countries because new infrastructure is vital in their bid to alleviate poverty and infant mortality. In develop countries, the continuous World Bank funding for services has become inadequate and ineffective. The bank gives funding directly to the government for projects, which in

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the majority of times, are left incomplete or never even started. This process has only left majority of the poorer countries with huge debts because some corrupt officials have not fulfilled the project requirements. Corruption amongst government officials in most developing countries is one of the biggest cancers affecting the developing world. In this type of environment, there seems to be an indication that private and public funding or partnership may be the solution, since the private sector is driven by demands for return on investment and would ensure at least the completion of the project in order to achieve its goal. It is important to note that there is no presumption that the public or the private sector provides the better route for public services delivery. However, experts have suggested that partnerships between the two sectors should be central to any government's aim of establishing first-class public services and infrastructure and promoting economic growth and regeneration. A system is required that makes best use of what both sectors have to offer in public/ private partnerships. There are a variety of concession and partnership agreements. Some of the most commonly used are Private Finance Initiative (PFI) and Public/Private Partnership (PPP). Franks (1998) indicates that PFI was introduced to the UK in the 1980s. Blackwell (2000) has defined PFI as "the involvement of the private sector more directly in initial asset provision and subsequent operation of the service. The aim is to deliver higher quality more cost-effective public services". PPP arrangements remain a relatively new phenomenon. There is still uncertainty as to what a PPP is, what are their strength and weaknesses and how to manage risks under the system (DOFSA, 2000). The advantage of these two methods of procurement is that almost all the risk lies with the private sector and therefore ensures project delivery and compliance to international standards. With this benefit, it may be argued that the PPP and PFI methods of procurement are the solution to the problems facing governments in trying to be able to provide or fulfil the demand for services and infrastructure, especially in the developing countries. The implementation of PFI/PPP across the developing world may vary due to the varying levels of risks and constraints. To this effect therefore, a country that have most of the global effect characteristics (i.e. size, economic wealth, growing population, poverty, corruption and the rapid demands of public services) has been chosen. Nigeria is chosen for the research work reported in this paper. The government has been finding difficulty to provide and sustain. This paper is going to focus on identifying the key risks and constraints in the Nigeria environment with a particular reference to the implementation of PFI/PPP.

NIGERIAN ECONOMY AND POLITICS

Nigeria's political and economic development has been reviewed previously in Gidado, K. (1996). Nigeria's economy still depends highly on the oil sector, which accounts for about 40 percent of gross domestic product (GDP) and accounts for about 85 percent of the country's foreign exchange earnings. With its large reserves of human and natural resources, Nigeria has the potential to build a highly wealthy economy, to reduce poverty significantly, and to provide the health, education and infrastructure services its population needs. Despite the country's relative oil wealth, poverty is widespread and Nigeria is placed among the 20 poorest countries in the world (World Bank, 2002). GNP per capita stands at about US\$310 today, which is below the level at independence 40 years ago and below the US\$370 that obtained in 1985. About 70 percent of the population are now below the poverty line of roughly one U.S. dollar a day compared to 43 percent in 1985. Economic mismanagement, corruption, and excessive dependence on oil have been the main reasons for the poor

economic performance and rising poverty. The present administration has identified corruption and lack of good governance as issues that need to be forcefully tackled in order to begin to reverse the economic decline. An Anti-Corruption Bill has been passed by the National Assembly and recently signed into law by the President. The government has also acknowledged the widespread poverty and has embraced the need to adopt policies quickly to generate broad-based economic growth in which the poor share. One of such is the Public Enterprises (Privatization and Commercialization) Act 1999, which provides the enabling legislation for the implementation of privatization and commercialization programme of the Federal Government of Nigeria. The primary goal of this programme is to reduce the dominance of the public sector in the economy and allow the private sector to play its proper role as the leading engine of growth. Over time, through direct massive investment and participation, Nigeria has developed a large public enterprise sector. As at May 1999 the Federal Government investment in these public enterprises was in the region of US\$100 billion. In spite of these massive investments, however, public enterprises have woefully failed to perform the functions and attain the objectives for which they were set up. The gross failure of these enterprises to live up to expectations is partly responsible for the current move towards economic liberalization, competition and privatization. The philosophy behind privatization therefore is to restructure and rationalize the public sector, not only to reduce the dominance of unproductive investments in the sector but also to initiate the process of gradual cession to the private sector of public enterprises which are better operated by the private sector. It is also expected that the privatization programme will provide a channel for reintegrating Nigeria into the global economy as a platform to attract foreign direct investment in an open, fair and transparent manner. To implement the 1999 Act, the government have set up a Bureau of Public Enterprise (BPE) that is answerable to a council under the Chairmanship of the Vice President. The BPE has the overall responsibility of implementing the policies and decisions of the Council. The functions of the Bureau include:

- Implementing the Council's policy on privatization and commercialization
- Preparing public enterprises approved by the Council for privatization and commercialization
- Advising the Council on further public enterprises that may be privatized or commercialized
- Advising the Council on capital restructuring needs of the public enterprises to be privatized
- Making recommendations to the Council on the appointment of consultants, advisers, investment bankers, issuing house stockbrokers, solicitors, trustees, accountants and other professionals required for the purpose of either privatization or commercialization
- Ensuring the success of the privatization and commercialization exercise through effective post-transactional performance monitoring and evaluation.

Nigeria is an important country in West Africa, accounting for 47 percent of the region's population and 41 percent of the region's GDP. In recent years, Nigeria has exercised a leadership role through the Economic Community of West African States Monitoring Group (ECOMOG) peacekeeping force at an expensive financial cost and

human life. This has relatively restored peace in the region, especially in Liberia and Sierra Leone (World Bank, 2002).

RESEARCH METHOD

The research commenced with in-depth literature search in the relevant journals, books, internet, UK government and World Bank publications in the areas of procurement, funding, risks, services demand and supply, and project delivery. The nature of Nigeria's culture was investigated and reported in Akerele, D (2002). This provided a foundation upon which this part of the research was built. Detailed PPP and PFI case studies of projects executed in Nepal, Zimbabwe and South Africa (all of which are developing countries with similar cultural environment to that of Nigeria) have been studied. This enabled the research to identify the key issues that may affect the implementation of PPP and PFI in the Nigeria's environment. A number of papers on the Nigerian business, economic, political and construction environment were analysed. This gave a good basis for understanding the Nigerian environment and showing the problems that occur when undertaking projects in Nigeria. Three different case studies dealing with either water or waste taken from working papers that have been sponsored by the United Nations on private sector participation in public projects were research. The first case study was on water and sanitation services in Gweru, Zimbabwe at the initial agreement period. The objectives were investment, technical skills and improved service delivery. The key characteristics were formulated and modelled on World Bank Guidelines. The process helped initiate change in national policy and legislation to create an enabling environment, strong focus on consultation with civil society and developing a wide range of stakeholder agreement, significant support from external PPP specialist and strong sense of confidence, leadership and control (Plummer and Nhemachena, 2001). The second case study was on solid waste management in Biratnager, Nepal at the middle stages of the agreement period. The objectives here were to draw on private sector skills and technologies for integrated solid waste management. The key characteristics taken from these case studies are the following: Contract established initially with fraudulent contractor and taken over by local engineering contractor who has re-established confidence in the initiative and complex contractual arrangement favourable to the municipality and unsustainable for ongoing private sector involvement (Plummer and Slater, 2001).

Finally, the third case study was on water and sanitation services in Stutterheim, South Africa at the final stages of the agreement period. The objectives here were delegating the management of municipal functions, and improving efficiency and technical input. The key characteristics were Complex area responsibilities, traditional contract not meeting needs of the council, costs compare favourably with costs for services in neighbouring towns, partnership lacks equality, due to severe differences in capacity (Plummer, 2000).

Due to the nature of the Nigerian environment, a vast amount of information had to be initially collected by using a series of semi-structured interviews with practitioners. These interviews involved senior managers selected from three key selected organizations: 1. A government parastatal that is directly involved in privatization and public enterprising; 2. Leading international construction project management firm; and 3. An international oil company that is currently involved in PPP arrangement in the oil sector and also funding infrastructure projects in Nigeria. The combination is made due to the fact that these organizations could play different roles in the set up of PPP/PFI projects i.e. client, promoter, consultant, financier. The interviews were

carried out with a serial connection, with each of the 3 senior managers interviewed been asked to select or recommend another professional of a similar or higher position in his or her own organization or similar. This process is repeated twice, bringing the total number of interviewees to 12 senior managers.

The results from the literature review and semi-structured interviews were then used to develop a questionnaire. The questionnaire was mainly aimed at identifying the constraints and risks and their effects on implementation of PFI/PPP projects in Nigeria. Due to the poor state of the postal system in Nigeria and the research time and cost constraints, a unique approach for the distribution of the questionnaires to practitioners was adopted, which resulted in achieving a 100% response rate. A selection of 10 key organizations in Abuja, Lagos and Port-Harcourt were identified, and each of the organizations was contacted prior to the distribution of the questionnaires and a date was then set for the researcher to meet with one of the senior managers in Nigeria. This senior manager then identifies at least 10 relevant persons that would surely complete the questionnaires and then distributes and collects back the completed questionnaires accordingly. The researcher then collected the completed questionnaires from the contact point at a predetermined time. The respondents included architects, engineers, project managers, lawyers, accountants, civil servants, and economists. The method adapted for analysis of the questionnaires was the severity index (SI). This method was chosen because previous researchers in dealing with similar issues in the Nigerian construction industry have successfully used it. The Severity Index equation was taken from Aniekwu's (1995) paper on the business environment of the construction industry in Nigeria. This method is used for questions that require the selection of ratings between 1-5 showing the severity of that particular issue. The mathematical expression of the severity index is:

$$\text{Severity Index } SI = \frac{\sum R_w W}{R_t}$$

R_w is the number of respondents

W is the weight or points assigned

R_t the total number of responses obtained for that variable

The scale of how the issues were rated is given below:

1. $SI < 3$, implies not very serious, never felt its effect
2. $SI = 3 - 5$, implies moderately serious or felt its effects some of the time
- $SI > 6$, implies very serious or felt its effects most of the time

LITERATURE REVIEW

PFI and PPP are both considered as a system of procurement. Masterman (1992) defines procurement as "the organizational structure adopted by the client for the management of the design and construction of a building project". In a more detailed definition, Moshini and Davidson (1989) states that procurement is "the acquisition of new buildings, or space with buildings, either by directly buying, renting or leasing from the open market, or by designing and building the facility to meet specific need". Lenard and Moshini (1998) suggests that this definition has been challenged in a debate at the Montreal Symposium, and the following definition was accepted: 'Procurement is a strategy to satisfy clients' development and /or operational needs with respect to the provision of constructed facilities for discrete life-cycle'. Previous to this event, McDermott and Jagger (1991) have argued that the scope of definitions like that of the Montreal symposium is limited. Rowlinson and McDermott (1999) also state that: "as a means of comparing projects or project performance across national boundaries, the previous definitions are limited to developed market

economies”. Sharfif and Morledge (1994) have supported this view and identified that there are inadequacies in common procurement classifications (traditional, management, design and build) in enabling helpful global comparisons. Indeed, Latham (1994) states that “some international comparisons reflect differences of culture or of domestic legislative structures which cannot easily be transplanted to the UK”, while Davenport (1994) also states that “the French do not recognize the British and North American concept of procurement”. According to McDermott *et al.* (1994) the procurement concept as defined is irrelevant to developing countries. The variety of arguments regarding the definition of procurement may be sufficient to confirm the claim that there is no one global model for an effective PPP or PFI. Different circumstances will require different solutions. Even within the same country, we have seen a variety of models with the governments working pretty hard to regularise the system. In the UK local governments there are well-established joint working arrangements between the public, private and voluntary sectors to achieve a wide variety of objectives. The simplest form of PPP is a service contract, where a department typically awards a private party the right and the obligation to perform a service, within well-defined specifications, for between one and three years. The government retains ownership and control of all facilities, capital assets and property. More complex PPP arrangements, such as concessions and build-operate-transfer (BOT) schemes, are characterized by the mobilization of private finance on a limited resource basis. Due to the large amount of capital investment by the private party, contracts in such arrangements tend to be long. Figure 1.0. shows the various types of PPP contracts. Franks (1998) suggests that the PFI system started to become recognised in the United Kingdom in the 1980s. Masterman (1992) suggested that PFI was introduced by the Chancellor of Exchequer, the Rt Hon. Kenneth Clark, at the CBI conference in Birmingham in November 1994. He mentioned that PFIs are part of a government policy of ‘privatization’ that was designed to take services that are not directly concerned with government outside the public sector. Akintoye *et al.*, (2001) suggests that Private Finance Initiative (PFI) is a type of PPP where project financing rests mainly with the private sector. Although it is a type of PPP, there are few clear distinctions between the two and the two terms seem to be taken to mean the same in many projects. PFI has been seen as deregulation of public services, i.e. projects which hitherto have been delivered under the control of public bodies (e.g. prisons, hospitals, etc) are made available to private organizations. The key reasons given include faster project completions, cost savings, and reduction of the financial burden on the public purse. However, there are also problems associated with such de-regularization. These include: high costs are being involved in tendering for PFI projects, agreements are brought about through complex negotiations, the possibility of innovative inputs in both design and construction being inhibited, as contractors become wary of overruns and the possibility of the formation of project consortia being difficult. It seems that the main difference between PFI and other PPP options is that in PFI all the risks and the funding lie with the private sector, while in others it is usually shared. Risk can only be allocated once it has been identified and quantified in terms of a good and detailed risk management plan. Risk must be considered over the whole of the project life cycle. From the literature search (Akintoye *et al.*, 2001; Franks, 1998; Mastermen, 1992; Blackwell, 2000; DOFSA, 2000), the following have been listed as the common risks in PPP/PFI schemes:

- **Availability Risk:** This is the risk that the services provided by the private sector party may fall below the standard required by the public sector client. The risk is

borne by the private sector company and contract conditions will penalise the private sector provider should a problem occur (DOFSA, 2000).

- **Completion Risk:** This also includes construction and design risk and generally results in time and/ or cost overruns that will require a substantial increase in capital and/or interest expenses during construction. It may be attributable to weather, labour strikes or late delivery of equipment and supplies (Blackwell, 2000).
- **Construction Risk:** The PFI will seek to place the construction risk with the bidder. There may be some limitations of risk due to events outside the control of the parties; however, any limitations are likely to be few. Any defects within the construction will need to be rectified by the bidder, an important point for those putting together a team to bid on a project. The contractor within the team will not want defects in the building to impact on the relationship with others in the consortium. Funding banks may require contract monitoring on their behalf to minimise likely problems during the operational phase. Defects will impact negatively on investment value and on the ability of various parties to dispose of their interest in the project (Blackwell, 2000).
- **Technical Risk:** There is a range of technical risks to be factored into bid calculation. While the PFI seeks to encourage innovation, in a technical context there is a bias against the use of new products or procedures if these have not been thoroughly tested. The risk areas are not unrelated to each other and construction and technical specification must work together. A bidder may build to a higher initial standard in the hope of reducing maintenance costs. (Blackwell, 2000).
- **Revenue Risk:** The revenue risk is associated with all the areas in the contract that relate to payment. Payment may be reduced because public sector demand for the services decreases; this is a volume risk. There is also an availability risk, given the need to make a specified type and amount of accommodation available to certain standard for occupation and use (Blackwell, 2000).
- **Tax Risk:** Tax risks are categorised into two groups. The first group comprises tax changes that occur while a project is being developed. Tax risks themselves that occur after project construction or during operation comprise the second grouping. These tax risks are sub-categorised into three areas. The first is the introduction of a new tax or, less likely, the removal of an existing tax. The second relates to changes in tax rate for a particular tax, e.g. the VAT rate on fuel payments being increased. The third area is an action that leads to a tax being paid (Blackwell, 2000).
- **Political Risk:** There is always a political risk with a contract that is to last in the region of 30 years. The risk can be minimised, but not eliminated. PFI/PPP projects are being explored in other countries where the political risk may well be different (DOFSA, 2000).
- **Contract Risk:** Unfortunately parties do default on contracts, sometimes deliberately, sometimes through little or no fault of their own. The contract structure will attempt to cover all circumstances and to provide a means by which the agreement operates. There is a risk that these provisions may be called upon. There is a further risk that a different legal interpretation may be put on the contract clause than that which the parties envisaged (DOFSA, 2000).

- **Currency Risk:** Currency risk is, to large extent, a part of the construction and operating risk of the project. South African PPP laws and regulations require all PPP projects to be denominated in Rand (South African currency). This will automatically shift the risk from the project to the product or service. Currency risk occurs when the revenue or turnover and expenses (operating or interest) of a project are in different denominations. Foreign investors will generally use their primary operating currency in determining the Internal Rate of Return (IRR) or Net Present Value (NPV) of a project (DOFSA, 2000).
- **Technology Risk:** This risk refers to the possibility of changes in the technology resulting in the services being provided with sub-optimal technology. This risk is difficult to control. However, when better technology decreases the cost of providing the services, the private sector provider will almost certainly implement such changes (DOFSA, 2000).

RISK ALLOCATION

The request for proposal (RFP) is a package of official project documents that are served to define exactly what the implementing department wishes the proposers to bid on (DOFSA, 2000). The RFP is the means by which risk is allocated, bearing in mind that the private sector may not agree with risk quantification or proposed allocation. The private sector may also identify risks not quantified by the implementing department. The final risk allocation appropriate for any project will depend on the nature of the assets, the industry sector and the actual financial structure adopted for PPP. Each industry sector has unique characteristics. The simplest means of allocating risk is the use of a risk matrix. All identified risks are listed in the matrix, as well as the party to whom and the extent to which they are allocated. Allowance should be made for private sector risk identification in the matrix. Deviation from the risk allocation in the RFP should be allowed where these risks have not been identified as non-negotiable by the implementing department (DOFSA, 2000).

The private sector then prices the risk transfer and spells out any deviations from the RFP matrix. The RFP should not specify how the private sector must manage risk, but must include a review mechanism to ensure that the private sector has in place a system to manage the consequences of the risk (DOFSA, 2000). Risk assessment, mitigation and allocation are important during all phases of project development, implementation and execution. Risk assessment and mitigation are therefore not confined to the transition phase, but this phase is significant as arrangements are finalised to affect the risk transfers and risk sharing underpinning the project (DOFSA, 2000). Risk issues are critical to both the private sector partner and the government. The private operator puts time, technological know-how and money at risk, while the government may be subject to unanticipated liabilities or be expected to offer limited guarantees or performance undertakings to enhance the viability of a project. If risk resides with the party best able to manage it, efficiency gains may be substantial.

PROJECT FUNDING

Another important factor in PPP and PFI projects is funding. Like risk it is a crucial part of system and also distinguishes the different types of PPP e.g. PFI is totally private funded but other concession contracts such as BOT systems may vary. The

funding of developments can be categorised into public, corporate and project funding, as follows:

- **Public Finance:** For years, many governments, including developing countries such as the South African government, funded projects by using existing surplus funds or issuing debt (government bonds) to repay over a specific period. However, governments have increasingly found this funding to be less attractive, as it strains their own balance sheets and therefore limited their ability to undertake other projects. This concern has stimulated the search for alternative sources of funding.
- **Corporate finance:** This is where the private sector participant uses its own credit for raising the funds, due to its capacity and the limited size and nature of the project. This option is often used for shorter, less capital-intensive projects that do not warrant outside financing. Private companies avoid this option, as it strains their balance sheets and capacity, and limits their potential participation in the future.
- **Project finance:** Project financing uses the project's assets and/or future revenues as the basis for raising funds. Generally, the sponsors create a special purpose, legally independent company in which they are the principal shareholders. The newly created company usually has a minimum equity required to issue debt at a reasonable cost, with equity generally averaging between 10 and 30 per cent of the total capital required for the project. Individual sponsors often hold a sufficiently small share of a new company's equity, to ensure that it cannot be constructed as a subsidiary for legal and accounting purposes.

DATA COLLECTION, RESULTS AND ANALYSIS

There are 12 questions per questionnaire. The questionnaire focuses on PFI and PPP, with a particular reference to the risks, constraints and funding structures that are existing or could exist in the Nigeria's environment. In a tabular summary, the results from the analysis show the following severity indexes for the key risks, constraints and funding agreements affecting the implementation of PPP/PFI:

Table 1: The effect of common risks on the implementation PPP in Nigeria

Type of Risk	Severity Index	Type of Risk	Severity Index
1. Political risk	3.9	6. Availability risk	3.4
2. Inflation risk	3.8	7. Operating risk	3.3
3. Currency risk	3.6	8. Technology risk	3.1
4. Completion risk	3.5	9. Market (demand) risk	3
5. Regulation risk	3.4	10. Resource risk	3

The results shown in Table 1 suggest that market demand risk and resource risk are not considered serious and may not have a consistent effect on the implementation of any kind of public-private partnerships. This may be due to the fact that Nigeria has a large and increasing population with abundance of skilled human and natural resources. However, all other risks have been considered to be moderately serious, with political, inflation and currency risks topping the list. As long as the rest of the world continues to support the continuously stabilizing political system, the political risks could be mitigated with time. However, inflation and currency risks are directly dependent on the economic development. This relies on foreign capital investment

that depends upon availability of security and infrastructure. To break the vicious cycle, the implementation of PFI/PPP would significantly help in stimulating the economy and provide the most needed infrastructure required for the facilitation any economic growth. The regulation risk (comprise of contract risk and tax risks) is also rated high, which can be reduced by government clear policy and regulatory framework. Technical risk is considered low by rating operating risk at 3.3. Again, construction risk and technical risks are considered low as shown by the low rating of technology and resource risks. These low ratings seem to suggest that practitioners have confidence in the technical competencies of human resource available in Nigeria.

Table 2: Risks on PFI and Constraints on PPP in Nigeria

Effect of Risks factors affecting implementation of PFI Risk Factors	Severity Index	Effect of Constraints affecting implementation of PPP/PFI Constraints	Severity Index
Local partner	8.8	Difficulties in securing credit	4.1
Consortium structure	5.8	Problems of delays in receiving payments	4.1
Corruption	4.5	Absence effective maintenance culture	4.1
Changing government	4.2	Problems of gratifying government officials	4
Commisioning and operating risks	4	Difficulties from changing governments	3.9
Material availability	4	Difficulty in specifying quality	3.7
Delay in feasibility	3.9	Potential conflict of interest	3.6
Economic risk	3.9	Lack of clients knowledge and experience	3.4
Regulation risk	3.8	Problems of inadequate procedures	3.4
Complicated negotiations	3.8	Complex negotiation	3.3
Foreign exchange	3.8	Clients representatives constantly changing	3.3
Financing risks	3.7	Difficulty in obtaining foreign exchange	3.2
Operation and maintenance	3.3	Lack of effective value management	3.2
Technology risk	3.1	Difficulty in importing spare parts	3.1
Design and construction risks	2.2	Problems of incompetent	3.1

The success of private participation in any partnership with the government depends upon the private sector having reliable access to funding. As shown in Table 2, the difficulty in securing credit from financial institutions in Nigeria is considered to be the top most constraint. Other key constraints are the problems of delays of payments or cash calls from the public partner and disregard to effective maintenance by officials of the public partner. To remedy or mitigate these constraints, the government needs to set up reliable guidelines for PPP and to review the financial sector and put in place robust policies that would encourage financiers to be involved in such partnerships.

Table 3: Effect of Constraints on various parties when undertaking PFI

Constraints	Severity index			
	Client	Consultants	Contractor	F M firm
None provision of project data	3.1	3.0	2.7	2.55
None availability of historic data	3.4	3.0	3.3	2.85
None provision of strategy	3.35	2.95	2.7	2.9
Poor legal documentation	3.0	2.52	2.5	2.15
Poor decision making	3.1	3.0	3.2	3.3

The effect of poor data, strategy, documentation and decision making constraints is considered to be higher on the client. This suggests that it is in the interest of the government to ensure that qualified expertise exists within its staff that represent it in any PFI arrangement. This reinforces the need to establish a highly qualified and capable unit or department that deals primarily with PFI/PPP projects. The lack of clients’ knowledge and experience is also considered to be severe effect on PPP at 3.4

index rating in question 3. The lack of expertise (difficulty in specifying what is required) is also shown to be the top constraint on PFI in question 1.

Table 4: Weighting of suitability of funding agreement in public-private arrangement.

Types of Funding Agreement	Severity Index
Fully funded through the public sector	2.4
Equally funded by both sectors	3.2
Partly funded by the private sector	3.4
Fully funded through the private sector	3.6

The response shown in Table 4 confirms the confidence of the need to fund projects through the private sector. For PFI to be successful in any economy there must be the willingness of the financial institutions to fully participate. The research carried out also suggested that the major or main constraints originate from the financial sector. A government policy and a workable framework for funding projects in PFI need to be set up.

CONCLUSION

The paper has shown that the level of understanding of the implications of risk and constraints differs in the public and private sectors. The public sector seems to underestimate the extent of risk and constraints that need to be seriously addressed before considering implementing a reliable PPP/PFI project. As mentioned in the previous section, the global aim of this research is to develop a model for the implementation of PPP/PFI in Nigeria. For this to be successfully implemented the Nigerian government needs the political will and must establish a very clear policy and framework for PPP/PFI. Due to perceived lack of expertise in the client organizations, it is paramount that the government sets up an autonomous governmental body, made up of qualified experts, that is charged with the implementation of PFI/PPP. Alternatively, it may be appropriate to set up an independent unit within the BPE to deal specifically with the implementation of PPP/PFI projects. BPE has already acquired knowledge of privatization, undertaking PPP/PFI might be a likely progression. The work seems to suggest that project funding is best done through the private sector. This may suggest that funding agencies like the World Bank should lead in the implementation of PFI/PPP by insisting that a private-public partnership is a condition for funding any project, instead of giving loans directly to the governments. It may be suggested that the recent implementation of the Anti-Corruption bill is beginning to bring some confidence in the economic sector with regard to corruption. This is demonstrated by this research placing corruption as a low 3rd but previous work conducted by Akerele (2001) revealed corruption as the top problem affecting Nigeria. Until such a time when clearer evidence on the decline of corruption is obtained, it recommended that the effect of corruption on PPP/PFI in Nigeria should not be overlooked when it comes to developing an implementation model. The distinct differences between PPP and PFI are the funding arrangements and risks allocation structures. In PFI, all the risks and funding lie with the private company. While in PPP, the risks and funding are shared relatively by all the parties involved. The paper indicates that there is a significant difference in the perception of risks and the effect of constraints when implementing either PPP or PFI when one compares the responses from the government, consultants and financiers. This issue of perception of risk must be resolved if successful partnerships and PFIs are to be implemented. Educating or training officials, especially in government organizations, on understanding of risks may narrow the gap

between various participants. As shown in Figure 2, there are seven possible configurations for the implementation of PFI/PPP. The fourth configuration may be premature, but all others can be implemented.

The research did not fully consider the financial and legal implications.

PPP	Pr & Pb Ownership	Public Ownership	I	
PFI	Private Ownership	Public Ownership	II	
PPP	Pr & Pb Ownership	Public & Private Ownership	III	
PFI	PPP	Public & Private Ownership	IV	
PPP	PFI	Private Ownership	Public Ownership	V
PFI	Private Ownership		VI	
PPP	Private Ownership	Public Ownership	VII	

Figure 2: Configurations of PFI/PPP implementation

RECOMMENDATIONS FOR FUTURE RESEARCH

Further research should also be conducted, using unstructured interviews and questionnaires with a larger number of companies and government organizations at the various tiers of government, including a significant participation of financial and legal institutions.

REFERENCES

- Akerele, D (2001) The effect of culture on project delivery in Nigeria, Unpublished Dissertation, University of Brighton, Project management for construction degree.
- Akintoye *et al.* (2001), *Framework for risk assessment and risk management in PFI projects*, Glasgow Caledonian University
- Aniekwu, A (1995) The business environment of the construction industry in Nigeria. *Construction Management and Economics*, **13**, 445 - 455.
- Bennet (1999), Public/Private Partnership for the Urban Environment, *Working Paper Series Volume1*, Yale University
- Blackwell, M. (2000) *The PFI/PPP and Property*, Chandos Publishing Limited, Oxford.
- Davenport, D. (1994) ‘Assessing the efficiency of international procurement systems in order to improve client satisfaction with construction investment – the French experience’, in S.M. Rowlinson (ed.) *East meets west: proceeding CIB W92 Procurement Systems Symposium*, University of Hong Kong, Hong Kong, CIB publication 175,43 –51
- DOFSA Department of Finance, South Africa (2000) *Guidelines for Public-Private Partnership*, South Africa
- Franks J, (1998), *Building Procurement Systems – A Clients Guide*, 3rd Edn, CI0B, Ascot.
- Gidado, K. (1996) ‘Political and economic development in Nigeria, what procurement system is suitable’, in R.Taylor (ed) *North meets south: proceeding of CIB W92 Procurement Systems Symposium* , University of Natal, Durban, 160-8.
- Latham M, (1994), *Constructing the Team*, HMSO, London

- Lenard and Moshini, R. (1998) 'Recommendations from the organizational workshop', in C.H. Davidson (ed.) *Procurement - the way forward: proceeding of CIB W92 Symposium*, University of Montreal, Montreal, CIB publication 203, 79-81.
- Masterman J.W.E, (1992), *An Introduction to Building Procurement System*, E&F Spon, London.
- McDermott, P. and Jagger, D. (1991) 'Towards establishing the criteria for a parative analysis of procurement methods in different countries: social systems construction', in *Procurement Systems Symposium*, Las Palms, Gran Canaria, Spain, CIB publication NI 145, Chapter 9
- McDermott, P., Melanie, Y. and Sheath, D. (1994) 'Construction procurement systems: what choice for the Third World?', in S.M. Rowlinson (ed.) *East meets west: proceeding CIB W92 Procurement Systems Symposium*, University of Hong Kong, Hong Kong, CIB publication 175,203-11.
- Mohsini, R. and Davidson, C.H. (1989)' Building procurement – key to improve performance', *Contractual procedures for buildings: proceedings of international workshop*, 6-7 April, University of Liverpool, UK,83.
- Plummer and Nhemachena (2001), Preparing a concession working towards private sector participation in water sanitation services in Gweru, Zimbabwe, *Working Paper 442 04*, UNDP
- Plummer and Slater (2001), Just managing: the solid waste management partnership in Biratnagar, Nepal, *Working Paper 442 02*, UNDP Publishing, London
- Rowlinson and McDermott (1999) *Procurement systems- a guide to best practice in construction*, E& FN SPON, London.
- Sharif, A. and Morledge, R. (1994)' A functional approach to modeling procurement systems internationally and identification of necessary support frameworks', in S.M. Rowlinson (ed.) *East meets west: proceeding CIB W92 Procurement Systems Symposium*, University of Hong Kong, Hong Kong, CIB publication 175,295-305.