PRIVATE SECTOR PARTICIPATION IN FINANCING ROAD NETWORK IN NIGERIA: A CRITICAL REVIEW OF THE BOT MODEL

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Abstract

The 'build-operate-transfer' concession or BOT model has become a popular finance option in both developed and developing countries for infrastructural development. However, achieving the basic BOT objectives of quick, efficient and privately financed infrastructure has proven to be difficult due to inherent issues that, most times, are left unattended to by parties to BOT agreement. This study identifies such critical issues as contractual incompleteness, financial and political uncertainties. The study recommends that these critical issues have to be addressed before a country like Nigeria with a glaring weak and corrupt legal system, shaky and weak financial system and political instability will begin to enjoy the advantages in the BOT framework.

Keywords: BOT model, Private sector financing, Road network

Introduction

A growing trend has emerged among government in many countries, including the developed and developing ones, to solicit investment for public projects from the private sector. The main reasons for this trend are a shortage of public fund amidst increasing demand from a rapidly growing population, who are faced with declining infrastructural services from the public sector and encouraged by their declining income and purchasing power. These people are however buoyed by the advent of democratic governance and the resultant strengthening of the civil society to demand for improved social services. Moreover, the changing economic paradigm that requires a hands-off approach of government parastatals and agencies, given their inherent inefficiency and gross mismanagement to the private sector.

The Build-Operate and Transfer (BOT) approach is an option for the government to outsource public projects to the private sector for financing, management and subsequent transfer to the government at zero cost. The BOT is therefore, a development technique for infrastructural projects by using private initiative and funding, with the primary function to serve public needs, to provide social services and provide economic activity in the private sector, example includes roads, bridges, provision of water, seaports, airports and public building (Vaughan and Pollard, 1984).

However, achieving the basic BOT objectives has proven to be difficult in practice due to inherent issues which most times are left unattended to and which this study attempts to discuss. To achieve this, this study is divided into five sections. Preceding section one, which is the introduction, is section two which discusses the road network in Nigeria. Section three presents the BOT model, its variants and history. In section four, it looks at the critical issues arising from the use of the BOT model. While section five, presents the conclusion of the study.

The Road Network in Nigeria

Nigeria's road network falls into three categories, trunk A roads owned and managed by the federal government which links the major cities in the country. Trunk B roads which are owned and managed by state governments which links major towns in a state and trunk C roads which are owned and managed by the local

governments. Trunk C roads are known as feeder roads, which transport the bulk of agricultural goods and the population from the hinterland to the major towns and cities.

The road transportation sector is a central sector in the Nigeria economy contributing 5.5% to the overall gross domestic product (GDP) and accounts for about 90% of the movement of passengers and traffic (Edun and Modie, 2000; Oni, 1999). The road network in Nigeria, which is generally regarded as being extensive with a length of 193200 kilometres, cannot meet the accessibility and mobility requirement of a country with Nigeria's size and population. The road network suffers from serious deficiencies in a number of areas as shown in Table 1.

Table 1 Distribution of Road Network in Nigeria

Types of Pavement	Federal	States	Local govts	Total
Paved Trunk Roads	26,500	10,400	-	36,900
Unpaved Trunk Roads	5,600	20,100	-	25,700
Urban Roads -	-	21,900	21,900	
Main Rural Roads	-	-	72,800	72,800
Village Access Roads	-	-	35,900	35,900
Total; Km	32,100	30,500	130,600	193,200
Percentage	17	16	67	100

Source: Road Vision 2000 Steering Committee Information Brochure, p.4 Transport in Nigeria in 2020.

The distribution of road network shows that there are 32,100 Km. of Trunk A, which is 17% of the total road network in Nigeria. There are 30,500 Km of Trunk B road which translate to 16% of the total road network. There exist 130,600 Km of feeder or Trunk C roads, which is 67% of the total road network.

Table 2 Condition of Road Network in Nigeria

Paved Roads	Good	Poor	Unpaved Roads	Good	Poor
Trunk A	50%	50%	Trunk A	6%	94%
Trunk B	60%	40%	Trunk B	7%	93%
Trunk c	5%	95%	Trunk C	4.2%	95.8%

Source: Edun. F and Modie. O (2000)

The failure to reform the existing situation where government fund the road sector even in the face of dwindling financial resources and competing demand from other sector has put Nigeria's road network in jeopardy to the point where over 90% of the road network is in deplorable condition. Moreover, there is increasing rate of road accidents and high fatalities. The road asset is estimated to be suffering from about N80 billion due to lack of maintenance and road users suffer additional vehicle operating cost of N53 billion due to poor condition of the roads. The above total annual financial loss of N133 billion per annum represents 5.5% of 1994 Gross Domestic Product (GDP). When these losses are added to the economic costs from road accidents, loss of productive man-hours etc., arising from poor condition of the road network, it becomes obvious that the situation needs urgent attention. (Oni,1999).

The government of Nigeria has been concerned with and constantly makes attempt at investing in the improvement of the road infrastructure. Government budgetary allocations are inadequate considering the requirement of the road transport sector. Overall, current estimate suggests that a financing gap of about $3 billion per annum exists, that must be filled, if Nigeria is to meet its infrastructural needs (Okonjo-Iweala, 2005)

The government therefore, should consider partnership with the private sector for road infrastructure development through the Built Operate and Transfer (BTO) as an alternative means of complementing her efforts and the speedy delivery of road infrastructure for national development.

The BOT Model

The BOT (Build-Operate-Transfer) model is a new approach to infrastructure development, which enables direct private sector financing and investment in large-scale projects such as roads, bridges and power plants. The theory of BOT is quite simple, it is made up of three principal components namely:

Build: A private company (or consortium) agrees with a government to invest in a public infrastructure project (such as a road or power station). The company then secures their own financing to construct the project.

Operate: The private developer then owns, maintains and manages the facility for an agreed concessionary period (e.g. 20 years) and recoups its investment through charges or tolls (e.g. road tolls or electricity sales).

Transfer: After the concessionary period the company transfers ownership and operation of the facility to the government or relevant state authority at no zero cost.

A key characteristic of BOT model is private financing (Sebastian et al, 1996). When a government outsourced the development of a public project, one of the risks inherited by the private sector is finance and which must be sourced. A prerequisite for private financing is a need for the project to be developed. It is only when a market analysis justifies a need will private parties be willing to financially participate as well as become involved in developing the project.

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Variants of the BOT Model

There are different and alternative models of the BOT approaches. These are:

Build-Transfer Scheme: The contractor undertakes the construction, including financing, of a given infrastructure facility, and its turnover after completion to the public-sector body concerned which pays the contractor its total investment expended on the project, plus a reasonable rate of return. This arrangement may be employed in the construction of any project, including critical facilities that, for security or strategic reasons, must be operated directly by the Government.

Build-Transfer-Lease-Operate Scheme: The public-sector body concerned is the direct borrower which leases back the infrastructure to the contractor at a rate matching the amortization schedule.

Build-Own-Operate: The private party retains ownership of the facility, makes returns on investment by operating it for its useful life, and may sell it at any point at market value.

The most important identifying criterion of a BOT is that it is a project that can be economically and operationally isolated from related operations so that its revenue streams and costs basis can be clearly identified and assessed (Handley, 1997). This is crucial not only for determining the commercial viability of a project but also for its successful launching and management.

History of the BOT Model

The first official private facility development under the name "Build Operate Transfer" was used in Turkey in 1984 by Turgut Ozal as part of an enormous privatization programme to develop new infrastructure (Beuker, 1988). However, the BOT approach was used as early as 1782 for a water system in Paris (Handley 1997) and in 1834 with the development of the Suez Canal. This revenue-producing canal, financed by European capital with Egyptian financial support, had a concession to design, construct, and operate assigned to the Egyptian ruler Pasha Muhammad Ali (Levy, 1996).

Since the beginning of the 1990s power generation, telecommunication, sewage and water, railway and roads have been constructed in United State of America, England and Latin America with the help of private financing under the BOT model (Mobsby, 1992; Handley, 1997).

Across Asia and Africa the BOT model has become hugely popular, especially with poverty and capital-stricken countries of these regions, where the model has been seen as a one-off, quick fix solution to infrastructural bottleneck (Handley, 1997).

Advantage of the BOT Model

Although the benefits of BOT are directly depended to the specific project and its economical environment, there is a number of general characteristics that make them attractive. BOT helps governments to transfer financial resources that would have been spent on some capital projects to finance social and educational programmes that will help to increase social welfare. For instance, instead of spending billions of Naira of the Nigeria's government's limited annual budget on the construction of roads and railways whilst poor parents have to pay for the education of their children, which has caused most children to drop out of school, the government could engage private financial corporations to build and manage the roads and railways on BOT basis whilst the government redirects the limited budget to create free universal education for all in the country. Thus, countries are provided with an opportunity to finance projects without involving public funds.

Another main advantage of the BOT system, according to Tam (1999) is that, the host government needs not spend any public fund but can still provide a public facility to her people. Projects financed under the BOT system are justified so far as governments are unable to undertake needed

improvements in infrastructure due to financial constraints (David and Fernando, 1995). The scheme enables the government to achieve its goal of infrastructural development without expanding the public sector. Since, in a BOT project, a private concern raises finance and builds an infrastructure, operates and manages it for a given period of time (known as franchise period) at the end of which ownership of the infrastructure is transferred to the government, usually after a token payment. Countries have benefited from the expertise and experience of the concession company.

Moreover, a BOT project is driven by commercial incentives. Hence, the concession company tends to undertake the quickest and most efficient way of installing the infrastructural facility and to manage them efficiently.

Financial, investment, construction and technological risks involved in a BOT projects are shifted to the concession company.

Finally, Investments are stimulated and privatisation is promoted, taxes and royalties arising from the privatisation process, as well as the improvement in operating inefficiency can help government to generate more revenue and promote social welfare.

Taking a Look at the Critical Issues in BOT Model

Contractual Incompleteness

Infrastructure investments, being long-term in gestation, inherently involve long-term contracts. The very fact that long-term obligations are committed *ex ante* and the benefits for which are realizable *ex post* results in contract incompleteness. Economic literature explains that complete contracts are very hard to specify because of the high transaction costs involved, non-verifiability of information, uncertainty of future events and lack of commitment to renegotiate. Moreover, bounded rationality, due to uncertainty of exogenous events and weak computational ability of economic agents, constrains the parties' ability to cover everything and write these into the long-term contracts. Williamson (1975 and 1985) identified the possibility of "hold up," a principal-agent problem which basically predicts this after the long-term investment. For example, on an infrastructure facility has been made *ex ante* by a party to a trade transaction, which investment is largely sunk due to its specificity, the other party may behave opportunistically *ex post*. The latter can do this by reneging on the agreement to use the contracted facility or threatening not to use it if the price is not lowered. Accordingly, since the specific investments cannot be protected by an *ex-ante* contract, incentives are not properly aligned such that under-investment may occurthe investor anticipates her exploitation and under-invests (Llanto, 2003)

Financial Uncertainties

BOT financing involves project-financing method. That is, financing is based mainly or wholly on the assets and cash flows of the project with limited or no recourse to collateral external to the project (Hundley, 1999). The technique of risk management in project finance is well developed. But they face particular challenge in a developing country like Nigeria, with a weak and corrupt legal system, and an unstable and undeveloped financial system and a potential political instability. Moreover, satisfying the requirement of domestic financier in a BOT project can be time-consuming given the fact that Commercial Banks and other domestic financiers are wary of BOT financing because of its long gestation period. In the case where foreign capital participation is required, a tougher examination of the project commercial and market potentials and its risks, and a more strenuous process of due diligence are required.

Legal Uncertainties

The legal framework, especially the ability to enforce property rights, contracts and have an accessible and impartial venue for dispute resolution, is a key element of the enabling environment for the BOT model to thrive. In Nigeria, the courts have been ineffective as the primary venue for enforcement of rights and dispute resolution. The reason for this is not far-fetched. Successive government in Nigeria (both Military and Civilian) targeted the courts as an obstacle to the arbitrary mode of governance which prevailed, and their authority was purposely undermined, thereby fostering a weak and corrupt legal system with the attendant legal uncertainties.

Political Uncertainties

Whether in public or private sector, big ticket and lucrative infrastructural projects like the award of road contract are financially rewarding and highly political. Because of this reason and because BOT removes control over infrastructural development from bureaucrats and state officials, they tend to be what Hundley (1999) called political and bureaucratic resistance. This political and bureaucratic resistance has been known to create political instability. Moreover, bureaucratic and political or rent seekers sentiments can be real threat to successful implementation of BOT projects. In Nigeria, the youth and militancy resistance in the Niger Delta and the politicization of the award of contract are a pointer to this fact.

Conclusion

The use of BOT model to finance road infrastructure is one alternative that could be used to relieve the dilemma faced by the government on many competing budgetary needs, given the inherent advantage, desirability and necessity.

However, the critical issues raised have highlighted the difficulties of implementing a large BOT project in a country like Nigeria with glaring weak and corrupt legal system, shaky and weak financial system and potential political instability. These have to be addressed before the country can enjoy the advantages inherent in the BOT model.

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