ROLE OF PUBLIC – PRIVATE PARTNERSHIP IN INFRASTRUCTURE PROJECTS

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ABSTRACT

In face of the global financial crisis and the economic downturn, infrastructure sector plays an important role to counter balance against slowing economic activity and lower consumption. In India the infrastructure sector currently accounts for 26.7% of India’s industrial output and thus remains a useful tool to balance the economy. Moreover infrastructure is the lifeline of any business activity, proper infrastructure increases business activity manifold. In India, out of the proposed 31,755 km by the National Highways Development Programme, completion achieved is just 28 percent or 9,165 km, even if this project is to be completed by 2012, there will be huge opportunity for companies engaged in highway building sector. This paper attempts to highlight the role of Public Private Partnership in infrastructure development.

INTRODUCTION

According to Assocham-Ernst & Young - Infrastructure, including roads, power, highways, airports, ports and railways, have emerged as an asset class with long-term growth that can provide relatively stable returns to investors. In terms of investment attractiveness in the future, the joint study has ranked power as the most sought after segment among respondents for investment in the future (83%), followed by roads and highways (72%), ports and logistics (66%), rail (45%), airports (43%) and shipping (35%). An interesting segment identified as offering a strong growth potential was urban infrastructure, especially areas such as water management, waste-water management, sewerage system and solid waste management.

SPECIAL FEATURES OF INFRASTRUCTURE PROJECTS

1. Large Capital requirement

2. High initial cost. A large proportion of the cost has to be irrevocably committed upfront before the project becomes operative

3. Long gestation periods
4. Returns are slow to pass in
5. Payment of user charges
6. Sector is sensitive to political environment and policy changes
7. The services produced are non-tradable.

The excess services generated can not be stored or exported and deficiency in service can not be met with by imports except for certain exceptions. Over the past four years, the Indian Economy consistently recorded growth rates in excess of 8.5% per annum resulting in rapidly increasing infrastructure spending.

INTRODUCTION OF PUBLIC PRIVATE PARTNERSHIPS (PPP)

Public-private partnerships (PPP) in infrastructure development involve private sector participation in any or all of the design, construction, financing and operation phases of a public utility infrastructure, service or both. Examples of infrastructure developed through PPP models abound worldwide. It has been used in industrialised countries, such as the UK and Germany, and in newly industrializing countries with tremendous infrastructure demands, such as China and India, as well as in some developing countries in particular in Latin America. PPPs are aimed at inducing private sector participation in activities which might otherwise prove to be cost prohibitive e.g. development, operation and maintenance of toll roads.

PPPs often involve complex planning and sustained facilitation. Infrastructure projects such as roads and bridges, water supply, sewerage and drainage involve large investment, long gestation period, poor cost recovery, and construction, social, and environmental risks. When infrastructure is developed as PPPs the process is often characterized by detailed risk and cost appraisal, complex and long bidding procedures, difficult stakeholder management, and long-drawn negotiations to financial closure. This means that PPPs are critically dependent on sustained and explicit support of the sponsoring government. To deal with these procedural complexities and potential pitfalls of PPPs, governments need to be clear, committed, and technically capable to handle the legal, regulatory, policy, and governance.

ADVANTAGES OF PPP

- To introduce competition;
- To adopt managerial practices and experience of the private sector;
- To restructure public sector service by embracing private sector capital and practices; and
- To achieve greater efficiency than traditional methods of providing public services.
MODELS OF PPP

1. Build-Operate-Transfer (BOT) arrangement involves the transfer of responsibility for constructing, financing and operating a single facility to a private sector partner for a fixed period of time. At the end of that period, the responsibility reverts to the public party. The bundling of building and operations allows for “lifecycle efficiency”. The additional financing cost incurred by using the private sector can be offset by a reduction in operating costs resulting from the lifecycle approach in design, construction and operation. BOT is perhaps the most familiar models of PPP and the basic concept has been employed with some variations in many different ways, including BOOT, DBLOT and DBROT. Some models are more prevalent in some nations than others.

2. Design-Build-Finance-Operate (DBFO) means that the private sector partner is also asked to supply resources for having the project built. His future revenue streams are usually based on availability payments made by the public sector or shadow tolls. Hence this contract model belongs to typical budget-financed PPPs.

3. Build-Operate-Own (BOO) involves the granting of ownership rights in perpetuity to develop, finance, design, build, own, operate, and maintain an asset. The private sector owns the asset outright and retains the ownership and operating revenue risk, with no transfer to the public sector. It is hence categorised as material PPP

PPP EXPERIENCE WORLDWIDE

PPP IN CHINA

PPP/BOT was transplanted into China in 1980’s when there was huge need for infrastructure development. Private participation in infrastructure development in China was first seen in the power industry in 1980s. The Shajiao B power plant in Shenzhen, which came to operation in 1988, is regarded as the first BOT project in China. However, government and commercial banks in Shajiao B project took over too many risks due to the lack of BOT experience. Thereafter, several state-approved pilot BOT projects have been awarded in order to introduce BOT on a larger scale since late 1996, such as Laibin B power project and Dachang water project etc. Since then, the involvement of private investors in infrastructural development of public utilities has improved greatly. However, at the end of last decade, the central government invested huge amounts of treasury bonds in infrastructure, and was determined to clean up the unregulated or illegal projects, which lead to a termination of the first round of private investment (Shenetal, 2005). Stepping into the 21 century, the bottleneck effect of infrastructure shortage for the economy emerged and imposed great budgetary pressure on the government. For examples, the forecast of the total investment on rail construction in the 11th Five-Year (2006 - 2010) is 1,250 billion RMB (MOR, 2006); In Beijing alone, there will be about 2,400 infrastructure projects to be developed during this period with a total investment of over 470 billion RMB (BMCDR, 2006). The huge investment in infrastructure area could not be completed by the government alone, thus provides a good business opportunity for private investors. In light of the above, there are two rounds of private investment in China’s infrastructures as It is easy to find that China’s...
infrastructure market has been opened to the private investors except for some special sectors such as pivotal railway, ports and airports.

The highest openness has been seen in toll road and municipal utilities including water, environment, city gas, etc. However, it could be found that the investors in both rounds of infrastructure investment in last two decades have limitations (Wu, 2007). Foreign investors acting as the major player in the first round usually charge higher and prefer operating projects in more developed regions in China, while state-owned enterprises as the principle player in the second round have relative low operation and management efficiency, which largely restrains the advantages of concession model. Nevertheless, international companies are still the most competitive player (Zhang, 2009).

DRIVERS FOR PPP IN INDIA

There are several factors that have helped to drive PPP investments in India over the years. Some of the relevant factors are summarized below: Growing emphasis on infrastructure development by the government: The development of economic and social infrastructure has today become amongst the top priorities of the government. The government has significantly increased its spending on infrastructure through several sector specific national programmes such as National Highways Development Programme (NHDP), Bharat Nirman, Pradhan Mantri Gram Sadak Yojana (PMGSY), Jawaharlal Nehru National Urban Renewal Mission (1NNURM), National Rail Vikas Yojana (NRVY), National Maritime Development Program (NMDP), airport modernisation initiatives, etc. This, in turn has necessitated the need for involving the private sector. Moreover, the government does not have

PPP MODELS IN CONTEXT OF INDIA

Policy formulators have come to realize that the private–public partnership mode holds the key to the development of infrastructure in the country. The government used to dominate infrastructure space with hardly any private sector participation. However, times have changed. The government is now focusing on a public–private partnership (PPP) model for infrastructure creation. A host of private sector players have invested in infrastructure sector, mainly through the BOT model.

PPP is recognized as effective way of delivering value for money public infrastructure. Risk is inherent & difficult to deal with & require proper management. Govt procuring ppp projects would state its preference to how the project risk should be shared. Private investor would assess their capability of taking these risks & then propose bidding price optimal risk allocation is not to pass all risks to seek a solution minimizing total cost of both public & private sector.

The PPP models can be classified into five broad categories in order of generally (but not always) increased involvement and assumption of risks by the private sector. The five broad categories are:

- Supply and management contracts
• Turnkey contracts
• Affermage/Lease
• Concessions
• Private Finance Initiative (PFI) and Private ownership

SUPPLY AND MANAGEMENT CONTRACTS

A management contract is a contractual arrangement for the management of a part or whole of a public enterprise (for example, a specialized port terminal for container handling at a port or a utility) by the private sector. Management contracts allow private sector skills to be brought into service design and delivery, operational control, labour management and equipment procurement. However, the public sector retains the ownership of facility and equipment. The private sector is assigned specified responsibilities concerning a service and is generally not asked to assume commercial risk.

TURNKEY

Turnkey is a traditional public sector procurement model for infrastructure facilities. Generally, a private contractor is selected through a bidding process. The private contractor designs and builds a facility for a fixed fee, rate or total cost, which is one of the key criteria in selecting the winning bid. The contractor assumes risks involved in the design and construction phases. The scale of investment by the private sector is generally low and for a short-term. Typically, in this type of arrangement, there is no strong incentive for early completion of the project. This type of private sector participation is also known as Design-Build.

AFFERMAGE/LEASE

In this category of arrangement, the operator (the leaseholder) is responsible for operating and maintaining the infrastructure facility (that already exists) and services, but generally the operator is not required to make any large investment. However, often this model is applied in combination with other models such as build-rehabilitate-operate-transfer. In such a case, the contract period is generally much longer and the private sector is required to make significant investment.

The arrangements in an affermage and a lease are very similar. The difference between them is technical. Under a lease, the operator retains revenue collected from customers/users of the facility and makes a specified lease fee payment to the contracting authority. Under an affermage, the operator and the contracting authority share revenue from customers/users.

In the affermage/lease types of arrangements, the operator takes lease of both infrastructure and equipment from the government for an agreed period of time. Generally, the government undertakes the responsibility for investment and thus bears investment risks. The operational risks are transferred to the operator. However, as part of the lease, some assets also may be transferred on a permanent basis for a period which extends over the economic life of assets.
Fixed facilities and land are leased out for a longer period than for mobile assets. Land to be developed by the leaseholder is usually transferred for a period of 15-30 years.

CONCESSIONS

In this form of PPP, the government defines and grants specific rights to an entity (usually a private company) to build and operate a facility for a fixed period of time. The government may retain the ultimate ownership of the facility and/or right to supply the services. In concessions, payments can take place both ways: concessionaire pays to government for the concession rights and the government may pay the concessionaire, which it provides under the agreement to meet certain specific conditions. Usually, such payments by the government may be necessary to make projects commercially viable and/or reduce the level of commercial risk taken by the private sector, particularly in a developing or untested PPP market. Typical concession periods range between 5 to 50 years.

PRIVATE FINANCE INITIATIVE (PFI)

In the private finance initiative model, the private sector remains responsible for the design, construction and operation of an infrastructure facility. In some cases, the public sector may relinquish the right of ownership of assets to the private sector.

In this model, the public sector purchases infrastructure services from the private sector through a long-term agreement. PFI projects, therefore, bear direct financial obligations to the government in any event. In addition, explicit and implicit contingent liabilities may also arise due to loan guarantees provided to the lenders and default of a public or private entity on non-guaranteed loans.

WHICH MODEL TO SELECT?

Each model has its own pros and cons and can be suitable for achieving the major objectives of private-private partnership to a varying degree. Special characteristics of some sectors and their technological development, legal and regulatory regimes, and public and political perception about the services in a sector can also be important factors in deciding the suitability of a particular model of PPP.

There is no single PPP model that can satisfy all conditions concerning a project’s locational setting and its technical and financial features. The most suitable model should be selected taking into account the country’s political, legal and socio-cultural circumstances, maturity of the country’s PPP market and the financial and technical features of the projects and sectors concerned.
ROLE OF PPP IN DIFFERENT SECTORS

PORTS

The ports sector has also been able to attract significant private interest. While earlier private participation was restricted to only container terminals, it has now extended to the development of dry bulk and liquid bulk terminals, greenfield ports, rail-port connectivity projects, and other port services such as dredging. The NMDP has been one of the biggest initiatives of the government in the ports sector to rope in private interest. The National Maritime Development Program targets investments of the order of almost USD 13 billion over the next 10-year period. About 60 percent of this investment is envisaged to come from the private sector amounting to approximately USD 8 billion. The balance investments would come from the port’s internal accrual as well as budgetary support from the government. The NMDP includes projects for the creation of berths, port facilities, landside infrastructure, etc. as well as the Sethu -Samudram Project, which will dredge a navigable channel between India and Sri Lanka at an estimated cost of USD 540 million to enable ships up to 10 meter draft a shorter passage. An additional USD 580 million is proposed to be pumped into the sector for hinterland connectivity projects. Indian port productivity is extremely low by international standards. Unless the productivity and capacity of ports are increased, more bottlenecks will occur as demand for port services grows. The central government is seeking private investment in captive and other facilities, and state governments are seeking private investment, largely in new sites. Key issues:

- Separating statutory and operational roles at the major ports.
- Continuing to transfer operational roles to the private sector.
- Enhancing competition between ports to provide greater choice for consumers.
- Improving the sector’s institutional structure, particularly the distinction between major and minor ports.

RAILWAYS

The railways sector is still not well exposed to the private sector. The government has just recently begun to engage itself in a variety of PPP arrangements ranging from catering and upgradation of facilities to augmentation of existing routes and greenfield networks. Projects worth Rs 120 billion are presently under implementation with the modernisation of the New Delhi Railway Station being the biggest project entailing investments worth Rs 85 billion. A large proportion of the capital investment is proposed to be raised through PPP. In addition to capacity expansion of rail network, an investment of USD 3-4 billion is planned for upgradation of rail safety. Apart from safety-related investments, there would also be substantial investments in upgradation and laying of new railway lines. Key areas of PPP in Railway sector comprise:

- Development and operation of the dedicated heavy duty rail freight corridor
• Development of terminals and warehousing facilities

• Privatization of branch lines

• Commercial exploitation through PPPs of the excess, vacant and unutilized land available with Indian Railways

• Setting up of rolling stock manufacturing facilities for IR

AIRPORTS

The airport sector has been a relatively new beginner for PPP investments. There has been a lot of activity happening in the sector on the PPP front. PPPs in airports have changed the entire business model of airports. Today, PPP airports in India are looking to generate about 70-75 per cent of their revenues from non-aeronautical sources as opposed to only 20-25 per cent earlier. In a short span of about four years, the sector has to its credit the completion of two of the biggest greenfield airports — Bangalore and Hyderabad. The success of PPPs in the airports sector is linked to the maximisation of non-aeronautical revenues both through development of real estate activity in the surrounding areas of the airport as well as by making best use of the terminal space. The Committee on Infrastructure chaired by the Prime Minister estimates an investment of USD 9 billion for the development of airports during 2006-07 to 2013-14. Out of the total, it is estimated that USD 6.9 billion would come from PPPs. This comprises

• Modernization of Chennai and Kolkata airports and greenfield airports for NaviMumbai, Pune, Goa, Nagpur, Pune, Navi Mumbai, Greater Noida, and four North-eastern states

• Modernization of 35 non-metro airports but private participation allowed in development of city-side facilities only

• Upgradation of equipment/instrumentation at all airports in country

Passenger traffic is concentrated at Bangalore, Calcutta, Chennai, Delhi, and Mumbai. All of these airports were operated by the Airports Authority of India. Major investments in airports are needed to bring existing facilities up to international standards and to handle the expected increase in passengers and cargo.

KEY ISSUES

• Structuring the proposed leasing contracts.

• Establishing a regulator to oversee private operations under the lease.
ROADS AND HIGHWAYS

India has one of the largest road networks in the world, aggregating to approximately 3.34 million kilometers. The Government has laid down ambitious plans for development and upgradation of the domestic road network. Private sector participation through PPPs is being actively encouraged to achieve greater efficiencies in development, operation and maintenance. It is estimated that the total investment requirement for development and upgradation of the country’s road network over the next five years is approximately US$ 55 billion.

The Indian Government estimates around US$90 billion plus investment is required over FY07-FY12 to improve the country’s road infrastructure. Plans announced by the Government to increase investments in road infrastructure would increase funds from around US$15 billion per year to overUS$23 billion in 2011-12. The quantum of funds invested as part of these programmes will significantly exceed that invested in recent history. Such programmes would be funded via a mix of public and private initiatives. The Indian Government, via the National Highway Development Program (NHDP), is planning more than 200 projects in NHDP Phase III and V to be bid out, representing around 13,000 km of roads. The average project size is expected to US$150 million-US$200 million. Larger project share likely to reach the US$700 million-US$800 million range. About 53 projects with aggregate length of 3000km and an estimated cost of around US$8 billion are already at the pre-qualification stage.

To cater to investment needs of the road sector, the investments in the sector are projected to grow by around 24 percent over the next 5 years. The state and the central governments have planned investments in the road sector to the tune of almost USD 50 billion by 2011. The share of private participants is expected at USD 4 billion by way of equity alone for NHAI BOT projects under the National Highway Development Program from Phase III to Phase VII.

POWER

Power projects are very capital intensive and require huge investments. Therefore, the financing of these projects is generally very complex –particularly in developing countries such as India. In the case of power, the thrust on PPP began only with the ultra mega power project (UMPPs). Prior to UMPPs, private interest in the power sector was mainly in the form of independent power generation projects based on a BOO basis in most cases.

State electricity boards are an increasing financial drain on their governments. They have low average tariffs, with high cross-subsidies to agricultural and residential consumers, and suffer from poor management, high levels of theft of power, and a large volume of uncollected bills. This has lead to capacity shortages, poor system reliability, and frequent blackouts. Despite government steps to introduce private sector investment in generation, the poor financial standing of most boards means that far fewer deals have reached financial closure than expected. Key issues:

• Private ownership in distribution would provide commercial incentives to reduce technical and, in particular, nontechnical losses.
• Genuinely independent regulatory agencies would help ensure that prices are set to correct present distortions and provide incentives to make operation more efficient

INFRASTRUCTURE INVESTMENTS REQUIREMENT IN INDIA

India is expected to grow at an average 9 percent per annum in next few years. Accompanying this growth will be an increase in demand for infrastructure services. Economic and population growth prospects are expected to place additional pressure on existing infrastructure facilities. Therefore, addressing these challenges will be essential is the infrastructure sector is to continue fostering economic growth rather than becoming a constraint. In other words, a failure to respond to this demand will cause The strategy for infrastructure development in the Eleventh Plan reflects the dominant role of the public sector in building infrastructure. However, it also recognizes that the total resources required to meet the deficit in infrastructure exceed the capacity of the public sector. It is, therefore, necessary to attract private investment through appropriate forms of public private partnerships to meet the overall investment requirements

REFERENCES


