Overview Of PPP Projects In India

Aditya P. Mehendale, Vinuta V. Dhupadale, Abhishek A. Sutar

Lecturer, Rajarambapu Institute of Technology (An Autonomous Institute)
Islmapur, Sangli, Maharashtra, India
adityamehendale123@gmail.com

Lecturer, Sanjay Ghodawat Polytechnic,Atigre,Kolhapur, Maharashtra, India.
vinuta.jun25@gmail.com

Abstract: Infrastructure projects are complex, capital intensive, having long gestation period and involves multiple risk to the project participants. In many countries shortage of public funds have forced the government to enter into long term contractual agreement for financing construction and operation of infrastructure projects. A PPP can be defined to be the private sector construction and operation of infrastructure which would otherwise have been provided by the public sector. PPP structures are typically more complex than traditional public procurement projects. PPPs complexity is due to number of parties involved and the mechanism use to share the risk.

Keywords: PPP Projects in India, PPP, Public Private Partnership Projects.

1. Introduction

Civil infrastructure is vital to the nation's economic growth. Infrastructure may be considered to be the skeleton on which the society is built. It includes highways, railways, ports, bridges, hydraulic structures, power plants, tunnels, municipal facilities like sanitation and water supply, and other facilities serving public needs. Adequate funding is required to construct and maintain the requisite infrastructure. The immediate need for such projects coupled with chronic budget shortages experienced by public agencies encouraged the use of innovative financing. In many countries, particularly, developing countries shortage of public funds have led governments to invite private sector entities to enter into long term contractual agreements for financing, construction and operation of capital intensive infrastructure projects. PPP projects are characterized by non-recourse or limited-recourse financing where lenders are repaid from only the revenues generated by projects. The concessionaire is a special purpose vehicle in which the sponsoring entities are not responsible for the repayments of the loans. These projects have a capital cost during construction and a low operating cost afterwards which implies that the initial financing cost are very large compared to the total cost. Further, a mix of financial and contractual arrangements amongst the multiple parties including the commercial banks, project sponsorors, domestic and international financial institutions and government agencies makes it further complex.

2. Main Objectives of PPP

1. To increase the availability of financial resources, allowing the development of additional projects without recourse to public budgets.
2. To increase the efficiency of a project or reduce its costs, incorporating specific private sector technologies, know-how, management techniques, or innovative financial schemes.
3. To simplify the development of the project, reducing the lead-time and merging different procurement phases into one single tender process.
4. To optimize the whole life cost cycle of the project, incorporating development and management/maintenance into one single contract.
5. To allow funding structures that are more reliant on users and those directly benefiting from the project, thereby avoiding distortions generated by taxpayer funding through public budgets.
6. For accountancy purposes, to defer public liabilities without showing them in public accounts.

3. Evaluation of PPP

Phase 1:- Few notable PPPs could be found as early as 19th century:

- The Great Indian Peninsular Railway Company (1853)
- The Bombay Tramway Company's tramway services in Mumbai (1874)
- PPP models were there in power generation and distribution in Mumbai and Kolkata in the early 20th century

Phase 2:-

- Only 86 PPP projects worth INR340 billion were awarded till 2004 (World bank study of 13 states in 2005)
- Most of the projects were in bridges and roads sector
- Large-scale private financing has been limited to Vishakapatnam and Tirupur

Phase 3:-

- Increasing acceptance of PPP model due to favorable policy reforms and innovative PPP structures
- Growth in PPP from 450 projects costing INR 2,242 billion in November, 2009 to 758 PPP projects costing INR3,833 billion in July 2011.

4. Current Status of PPP in India

The PPP India database (Department of Economic Affairs, Ministry of Finance) indicates that 758 PPP projects costing INR3,833 billion is awarded/underway status (i.e., in operational, constructional or in stages wherein at least construction/implementation is imminent). There exists significant untapped potential for the use of the PPP model in e-governance, health and education sectors. Karnataka, Andhra Pradesh and Madhya Pradesh are the leading states in terms of number and value of PPP projects. At the central level, the National Highway Authority of India (NHAI) is the leading user of the PPP model. Figure 1 indicates the PPP projects in India by sectors

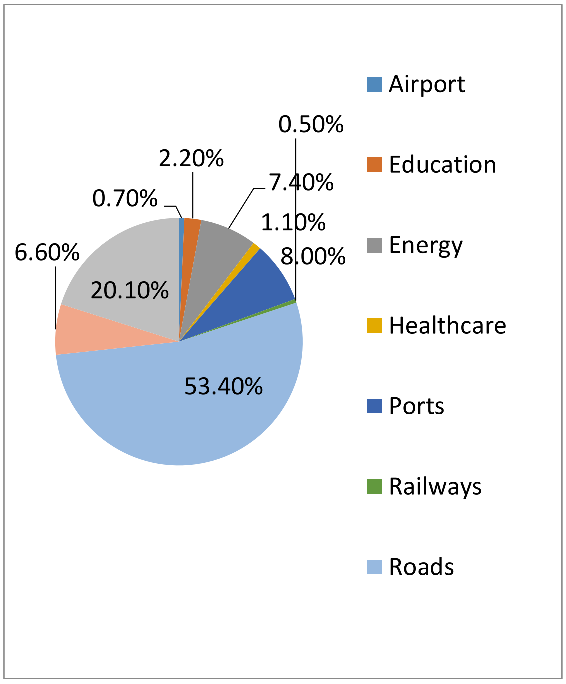

***Figure 1:-** PPP Projects in India by sector*

5. Common forms of PPP model in India

There is no single PPP engagement model that may satisfy all conditions regarding a project's location setting and its technical and money options. the foremost appropriate model ought to be chosen taking into consideration the country's political, legal and socio-cultural circumstances, maturity of the country's PPP market and therefore the money and technical options of the comes and sectors involved." This has semiconductor diode to innovation within the engagement models.The below are the top ten prevalent PPP Engagement Models in India:

1) BOT (Build Operate Transfer –Toll):-
The personal entity meets the direct value of style, construction and revenant value on operation and maintenance. The personal entity recovers the whole value at the side of the interest from assortment of user utilization throughout the in agreement concession amount. Capital infusion is obtainable from the general public entity. A risk sharing model is predominant during this model.

2) BOOT (Build Operate Own Transfer):-
It is almost like the "Build Operate Transfer" model except that the personal entity needs to transfer the ability back to the general public sector.

3) Joint Venture (JV):-
In a PPP arrangement ordinarily followed in our country (such as for aerodrome development), the non-public sector body is inspired to make a venture company (JVC) along side the collaborating public sector agency with the latter holding solely minority shares. The non-public sector body are liable for the design; construction and management of the operations targeted for the PPP and can conjointly herald most of the investment necessities. the general public sector partner's contribution are by manner of mounted assets at a pre-determined price, whether or not it's land, buildings or facilities or it's going to contribute to the property capital. it's going to conjointly offer assurances and guarantees needed by the non-public partner to boost funds and to confirm sleek construction and operation. the general public service that the venture is established are provided by the entity on sure pre-set conditions and subject to the specified quality parameters and specifications. Examples square measure international airports (Hyderabad and Bangalore), ports etc.

4) Management Contract:-
A management contract could be a written agreement arrangement for the management of a region or whole of a public enterprise by the non-public sector. Management contracts permit non-public sector skills to be brought into service style and delivery, operational management, labour management and instrumentation acquisition. However, the general public sector retains the possession of facility and instrumentation. The non-public sector is provided fixed responsibilities regarding a service and is mostly not asked to assume industrial risk. The non-public contractor is paid a fee to manage and operate services. Normally, payment of such fees is performance-based. Usually, the contract amount is brief, usually 2 to 5 years. however longer amount is also used for giant and complicated operational facilities similar to a port or field.

5) BOT (Build Operate Transfer):-
The personal business builds Associate in Nursingd operates the general public facility for an united amount of your time. Once the ability is operational as united, or at the top of the fundamental quantity, the personal entity transfers the ability possession to the general public, here it's going to be construed as Government. below this class, the personal partner is accountable to style, build, operate (during the contracted period) and transfer back the ability to the general public sector. The personal sector partner is anticipated to bring the finance for the project and take the responsibility to construct and maintain it. the general public sector can either pay a rent for victimization the ability or permit it to gather revenue from the users. The national road comes contracted out by NHAI below surgical operation mode is Associate in Nursing example. This model may be a classic example for IT business.

6) BOT-Annuity (Build Operate Transfer-Annuity):-
This model is globally accepted one does not have the favor of the look Commission of state. simply just in case of rent model, the value of building the entity is paid to the private entity or the developer annually once the start industrial operations of the flexibility.

7) DBFOT (Design Build Finance Operate Transfer):-
These ar alternative variations of surgical process and because the nomenclatures highlight, the non-public party assumes the whole responsibility for the look, construct, finance, and operate or operate and maintain the project for the amount of concession. These also are remarked as "Concessions". The project can recover its investments (ROI) through concessions granted or through regular payment etc. It should be noted that almost all of the project risks

associated with the look, funding and construction would stand transferred to the non-public partner. the general public sector could give guarantees to funding agencies, facilitate with the acquisition of land and assist to get statutory and environmental clearances and approvals and additionally assure an inexpensive come as per established norms or trade observe etc., throughout the amount of concession.

8) BOO (Build Own Operate):-

In a BOO project, possession of the project sometimes remains with the personal entity. the govt grants the rights to style, finance, build, operate and maintain the project to a personal entity, that retains possession of the project. In BOO the personal entity is sometimes not needed to transfer the power back to the govt.

9) PPP (Public Private Partnership):-

A partnership between the general public and personal sectors with clear agreement on shared objectives for the delivery of public infrastructure and/or public services. There exists well outlined allocation of risk between the personal and therefore the public entities and therefore the personal entity receives performance connected payments that adjust to given and pre-determined performance standards, measurable by the general public entity or its representative.

10) BOOST (Build Operate Own Share Transfer):-

This model is extremely kind of like the BOOT model, except that there exists a meeting or sharing the revenue to the non-public entity for a extended time even once the rights of the non-public entity is transferred to the general public entity.

6. BOT projects

The term "BOT" is used mainly in the area of infrastructure projects financed by the private sector. The economic environment today is suitable enough for the private sector to invest in infrastructure projects for the following reasons :

- Government policy aiming to increase the private sector participation.
- Modification in legislation and laws that encourage investments.
- Decrease in inflation rates.
- Availability of cheap and experienced work force.

6.1 Background of BOT

It was reported that Turgut Ozal, a former Prime Minister of Turkey, first coined the term BOT and used the BOT approach in Turkey in 1984 as a part of the Turkish Privatization Program. However, the philosophy and origins of BOT and BOO (Build Own Operate) schemes can be traced back to the privately financed French canals and bridges in the 17th Century : the privately funded and operated trade related infrastructure for the transportation of people and raw materials following the industrial revolution; and the French concession contracts, for example to supply drinking water to Paris in the 18th century; the Suez Canal; the Trans-Siberian railway; and the railways and power companies in the USA (which were mostly on a BOO basis, i.e. without the need to 'Transfer' back the facility) Despite such wide-ranging precedents, the perceived need for central planning and control of critical public infrastructure precluded private sector participation in most of such developments until the 1980s. The paradigm shift that mobilized the private sector more recently resulted from a combination of forces, such as the gross inadequacies of public funding capacities, particularly in comparison with the growing aspirations of burgeoning populations; the inefficiencies of government monopolies; the conspicuous availability of surplus private resources (financial, technical and managerial) ; and the formulation of creative non-recourse financing mechanisms whereby projects could be self-funding (i.e. not have recourse to other assets of the stake-holders). However, experiences indicate that although the idea of complete non-recourse is central to the BOT concept, some level of guarantee/support or a comfort letter is invariably sought in practice.

6.2 Definition of BOT

"BOT" has more than one definition. Here are a few:

- A model that entails a concession company providing the finance, design construction, operation, and maintenance of a privatized infrastructure project for a fixed period, at the end of which the project is transferred free to the host government.
- The granting of a concession by the government to a private promoter, known as the concessionaire, who is responsible for the financing, construction, operation, and maintenance of a facility over the concession period before finally transferring the fully operational facility to the government at no cost
- A model or structure that uses private investment to undertake the infrastructure development that has historically been the preserve of the public sector.
- A type of project financing whereby the government grants a concession to a private entity (project company) to build and operate a project, such as infrastructure of resource extraction, that would be operate by the government.
- Essentially a form of project financing whereby a government awards a group of investors (hereafter referred to as "Project Consortium") a concession for the development, operation, management, and commercial exploitation of a particular project.
- A contractual arrangement and a new legal concept to encourage private enterprises and entrepreneurs to help the government in its development effort.

6.3 BOT variations

The emerging trend is to build infrastructure by privatizing them, at no cost to the state, using the procurement called Build-Operate-Transfer (BOT). A BOT project can be described as a project based on the granting of a concession by a client (usually a public or governmental agency) to a consortium or concessionaire (usually in the private sector) who is required to 'Build' (including financing, design, managing project implementation, carrying out project procurement, as well as construction), 'Operate' (including managing and operating the facility or plant, carrying out maintenance etc., delivering product/service, and receiving payments to repay the financing and investment costs and to make a margin of profit), and to 'Transfer' the facility or plant in operational condition and at no cost to the client at the end of the concession period. While BOT in Turkey has been legitimized by a specific law based on the original BOT concept, diverse variations have evolved in many countries.

These mainly differ in the precise mechanisms of ownership, usage rights, and obligations . These variations include the following, with the terms indicating basic arrangements and/or essential emphasis:

- BOO = build-own-operate,
- BLT = build-lease-transfer,
- BOOM= build-own-operate-maintain,
- BOOT = build-own-operate-transfer,
- BOOTT = build-own-operate-train-transfer,
- BTO = build-transfer-operate,
- DBFO = design-build-finance-operate,
- DBO = design-build-operate,
- DBOM = design-build-operate-maintain,
- DOB = design-operate-transfer,
- ROO = rehabilitate-own-operate, and
- ROT = rehabilitate-operate-transfer.

6.4 Participants in BOT Projects

The implementation process of a BOT project involves many parties, including the government, promoter, construction contractor, operating firms, financiers and other\ parties. The main stakeholders in BOT projects are – Government; promoter/concessionaire; lenders/financiers and the public. All of them have particular reasons to be involved in the project.

- **Public Procurer/Government**

From his point of view, there is an obvious need to ensure that money has been spent economically, efficiently, and effectively. At its simplest, the Government seeks to utilize private sector finance in the provision of public sector infrastructure and services and thereby achieve value for money. Value for money, defined as the effective use of public funds on a capital project, can come from private sector innovation and skills in asset design, construction techniques and operational practices and also from transferring key risks in design, construction delays, cost overruns and finance and insurance to private sector entities for them to manage.

- **Project sponsors/promoters**

From the perspective of the project sponsors, PPP (and PFI) is essentially project financing, characterized by the formation of a highly- geared special purpose company for the project vehicle and consequently a reliance on direct revenues to pay for operating costs and cover debt financing while giving the desired return on risk capital.

- **Lenders / financial Institutions**

BOT-type projects usually use a nonrecourse or limited-recourse financing structure, where lenders look primarily to the revenue stream generated by the project for repayment and to the assets of the project as collateral for the loan. The lenders have no recourse or only limited recourse to the general funds or assets of the project sponsors because the concessionaire is a special-purpose vehicle, in which project assets, project-related contracts, and project cash flows are segregated to a substantial degree from the sponsoring entities. This special- purpose vehicle allows the investors to reduce substantially both their financial investments by using debts and, consequently, their exposure to project liability . Typically, the providers of finance look to the cash flow of the project as the source of funds for repayments. Financial security against the project company usually has minimal assets and because the financing is without recourse to the sponsor companies. However, performance guarantees are often made available by the sponsor companies in favour of the lenders. Thus the key principle for large PPP projects is to achieve a financial structure with us little recourse as possible to the sponsors whilst at the same time providing sufficient credit support so that the lenders are satisfied with the credit risks.

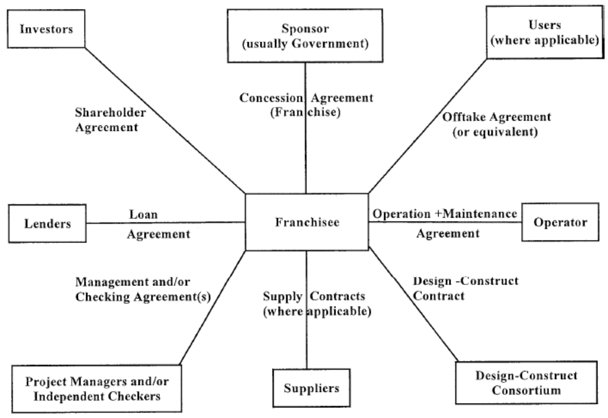

***Figure 2:** Typical Relationships between Project Participants In BOT Type Procurement*

6.5 BOT Project Financing

Project financing involves the raising of funds to finance an economically feasible capital investment project by issuing securities that are designed to be serviced and redeemed exclusively out of project cash flow. BOT is fashionable worldwide, especially in developing countries to attract private capital to assist in developing public infrastructure . The first BOT project officially implemented in modern times was in the mid 1980s as part of a move to privatize infrastructure projects and large power plants in Turkey. The BOT method was used as early as 1834 when the Egyptian government was financially supported by European capital to build the Suez Canal. Financing has replaced the availability of technology and expertise as the main problem in infrastructure development around the world. After years of large cost overruns and numerous change orders on 100% publicly funded projects, many governments started seeking greater efficiency by centralizing the management and control of complex projects in the hands of private experts. Public deficits, resistance to taxes and a shift among development strategist toward private investment incentives have created opportunities for private companies and public agencies to cooperate in the form of BOT projects. Ideally, BOT projects put large, well capitalized private firms at the services of governments with strong commitment to economic development, in the process of finding design and construction efficiencies, reducing the drain on the public purse, and distributing risks and rewards fairly. The success of BOT projects depends on the motivations of a market economy that benefit all parties i.e. government, end user, and sponsor. In a PPP finance-based approach, tapping private finance is a major objective to get the needed infrastructure built when insufficient government funds are available. For this objective, having robust demand is an important financial factor for a project to be successfully developed. Projects are mainly funded through tolls in road projects. As shown in figure, the general financial structure of a project under such a scheme could have the private consortium setting and collecting the user tolls. BOT/ BTO/concessions and franchises in India and worldwide are examples of this finance based approach. In the PPP service-based approach, the major emphasis is the optimization of the time and cost efficiencies in "service" delivery through the utilization of private sector skills, innovations, integration, and collaboration in project design, construction, financing, operation, marketing, and management.

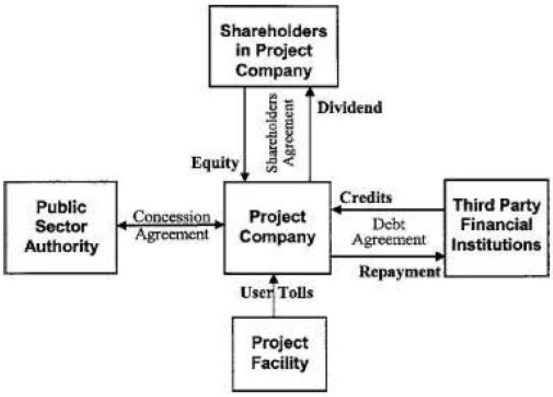

Figure3: *Financial structure with private financing as driver*

As shown in figure, the service-based scheme has the government compensating contractors from government funds (with or without user fees) over the contract/concession period where private finance is secured by these payments, not by the robustness of the demand . Further, at the extreme, government may participate in lending to the private sector, as illustrated in figure. The United Kingdom was piloting this lending mechanism, called Credit Guarantee Finance, in order to further reduce the cost of finance; contractors were still required to provide necessary insurance guarantee for repayments.

Figure 4: *DBFO regular financial structure*

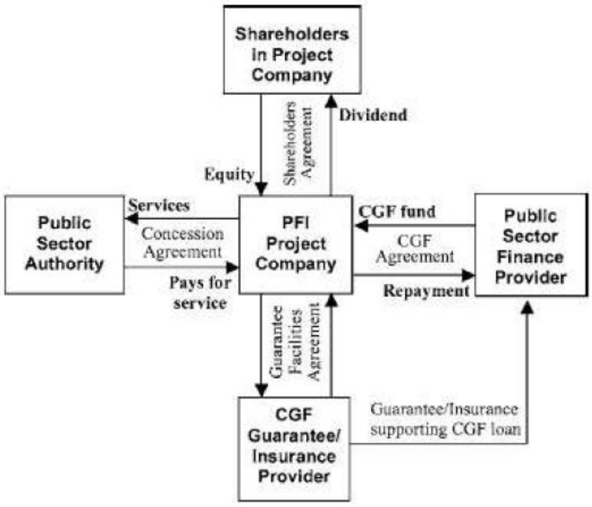

Figure 5: *Credit guarantee finance facility proposed for United Kingdom's PFI projects*

7. Phases in PPP Projects

The PPP process should comprise four phases:-

1. PPP identification stage:-
Planning, project prefeasibility analysis, Value for Money analysis, PPP suitability checks, and internal clearances to proceed with PPP development.

2. Development stage:-
Consists of project preparation (including technical feasibility and financial viability analysis), project structuring, preparation of contractual documents and obtaining of project clearances and approval.

3. Procurement stage:-
Consist of procurement & project award.

4. PPP contract management & monitoring stage:-
Consists of project implementation and monitoring over the life of PPP project.

8. Challenges in PPP India

Regulatory environment:-
There is no independent PPP regulator as of now. In order to attract more domestic and international private funding of the infrastructure, a more robust regulatory environment, with an independent regulator is essential.

Lack of information:-
The PPP program lacks a comprehensive database regarding the projects/studies to be awarded under PPP. An online data base, consisting of all the project documents including feasibility reports, concession agreements and status of various clearances and land acquisitions will be helpful to all bidders.

Project development:-
The project development activities such as, detailed feasibility study, land acquisition, environmental/forest clearances etc., are not given adequate importance by the concessioning

authorities. The absence of adequate project development by authorities leads to reduced interest by the private sector, mispricing and many times delays at the time of execution.

Lack of institutional capacity:-

The limited institutional capacity to undertake large and complex projects at various Central ministries and especially at state and local bodies level, hinder the translation of targets into projects.

Financing availability:-

The private sector is dependent upon commercial banks to raise debt for the PPP projects. With commercial banks reaching the sectoral exposure limits, and large Indian Infrastructure companies being highly leveraged, funding the PPP projects is getting difficult. While most of the above challenges are being worked upon by the GOI, the limited availability of sources of funding is the biggest problem for the success of the PPP model.

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