Public Private Partnership Projects-

A Study on the effectiveness of existing agreement conditions of public private partnership of road contracts and recommendations for high performance

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Abstract - **Public private partnerships (PPPs) play an important role in bringing private sector competition to public monopolies in infrastructure development and service provision and in merging the resources of both public and private sectors to serve the public needs in better way. The development of PPP contracts, the structure includes a vital influence on the economic and policy success of privately financed roads throughout their lifecycle. Following fundamentals of PPP and the public policy differentiation between public interest and public objectives, many approaches for establishing the key contract method of concession length and risk mitigation are explored. The patterns of PPP contract strategies which correspond to common policy objectives achieving managing congestion, identified through evaluation of five national highway project agreements. This paper proposes decision making tools resulting from this work are illustrated through application to current PPP concession agreements (1) Process of PPP (2) Frame work of PPP contracts (BOT) (3) Comparisons (4) Recommendations & Suggestions, which concludes with thoughts on the appropriate role of PPPs in infrastructure delivery.**

IndexTerms - Structure of PPP, Process, Framework, Comparisons.

I. INTRODUCTION

Public Private Partnership (PPP) is a new approach that Government is adopting to increase private sector involvement in the delivery of public services.PPP is part of the Best Sourcing framework, where the public sector will engage private sector providers to deliver those services which the private sector can provide more effectively. The project is on study of developing country governments like INDIA are interested in using the Public Private Partnerships (PPPs) to provide public infrastructure facilities such as airports, highways, ports etc., The model of PPP came into existence in the early 1990s starting with the BOT (Build, Operate, Transfer) model. Later this was extended further to various other models such as the BOOT, BOLT, DBFO, BOOST etc.

Scope

A PPP is an agreement between the government and private sector for the purpose of public services or infrastructure. With a standard vision of public and private sector bring to the table their own experience and strength resulting in accomplishment of mutual objectives. A frame work is a design of comparative study of various public private partnership projects and gives the best outcome.

Objective

- To study and design the framework to achieve the government objectives in purchasing PPP'S.
- To study PPP'S as a mechanism for procuring contracts and agreements for various projects.

II. DEFINING PPP STRUCTURE

PPPs are a concept that has been applied to a range of types of agreements between public and private entities. There is considerable confusion and difference of opinion among stakeholders as to what exactly constitutes a PPP, and the foundation for developing a PPP framework by defining PPPs in infrastructure. The public-sector partner contracts with a private developer typically a large corporation or consortium of businesses with specific expertise to design and implement a large project.

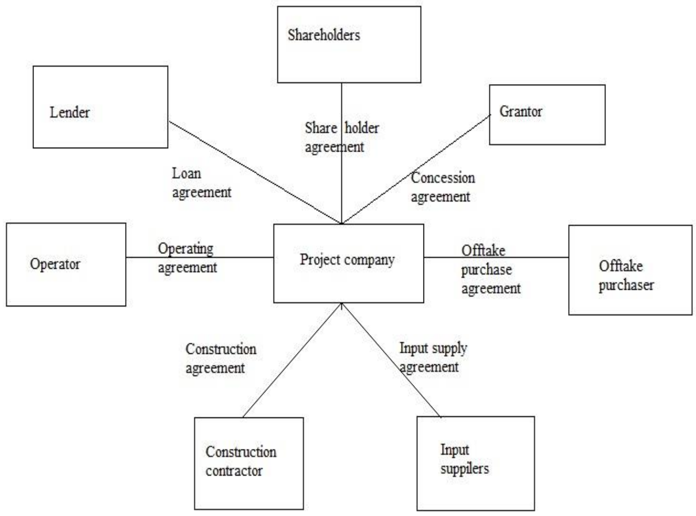

FIG 2.1 PPP STRUCTURE

CONCESSION AGREEMENT

A negotiated contract between a company and a government that gives the company the right to operate a specific business within the government's jurisdiction, subject to certain conditions. In the case of a public concession, private company enters into an agreement with the government to have the exclusive right to operate, maintain and investment in a public utility for a given number of years.

Input supply agreement

It is an agreement between two or more parties, one is the customer and another is service providers. This will be a legally binding formal or an informal contract. The agreement may involve separate organisations, or different teams within one organisation.

Operating agreement

An operating agreement is an agreement among limited_liability_company members governing the business, and member's financial and managerial rights and duties. The companies operating without an operating agreement are governed by the State's default rules contained in the relevant statute and developed through state court decisions.

Off take purchase agreement

An agreement between a producer of a resource and a buyer of a resource to purchase/sell portions of the producer's future production. An off take agreement is normally negotiated prior to the construction of a facility such as a mine in order to secure a market for the future output of the facility. Lenders will see the company will have a purchaser of its production, to makes it easier to obtain financing to construct a facility. Off take agreements are frequently used in natural resource development, wherever the capital cost to extract the resource is significant and the company wants a guarantee that some of its product will be sold.

III. BUILD OPERATE AND TRANSFER (BOT)

BOT finds extensive application in infrastructure projects and in public private partnership. In the framework of BOT the third party, for example the public administration and delegates of a private sector entity to design and build infrastructure and to operate and maintain these facilities for a certain time (period). During this period the private party has the responsibility to raise the finance for the project and is entitled to retain all revenues generated by the project and facility. The facility will be then transferred to the public administration at the end of the concession agreement without any remuneration of the private entity involved. In a BOT Project the project company or operator generally obtains its revenues through a fee charged to the utility/ government rather than tariffs charged to consumers. The concession projects are, such as toll road projects which are new build and have number of similarities of BOTs.

Build: Set-up the facility and infrastructure, state the development center, and establish knowledge.

Operate: Manage the organization, Development, QA, maintenance.

Transfer**:** Register a new subsidiary for the client, transfer assets, and handover operations.

The Concessionaire

The project sponsors who are concessionaire create a special purpose entity which is capitalized through their financial contributions.

The host government

Normally, the government is the initiator of the infrastructure project and decides if the BOT model is appropriate needs. Additionally, the political and economic circumstances are main factors for this decision. The government normally will support for the project in some form.

Lending banks

Most BOT project are funded to a big extent by business debt. The bank will be expected to finance the project on “non-recourse” basis meaning that it has recourse to the special purpose entity and all its assets for the repayment of the debt.

Sponsors/Lenders/Promoters/investors/suppliers

Those are joins together by joining lands, technology, operation management, constructions, financing, local connection, transportation, supply resources etc.

Construction contractor/ operator

Contractors are involved in engineering, design, procurement and construction itself. O/M companies use their management skill and ability in operation and management to operate the project**.**

IV. CONCESSION AGREEMENTS AND PROCESS PHASE OF PPP PROJECTS

Details of BOT agreements

- Four laning of MH-KNT border – Sangareddy from km.348.800 to km.493.000 in the sates of Karnataka and Andhra Pradesh of NH-09 under NHDP-III.
- Six-laning of Chilkaluripet - Vijayawada section of NH-s from km 355.00 to km 434,15 (length - 82.5 km) in the state of Andhra Pradesh under NHDP phase – V.

PPP PROCESS

To make the decisions needed to plan, develop, and execute successful PPPs, the process can be broadly divided into four phases, identification stage, development stage, procurement stage and contract management and monitoring stage.

Phase 1 Identification stage

Covers activities such as strategic plan, pre-feasibility of project analysis, value for money analysis, PPP check for suitability, and internal clearances to proceed with PPP development. Some of the critical drivers are given below.

- Value for Money Drivers
- State and Sector Legislation of conformance
- Adherence to Processes

Phase 2 Development stage

Development Stage covers project preparation of technical feasibility and financial viability analysis, project structuring, preparation of agreement and obtaining of project clearances and approval. In this stage, activities would be undertaken with the following objectives.

- Scope of the project, implementing needs requirements and set forth roles/ responsibilities of the parties.
- The revenue model is robust and sustainable over the project life.
- Ensure that the underlying risks are identify and appropriately allocated between the contracting parties.
- Ensure that the documentation and contractual arrangements accurately reflect the scope of the project, roles and obligations of parties, performance standards, monitoring arrangements, penal provisions, reporting requirements, dispute resolution mechanism and termination arrangements as well as & and effective post award governance mechanisms.
- Any ascertain that contractual arrangements are permissible under the policy, legal and regulatory regime.
- Establish stakeholder buy-in ensured and commitment throughout the process.
- Economic, Financial and Affordability Assessment
- Value for Money Analysis
- Management of Risks

Phase 3 Procurement stage

Procurement stage would cover the project award and procurement. Accountable, clear, non-discriminatory, competitively and timely procurement processes would be followed to encourage maximum participation by private sector and public confidence in the procedure. The rules of PPP notified by the Govt would define the norms and procedures for procuring the projects of PPP.

- The procurement of bid documents used for private sector entities may comprise one or more of expressions of interest, request for qualifications, and request for proposals.
- The Govt has prescribed the bidding method and the model bidding documents for PPP projects in infrastructure sector, through notifications issued from time to time.
- A net based mostly market place, as well as e-tendering and auction would be promoted based on the project requirements to promote wider participation and transparency in the process.
- The draft contract agreement, provides provisions on the roles and obligations of the parties, performance standards and monitoring arrangements, reporting requirements, penalty conditions, force majeure conditions, dispute resolution mechanism and termination arrangements, shall be provided to the prospective bidders as part of the bid documents.
- Timelines to be followed during throughout process would be indicated by the procurement entity in the bidding documents.
- Procuring entities would be based on best efforts basis, facilitate all necessary clearances for speedy implementation of a PPP project.

Phase 4 Contract management and monitoring

PPP contract management in this stage, it covers monitoring and project implementation over the life of the PPP project. The management of contract is not a reporting exercise, it is a active process that involves a wide range of skills. These Projects are not static, conditions will change and the capability of the public authority at the interface with the private sector party is therefore crucial.

The manager of contract needs to be empowered to take action responsively and effectively only escalating up the chain issues, this call for effective and efficient governance processes and people with the right mix of skills including project management, negotiation skills and commercial expertise.

V. FRAMEWORK AND COMPARISIONS OF PPP PROJECTS

The highways sector in India is witnessing a significant interest from both domestic as well as foreign investors following the policy initiatives taken by the Government of India to promote Public Private Partnership (PPP). However, the inflow of investment will depend on a comprehensive policy and regulatory framework necessary for addressing the complexities of PPP. Moreover, transformation of rules as well as the mindset that governed a command economy would require attention.

Principles of a PPP Framework

PPPs are a concept that has been applied to a range of types of agreements between public and private entities. There is considerable confusion and difference of opinion among stakeholders as to what exactly constitutes a PPP. These provides the foundation for developing PPP framework by defining PPPs in infrastructure and then summarize the advantages of using PPPs to provide infrastructure services and discuss the principles behind developing a PPP framework.

Infrastructure development by a systematic framework of PPP

There is a huge demand on public infrastructure and services worldwide whereas the Govt budget of any country is always limited. Additionally, the public sector often lacks of skills, technology and expertise required for efficient development of infrastructure. Moreover, civil servants are less incentive to invest wisely than private project managers. (1) providing a private partner for design of construction, operation, financing for infrastructure development, for payments return either from the users of the infrastructure or from the public client itself (2) public and private partners share risks and jointly manage them through better utilization of resources and improved project control and (3) PPP projects are usually based on a long-term contract to encourage innovations and low life cycle costs.

Framework for a systematic approach

A systematic approach is taken in the proposed framework for infrastructure development through PPPs in general. Basically, the proposed framework integrates four broadly divided stages in the infrastructure, service and including delivery process.

- Design of a workable concession.
- Competitive concessionaire selection.
- Financial regulation of the selected concessionaire during the concession period, and
- Rebidding and reconcession are periodically are allow changes and adjustments of the concession, and new entry for the concession.

Characteristics

- The public entity should have the authority to transfer its responsibility legislative and frame work policy.
- The private entities are usually responsible for significant transfer and include financial investment obligations.
- Through the users payment is directly done to the private entity or by the public entity such significant portion of revenues projects and the payments are conditional.
- These systematic approaches of projects are usually long-term relationships.

V. COMPARISIONS OF PPP PROJECTS

Analytical comparison

The greatest advantage of BOT for the government is the subcontracting of the majority of the risks to the private sector, later to finance and assume risks for the development of a public facility. The Govt will inherit a well-operated project without investing public funds and with little risks at the end of the concession period.

Comparison of different public private partnership models in social infrastructure

Administrative buildings, educational institutes, health care centers and sports complex etc., are social infrastructure projects can be efficiently constructed using various PPP models. Given below are the tables representing comparison between various PPP models at various stages of the project.

Table 1 Brief comparison between methods

Method	Risk	Public support	Duration period	Public Involvement	Private Investment	Cost for end user	Efficiency
BOT	90%	vital	20-30	Less	70-100%	Higher	Medium
BOOT	90%	vital	(30+)	Less	70-100%	Higher	High
P3	90%	None	Short term project	More	Lower	lower	high

Table 2 Comparison between various PPP models

	During concession period					
	public sector responsibility			private sector responsibility		
	Boo	Bolt	Bot	Boot	Boo	Bolt
operation and maintenance		Y	Y	Y	Y	
capital investment/ finance	Y		Y	Y	Y	Y
Construction			Y	Y	Y	Y
Asset ownership			Y	Y	Y	Y
commercial risk	Y	Y	Y	Y		Y

Table 3 After concession period

	After concession period					
	public sector responsibility				Private sector responsibility	
	Bot	Boot	Boo	Bolt	Bot	Boo
Operation and maintenance	Y	Y		Y		Y
Rehabilitation	Y	Y	Y	Y		
Asset ownership	Y	Y		Y		Y
Commercial risk	Y	Y		Y		Y

Table 4 Alternative Public-Private Partnership Approaches in Transportation

Approach	Private Sector Role	Public Sector Role
Design Build	Design and Construction of Facility	Planning, Operation and Subsidy of Facility
BOT Or DBOT	Build, Operate, Finance, Maintain, Transfer	Negotiation with private companies
Long Term Lease	Finance, Operate, Maintain, Transfer	Negotiation with private companies
Competitive Contracting	Operation and Maintenance	Negotiation with private companies
Asset Sales	Finance, Operate, Maintain	Negotiation with private companies
Vouchers	Finance, Operate, Maintain	Negotiation with private companies
Deregulation	Build, Operate, Finance, Maintain	None
Publicization	Build, Operate, Finance, Maintain	Planning, Subsidy

Table 5 Evaluation of Public-Private Partnership Approaches in Transportation

Approach	Allocative Efficiency Potential	Cost Efficiency Potential
Design Build	Excellent	Poor
BOT or DBOT	Depends on Contract	Excellent
Long Term Lease of Existing	Depends on Contract	Excellent
Competitive Contracting	Excellent	Excellent
Asset Sales	Good	Good
Vouchers	Excellent	Excellent
Deregulation	Excellent	Good
Publicization	Excellent	Good

RECOMMENDATIONS

Policy recommendations

An independent institutional structure for handling of PPP program: With the express objective of meeting the PPP targets, an independent institution should be set up to act as nodal agency with the responsibility of creation of PPP data base, best practices, model documents for sectors and coordination with all departments. Development of sector-specific regulatory mechanism: In order to protect the interest of users, private developers, the social community and lenders and sector-specific regulators should be established. Dissemination of information on PPPs: There exists a need for the creation of specific information policy for PPPs wherein all bid documents, feasibility reports and current status of the projects are published on a dedicated contract portal.

Project development recommendations

Capacity building measures for the government: There is a need for capacity building at the Centre and more particularly at the state governments and local bodies level. The PPP nodal agencies at the Centre and state level should take the responsibility of creating awareness about the PPP program in all departments and wherever required, the services of the technical and financial consultant for training of the staff should be taken. The multilateral and bilateral agencies can also provide technical and financial assistance for the PPP projects and to provide best global practices to be followed in PPPs. Role of consultants: For development of PPP project the role of technical and transaction advisors is most critical.

Financing recommendations

Developing corporate bond market: There is an immediate need to develop the corporate bond market. The proposal to set up Infrastructure Debt Funds (IDFs) is a step in the right direction. Further, in order to jumpstart the corporate bond market in infrastructure projects, the large Indian commercial banks while funding the project can compulsorily fund some part of debt by subscribing to bonds. These bonds can be listed on exchanges. The large commercial banks and NBFCs can also play the market makers in infrastructure bonds for initial years.

SUGGESTIONS

For successful implementation of different options, an analysis of various pre-conditions is necessary. These include political commitment, value recovery, stakeholder support and evaluation or pricing, information regarding based on the system and regulatory framework. Service contracts needs information on an regarding existing system and minimal monitoring capacity. Whereas, build operate and transfer (BOT) and concession agreement needs high political support and data base about the regarding present system and a strong regulatory framework. A public agency might begin with a service or management contract introduce more and more complex options by transferring more responsibilities to the private sector.

Table 6 Suggestions for PPP projects

Sector	Possible Intervention	Possible Structures
Water projects	1. Management of existing water distribution system. 2. Augmentation/development of new system by tapping identified sources construction, operation and maintenance of water treatment plant. 3. Expansion of water distribution network in unserved areas.	For existing system: • Performance primarily based management & service contracts • Lease contract • EPC contracts along with performance primarily based O&M contracts For new system: BOT/concession
Solid waste management	1. Segregation, collection transportation and disposal (sanitary landfills, composting, integrated waste-to energy projects).	• Service contracts • Management contracts • Community participation for collection and segregation of waste • PPP formats for solid waste management
Sewerage/ storm water drainage system	2. Renovation in old city area. New system in unserved areas.	Existing system: • Annuity contracts • Performance based contracts for construction & O&M New system: • EPC contracts other PPP models such as design, build finance transfer (DBFT)
Traffic & Transportation	1.Bus terminal 2.Construction of new ring roads/ Bypass / bridge 3.Laying/improvement/ widening 4.Intersection improvements 5.Parking lots 6.Auto/taxi stands 7.Transport 8.Ware house, truck parking, fuel station, 9.Service centers, office complex	• PPP (BOT/BOLT/DBFO) • BOT model with tolls/shadow tolls • O&M contracts • EPC contracts • EPC + O&M contracts • BOT (lease/ DBFO)
Lake conservation and improvement for recreation	1. Lake cleaning, promoting tourism, recreational activities.	• Service and O&M contracts for lake cleaning • PPP formats for treatment plants/ solid waste management/ sewerage networks • Tap MOEF/MOS schemes
Urban renewal (environment improvement & city beautification)	1.Inner city areas 2. Shifting of non-conforming commercial/industrial uses. 3.Renovation of water/ sewerage/SWM system	• BOT models for commercial projects • Service/management contracts for upgrading existing system
Social infrastructure	1.Community halls, public spaces, slaughter houses, etc	• Management/service contracts • Annuity models
Street lighting	1.Street lighting	• Performance based contract for supply, installation, O&M for 2/5 years period

CONCLUSION

PPPs are a concept that has been applied to a range of types of agreements between public and private entities. PPPs play an important role in bringing private sector competition to public infrastructure monopolies and in merging the resources of both public and private sectors to better serve the needs. The worldwide interest in PPPs, problems is encountered in many countries and the controversy over PPP calls for an improved methodology for improved infrastructure and service delivery through PPPs. This paper proposes infrastructure development by a systematic framework of PPPs. The public procurement principles and public private win-win solution act somewhat as guidelines or constraints for decisions made in each of the four stages of the framework. Public-private partnerships offer the prospect of achieving desired social benefits of transportation in the most efficient manner. The planning, coordination and possibly subsidy provided by the public sector is combined with the incentives of the free market. The paper concludes that this new trend will be fundamental of PPP for next generation and results from such new research directions will help in excelling the barriers for developing social infrastructure.

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