

Public Private Partnership (PPP) and its Evolution – A Conceptual Framework

Vimlesh Prabhudesai¹, Dr. Nandkishor G. Sarode²

¹PhD Research scholar, Savitribai Phule Pune University, Pune, India. And Associate Professor, National Institute of Construction Management and Research, Pune, India.

²PhD Research Guide, Savitribai Phule Pune University, Pune, India And Director (MBA & MCA), Abhinav Education Society's Institute of Management & Research, Savitribai Phule Pune University, Pune, India.

Abstract: India's economy has experienced rapid progression since the attempt of liberalization in 1991. To keep pace with this growth, physical infrastructure such as transportation systems, communication systems, energy systems, water and sanitation networks etc need to be developed. The burgeoning investments required have necessitated the government to look for ways and means to scale up the infrastructure. Typically the governments have been using – Engineering, Procurement and Construction (EPC) method for infrastructure provisioning. The constraints on the availability of finance on one side and the need to provide social good on the other side has had its impact not only on the performance of existing but also on the addition of new infrastructure. To cope up with this dilemma and to increase the share of private sector in country's infrastructure development, the government initiated Public Private Partnership. PPP is a contractual agreement between the public sector and private sector partners for a pre-defined period. This arrangement allows the government to have access to the financial resources, technical & managerial experience, expertise and efficiency of the private sector and share most of the risks in providing specified infrastructure services. The success of PPP relies on designing viable projects, minimizing speculation on uncontrollable factors, having fair and transparent procurement process & a competitive environment and an efficient financially system.

Keywords: Public Private Partnership, PPP, framework, PPP process

1. Introduction

Infrastructure development is critical for economic growth of a country. Inadequate infrastructure increases the transaction cost of public services, is a constraint on growth and impacts quality of life. When the demand for public services outstrips supply; service rationing occurs, the quality of service deteriorates and in some cases the service doesn't get provided.

Traditionally, Governments are responsible for providing public services and the associated infrastructure. Typically the governments have been using – Engineering, Procurement and Construction (EPC) for infrastructure provisioning. The burgeoning strain on the finances of the government treasury has forced governments across the world to look at different modes of financing and developing infrastructure. Public Private Partnership (PPP) has increasingly been used all over to bridge the gap. PPP is a contractual agreement between the public sector and private sector partners for a pre-defined period. This arrangement allows the government to have access to the financial resources, technical & managerial experience, expertise and efficiency of the private sector and share most of the risks in providing specified infrastructure services. The success of PPP relies on designing viable projects, minimizing speculation on uncontrollable factors, having fair and transparent procurement process & a competitive environment and an efficient financially system.

2. traditional Procurement System – Engineering, Procurement and Construction (EPC)

In the traditional procurement system the government plays an active role in the development of infrastructure project

throughout its lifecycle. The typical stages of development are – conceptual, design, contractor selection, construction and operation & maintenance.

In the conceptual stage the government establishes the basic needs of the project in terms of its functional requirements, time to construct, cost of construction and quality. At the same time a project manager (either a government agency or an external consultant) is appointed who shall be the single point of contact for all technical, financial and administrative requirements for the project.

In the design stage the deliverables such as functional requirements, time to construct, cost and quality from the previous stage form the inputs for preliminary and detailed design. Once the design is ready the government embarks on the tendering stage to select the contractor for construction stage.

In the tender stage, bids are invited from eligible contractors for construction of the project. The eligible contractors are provided with tender documents such as drawings, specifications, bill of quantities, rules & regulations about submission of bids and the selection criteria. The bidding could be either limited competitive or open competitive. In limited competitive bidding only tried and tested contractors who have the technical bandwidth and financial power to construct the project are invited whereas in open bidding all the contractors who satisfy the pre-qualification criteria are eligible. The selection of the contractor is done on lowest price basis.

In the construction stage the contractor mobilizes the resources and starts the construction of the project. Periodic payment is made to the contractor based on the interim bills raised. The bills are verified with the rates included in the bill of quantities submitted earlier by the contractor. Many a times

the government uses the services of an Independent Engineer who ensures that the construction is in conformity with the design and the specifications of contractual conditions. Any deviations from pre-agreed specifications are brought to the notice during execution of the work.

The operation and maintenance of the projects are carried out by the government agencies through their own workforce or contracted out to a contractor.

EPC has certain advantages for private players;

1. Risk mitigation - In EPC the private player's exposure to risk is limited to construction related risks. The risk related to regulatory clearances, financial closure, land acquisition, social unrest, revenue generation etc is borne by government (client).
2. Limited financial commitment – As most of the risks are borne by the client including the risk associated with raising financial resources, the capital requirement is lower in traditional procurement method (EPC).
3. Reduced uncertainty – Changes in government policies, development of competing project, demand variation etc create a high level of uncertainty for private sector over a long duration. But the EPC mode avoids most of these uncertainties
4. Faster Financial returns – Since the EPC contract is limited to the completion of the project and defect liability period, the private player will be able to churn faster returns on its investment.

The huge infrastructure investment requirement, the fiscal constraints and the mounting liabilities forced the governments of different countries to think of innovative ways of financing and developing infrastructure. The state owned infrastructure utilities suffered with low labour productivity, poor service quality, thefts, revenue shortages, inadequate investments, deteriorating equipments (Kessides, 2004).

Many countries implemented far-reaching reforms over the past two decades—restructuring, encouraging private participation, and establishing new approaches to regulation in the infrastructure sectors (Kessides, 2004). One among such reforms was Public-Private Partnership. Public Private Partnership (PPP) is increasingly becoming the preferred mode for construction and operation of infrastructure projects, both in developed and developing countries (Planning Commission, 2011). Rapid growth calls for larger investments in infrastructure and the limitations of public resources have led to greater reliance on private investment through various forms of PPP. PPPs are expected to augment resource availability as well as improve efficiency of infrastructure service delivery. Time and cost overrun in construction of PPP projects are also expected to be lower compared to traditional public procurement.

3. Public Private Partnership

Private sector's financing of projects in public domain results in the emergence of PPPs (Li & Akintoye, 2003). The 1990s has seen PPPs as the key tool of public policy across the world (Osborne, 2000). Since its emergence in 1997 in United Kingdom, PPP has been recognized as an effective way of delivering value for money in public infrastructure and services. PPP has different definitions.

- The National Council for Public-Private Partnership, USA defines a PPP as a “contractual arrangement between a

public sector agency and a for-profit private sector developer, whereby resources and risks are shared for the purpose of delivery of a public service or development of public infrastructure” (Li and Akintoye, 2003).

- In Canada, the Council for Public-Private Partnerships (2004) defines a PPP as a “cooperative venture between the public and private sectors, built on the expertise of each partner, which best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards”.
- The World Bank defines PPP as "a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance". PPPs typically do not include service contracts or turnkey construction contracts, which are categorized as public procurement projects or the privatization of utilities where there is a limited ongoing role for the public sector. (<http://www.ppp.worldbank.org>).
- In UK, HM Treasury defines Private Finance Initiative (PFI) projects as PPPs where the private sector constructs the project's assets (for example a building) and raises the required funding, usually on a project finance basis (i.e. where contractual payments represent the primary security for funders) (EPEC, 2012).
- In Australia, the National PPP Policy defines PPP as a service contract between the public and private sectors where the Government pays the private sector (typically a consortium) to deliver infrastructure and related services over the long term. The private provider will build the facility and operate or maintain it to specified standards over a long period. The private provider usually finances the project.
- Public Private Partnership means an arrangement between a government / statutory entity / government owned entity on one side and a private sector on the other side, for the provision of public assets and or / public services, through investments being made and / or management being undertaken by the private sector entity, for a specified period of time, where there is well defined allocation of risk between the private sector and the public entity and the private entity receives performance linked payments that conform (or are benchmarked) to specified and pre-determined performance standards, measurable by the public entity or its representative (DEA, 2011)
- Standard & Poor's definition of PPP is any medium-to-long term relationship between the public and private sectors, involving the sharing of risks and rewards of multi-sector skills, expertise and finance to deliver desired policy outcomes (S&P, 2005)

A significant characteristic of PPP is the allocation and sharing of risk among parties (Ke et al., 2010a, 2010b). Unlike other procurement methods, the risks in PPP are identified and allocated to parties best able to manage and mitigate those (Li et al., 2005). Over the years various models of PPP have been developed in different countries and across different sectors – the most widely used is Build-Operate-Transfer (BOT) (Kumaraswamy and Zhang, 2001). Other forms of models include Design Build Finance Operate (DBFO), Build Transfer Operate (BTO), Design Build Operate Maintain (DBOM), Build Own Operate Transfer (BOOT), Operate and Maintain

(O&M), Design and Build (DB), Build Lease and Transfer (BLT), Design Construct, Manage and Finance (DCMF), Design Construct Manage and Finance (DCMF) and several other similar concession acronyms (Eaton and Akbiyikli, 2005). Table 1 below describes some of the different variants of PPP models,

Table 1: PPP schemes and modalities

| Schemes | Modalities |
|--|--|
| Build-own-operate (BOO) Build-develop-operate (BDO) Design-construct-manage-finance (DCMF) | The private sector designs, builds, owns, develops, operates and manages an asset with no obligation to transfer ownership to the government. These are variants of design-build-finance-operate (DBFO) schemes. |
| Buy-build-operate (BBO) Lease-develop-operate (LDO) Wrap-around addition (WAA) | The private sector buys or leases an existing asset from the government, renovates, modernizes, and/or expands it, and then operates the asset, again with no obligation to transfer ownership back to the government. |
| Build-operate-transfer (BOT) Build-own-operate-transfer (BOOT) Build-rent-own-transfer (BROT) Build-lease-operate-transfer (BLOT) Build-transfer-operate (BTO) | The private sector designs and builds an asset, operates it, and then transfers it to the government when the operating contract ends, or at some other pre-specified time. The private partner may subsequently rent or lease the asset from the government |

Source: International Monetary Fund, Fiscal Affairs Department, March 2004

Privatization is not same as PPP, as under PPP, both parties have a balanced partnership and work together to ensure successful results (Mitchell-Weaver and Manning, 1991). California Debt & Investment Advisory Commission (2007) states three main points of differences between Privatization and PPP,

- Ownership – Under Privatization, the ownership of public owned assets is fully transferred to the private sector while in PPP the public agency retains the ownership of the assets, oversight of O&M of the assets and controls the amount of private involvement.
- Contract structure – Under Privatization once the asset is sold the public agency’s involvement is limited to non-existent except possibly in a regulatory role while in PPP the contractual agreement determines the level of participation of both partners.
- Risk – Under privatization, private sector has sole responsibility in general while in PPP there is shared responsibility between partners.

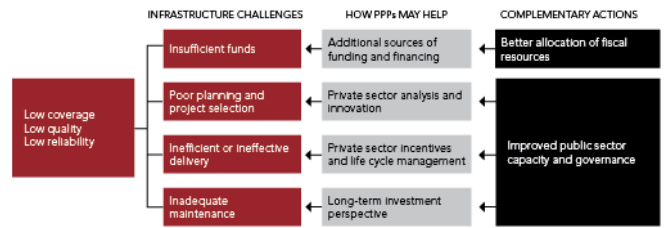


Figure 1: Infrastructure challenges and how PPP can help
Source: www.pppknowledgelab.org

3.1 Enabling PPP framework

The amendment of National Highway Act, 1956 paved way for private sector participation in development of national highways. This amendment allowed private sector to levy toll and participate in construction, maintenance and operation of National Highways. Enactment of the Electricity Act 2003, Special Economic Zone (SEZ) Act 2005 etc have made large private investments possible for infrastructure development. To support these legal frameworks, dedicated implementing agencies, regulatory bodies and financial institutions have been formed.

For speedy approval of PPP projects, Ministry of Finance in 2006 formed PPPAC (PPP Approval Committee). The guidelines for formulation, appraisal and approval were notified. Standardized contractual and bidding documents such as sector specific Model Concession Agreements, Model Request for Qualifications and Model Request for Proposal was formed. India Infrastructure Finance Company Ltd. (IIFCL) was set up to provide long term finance and refinancing opportunity to infrastructure projects. India Infrastructure Project Development Fund (IIPDF) was formed to provide financial support for quality project development activities such as bidding support.

Institutional Framework

The Central Government has notified a system for appraisal / approval of projects to be undertaken through Public Private Partnership (PPP). These are applicable to all PPP projects by Central Government Ministries, statutory authorities or other entities under their administrative control.

Table 2: Project cost and appraising authority

| | Project cost (in Rs. Crores) | Appraising authority |
|---|---------------------------------|---|
| 1 | Less than 5 | Administrative Ministry |
| 2 | More than 5 and less than 25 | Standing Finance Committee (SFC) |
| 3 | More than 25 and less than 100 | Expenditure Finance Committee (EFC) |
| 4 | More than 100 and less than 250 | committee comprising of Secretary, Department of Economic Affairs and Secretary of the Ministry / Department sponsoring the project |
| 5 | Projects under | committee comprising of |

| | | |
|---|--------------------------------------|--|
| | NHDP more than 250 and less than 500 | Secretary, Department of Economic Affairs and Secretary, DORTH (Department of Road Transport and Highways) |
| 6 | More than 500 | Public Private Partnership Approval Committee (PPPAC) |

Source: Infrastructure Division, Dept of Economic Affairs, Ministry of Finance, GoI

i. Project identification

The sponsoring Ministry / entity identifies the projects to be taken up through PPPs and undertakes preparation of feasibility studies, project agreements etc with the assistance of legal, financial and technical experts as necessary.

ii. Inter-ministerial consultations

The Administrative Ministry circulates the details of the project and the terms of concession agreement to the appraising agencies and comments received will be incorporated to the proposal for consideration by SFC / EFC. Where more than one Ministry / Department is involved, participation from all such ministries / departments will be sought.

iii. 'In Principle' approval of PPPAC

Administrative Ministry seeks 'in principal' approval from PPPAC within three weeks of submission of the proposal alongwith pre-feasibility / feasibility report and term sheet containing the salient features.

iv. Expression of Interest (EOI) / Request for Qualification (RFQ)

Following the 'in principal' approval by PPPAC, the Administrative Ministry may invite expression of interest in the form of RFQ to shortlist pre-qualified bidders.

v. Formulation of Project Documents

The project documents include various agreements important being the 'concession agreement (CA)'. These documents inter alia mention the rights and obligations of various parties.

vi. Appraisal / Approval of PPPAC

The Niti Aayog (erstwhile Planning Commission) will appraise the project proposal and forward its appraisal note to the PPPAC Secretariat. PPPAC Secretariat will also receive comments from Law Ministry and any other Ministry / Department. PPPAC will either recommend the proposal for approval to the competent authority or request the Administrative Ministry to make necessary changes for further consideration of PPPAC.

vii. Invitation of Bids

Financial bids are invited after the approval of the competent authority

3.2 PPP Process

Identifying and implementing a PPP project involves a series of steps set out in the following four phases.



Figure2: PPP process phases

Source: www.pppinindia.gov.in

- Phase 1 is the PPP identification stage that covers strategic planning, project prefeasibility analysis, Value for Money (VfM) analysis, PPP suitability checks, and internal clearances to proceed with PPP development. The different government agencies set out an annual PPP Plan which would identify a shelf of projects flowing from the overall vision and specify the extent of private investment for each project in the Plan. Pre-feasibility analysis is carried out to assess broad viability of every project, identify key risks, and establish likely cost and revenue streams. VfM analysis is carried out to ascertain whether the project offers good value for the money to the public sector. An assessment is carried out to ascertain whether private participation is permissible under the legislation if not suitable modifications / amendments are carried out.
- Phase 2 is the PPP developmental stage that includes full feasibility study, selection of the best procurement method, and first draft of bidding documents and in-principal clearance from the Appraisal / Clearance Authority. The feasibility study entails market analysis, project scope, social & environmental feasibility, technical feasibility, risk studies & refinement of PPP mode, preliminary cost assessment, financial analysis & due diligence, economic feasibility, VfM analysis and project implementation schedule.

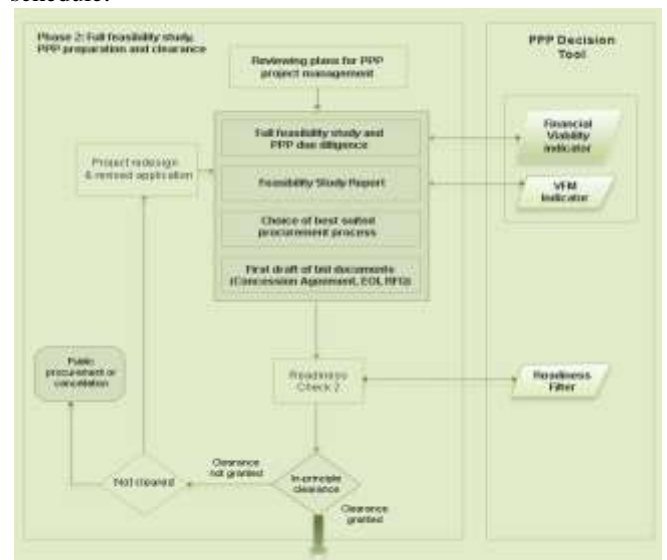


Figure3: Phase 2 Developmental phase

Source: www.pppindia.gov.in

- Phase 3 is the procurement phase wherein the goal is to select the best qualified private sector partner for the PPP and to conclude contracting with that partner. Appropriate procurement process is to be followed to encourage maximum participation by private sector and to imbibe public confidence in the procedure. Bidding docs such as EOI, RFQ, RFP, draft CA etc may be provided to the bidders. Technical proposal may be invited depending on the complexity of the project. In complex projects involving number of technological, legal & / or financial options a competitive dialogue process might be used to gauge and assess private sector innovation and unique design solutions & arrive at clarity on the project scope.
- Phase 4 is contract management and monitoring stage and covers project implementation and monitoring over the life of the PPP project. For effective & efficient implementation, people with right mix of skills including project management, commercial expertise and negotiation skills shall be deployed. Project Monitoring Unit (PMU) and inter-departmental committees shall oversee project implementation. Contract management team shall have the knowledge & understanding of the contract terms, performance criteria & payment mechanism. PPP Cells would be responsible to set up MIS (Management Information Systems) systems and disseminate information to Government agencies from time to time.

4. Conclusion

PPP is a complex arrangement. It requires the support of the government, general public and private sector for its successful implementation. The use of PPP should be considered when the enabling ecosystem is in place - legal environment & political support, private sector appetite, public sector experience & capacity building and favorable investment climate. Laws that enable development of projects on PPP and do not restrict its progress should be enacted. A strong political will with equally helpful wider public is required for PPP to happen. A healthy competition with a transparent procurement process would attract able and potential private players.

References

- CDIAC, (2007), Issue Brief Privatization v/s Public Private Partnerships: A Comparative Analysis, USA
- Department of Economic Affairs, Ministry of Finance (2011), 'National Public Private Partnership – Draft for consultation', Government of India.
- Eaton, D., Akbiyikli, R., (2005). PFI and the Delivery of Public Services. RICS Publications (Available from; www.rics.org/pfi).
- European PPP Experience Centre,(2012), United Kingdom – England PPP Units and Related Institutional Framework.
- Ke, Y., Wang, S., Chan, A. P., (2010a). Risk allocation in public–private partnership infrastructure projects: comparative study. *J. Infrastruct. Syst.*343.
- Ke, Y., Wang, S., Chan, A.P., Lam, P.T., (2010b). Preferred risk allocation in China's public–private partnership (PPP) projects. *Int. J. Proj. Manag.* 28(5), 482–492.
- Kessides I. N., (2004). 'Reforming Infrastructure - Privatization, Regulation, and Competition', World Bank policy research report, Washington, DC.
- Kumaraswamy, M. M., Zhang, X.Q., (2001). Governmental role in BOT-led infrastructure development. *Int. J. Proj. Manag.* 19 (4), 195–205.
- Li, B., Akintoye, A., (2003). An overview of public–private partnership. In: Akintoye, A., Beck, M., Hardcastle, C. (Eds.), *Public–Private Partnerships: Managing Risks and Opportunities*. Blackwell Science Ltd., UK
- Li, B., Akintoye, A., Edwards, P.J., Hardcastle, C., (2005). The allocation of risk in PPP/PFI construction projects in the UK. *Int. J. Proj. Manag.* 23 (1), 25–35.
- Mitchell-Weaver, C. and Manning, B. (1991), "Public private partnerships in third world development: a conceptual overview", *Studies in Comparative International Development*, Vol. 26 No. 4, pp. 45-67.
- Osborne, S.P., (2000), *Public–Private Partnerships: Theory and Practice in International Perspective*, Routledge: London.
- Planning Commission, (October, 2011) 'Faster, Sustainable & More Inclusive Growth. An approach to XIIth Five year plan', Government of India. New Delhi
- Standard and Poor's, (2005), "Public Private Partnerships: Global Credit Survey 2005," April 25 (New York: Standard and Poor's)