

## **Public Private Partnership (PPP) as a Catalyst for Infrastructure Development and Growth**

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*In its 75th year of independence, India has become the world's fifth largest economy, with a nominal GDP of approximately US\$ 3.5 trillion and is now rapidly advancing towards realising the vision of reaching the milestone of US\$5 trillion GDP by 2025. This growth momentum of the economy was sustained, mainly due to the ramping up of public investment in infrastructure which had a multiplier effect across sectors such as steel, cement, auto, real estate among others. However, unlike other emerging markets, India relied primarily on the government budget for financing infrastructure projects, with nearly 70 per cent of funds coming from the government budget. The Government stepped-up budgetary allocation to fund infrastructure investment, through the creation of the National Infrastructure Pipeline, with a projected investment of around ₹111 lakh crores for FY20-25. This was further strengthened with the setting up of two institutional structures was envisaged - National Bank for Financing Infrastructure and Development for long term funding; and the National Monetisation Pipeline for monetising unused and underutilized assets. Although infrastructure spending increased, however, this was not sufficient given the intensive infrastructure requirements resulting in a huge infrastructure financing gap. The government is also encouraging the private investor to participate by creating a pipeline of operating assets which would remove some of the riskier elements of investing in large projects. In fact, the evolution and growth of the public digital infrastructure was due to the regulatory framework which ensured the public good coupled with the incentivisation for the private sector to innovate and invest. The key principles on which policies were formulated were - creating public goods, adopting trust-based governance, partnering with the private sector for development. Already, there are early signs of private sector investing in infrastructure projects, especially in the roads and power sectors. This contribution would be scaled up to other sectors such as ports, railways, water and sanitation, coal, mines, etc as economic conditions improve.*

## **Public Private Partnerships**

The public private partnership (PPP) has been an important strategy in financing the infrastructure gaps and delivering public services in many countries. A purely public approach may cause problems such as slow and ineffective decision-making, inefficient organizational and institutional frameworks, and lack of competition which are collectively known as government failure. As against this, a purely private approach may cause problems such as inequalities in the access to infrastructure services, which is known as market failure. To overcome both government failure and market failure, a Public-Private Partnership approach can combine the strengths of both the public and private sector, resulting in a win-win situation.

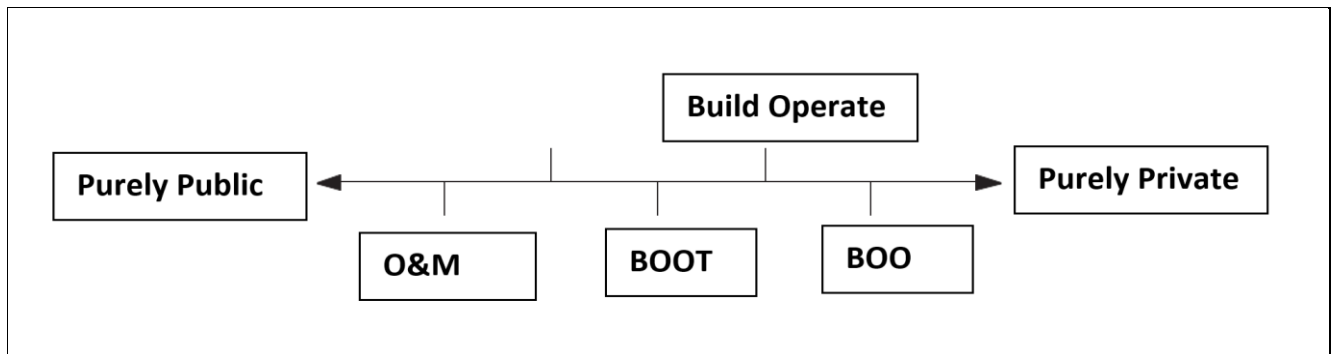
The term “PPP” has several definitions that have been used by different governments, and international organisations. The most comprehensive definition is given by World Bank as follows:

*The term “public-private partnerships” has taken on a very broad meaning. The key elements, however, are the existence of a “partnership” style approach to the provision of infrastructure as opposed to an arm’s-length “supplier” relationship...Either each party takes responsibilities for an element of the total enterprise and they work together, or both parties take joint responsibility for each element...A PPP involves a sharing of risk, responsibility, and reward, and it is undertaken in those circumstances when there is a value-for-money benefit to the taxpayers.*

## **Types of PPPs**

Various types of partnerships have been implemented to reflect different project objectives and requirements. These PPPs vary in terms of the degrees of private involvement. At one extreme is the public provision, where the public sector is fully responsible for all aspects of delivering public services; while at the other extreme is the private provision, where the private sector assumes all those responsibilities. As the PPP move from the end of the purely public provision to the other, the degree of private involvement increases. These PPPs also vary in terms of financing and ownership of assets. A continuum that reflects the degree of private involvement in PPPs is shown in Figure 1, below.

Figure 1



In India the most prevalent type of PPP is the concession-type PPP, according to the World Bank, a concession agreement is defined as “an arrangement whereby a private party leases assets for service provision from a public authority for an extended period and has responsibility for financing specified new fixed projects during the period. The new assets revert to the public sector at expiration of the contract.”

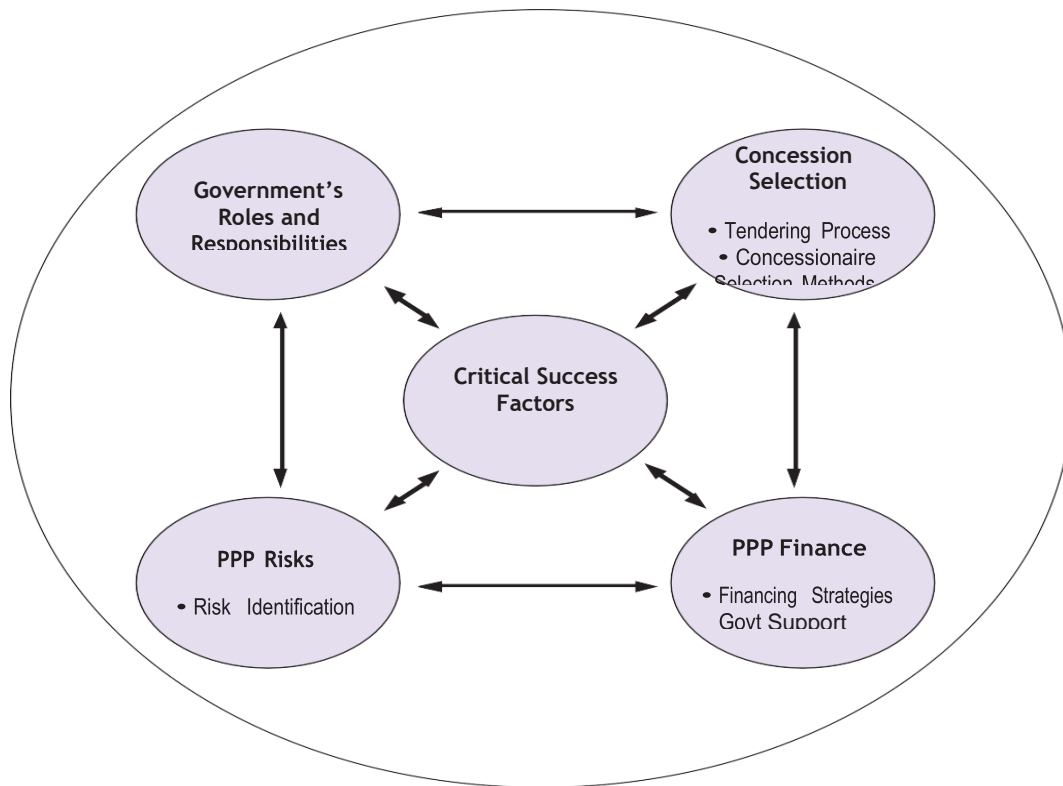
A concessionaire is a consortium formed particularly for a PPP project, and its responsibilities include the financing, design, construction, operation, and maintenance of the infrastructure assets and the transferring of the assets to the government in operational condition at the end of the concession period. The success of a PPP project requires a well-structured tendering process, an appropriate concessionaire evaluation method, and a set of evaluation criteria.

The concessionaire assumes far more responsibilities than a traditional contractor as the uncertainties and risks associated with the PPP are much more and deeper. Consequently, the financial issues in a PPP project are much more complicated and the allocation of risks and rewards among participants needs to be appropriately structured.

### Design of a PPP

There are five main aspects of PPPs, as given in the figure 2 below: the government roles and responsibilities; the concession selection; PPP risks; PPP finance; and the critical success factors and/or barriers for PPP projects.

Figure 2



### Benefits of PPPs

International experience has shown that the PPP, if properly formulated, can provide multiple benefits to the government. During the past two decades, PPPs have become increasingly important for delivering public services. In most countries, PPP projects focus on transportation projects such as roads and airports. However, the use of PPPs has been expanded across other sectors such as education, healthcare and agriculture.

The major advantages of PPP are:

- Providing more-efficient, lower-cost, and reliable public services, thereby increase the “value for money” spent for infrastructure services;
- Reduces up-front capital costs and administration costs for the Govt;
- Project life-cycle costs and project delivery time can be better managed;
- Facilitates innovation in infrastructure development; and
- Improved risk allocation between Govt and private sector with risks related to construction, finance and operation of projects being transferred to the private sector;

### ***Critical Success Factors (CSFs) in PPP Projects***

Critical success factors are defined as “*the limited number of areas, the result of which, if they are satisfactory, will ensure successful competitive performance for the organization. They are the few key areas where ‘things must go right’ for the business to flourish.*”

The identification of such factors has been viewed as the first important step toward the development of a successful PPP. Based on research studies it can be concluded that the success or failure of a PPP project is dependent on: the competence of the government; the selection of an appropriate concessionaire; an appropriate risk allocation between the govt and private sectors. The problems of PPPs often arise when the projects are organized and managed. The critical success factors include: continuity in leadership; independent project team and an independent project leader, who report to a steering committee consisting of top representatives from both the public and private sectors; periodic progress monitoring during implementation; clarity in responsibilities and agreements. The factors that contribute to the achievement of best results are detailed risk analysis and appropriate risk allocation.

### ***Government Roles and Responsibilities***

The government plays a pivotal role in the development and management of a PPP project. The role of the government has been identified as follows:

- ***Establishing a conducive Legal/Regulatory Framework*** - It has been emphasized that the establishment of a sound regulatory framework is a pre-requisite for PPP. A well-structured and balanced regulatory framework can not only increase the willingness of the private sector to participate in infrastructure development, but also increase benefits to the government by ensuring that the projects operate efficiently.
- ***Developing a fair and transparent Concessionaire Selection Process*** - The selection of an appropriate concessionaire is critical to the success of a PPP project. The government should establish a fair and transparent selection process, which includes well-defined scope, fair treatment of bidders, transparency, and financial evaluation of the project.

- **Continuous Monitoring of Project during Life-Cycle** - Although the concessionaire is the principal participant that is responsible for the implementation of a PPP project, the government needs to be actively involved in the project life-cycle phases to ensure that the project meets its quality and delivery objectives. This involvement can be achieved through the establishment of an interdisciplinary team that continuously monitors project progress, and implements quality control and quality assurance measures.

***Risk Identification and Classification***

The identification of risks is the first step to managing them appropriately. As such, researchers have identified the potential risks associated with a PPP project and proposed several classification approaches for structuring these diverse risks. The risks a PPP project may be exposed to are affected by a number of factors, such as the scale of a project, the geographical location and the type of PPP being implemented.

A striking characteristic of the PPP is its high level of risks, mainly due to the long concession period, and the diversity of participants involved in the partnership.

<b>Type of Risk</b>	<b>Risk Factors</b>
Political Risks	<ul style="list-style-type: none"> <li>• Expropriation, reliability and creditworthiness of the government</li> <li>• Change in government policies</li> <li>• Political opposition</li> <li>• Delay in approvals</li> <li>• Political force majeure events</li> </ul>
Financial Risks	<ul style="list-style-type: none"> <li>• Rate of return restrictions</li> <li>• Inability to service debt</li> <li>• Fluctuations in the inflation rate, interest rate, foreign currency exchange rate</li> </ul>
Construction Risks	<ul style="list-style-type: none"> <li>• Land acquisition and compensation</li> <li>• Project cost and time overrun</li> <li>• Material/labor unavailability</li> <li>• Project site conditions</li> </ul>

Type of Risk	Risk Factors
	<ul style="list-style-type: none"> <li>• Contractor’s failure</li> <li>• Construction force majeure events</li> </ul>
Operation and Maintenance Risks	<ul style="list-style-type: none"> <li>• Operation and maintenance cost overrun •</li> <li>• Low operating productivity</li> <li>• Unavailability of material/skilled labor</li> <li>• Force majeure events</li> </ul>
Market and Revenue Risks	<ul style="list-style-type: none"> <li>• Traffic/Revenue Risk</li> <li>• Government restrictions on profit and tariff</li> <li>• Inaccurate pricing and demand estimate</li> <li>• Force majeure events</li> </ul>
Legal Risks	<ul style="list-style-type: none"> <li>• Non-compliance in contracts in the BOT framework</li> <li>• Unanticipated change of the concessionaire scheme</li> <li>• Early termination</li> <li>• Legal force majeure events</li> </ul>

***Risk Allocation Strategies***

The guiding principle in risk allocation is to allocate risks to the entity with the best financial and technical capabilities to manage them. On the basis of this principle, political risks should be retained by the government, while relationship risks, the risks of legislative changes, and force majeure risks should be shared by both the public and private sectors. The majority of the remaining project-related risks, risks that are directly associated with the project itself, should be assumed by the private sector.

In general, risks that are related to the environment within which the project is implemented should be retained by the government, while the risks that are directly related to the project are mostly allocated to the private sector. Some risks that are beyond the control of both the public and private sectors should be shared by both parties. Most operation-related risks should be retained solely by the private sector (e.g., technical and management risks) or shared by the public and the private sector (e.g., demand and supply risks).

***PPP Finance***

The finance plan for a PPP should have an appropriate mix of equity and debt and a financing strategy that is based on the considerations of project risks, project conditions, and financing sources. PPP projects which are often characterized as being large, complex, and capital-intensive require innovative financial engineering techniques. Project financing is a technique where a project is considered as a distinct legal entity and the financing of the project is repaid from the cash flows generated by the project.

PPP projects are generally funded with both equity and debt, however, the strategy is to utilize as much debt as the project cash flows can service so as to generate an attractive return for shareholders. Consequently, the capital structures in most PPP projects are highly leveraged, with equity financing covering only 10-30% of total project costs and the remaining 70-90%, from debt financing. Although the higher debt would generate higher rate of return to equity investors, it would increase the financial risk of the project, therefore an appropriate mix of equity and debt is used. In addition, project risks, project conditions, and financing sources need to be taken into account when selecting an appropriate financing strategy for a PPP project.

<b>Risk Conditions</b>	<b>Financing Strategies</b>
Low Risk	• High debt-to-equity ratio to maximise return on invested equity
	• Raise debt from capital market to reduce interest costs
High Political Risk	• Procure insurance from government organizations such as the Overseas Private Investment Corporation
High Financial Risk	• Obtain loans from international lending institutions
	• Fixed-rate or standardized-rate debt financing
	• Structure debt financing in the same currencies as anticipated revenues
High Market Risk	• Finance early phases with equity and temporary loans and refinance during the operation phase with lower-cost long-term debt



Risk Conditions	Financing Strategies
	<ul style="list-style-type: none"> <li>• Structure the debt repayment schedule to start low and escalate during the initial years of operation.</li> </ul>
	<ul style="list-style-type: none"> <li>• Negotiate contract terms that allow increases in user fees.</li> </ul>
	<ul style="list-style-type: none"> <li>• Restructure debt, if necessary, to solve cash flow problems during the concession period.</li> </ul>

### ***Government Support***

The financial viability of a PPP project is affected by a number of factors, including market need, tariff structure, concession period, credibility of the project sponsors and force majeure events. Govt of India provides viability gap funding to improve the financial viability and/or to enhance the attractiveness of a PPP project. For instance, the 22.5 km long Trans-Harbor Bridge that is proposed for Mumbai and costing over \$1 billion is not feasible without at least 30 percent viability gap funding.

- ***Minimum Guaranteed Revenue*** – Demand risk can be mitigated by providing a minimum guaranteed revenue from the government.
- ***Flexibility in Tariff Structure*** - The tariff structure and its adjustment have significant impact on the project cash flows. Hence, some flexibility in tariff structure may be required to enhance the financial viability of a PPP project.
- ***Financial Support*** - Different types of financial support, both directly and indirectly, can be used to increase the rate of return of the project, and thereby enhance the attractiveness of a PPP project. Direct financial support could be through grants or loans or tax incentives.

### ***Limitations of PPPs***

Despite the benefits and increasing usage in infrastructure development, PPPs have certain limitations, which are:

- Limited competition in PPP projects due to the high tendering costs;
- Delays in land acquisition, public opposition, and complex negotiation processes;
- Cost of financing is higher since the borrowing cost of the private sector is always more than the sovereign borrowing cost;

- Limited access to public services as the user charges may not be affordable.

### **Recommendations: Way Forward**

Going forward, closing the infrastructure financing gap by attracting private sector investment will depend upon the capacity of Central and state governments to ensure a pipeline of commercially viable and environmentally sustainable projects that deliver commensurate returns to investors. Governments can support the creation of inclusive and quality infrastructure by providing and enabling environment, capacity building and developing financial markets. It also requires mobilising diverse funding sources such as - grants, taxes, user charges and asset monetisation. Developing innovative financing instruments, such as green and sustainable bonds, will be necessary to support the successful rollout of quality, environmentally sustainable project pipelines.

The Government should ensure that infrastructure long-term planning takes into account environmental and climate considerations. Sustainable and resilient infrastructure investment is required to address multiple economic, social and environmental objectives beyond a narrow definition of user needs. The appraisal of infrastructure project investments should include integration of environmental and climate considerations in project planning, appraisal and prioritisation. The Government should undertake independent assessments of infrastructure projects and initiatives against criteria that include environmental value.

The possibility of establishing a 100% government-owned special purpose vehicle (SPV) for promoting PPPs, can be explored. The SPV would be mandated to secure permissions, land acquisitions, and all other sovereign functions. The shares can subsequently be sold to the highest bidder who will be responsible for the future functions such as construction, etc. This should apply especially to big infrastructure projects such as power plants, airports and roads. This will not only help to mitigate risk and uncertainty associated with the project but would also help avoid project delays and cost overruns.

In conclusion, the Govt needs to operationalize its objectives into project prioritisation and appraisal criteria, and to ensure that key capacities are in place across the Govt hierarchy for effective decision making and to ensure a pipeline of bankable quality infrastructure projects.

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