



## Overview Of Public-Private-Partnership For Transportation In India

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### ABSTRACT

The concept of a working partnership between the private sector and public bodies is well established. Public Private Partnerships are common practice in delivering services. Many governments have already established such partnerships and achieved great deal in delivering infrastructure such as roads, airport, ports or services. In recent years India's economy has experienced a period of rapid economic growth. The purpose of this thesis is to promote the benefits of PPP for infrastructure development and to identify effective strategies for overcoming institutional impediments and facilitating successful PPP development and implementation, based on the experience of a number of successful international PPP projects. The study revealed and summarized the available literature on the application and management of PPPs for transportation infrastructure in India and other countries. This provided summary of benefits, risks and critical success factors arising from PPP arrangements in India and other countries.

**Keywords : PPP, Highway, Infrastructure.**

### 1. INTRODUCTION

Since the late 1980s, public-private partnerships (PPP) have come to the fore in various countries around the world to expedite or otherwise make possible the provision of needed infrastructure which the public sector cannot provide in a timely manner by itself. PPPs provide an opportunity for governments to expedite the provision of social capital infrastructure in the form of schools, hospitals and roads while benefiting from greater cost-efficiency that may be achieved from private sector involvement. It is argued that alignment of incentives drives the efficiencies that are derived from PPP arrangements. Private sector participation in asset and Service provision can maximize value for money for government by expediting financing, facilitating innovation, providing better risk management, and integrating life-cycle management. Over the last twenty years, private involvement in financing and delivering transportation infrastructure has grown significantly as governments sought ways to leverage scarce public resources, especially in the absence of dedicated funding sources for transportation. More recently there has been as greatly expanded interest in PPPs to expedite transportation projects needed to accommodate the changing and expanding movement of people and goods across national boundaries previously closed by political adversaries. Among the factors driving the Renewed interest in PPPs for transportation infrastructure financing and development overseas are the following developments over the last two decades due to rapid economic expansion of the economies in India and the development strategies by the Planning Commission.

The advantages of PPPs and the urgency of the transportation infrastructure needs has led to an increasing willingness by public agencies at both the national and local levels to consider and in some cases apply alternative funding, financing, contract delivery, and life-cycle preservation methods to leverage the scarce public resources.

In many cases this has required legislation permitting the use of these alternative project delivery approaches by government agencies sponsoring transportation improvement projects.

### 2. BACKGROUND

Private sector involvement in the provision of transportation infrastructure and services has been evolving for the last twenty-five years by nations overseas which realized early on that the lack of a dedicated transportation funding source required different approach-

es to financing and delivering transportation infrastructure, both highway and passenger rail. The strongest impetus for transportation PPPs overseas occurred in India, where economic reforms encouraged a number of efforts to privatize major elements of the nation's transportation systems. These early efforts focused primarily on the most developed transportation systems, including railroads, public transportation, and aviation. These initiatives included to efforts to more significantly involve private sector resources to help finance and deliver projects in various sectors of the economy, including health care, accommodations, defence, and transportation.

There is a well-established need for infrastructure investments in India. In the Tenth Five Year Plan period (between 2002-03 and 2006-07), the average growth rate in India was 7.6 percent in comparison to 5.5 percent achieved in the Ninth Plan period of 1997-98 and 2001-02. The estimates in the Eleventh Five Year Plan's (2007-2012) were for even higher growth at 9 percent.

The following chart shows the increasing trend of investments in infrastructure through PPPs, during the period 1990 to 2008.

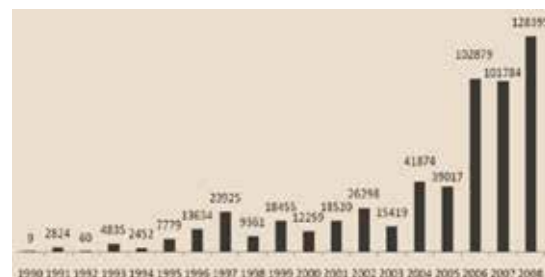


Fig Private Investment in Infrastructure (□Crore )

### 3. MAJOR TYPES OF TRANSPORTATION PPPs

1. Asset Sale
2. Full Service Long-Term Concession or Lease
3. Multimodal Agreement (Public-Public Partnership)
4. Joint Development Agreement (JDA - pre-development)
5. Transit-Oriented Development (TOD - post-development)
6. Build-Own-Operate (BOO)
7. Build-Own-Operate-Transfer (BOOT)

8. Build-Transfer-Operate (BTO) Alternative
9. Build-Operate-Transfer (BOT) Project
10. Design-Build-Finance-Operate (DBFO) Delivery
11. Design-Build-Operate-Maintain (DBOM) Approaches
12. Design-Build with Warranty (DB-W)
13. Design-Build (DB)
14. Construction Manager at Risk (CM@Risk)
15. Contract Maintenance
16. Fee-Based Contract Services

1. Nhava Sheva International Container Terminal (NSICT)
2. Kakinada deep water port (KDWP)
3. Pipavav Port
4. Delhi Gurgaon Expressway
5. Bangalore International Airport Limited
6. Hyderabad International Airport Limited
7. Second Vivekananda Bridge (Kolkata)
8. Pipavav Railway Corporation Limited (PRCL)
9. Mumbai Metro
10. Vadodara Halol Toll Road
11. Tuni Anakapalli Annuity Road Project

**4. BENEFITS OF PPPs**

1. Stronger Working Relations
2. Reduction in Financial Constraints
3. Faster Delivery
4. Innovation and Expertise
5. Greater Cost Efficiency and Productivity
6. Integration of Project Development and Delivery
7. Greater Choices
8. Increased Competition
9. Risk Management

**5. RISKS OF PPPS**

While providing a variety of advantages, there are also risks to consider when using PPPs for transportation projects. The many categories of project risks are listed below

<ul style="list-style-type: none"> <li>• Demand/volume</li> <li>• Revenue</li> <li>• Environmental/archaeological</li> <li>• Regulatory/contractual</li> <li>• Payment structure/mechanism</li> <li>• Transaction cost</li> <li>• Construction cost</li> <li>• Maintenance cost</li> <li>• Life-cycle cost</li> <li>• Liability/latent defects</li> </ul>	<ul style="list-style-type: none"> <li>• Compensation and termination clauses</li> <li>• Changes of law</li> <li>• Economic shifts</li> <li>• Currency/foreign exchange</li> <li>• Taxation constraints</li> <li>• Moral hazard</li> <li>• Loss of control of assets</li> <li>• Political stability</li> <li>• Protectionism</li> <li>• Public acceptance</li> </ul>
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**6. OVERVIEW OF PPP IN HIGHWAY SECTOR IN INDIA**

With an extensive road network of 3.3 million kilometers, India is the second largest in the world. Indian roads carry about 61% of the freight and 85% of the passenger traffic. All the highways and expressways together constitute about 66,000 kilometers (only 2% of all roads), whereas they carry 40% of the road traffic. To further the existing infrastructure, Indian Government annually spends about Rs.18000 crores (USD 3.704 billion).

**Target**

- Developing 1000 km of expressways
- Developing 8,737 km of roads, including 3,846 km of national highways, in the North East
- Four-laning 20, 000 km of national highways
- Four-laning 6,736 km on North-South and East-West corridors
- Six-laning 6,500 km of the Golden Quadrilateral and selected national highways
- Widening 20,000 km of national highways to two lanes

**Approach**

- National Highways Authority of India (NHAI) is the apex Government body for implementing the NHDP. All contracts whether for construction or BOT are awarded through competitive bidding
- Private sector participation is increasing, and is through construction contracts and Build-Operate-Transfer (BOT) for some stretches based on either the lowest annuity or the lowest lump sum payment from the Government
- BOT contracts permit tolling on those stretches of the NHDP
- A large component of highways is to be developed through public-private partnerships and several high traffic stretches already awarded to private companies on a BOT basis.

**7. PPP PROJECT CASE STUDIES IN INDIA**

Case studies of PPP projects from the four sectors, delivered by different concession models, and financed either by tolls or shadow tolls. These include the following projects:

**7.1 VADODARA HALOL TOLL ROAD**

PPP Delivery	Construction Period	Concession Period	Length	Contract Value	Status
BOOT	1999- 2000 (2 years)	(30 years)	32 Km	Rs. 161 crores	Operational

Vadodara Halol Toll Road Company Limited (VHTRL) was promoted by Government of Gujarat and Infrastructure Leasing & Financial Services (IL&FS) specifically for the purpose of developing and implementing Vadodara Halol Road Project under Built, Own, Operate and Transfer (BOOT) basis. Annual and Periodic Maintenance (including renewal and overlay) for next 30 years also to be carried out by VHTRL.

The project has been operational since 2000. One of the objectives of utilizing a PPP framework for infrastructure projects is to bring in efficient execution of projects. VHTR is a case in point as the key advantage of developing this road via private sector participation has been that the project was completed within the stipulated time and budgeted amount. The project was completed well within the 18 months timeframe as was stipulated in the contracting arrangement with the Construction Contractor. The original estimated cost of the project was approximately Rs. 175 crores. The actual landed cost of the project was Rs. 160 crores. Thus the project has resulted in both cost and time savings.

**8. RESULTS OF PPP**

The results of the transportation PPP projects from India presented as case studies from various sectors or transit cameos are summarized below. Included in the case study and cameo results summaries are the following information:

- PPP Contract Type
- Project Timeframe
- Project Cost
- Economic Development Consequences
- Other Pertinent Results

**9. CONCLUSION**

A number of countries have turned to the private sector for relief in the form of contractual public-private partnerships, representing a wide variety of project financing and delivery approaches to achieve the following outcomes:

- Lower project costs;
- Expedite project delivery;
- Expand access to capital markets;
- Implement new technologies; and
- More efficiently and effectively operate and maintain surface transportation assets and services.

The experience gained by various countries which have used PPPs to expedite transportation projects shows that the structure and delivery methods selected are highly dependent on the following features:

- Enabling statutes and regulations;
- Capabilities of all members of the partnership to execute their roles and responsibilities;
- Flexibility and a proactive approach to identifying and resolving issues that arise during the project planning and development process;
- Underlying taxation arrangements; and
- Ability of capital markets to deliver financing structured to suit each PPP project