Public Private Partnership in National Highways: Indian Perspective

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1 Overview of Indian Roads

India's road network of over 4.1 million km is second largest in the world consisting of expressways, national highways, state highways, major district roads and other roads. These roads carry about 65 per cent of freight and 80 per cent of passenger traffic. National highways constitute only 1.7 per cent of the road network, but carry about 40 per cent of the total road traffic. Road Transport has emerged as the dominant segment in India's transportation sector with a share of 4.7% in India's GDP in 2009-10. The number of vehicles on Indian roads has been growing at an average pace of 10.16% per annum over the last five years. Hence, development of road network assumes paramount importance in the context of a rapidly growing economy.

2 Investment in Roads Sector

Investment in the roads sector during the Tenth Five Year Plan (2007-12) and the Eleventh Five Year Plan (2007-12) are shown below:

Investment in Roads Sector (10^{th} and 11^{th} Plan)						
	Tenth Plan (2002-07)			Eleventh Plan (2007-12)		
	In Rs* (crore)	In $** (million)	% Share	In Rs (crore)	In $ (million)	% Share
Centre	71,536	17,884	46.87	1,55,367	38,842	42.94
State	68,143	17,036	44.65	1,34,246	33,561	37.10
Private	12,937	3,234	8.48	72,209	18,052	19.96
Total	**1,52,616**	**38,154**	**100**	**3,61,822**	**90,456**	**100**

* 2006-07 prices

**An exchange rate of $ 1= Rs 40 has been used for comparison at 2006-07 prices.

3 National Highways Authority of India (NHAI)

The National Highways Authority of India (NHAI) was established as a statutory entity under the National Highways Authority Act 1988 for development, maintenance and management of National Highways. Its initial mandate was restricted to a few projects undertaken with external assistance. From 1998 onwards, the Government has been implementing the National Highways Development Programme (NHDP) comprising:

- Phase I: Augmenting the Golden Quadrilateral connecting the four largest metropolis.
- Phase II: Augmenting the North-South and East-West corridors.
- Phase III: Four-laning of high density national highways connecting state capitals and places of economic, commercial and tourist importance.
- Phase IV: Upgradation of single-lane roads to two-lane standards.
- Phase V: Six-laning of four-laned highways.
- Phase VI: Construction of 1,000 km of expressways.
- Phase VII: Construction of ring roads, by-passes, underpasses, flyovers, etc.

The status of the different phases of NHDP as on 30th June 2012 is as follows:

	Phase I	Phase II	Phase III	Phase IV	Phase V	Phase VI	Phase VII	Total
Total length (km)	5,846	7,300	12,109	14,799	6,500	1,000	700	48,254
Already 2/4/6 Laned (km)	5,842	6,031	4,071	2	1,052	-	16	17,014
Under implementation (km)	4	691	6,198	3,316	3,028	-	25	13,262
Balance Length for Award (km)	-	420	1,840	11,481	2,420	1,000	659	17,820

Source: www.nhai.org

4 Public Private Partnership in National Highways

Owing to constraints of public funding, Public Private Partnership (PPP) has come to play a major role in the development of national highways. The National Highways Act, 1956 was amended in 1995 with a view to enabling private investment in development, maintenance and operation of highways. The Government initiated several other measures in this direction such as declaration of road sector as industry to facilitate borrowing on easy terms and reduction in the custom duties on construction equipment.

5 Models of PPP adopted in India

The two models of PPP adopted in India for the development of National Highways are BOT (Toll) and BOT (Annuity).

(a) **BOT (Toll)** Model: In the BOT (Toll) model, the Concessionaire recovers his investment by charging toll from the users of the road facility. This model reduces the fiscal burden on the government while also allocating the traffic risk to the Concessionaire. This is the model used for most of the projects and can be regarded as the default model for highway projects.

(b) **BOT (Annuity)** Model: Under a BOT annuity model, the Concessionaire is assured of a minimum return on his investment in the form of annuity payments. The Concessionaire does not bear the traffic risk and the Government bears the entire risk with respect to toll income.

Projects awarded under BOT (Toll) and BOT (Annuity) during Eleventh Five Year Plan are shown in the table below:

	BOT (Toll)		BOT (Annuity)	
Year	No of Projects	Length (km)	No of Projects	Length(km)
2007-08	8	1,109	1	36
2008-09	8	643	-	-
2009-10	34	3,085	3	177
2010-11	28	3,057	20	1,577
2011-12	47	6,231	2	247
Total	**125**	**14,126**	**26**	**2,037**

6 Model Documents

Creation of a standardised framework helps in ensuring transparency in the allocation of risks and providing clarity and predictability in the obligations of the Concessionaires while minimising the possibilities of disputes. It enables robust competitive bidding for individual projects with a reasonable commonality in approach across projects. The adoption of standardised documents such as the Model Concession Agreement, RFQ, RFP and Manuals of Standards and Specifications have streamlined and accelerated decision making and implementation. The standardised documents are briefly described below:

(a) **Model RFQ (Request for Qualification) -** A two stage bidding process has been adopted for PPP projects. In the first stage, that is the RFQ stage, the eligible and prospective bidders are pre-qualified. The second stage is RFP or the bidding stage.

The Model RFQ document lays down the norms, principles and parameters to be followed for prequalification of bidders in a fair and transparent manner with low transaction costs. The RFQ document aims at identification of experienced bidders who have the requisite technical and financial capacity for undertaking the project. The technical capacity is mainly determined on the basis of past relevant experience of the firm. The financial capacity is determined on the basis of net worth of the firm.

(b) **Model RFP (Request for Proposal) -** The Model RFP document addresses the key requirements that must be observed for conducting a fair and competitive bidding process. The response sought at this stage is restricted to financial offers only, requiring the bidder to quote on the basis of a single bidding parameter. The detailed terms of the project are specified in the Concession Agreement which forms an integral part of the Bid Documents to be provided to the bidders along with the RFP document.

(c) **Model Concession Agreement (MCA) -** The MCA spells out a precise policy and regulatory framework for implementing a PPP project. The MCA addresses the critical issues of a PPP framework such as mitigation and unbundling of risks; allocation of risks and rewards; symmetry of obligations between the principal parties; precision and predictability of costs and obligations; reduction of transaction costs; force majeure; and termination. The technical parameters are based mainly on output specifications, as these have a direct bearing on the level of service for users. The MCA specifies only the core requirements of design, construction, operation and maintenance of the Project Highway while leaving enough room for the Concessionaire to innovate and add value.

The MCA allocates risks to the parties that are best suited to manage them. The commercial and technical risks relating to construction, operation and maintenance as well as the traffic risks are allocated to the Concessionaire. All direct and indirect political risks are assigned to the Authority. The MCA also stipulates a time limit of 180 days (extendable up to another 120 days on payment of a penalty) for achieving financial close failing which the bid security is to be forfeited. A balanced and precise mechanism for determination of user fee has been specified for the entire concession period since this would be of fundamental importance in estimating the revenue streams of the project and, therefore, its viability. The MCA provides for indexation of the user fee to the extent of 40 per cent thereof linked to WPI. In the event of termination, the MCA provides for substitution of the Concessionaire by the senior lenders, failing which a compulsory buy-out by the Authority.

(d) **Manual for Specifications and Standards -** The MCA requires the Concessionaire to bear the responsibility for detailed design. However, since the accountability for providing safe and reliable roads rests with the Government, the MCA mandates a Manual of Standards and Specifications that the Concessionaire must adhere to. The Manual specifies only the core requirements of design, construction, operation and maintenance of the project highway and the Concessionaire is free to bring in innovations in the design to arrive at the required output or delivery of service. The Manual, by reference, forms an integral part of the MCA and is binding on the Concessionaire.

7 Formulation, Appraisal and Approval of PPP projects

Since PPP projects need to undergo extensive due diligence, guidelines for their appraisal and approval have been devised. These guidelines apply to all PPP projects sponsored by Central Government or its entities. Under these guidelines, an inter-ministerial PPP Appraisal committee (PPPAC) has been set up for appraisal of PPP projects. The Ministry of Finance is responsible for examining the concession agreements from the financial perspective while a PPP Appraisal unit (PPPAU) in the Planning Commission undertakes a detailed appraisal of each project.

The sponsoring Ministry identifies the projects to be taken up through PPPs and undertake preparation of feasibility studies, project agreements, etc. with the assistance of legal, financial and technical experts, as necessary. The proposal is first submitted for ‘in principle’ clearance of PPPAC. After the ‘in principle’ clearance, the Ministry invites expressions of interest in the form of Request for Qualification (RFQ) which is followed by shortlisting of pre-qualified bidders. After formulating the draft RFP, the sponsoring Ministry seeks clearance of PPPAC before inviting the financial bids.

Based on the recommendations of PPPAC, the final approval for a project is granted by the competent authority. In cases where the PPP project is based on a duly approved Model Concession Agreement (MCA), ‘in principle’ clearance by the PPPAC is not necessary. In such cases, approval of the PPPAC is to be obtained before inviting the financial bids.

8 Viability Gap Funding (VGF)

To bridge the viability gap of infrastructure projects undertaken through PPPs, the Government is implementing a scheme called the ‘Scheme for Financial Support to Public Private Partnerships in Infrastructure’. The scheme is applicable only when the concession is awarded to a private sector company which is selected through open competitive bidding and is responsible for financing, construction, maintenance and operation of the project during the concession period. Viability Gap Funding (VGF) is the quantum of financial support provided in the form of a capital grant at the stage of project construction and is equivalent to the lowest bid for capital subsidy, but subject to a maximum of 40 per cent of the total project cost.

9 Toll Policy Framework

Toll collection for use of the redeveloped and augmented sections of national highways was introduced in 1997 under the provisions of the National Highways Act. Subsequently, based on the experience gained, new toll policy was formulated and the National Highways fee (Determination of rates and Collection) Rules 2008 was notified on December 5, 2008.

The main features are as follows:

(a) A uniform rate of user fee is charged on all sections of the NHs having two or more lanes, permanent bridges, bypass or tunnel forming part of National Highways;

(b) Discounted user charges are levied for multiple journeys in a day or on a monthly basis for residents living in the nearby areas; and

(c) Local residents are entitled to a steep discount for short journeys.

10 Conclusion

There is a broad consensus in India that Public Private Partnership is the way forward for creation of world class highways. Since an enabling framework is a pre-requisite for attracting competitive private investment, the model documents, the appraisal process and the viability gap funding scheme have been adopted as the supporting pillars of a strong and sustainable PPP framework in the highway sector.