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PUBLIC PRIVATE PARTNERSHIP IN ROAD SECTOR

(NATIONAL HIGHWAYS IN INDIA)

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Abstract

India has 2nd highest road network in world (4.6 million km in 2013).Earlier, Government was major financing source for development of road network but by passage of time, Demands of other sector increases which lead to low financial conditions of Government, by which government was unable to meet the demands of road sector. So, for overcoming from this situation, Government of India preferred PPP-Public Private Partnerships route for the development of road sector especially national highways. BOT (Toll) and BOT (Annuity) are two models of PPP which are offered by government for the development of national highways.

Introduction

Investment in road before independence have resulted in expansion of road network from 0.4 million (1951) - 4.6 million (2013) km, the second largest road network in world which includes expressways, national highways, state highways and other roads. In order to keep pace with growth in traffic, the Government of India passed Five Year Plan for improvement of road network. The 7th Five Year Plan (1985-1989) indicated the need for further improvement in road network.

In 1980's, there was sudden shift in the mode of procurement of infrastructure such as road projects in India. Government sought to encourage private investment in infrastructure which leads to origin of PPP-Public Private Partnership. The reason of opting the use of PPPs was for the development of infrastructure by using skills, innovative, and managerial capability of private sector to optimize efficiency in infrastructure projects. PPPs are also key motivation for government of bringing in new sources of financing public infrastructure and service needs.

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PPP's Concept

Across all infrastructure sectors, Government face problem for filling gap between budget and needs of public both in advance and developed countries. The result of it was PPP-Public Private Partnerships.

'PPP' is partnership between public sector entity and private sector entity for the development and management of infrastructure for public purpose for a specified period partner has been procured through a transparent and open procurement system.

PPP does not mean the private ownership of infrastructure, but the government remains owner of infrastructure and full fill the needs of public. With PPP approach, Government set the stages like first of all, find best private partner who will finance, design, built, operate and maintain the project. Private partner recovers his initial investment through service fee paid by government or user directly. Finally, PPP allocates specific risk to partner that in better position to manage as government (public entity) controls legal frameworks, changing in jurisdiction and regulation, where as Private sector put its best in designing, investment and operation. Some risks are shared by both like sufficient use of demand for project. Fig 1 shows the Risk Transfer from Public to Private from Design-Bid-Build to Divestiture.

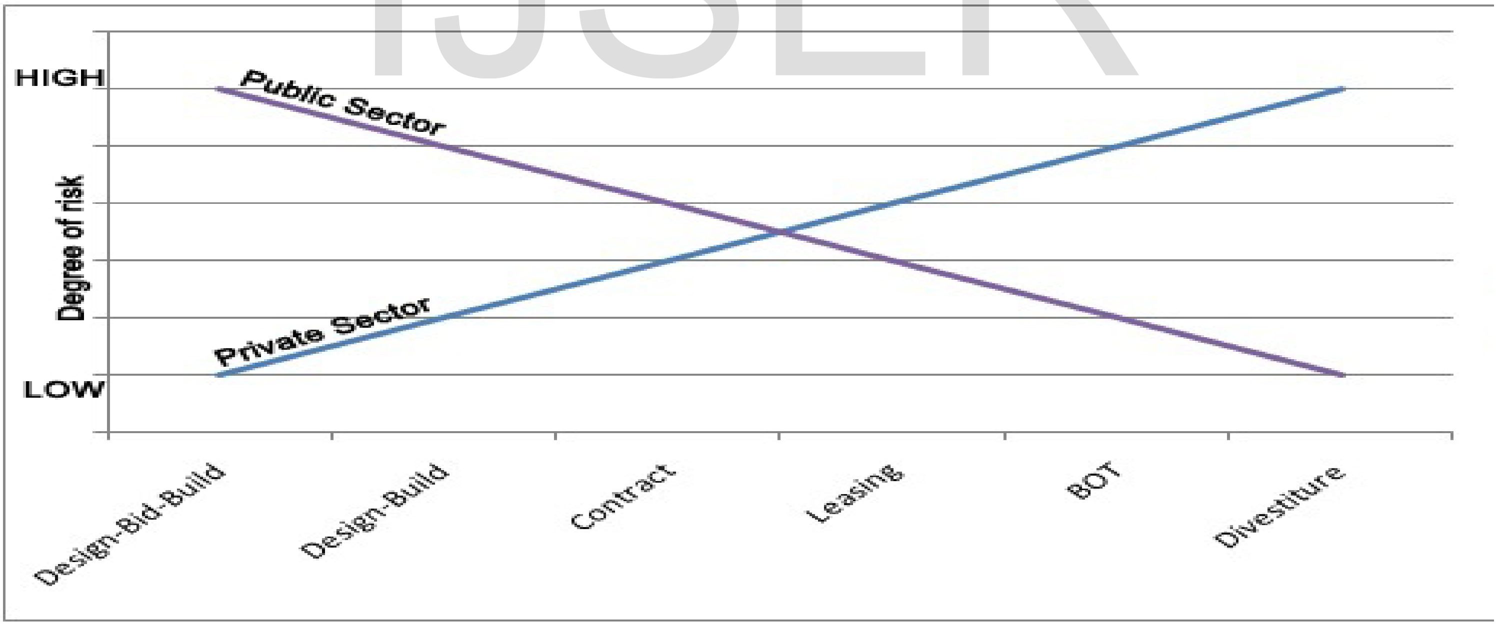

Fig 1 Risk Transfer from Public sector to Private Sector.

PPP in National Highways

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National Highways played a key role in economic development of country by connecting states, capitals, ports and adjacent countries. National highway constitutes only 2% of road network in India but carries about 45% of total road traffic (2013).

Government of India was unable to meet the required demands regarding development of National Highways due to demands of other sectors. So, for development and maintenance of National Highways involve private sector through the PPP route to meet public requirements and overcome the inefficiencies in road network. Involvement of Private Sector in development of National Highway Network is through PPP models such as BOT-Built Operate Transfer and Design and Construction Contract.

In Design and Construction Contract, only single entity design and construct the infrastructure, projects known as Design-Build Projects. This model of PPP is not preferable as whole project (Design+ Construction) responsibility is on single entity. For Road construction, Government of India prefers BOT as it is less risky and proper allocation of resources and skills of private sector. BOT (Toll) and BOT (Annuity) are two variants of BOT model through which capital from the private sector is invested in development of National Highways.

BOT- Built Operate Transfer

BOT – a private entity builds the infrastructure gets operation running for contract period of time, the client remains a major service consumer. The private entity then hands over the operations to client after contract period of time. During this period, Private entity and client shares the risk of failure of project.

In BOT, Project operation is divided into three parts- <u>BUILT</u>, <u>OPERATE</u> and <u>TRANSFER</u>.

- <u>BUILT</u>: Private entity understands objective and goal of project. Designing and Planning of project along with financing budget is made before proceeding for the project.
- <u>OPERATION</u>: Project implementation and monitoring is done according to the plan made before proceeding for project. Trial run of project is made before allowing users to use it.
- <u>TRANSFER</u>: As per signed contract between private entity and client, Project is transferred to client after specific period of time. Private entity recovers its invested money by operating project for contract period of time.

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BUILT → OPERATE → TRANSFER

Variants of BOT Model

Public Sector participation for development and maintenance of National Highways take place through variants of BOT Models i.e. BOT (Toll) and BOT (Annuity).

- **BOT (Toll)**: Private entity is required to meet Constructional, Operational cost and expenditure on annual and periodic maintenance. A Grant is also issued in order to bridge the gap between the investment required and the gains arising out of it and increase the viability of project.

  Private entity is awarded project through a systematic process. Bidders/Private entities provide information specified in ROQ- Request for Qualification, The pre-qualified bidders are invited to submit their bids for project. Bids could be invited for project on the basis of the lowest financial grant for implementation of project. Instead of grant, bidder could also offer to share the revenue for the project. The grant/revenue sharing constitute the sole criteria for evaluation of the bids and the project is awarded to the bidder quotes the highest revenue sharing or if not sharing of revenue is required, project is awarded to lowest bid.

  In BOT model, There are many commercial and technical risk related to construction, operation, maintenance of project. The main risk that a private entity faces is Traffic Revenue Risk. As forecasting traffic demand in future is crucial in transport PPPs since traffic influence effect project cost as well as project revenue, especially, if direct user charges (like Tolls). Traffic Revenue Risk arises when traffic forecast overestimation of actual traffic.

- **BOT (Annuity):** Private entity is required to meet construction, operational cost and expenditure on annual maintenance. The Private entity recovers the entire investment and predetermined cost of return out of annuities payable by the granting authority every year.

  In BOT (Annuity), Private entity is selected through two stage bidding process. Stage-1, interested parties are invited to furnish their technical, managerial and financial strength. Pre-Qualified parties invited to submit the financial bid which includes cost of construction, operation and maintenance along with percentage of return for their profit. The Contract is awarded to the bidder with lowest quote of an annuity. Grant Authority pass the annuity on the specified period as signed in contract.

In this model of PPP, Private entity assumes risks related to construction, operation, management and maintenance while the land acquisition, Permission, Traffic Problems are assumed by Government.

Risks in BOT Highway Projects

In BOT Project, Private entity is responsible for financing development and operation of project. To meet the demands, Private entity faces large number of risks. Some of them are mentioned below: -

- **Pre-Construction**: Private companies face problems in land acquisition, safe designing of Highway project, environment aspects.
- **Construction**: During construction of highways, unforeseen geological conditions make delays in project and some time also leads to change of design of project.
- **Traffic Revenue**: Low traffic demands for highways lead to less toll, less toll means less recovery of investment by private entity.
- **Currency**: Exchange rate fluctuation affects the financial condition of Project Company which led to delay of project.
- **Political**: New government in power can terminate the project started by other government or make increase taxes which effect financial conditions of Project Company.

Government Support for BOT Projects/PPP Projects

Government provide financial support to BOT Projects due to following two main reasons:

- BOT helps to reduce capital requirement and to improve in coming stream during project.
- BOT protect investors from risks of inadequate cash flow.

Government provides financial support to Project Companies/Private Entities as:

- **Equity Guarantees**: Government gives Private Entity/Project Company right to sell the project to government with a guaranteed minimum return on equity.
- **Debt Guarantees**: Government provides cash flow deficiency for repayment of debt.
- **Exchange Rate Guarantees**: Fluctuation of currency can create significant impact on project which involve foreign capital. Government guarantee the Project Company for increasing local cost of debt service due to exchange rate movement.
- **Shadow Tolls**: In this system, Government, instead of user, pay a specific annual payment per vehicle recorded on road to Project Company. The Shadow tolls can be made into several rates depending on demand volume.
- **Minimum Traffic Guarantee**: Government will compensate to Project Company in cash of traffic falls below a specified minimum limit.
- **Concession Extension**: Government provide right to Project Company to extend the concession term if revenue falls below a specified level.

Applicability of BOT Models

The Current policy framework for development road sector through PPP route is first offer the project on BOT (Toll), if any problem occurs in offering project on BOT (Toll) then, Project is offer on BOT (Annuity).

BOT (Toll) mode is adopted for the National Highway Network with high or medium density of traffic i.e. with large number of commercial vehicles and a low level of traffic revenue risk. On the other hand, where there is lack of users or not willing to pay toll and private entity is not reluctant to assume traffic revenue risk, there BOT (Annuity) adopted.

Limitations of PPP

Government of India has undertaken development of National Highways through PPPs. There, however, certain issues limiting greater participation of Private Sectors in development of road project through PPP route.

Some of major limitations of adopting PPP route are as follows:

- The current policy of offering project first BOT (toll) and then BOT (Annuity) is likely to introduce delay in the implementation of project as at every stage government approval is required.
- In BOT (Toll), Risk is high and Private Sector is reluctant to take high risk exposure.

- In BOT (Annuity), however risk is low but cost of project is high.
- The bidding process of PPP roads project has been standardized with introduction of new model of RFQ- Request for Qualification and RFP- Request for Proposal. Due to certain clauses in these models, Private sector is least interested in PPP projects As per RFQ, only six companies will be short listed for bidding process and as per RFP, bidder will be ineligible for bidding if bidder was:

  - Pre-Qualified for bid stage in relation to eight or more projects.
  - Declared as the selected bidder for undertaking four or more projects.
  - Unable to achieve financial lose for two projects within the stipulated time during the period of two months preceding the bidding date.

Conclusion

As National Highways plays a key role in development of country, Government of India has adopted PPP route for development of National Highways (Road sector). BOT (Toll) and BOT (Annuity) are two PPP models that have been used in National Highways Project in India. But due to high risk profile of projects and financial viability of project influence the selection of PPP route for National Highway development.

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