

## Chapter 1

### INTRODUCTION

Indian Railways, the world's one of the largest railway network has suffered due to lack of sufficient investment and populist policies of subsidising the fares. Lack of investments has turned once a mighty system into a slow and congested network, that crimps the economic growth. Indian Railways, an engine of economic growth of the country requires continuous infusion of funds and technology for its infrastructure and modernization. In order to arrange the sufficient funds for investment in infrastructure, Minister of Railways in his budget speech in Indian parliament in 2014 has announced that bulk of future projects requiring bulk investments in IR will be executed on PPP model.

Indian railways (IR) started its 53 km journey between Mumbai and Thane on April 16, 1853 and is today one of the largest Railways in the world. The railway network, invariably referred to as 'the lifeline of the Indian economy'. is spread over 109,221 Km. covering 6906 stations. Operating on three gauges, trains in India carry over 481 Billion Tonne Kilometres (BTKMs) and 695 Billion Passenger Kilometres (BPKMs) of goods and passenger traffic respectively every year. IR carries around 40 percent of freight traffic and 20 percent of the passenger traffic in the country

IR is one of the premier infrastructural wings of the economy ,builds and maintains infrastructure assets like Track, Electric traction, Signalling Systems, Telecom network, Stations / Terminals etc. Apart from operating goods and passenger trains, it operates suburban trains in various metros. It manufactures locomotives, coaching stock, wagon and components of rolling stock like Wheel and Axle. It runs workshops to maintain its rolling stock and also involved in ancillary activities like catering, tourism etc.

#### **PPP initiative in Past**

The current legal framework under the Railways Act 1989 allows private railway systems in all forms. However, the government policy enunciated under Industrial Policy Resolution of 1991 as amended from time

to time, reserves railway transportation for the public sector. It means that train operation can only be done by the public sector, while all other activities of design, construction, financing, and maintenance can be undertaken through private participation through award of concessions by Government of India. Presently, the Railways are managed through 17 Railway Administrations which are legal entities. In addition there are six port and other railways. These railway systems are members of the Indian Railway Conference Association, a body which deals with issues of inter railway movement of wagons and locomotives such as levy of hire charges for use of rolling stock belonging to other railways and neutral train examination for ensuring that railways do not pass on deficient wagons to other railways.

The Railway Board was constituted under the Railway Board Act, 1905 and it is also a railway regulator, dealing with a large number of issues including tariff regulation. Railway Board and the Commissioner of Railway Safety, whose office is under administrative control of Ministry of Civil Aviation, jointly work as safety regulator. There are only two kinds of rail systems that lie outside the integrated IR network. The first includes the close circuit systems that is, the Merry-Go-Round systems created and operated by the NTPC for super thermal power plants. The other kind includes standalone metro rail systems which are planned for and financed by the Ministry of Urban Development. The private sector has been largely associated in design, financing, construction, and maintenance of fixed infrastructure in railways. Construction activity in rail sector is normally undertaken by the private sector through contracts. However, no large Engineering Procurement and Construction contracts are being awarded to Construction Supervision Consultants. Design, build, finance, maintain, and operate concessions are being given to SPVs, which are JVs between IR and private sector strategic partners.

Unlike ports, highways and airports, where a regulator offers certain level of stable returns to private investors, railways by virtue of their monopolistic nature of operation, do not offer an alternative to customers among various Railways. The tariff policy is also fixed by the Government. There is thus a need for separate accounting for infrastructure and train

operations for initiating any long term PPP regulatory framework. It would thus be seen that Ministerial, commercial, and regulatory powers are vested with a single entity. While it is possible for other infrastructure projects in ports, highways and airports to be an independent system which could be operated and maintained independently of the existing system, the same is not possible for Railways. Here any project has to be supplementary or an extension to an existing larger railway network. Due to this historical perspective, railway activities are not readily available to private sector which poses a new challenge of building capacity with sector through PPP

During the 11<sup>th</sup> Plan, the share of the private investment in major infrastructure sectors is: electricity 49 percent, telecom 80 percent, roads 20 percent, ports 81 percent and airports 64 percent. In contrast, share of the private investment in railways has been negligible 5 percent.

### **Risks in PPP**

A project under PPP mode may be subjected to a number of technical, environmental, economic and political risks particularly in developing countries and emerging markets. Financial institutions and project sponsors may occasionally find that the risks inherent in project development and operation are unacceptable. To cope with these risks, projects in these industries (such as power plants or railway lines) are generally completed by a number of specialist companies operating in a network with each other that allocates risk in a way that is proportional to their exposure to the project.

Infrastructure projects have at least three phases, namely preparation and promotion, construction and operating phase. Thus, task of the project management is to find a way to mitigate these phase specific risks. The key issue of the promotion and preparation stage is the commercial and political risks related to the procurement .The major risks in different infrastructure project are summarized below in the table.

Phase name	Primary risk	Risk subgroups
Promotion and preparing phase	Commercial and political risk	Competitiveness risk, legislative delay risk
Construction phase	Construction and political risk	Technological risk, Supply risk, Regulatory risk, Government intervention risk
Operating phase	Commercial and political risk	Demand risk, Revenue risk, Technological risk, Government intervention risk

### Preparation and promotion phase

The success of this stage is highly dependent on how government arranges the procurement of PPP project. The ultimate goal is to have competitive and short procurement. High competition lowers the total cost of PPP project for the government. Secondly, short procurement means cost savings for both public and private sector.

Government can make procurement more efficient by preparing project well in advance. In this way, government can speed up the procurement process. Government can also help competition by making procurement process transparent, providing clear bidding criteria and avoiding legislative delays.

Before announcing procurement, government should consider carefully what exactly is needed to be achieved by PPP. The aim of the project should be crystal clear for the government, because only then negotiations with a private sector can go immediately into details. Also, clarity over PPP project objectives should exist among the public authorities. Well defined project proposal including full scope and objectives of the project is likely to draw more attention among the private sector actors than vague and unclear project description.

Moreover, the PPP project should have full support of government, without political unity exists, problems are likely to occur in the procurement

process. Lack of political support can cause legislative delays. For instance, difficulties may appear while Private Partnership company is applying for necessary legal permissions for the project from various government offices.

In sum, the commercial and political risks are always present in the preparation and promotion phase. Thus, the key behind the successful outcome of this phase is governments' strong political engagement and unity over project objectives in procurement process, and competitive procurement.

### ***Construction phase***

The risk of construction phase is that project will not be completed on time and for the price stated in contract. The availability problems and increased price of input supplies may incur extra costs on project. In addition, delivery of supplies may not arrive in time for the construction. Moreover, one of the sub-contractors may pull out of the pack and leave the project causing severe damage to other parties. Sub-contractors might not perform as expected resulting in delays on the project. Moreover, government may partly delay construction work by demanding certain assessments during the construction and halting the work. In sum, project management is facing construction and political risks on construction phase. To overcome these risks project management should avoid cost overruns and delays.

### ***Operating phase***

Operating phase includes political and commercial risks. Here, the risks comprise mainly technical, market and regulatory risks, which may effect on returns. The main source of the revenue in railway partnerships is usually the operating payments; passenger service fees, cargo tolls, license fees, provisions and government subsidies. Cuts and disruptions in service are likely to effect negatively on the revenue. Indeed, customers might change their type of transportation if they cannot account on it.

The change in government policies may cause remarkable expenses for the private sector. For instance, new safety regulations increasing the safety standards may force private sector to reform some of its railway assets. Even small changes in signaling systems may lead into replacement of whole signaling system and cost fortunes for the private sector.

In the operating phase in particular commercial risk is significant. A private sector provider of infrastructure must be able to generate sufficient operating profits to repay private sector contributions to financing. Predictability of the future revenues is, therefore, of crucial importance particularly in PPPs which include very time-consuming construction period where a strong negative cash flow appears during the long construction period. After the start of the operation period, cash flow grows slowly due to large interest payments

#### **Windfall gains/ losses**

These are gains/losses which occur due to unforeseen circumstances in a service may be due to unexpected demand or due to change in government regulation since these profits/gains are unforeseen hence there is no uniform formula to distribute these gains/losses among the various stakeholders. Up till now no provisions are made in the contract for the windfall gains/losses however in recently issued document "Overview of Framework for Participative Models of Rail Connectivity and Domestic and Foreign Direct Investment" for BOT Model it is brought out that in case actual user fee in a particular year is in excess of 120 percent or 150 percent of the projected revenue, 50 percent or 75 percent of the excess revenue respectively will be paid to MoR by the concessionaire. For JV model normal, concession period is proposed of 30 years for Railway Project. However after 25 years on the basis of shortfall/excess in actual traffic the concession period shall be deemed to be modified as per the terms of concession however this will range from 25 to 35 years. This system has in built incentive for the concessionaire to make efforts to bring more revenue.