India PPP Summit 2017

Revival of PPP momentum in the transport sector



1927-2017 FICCI @90

EY Building a better working world

नितिन गडकरी
NITIN GADKARI



सत्यमेव जयते

मंत्री
सड़क परिवहन, राजमार्ग
एवं पोत परिवहन
भारत सरकार
MINISTER OF ROAD TRANSPORT,
HIGHWAYS AND SHIPPING
GOVERNMENT OF INDIA

Foreword

Public Private Partnership in infrastructure represents a valuable instrument in accelerating the country's development process. Government is revisiting and revitalizing the PPP model for infrastructure development.

The PPP eco-system in the country is well developed and has been continuously evolving to revive the private sector interests. Government has opened up India's infrastructure sector making it an attractive investment destination, liberalized FDI norms, introduced innovative models like Hybrid Annuity in the road sector and has also promoted new avenues like Infrastructure Investment Trusts (InvIT) to raise funds.

Government has undertaken massive projects with PPP opportunities in transport infrastructure sector like National Highway Development Programme, Railway Station Redevelopment Programme, Sagarmala Project and Regional Connectivity Scheme (RCS) among others.

I congratulate Federation of Indian Chambers of Commerce and Industry and Ernst & Young for preparing a comprehensive background paper on '**Revival of PPP momentum in the Transportation Sector**'. The knowledge paper attempts to analyze emerging sector trends, identify impediments in scaling up PPP investment, recognize the recent achievements in PPP and highlight government initiatives for fostering PPP in transportation sector.

The India PPP Summit is held at an opportune time to gain better understanding of the project/investment opportunities in the transport infrastructure sector. The summit aims to present the 'Report Card for PPP Projects' and opportunity to rebuild the trust amongst the stakeholders.

I am sure, the deliberations and exchange of views during the summit would help in accomplishing the goal for reinvigorating Indian infrastructure.

I wish the India PPP Summit all the success.

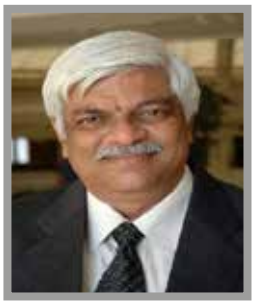
(Nitin Gadkari)

New Delhi
21st July, 2017

Transport Bhawan, 1 Sansad Marg, New Delhi-110 001, Tel. : 23711252, 23710121 (O), 23719023 (F)
E-mail : nitin.gadkari@nic.in

Foreword

FICCI



Mr K Ramchand

Chairman, FICCI National Committee on Infrastructure

and

Managing Director, IL&FS Transportation Networks Ltd

I am happy to share with you the FICCI-EY Report on 'Revival of PPP momentum in the Transport Sector' to be released at the India PPP Summit organized by Federation of Indian Chambers of Commerce and Industry.

India has witnessed considerable growth in PPPs in last decade and emerged as one of the leading PPP markets in the world. The PPP models being adopted by the government are opening new avenues of investment and modernization. This will also bring in greater productivity and efficiency to the deployed capital.

Government has taken a slew of measures to revitalize the PPP model to attract private investment like introducing the Hybrid Annuity Model (HAM) and Toll-Operate-Transfer (TOT) in the road sector, Sagarmala Programme for port-led development, Station Redevelopment Programme in railways sector and the recently launched Regional Connectivity Scheme (RCS) in the civil aviation sector.

To deliberate on existing policy framework and regulations relating to PPP in the country, FICCI is organizing India PPP Summit 2017. The summit will highlight critical issues on existing policy framework, fostering partnerships to invigorate PPPs and innovative financing solutions for infrastructure development.

As 'knowledge Partner' for the event, EY has prepared a comprehensive background paper covering a large number of important issues. The FICCI-E&Y report on "Revival of PPP momentum in the Transport Sector' highlights the current state of PPP in transport infrastructure sector in India, government initiatives, access to finance and recommendations for further fast-tracking growth in this sector. The report has been prepared through detailed analysis of several critical factors influencing PPP projects in India.

I hope you will find this report useful and as always, your suggestions and feedback are welcome.

Foreword

EY



Abhaya Krishna Agarwal

Partner,
Infrastructure & PPP,
EY

PPPs across sectors in India are undergoing significant policy and regulatory reforms so as to reach the next level of maturity. The NITI Aayog, which has been mandated to provide directional and policy inputs to the Government, has deployed a federal cooperation structure to plan and execute some large PPP projects across states. This is truly an innovative approach toward building capacities at state government level.

The Kelkar Committee's recommendations on revitalization of the PPP model of infrastructure are focused on a variety of issues, including rebalancing of risk sharing, renegotiation of contracts, need for an independent regulator, creation of a dispute resolution mechanism and strengthening of lending institutions. Efforts are being made by the Government to implement these recommendations.

Some noteworthy events that have happened during the last couple of years include adoption of new PPP modalities in the roads sector, permission to infuse funds in languishing projects, liberalization of exit policies, creation of the Rail Development Authority and non-fare revenue directorate in railways, and monetization of assets through station redevelopment programs and the Toll-Operate-Transfer (TOT) model.

Institutions such as the National Infrastructure Investment Fund (NIIF) are being promoted to provide financial stimulus to the sector. A Project Monitoring Group (PMG) has been created under the PMO's office to fast-track the approval process of large public and PPP projects. Further, the Government is in the process of making amendments in the Land Acquisition Act, 2013, Model Concession Agreements (MCAs), the Major Port Trusts Acts, 1963 etc. to streamline PPP regulatory frameworks.

However, despite these efforts, there are some over-arching issues that need to be resolved if the Government has to achieve its targeted investment of approximately INR 2.4 lakh crore in the transport sector during 2017-18. A World Bank report on PPP investments mentions that India had recorded a 10-year low in private investments in infrastructure in 2015. Aggressive bidding, poor appraisal capacity of commercial banks, inadequate project preparation activities, capacity constraints for concession monitoring, multiplicity of institutions, and overlapping functions are some of the challenges that cannot be overlooked. Decision makers, think tanks, developers, financial institutions and other stakeholders should come together on a platform to frame a dedicated strategy for the transport sector as a whole. Policy advocacies should be religiously followed by robust implementation of reforms on ground. All the sub-sectors, i.e., roads, railways, ports and airports, should be integrated and interlinked to create efficiencies.

PPPs in India have mostly focused on tapping private sector financing. Emphasis on leveraging private sector expertise in operations has been limited to fewer projects. Today, the Government possesses a significant infrastructure asset base, particularly in the transport sector, which requires massive investments for efficient operation and maintenance. The Government should push for award of performance-based contracts, which would guarantee better maintenance and service level of assets at similar or lesser costs.

The Viability Gap Funding (VGF) limits could be relooked at from the present level of 40% of the total project cost. There is a dire need to incentivize innovation for financial support to PPP projects as long as the spirit of PPP is safeguarded. For instance, there is a current no-go in case state governments are willing to extend capital support beyond the threshold limit of 40% in the form of innovative structures, such as deemed shadow toll and EPC for funded works. In light of improving the project economics, these initiatives could be revisited. In addition, state governments may be allowed to disburse funds directly from their own corpus to project SPVs, which could then be reimbursed by the Central Government. Also, the basis of calculation of viability gap funding should be as per market rates and not as per Schedule of Rates.

Creation of an environment to tap insurance and pension funds, establishment of a dedicated infrastructure PPP tribunal, setting-up of 3P India, and investment in DPR preparation are long overdue.

In this document, we take stock of the current state of PPPs in the transport sector in India, the achievements so far and sector-related experiences. We also discuss the challenges for PPPs in the sector and recommendations to revive private sector's interest in PPPs.



Contents

1	**Overview of PPP projects in India's transport sector**	**8**
1.1	Background	9
1.2	Trend in PPP projects in the transport sector	10
1.3	Recent success story	11
1.4	Existing PPP framework	13
2	**Emerging PPP trends in the transport sector**	**18**
2.1	Roads & highways	20
2.2	Railways	26
2.3	Ports and shipping	32
2.4	Airports	37
3	**Impediments in scaling up PPP implementation**	**40**
3.1	Financing issues and viability constraints	41
3.2	Capacity and procedural challenges	44
3.3	Policy, regulatory and institutional gaps	46
4	**Initiatives taken by the Government to tackle issues**	**50**
5	**Key recommendations**	**60**

1 Overview of PPP projects in India's transport sector

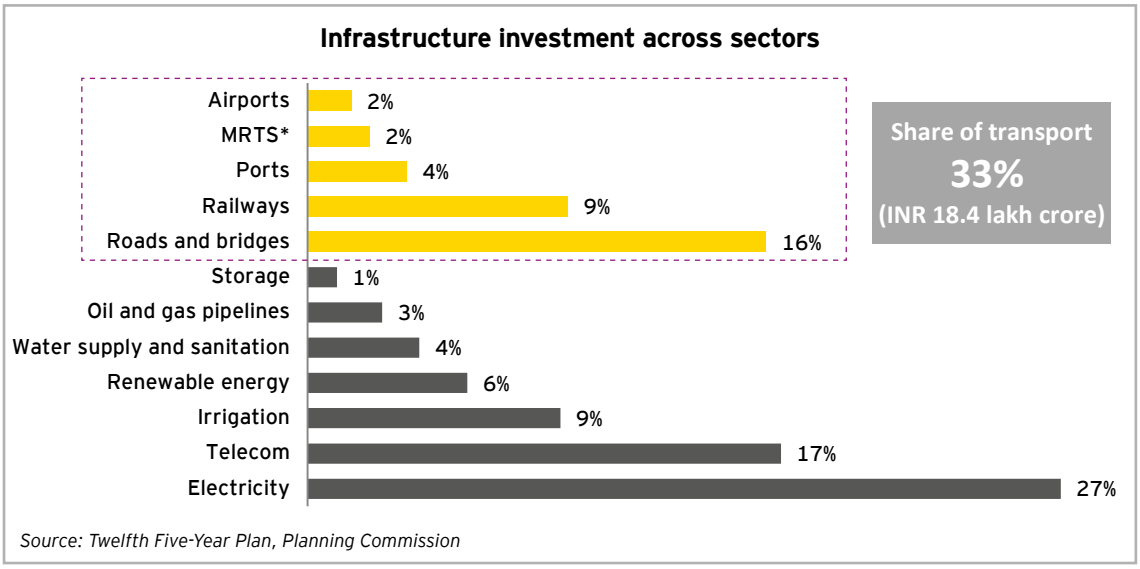


1.1 Background

Sustained strong focus on the transport sector

Infrastructure is the backbone of a growing economy, underpinning its competitiveness and self-sufficiency. Rapid urbanization and expanding trade during the last decade and a half have put immense pressure on the existing infrastructure. Simultaneous growth in purchasing power in the rural areas has resulted in demand for improving connectivity and services for attaining a seamlessly integrated network of logistics and facilities.

The government initiated several policy and enabling measures to support the creation of high-quality infrastructure and efficient delivery of services to its citizens in order to augment economic growth. The Eleventh Five Year Plan (2007–2012) envisaged an investment of US$ 387.7 billion at 2006-2007 prices during the plan period with the transport sector constituting around 33.8% of the planned investment.[1] Buoyed by the remarkable performance of the infrastructure sector during the Eleventh Plan, the government aimed an investment of more than double of the previous plan period in the infrastructure sector. Total planned investment in infrastructure sector during the Twelfth Plan was INR 56.3 lakh crore (approximately US$ 1 trillion) at current prices. Share of transport sector was envisaged at 33% of the total planned investment in infrastructure sector.



Source: Twelfth Five-Year Plan, Planning Commission

Reduced private investments as a result of slowdown in economy

Public Private Partnerships (PPPs) have been instrumental in creation of infrastructure assets and delivery of public services. At present, there are 880 PPP projects (both national and state level projects) under different stages of development and/or operation in the transport sector.[2]

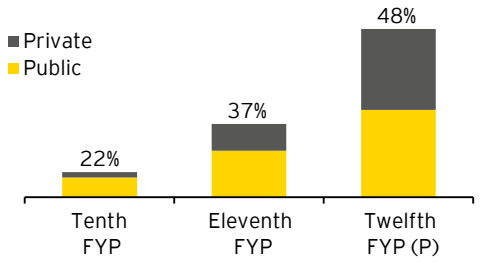
The share of private investment in infrastructure sector increased from 22% in the Tenth Plan to 37% in the Eleventh Plan. Therefore, the Government adopted a strategy of encouraging higher private investment in infrastructure to approximately 48% in the Twelfth Plan.

[1] "The Indian Infrastructure sector: Investments, Growth and Prospects," IBEF report, January 2013, p. 4.

[2] PPP data available on https://infrastructureindia.gov.in as accessed on 30 June 2017 (For projects that were either under 'Pre-construction Stage', Under Construction or Operation and Maintenance Stage as on April 1, 2011 or Awarded' thereafter and with Project Cost >INR 5 crore)

However, macro-economic developments in the late 2000s coupled with public and private sector capacity constraints resulted in overall slowdown in delivery and investment in infrastructure projects. The performance in the first two years of the Twelfth Plan suggests that infrastructure investment has slowed and there would be a shortfall of approximately 30%, with shortfalls in public investment (central and states combined) and private investment at 20% and 43% respectively. It is further estimated that the actual investments could be not higher than INR 39 lakh crore against the target investment of INR 56.3 lakh crore during the Twelfth Plan (implying an estimated shortfall of around 31% from the investment target) despite recent efforts made by the government to bring infrastructure investments back on track.[3]

Infrastructure investment



Source: Twelfth Five-Year Plan and Eleventh Five-Year Plan, Planning Commission

Actual realization in 12th FYP ~ 70% of planned investment

Revival of the transport sector is on the top of the Government's development agenda

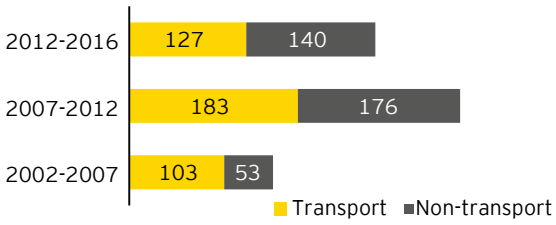
Transport sectors such as airports, ports, roads and railways are crucial for the growth of the economy due to their multiplier effects. It has been estimated that transport constraints result in a loss of 2%-3.5% in India's GDP.[4] Immense pressure on existing transport infrastructure due to rapid urbanization and expanding trade has had a negative multiplier effect on the economy, hampering trade, efficient logistics, connectivity and business operations. Thus, reviving and building a world-class transport infrastructure are among the top priorities on the current government's development agenda. Since taking charge in 2014, the National Democratic Alliance (NDA) government has put infrastructure development on top of its agenda.

This knowledge paper attempts to analyze emerging sector trends, identify impediments in scaling up PPP investment and highlight government initiatives to boost PPP in transport sector to arrive at a set of recommendations that may provide guidance to the policy makers while making infrastructure policy decisions.

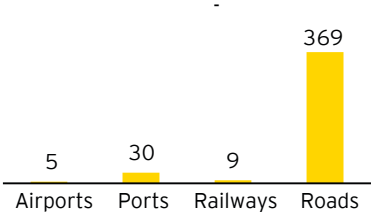
1.2 Trend in PPP projects in the transport sector

As per the World Bank PPP database, 781 PPP projects achieved financial closure between 2002 (since 10th Five Year Plan (FYP)) and 2016. Out of 781 projects, 413 projects are in the transport sector, thereby making share of transport sector to 53% of the total number of PPP projects which have achieved financial closure. Within transport sector, large number of PPP projects have happened in roads and highways. Out of 413 projects in the transport sector, 369 projects are roads and highways PPP projects.

Trend in number of PPP projects by sector



Number of PPPs in the transport Sector (2002-2016)



Source: The World Bank PPP Database (https://ppi.worldbank.org/snapshots/country/india as accessed on 4 July 2017)

[3] "Revisiting and revitalizing PPP Model of Infrastructure," Department of Economic Affairs, Ministry of Finance, November 2015, p. 7.

[4] "The Wide Angle India 2020: The Road to East Asia," Deutsche Bank Research, 1 September 2014, p. 24.

Roads and highways is followed by ports, which has witnessed 30 PPP projects during the last 15 years. There have not been much private sector investments in railways and airports. Nine projects have achieved financial closure in railways whereas 5 projects have achieved financial closure in airports sector since 2002.

The transport sector has been a preferred sector for PPP investment since the kick-off of the PPP era in India. However, the pace of PPP implementation, particularly in the transport sector, has slowed in the last few years. On average, 36.6 PPP projects achieved financial closure per annum in the transport sector during the Eleventh Plan, which reduced to 31.8 projects per annum during the Twelfth Plan.[5]

In 2015 and 2016, 20 and 13 PPP projects achieved financial closure in the transport sector respectively. Low level of PPP investment in the transport sector may be attributed to a number of factors such as policy paralysis during the initial few years of the Twelfth Plan, limitation on banks' infrastructure lending capacity and appraisal quality, and lack of commercially viable and bankable projects.

1.3 Recent success story

Despite a slowdown in PPP investment during the last few years, some marquee projects have been awarded in the transport sector in the recent past, which include:

1. Four laning of Kalmath-Zarap section in Maharashtra on Hybrid Annuity Model

This project is among the first few projects to be awarded on the newly adopted PPP model i.e. Hybrid Annuity model. Box below provides details of the Kalmath-Zarap section project.[6]

The project envisages four laning of NH-66 (erstwhile NH-17) on Kalmath to the Zarap section from 406.0 km to 450.2 km in Sindhudurg district under NHDP-IV. A Special Purpose Company has been constituted to implement the project. The Concession Agreement was signed on 25 November 2016 for a period of 15 years between the MoRTH and the Concessionaire. The total project cost as per the Concession Agreement is INR 914 crore and first year O&M cost is INR 3 crore. The project will be implemented on newly adopted Hybrid Annuity Model.

2. Redevelopment and modernization of Habibganj Railway Station on PPP mode

Indian Railways (IR), in its quest to enhance customer experience by adding world-class passenger amenities, has launched a station redevelopment program. The Government plans to leverage commercial development of land and air space in and around the station. The revenues realized from real estate development and commercials at station shall be utilized for station redevelopment and maintenance obligations. The box below provides details of the Habibganj Railway Station redevelopment project.[7]



[5] EY research based on the World Bank PPP Database

[6] As per information available on https://infrastructureindia.gov.in and www.dilipbuildcon.co.in/announcement.php

[7] As per information available on IRSDC website

Redevelopment and modernization of Habibganj Railway Station on PPP mode is a first of its kind in the railways sector. Signing of the Agreement on 14 July 2016 has been termed as a historic moment. The consortium has formed a Special Purpose Company to implement the project.

The total estimated cost of station redevelopment is INR 100 crore, whereas the estimated cost of commercial development is approximately INR 350 crore. The developer is mandated to complete the construction of the railway station within three years. The lease for commercial development is for 45 years and the license period for the station O&M is for three years of construction followed by five years of O&M. Lease premium was the bidding parameter.

Buoyed by the successful award of the Habibganj project on PPP mode, the government is in the process of awarding seven other stations on PPP mode. These stations include Anand Vihar, Bijwasan, Chandigarh, Shivaji Nagar, Surat, Mohali and Gandhi Nagar. In addition, redevelopment of 400 stations on the Swiss Challenge mode is being pursued by the government.

3. Vizhinjam Seaport project on PPP

The Vizhinjam International Transhipment Deepwater Multipurpose Seaport is an ambitious project taken up by the Government of Kerala. It is designed primarily to cater container transhipment besides multi-purpose and break bulk cargo. The box below provides details of the Vizhinjam port project.[8]



The Vizhinjam port is being currently developed on the landlord model with a PPP component on a design, build, finance, operate and transfer (DBFOT) basis. The private partner, the Concessionaire commenced the construction on 5 December 2015. As per the Concession, construction of port is scheduled to be completed on 4 December 2019. Though the Concession Agreement envisages a construction period of four years, the Government of Kerala and Concessionaire have set an ambitious target of 1,000 days to make the port commercially operational.

4. Goa Mopa Airport project on PPP



Goa Mopa Airport project is important because it has signaled a revival of airport construction projects in India that have been facing delays due to various reasons. Box below provides details of the Goa Mopa Airport project.[9]

[8] As per information available on http://www.vizhinjamport.in/home.html

[9] As per information available on https://centreforaviation.com/data/profiles/newairports/goa-mopa-airport and http://www.gmrgroup.in/pressreleasedetail-08-November-2016.aspx

The Government of Goa floated a tender for the Goa Mopa Airport project in 2014, estimated to cost INR 3,000 crore (US$ 552 million), developed on PPP basis. During initial period, the airport is expected to handle 4.4 million passengers annually. The state's contribution will be restricted to providing land for the project. International competitive bidding was conducted to select the private partner in August, 2016. As per the concession agreement, the concessionaire will design, build, finance and operate the international airport for 40 years with an extension option for another 20 years. The project will operate on a hybrid till model with 30% cross subsidy. The concession offers 232 acres of land for commercial city side development for a period of 60 years.

1.4 Existing PPP Framework

Significant growth in the number of PPPs in the past 15 years has made India one of the leaders in PPPs. Over the years, a PPP eco-system has developed, and currently it comprises institutions, developers, financiers, equity providers, policies and procedures.

A. PPP Approval Mechanism

For central sector PPP projects, an approval mechanism has been put in place since 2006 to ensure speedy appraisal of projects, elimination of delays, adoption of international best practices and uniformity in appraisal mechanisms and guidelines. The table below presents the approval mechanism for all PPP projects of central ministries or central PSEs (public sector enterprises) and statutory authorities under their administrative control.[10]

Capital cost limits	Appraisal forum	Approval forum
PPP projects of all Sector[11]		
Less than INR 25 crore	The concerned ministry, in its normal course	Secretary of Ministry / Department
From INR 25 crore up to INR 100 crore	Standing Finance Committee (SFC)	Minister-in-Charge
More than INR 100 crore but less than INR 250 crore	Committee, comprising (a) Secretary, Department of Economic Affairs (b) Secretary of the Ministry / Department sponsoring the PPP Project	Cabinet Committee on Economic Affairs (CCEA) (a) Minister-in-Charge for PPP Projects/ Finance Minister, for PPP Projects
More than INR 250 crore	Public Private Partnership Appraisal Committee (PPPAC)	CCEA/ Cabinet Committee on Infrastructure (CCI)
PPP projects Under National Highway Development Project (NHDP)		
INR 250 crore or more but less than INR 1,000 crore	SFC chaired by Secretary (MORTH)	Minister (MORTH)
More than INR 1,000 crore	PPPAC	CCEA
Port projects in PPP mode		
INR 250 crore or more but less than INR 1,000 crore	SFC chaired by Secretary (Shipping)	Minister (Shipping)
More than INR 1,000 crore	PPPAC	CCEA

[10] Source: https://www.pppinindia.gov.in/appraisal-and-approval-mechanisms as accessed on 5 July 2017

[11] It should be noted that the government has issued orders / notifications to increase the cost limits for NHDP and port PPP projects.

The government has realized the importance of transport infrastructure in the development of the economy and hence, CCEA has decided to increase the threshold limit for submission of national highway and port projects. The key objective for increasing the threshold limits is expeditious clearance of infrastructure projects and their early execution. Now, NHDP and port PPP projects with cost less than INR 1,000 crore are required to be appraised by SFC chaired by respective secretary (MORTH or Shipping) and approved by respective ministers.

B. Viability Gap Funding (VGF) Scheme

Further, the government provides financial support to make PPP infrastructure projects commercially viable through the Scheme for Financial Support to PPPs in the Infrastructure-Viability Gap Funding (VGF) scheme. Under the VGF scheme, the Government of India provides total VGF up to 20% of the total project cost, normally in the form of a capital grant at the stage of project construction. The Government or statutory entity that owns the project may, if it so decides, provide additional grants out of its budget up to further twenty percent of the total project cost.[12]

As on 16 May 2017, 61 projects worth INR 34,112 crore had been granted final approval under the VGF Scheme. Out of the 61 projects, 51 projects belong to the transport sector.

C. India Infrastructure Project Development Fund (IIPDF)

India Infrastructure Project Development Fund (IIPDF) has been created in the Department of Economic Affairs, Ministry of Finance, Government of India with an initial corpus of INR 100 crore for supporting the development of credible and bankable PPP projects that can be offered to the private sector. The IIPDF provides financial support for quality project development activities. The Sponsoring Authority will thus be able to source funding to cover a portion of the PPP transaction costs, thereby reducing the impact of costs related to procurement on their budgets.

D. Model Documents, Knowledge Repository and Toolkits

The efforts of the DEA and the erstwhile Planning Commission to mainstream PPPs through a multipronged approach to standardization of documents (adaptable to individual projects), have enabled easy adoption of PPP projects and capacity building. The Government of India maintains a repository of Concession Agreements of executed PPP projects in the country across sectors.

Standardized Contractual Documents such as sector specific Model Concession Agreements and Standardized bidding documents such as Model Request for Qualifications (RFQs) and Model Request for Proposals (RFPs) are available online on the website of the erstwhile Planning Commission.[13] Besides, authorities such as National Highways Authority of India (NHAI) and Department of Shipping have published model documents on their respective website for easy accessibility and reference.[14]

Information dissemination happens through a dedicated website www.pppinindia.com to provide comprehensive information on the status and extent of PPP initiatives in India. Government Guidelines and Knowledge Products for use of PPP practitioners in various sectors can easily be accessed through the website. Besides, online PPP Toolkits for five sectors are available to help improve decision-making for infrastructure PPPs and structure better PPP projects.

---

[12] Source: https://www.pppinindia.gov.in/schemes-for-financial-support as accessed on 5 July 2017

[13] Source: http://planningcommission.gov.in/sectors/index.php?sectors=infrastructure accessed on 5 July 2017

[14] MCAs for highway projects are available on http://www.nhai.org/concessionagreement.htm and MCA for port projects is available on http://pppshipping.nic.in/writereaddata/MCA_for_Major_Ports.pdf

PPP Toolkit is web-based and facilitates the identification, assessment, development, procurement and monitoring of PPP projects. The toolkit is structured to cover the full life cycle of PPP projects. The toolkit covers five infrastructure sectors, namely, State Highways, Water and Sanitation, Ports, Solid Waste Management, and Urban Transport.

In addition, there is a web-based PPP Post-Award Contract Management Toolkit to help improve the contract management and project execution of the infrastructure sector related PPP projects in India. At present, this toolkit has been developed for three sectors, namely, highways, ports and schools.

E. Institutional and Regulatory Framework

There is no PPP specific policy or law at national level. However, some state governments have formulated laws and policies and set up the necessary institutional structures for streamlining PPPs, thereby formalizing the PPP landscape at a subnational level. For example, the Government of Andhra Pradesh enacted "The Andhra Pradesh Infrastructure Development Enabling Act, 2001" to provide for the rapid development of infrastructure and attract private sector participation in the state. Similarly, the Government of Gujarat enacted "The Gujarat Infrastructure Development Act, 2006" in the state.

Sector-specific acts or regulations and agencies for crucial sectors such as roads, airports, power, ports and railways exists at national level. The table below provides the details of institutional and regulatory framework available for the transport sector.

Transport sector	Nodal agency	Existing acts, rules or regulations
Roads and highways	National Highways Authority of India (NHAI) Ministry of Road Transport and Highways (MoRTH)	The National Highways Act, 1956 NHAI Rules, 1957 NHAI Rules, 1964 The National Highways Authority of India Act, 1988 NHAI Rules, 1997
Railways	Ministry of Railways Railways Zones Indian Railway Stations Development Corporation (IRSDC) Limited	The Railways Act, 1989
Ports	Ministry of Shipping Indian Ports Association (IPA) National Shipping Board	The Indian Ports Act 1908 (15 of 1908) The MPT Act 1963 (38 of 1963) Indian Maritime University Act, 2008
Airports	Airports Authority of India (AAI) Airports Economic Regulatory Authority of India (AERA)	The Airports Authority of India Act, 1994 Airports Economic Regulatory Authority of India Act, 2008

These acts, rules or regulations empower the authorities or agencies in one way or another to undertake PPP projects. For instance, article 10 of the NHAI rules, 1997 allows the Concessionaire to collect and retain the fees so collected for the full concession period as agreed to in the specific agreement in respect of the facility offered to him and the facility shall revert back to the Government at the end of concession period and the collection of fee thereafter shall be governed by these rules.[15]

[15] Kindly refer the rule at http://www.nhai.org/rules1997.htm

F. NITI Aayog

The National Institution for Transforming India, also called NITI Aayog, is the premier policy think tank of the government, providing both directional and policy inputs. Infrastructure and PPP division has been created within NITI Aayog to oversee the development of PPP market in the country and provide policy guidance to the Government. NITI Aayog has prepared a brief on how to strengthen PPP policy framework in the country and has provided its recommendations to the Kelkar Committee for their consideration.

NITI Aayog has recently taken an initiative to offer advice and guidance to the states for implementation of infrastructure projects. A Project Management Unit (PMU) under the Development Support Services for States/UTs (DSSS) program of NITI Aayog has been set up to handhold states in identification, prioritization, selection, and implementation of PPP projects. Finally, a list of 10 big infrastructure projects that can be developed under PPP mode will be prepared for implementation.

Further, the government has decided to do away with the practice of preparing annual budgets on the basis of five-year plans. Now, there would not be any Five Year Plans (FYPs). Instead, NITI Aayog has been tasked to prepare the three-year action plan along with 7-year strategy and 15-year vision document for development of the country.





2 Emerging PPP trends in the transport sector



PPP is expected to play a pivotal role in the transport sector and in sustaining India's GDP growth rate of 7%-8% over the next decade, if implemented with guided efforts. Notably, reviving steam in transport sub-sectors will also go a long way in streamlining the country's logistics operations and boosting the overall economic growth. Estimates suggest that a 0.5% reduction in logistical costs will lead to a 2% increase in trade, and a substantial 40% increase in the range of products exported out of the country.[16]

Logistics cost (% of GDP)

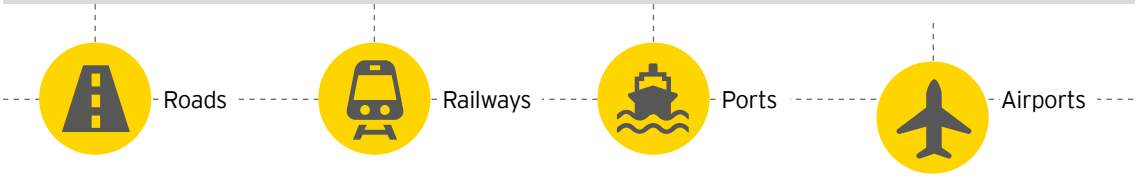


Source: http://pib.nic.in/newsite/PrintRelease.aspx?relid=151913

Though industry spend on logistics in India is low in absolute terms, the relative spend is high. India spends around 19% of GDP on logistics, which is more than what the UK (13.43%), China (12.5%) or Indonesia (15.72%) spends. It is estimated that poor logistics infrastructure costs the economy an extra US$ 45 billion or around 4.3% of the GDP every year.[17]

Clearly, there is an urgent call to action from the Government to address the growing requirements and constantly monitor the status of ongoing PPP activity in key transport sub-sectors, including roads, railway, ports and airports. This will also help ensure that the Government's operating environment is adapting fast enough to the evolving needs of the private sector.

Key sub-sectors for reviving India's transport infrastructure



[16] "Transport Corporation of India," Company Report, 25 February 2011, p. 7.

[17] "Transforming the nation's logistics infrastructure," a McKinsey & Company research report, p. 13.

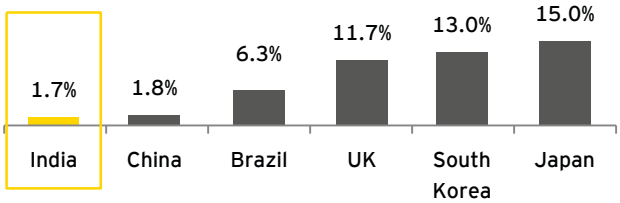


2.1 Roads and highways

Deployment of programmatic approach to address severe pressure on national highways

India's road network is the second-largest in the world, spanning 5.47 million km across national and state highways, district, urban and rural roads.[18] As on 31 March 2015, India's road density at 1.66 kms/sq.km of area was higher than that of Japan (0.91 km/ sq km), USA (0.67 km/ sq km), China (0.46 km/ sq. km), Brazil (0.18 km/sq.km) and Russian Federation (0.08 km/ sq km). Furthermore, road transport contributes around 3.1% to the country's economy,[19] via direct/indirect revenues from channels such as road transport tax and vehicle taxes. The roads sector, however, is under severe pressure, carrying nearly 60% of freight and 85% of the total commuter traffic.[20]

National highways as % of total roads network



Source: "Basic road statistics of India," Ministry of Road transport and highways

The number of registered vehicles in the country grew at a CAGR of around 9.9% during 2005-2015, with the road network increasing by just 3.7% during the period.[21] Furthermore, the national highways, which are the arterial roads of the country and handle 40% of the traffic, account for just approximately 1.79% of the total network, faring poorly in comparison to other countries.[22]

[16] "Transport Corporation of India," Company Report, 25 February 2011, p. 7.

[17] "Transforming the nation's logistics infrastructure," a McKinsey & Company research report, p. 13.

[18] "Basic Road Statistics of India 2013-14 and 2014-15," Ministry of Road Transport and Highways

[19] "Road Transport Year Book 2012-13," Ministry of Road Transport and Highways

[20] "Indian Road Network,", National Highways Authority of India website

[21] "Basic Road Statistics of India 2013-14 and 2014-15," Ministry of Road Transport and Highways

[22] "Basic Road Statistics of India 2013-14 and 2014-15," Ministry of Road Transport and Highways

Hence, the Government, both Centre and State, has been looking to address the challenges of road infrastructure deficits through programmatic approach channelizing both public and private investment.

The flagship National Highway Development Programme (NHDP) launched in 1998 aimed at constructing 50,000 km of National Highways has opened up sector investments and PPP framework. More than 50% of NHDP projects have been constructed till date. PPP has been the cornerstone of the NHDP's project development model with more than 247 PPP projects (approximately 23,000 km) having been awarded. In the next 3 years, 20,000 km of NHDP is to be developed which require a planned investment of US$ 45 billion. Some of the other major central government programs on the anvil include:

- Bharat mala project to add 6,000 km
- District Connectivity project: 123 district headquarters to be connected
- Setu Bharatam project to construct 350 ROBs/Bridges ROBs in 2 years
- Char Dham Connectivity project to add 2,500 km in mountainous terrain
- Regional Connectivity strong network of roads in the North East and Border areas
- The Eastern Peripheral Expressway to connect various states on the eastern periphery of India

Many of the states have followed suit of developing state road network through a programmatic approach. The funding has been primarily through a mix of states' own budget, central funds for Rural Road Development Schemes like PMGSY, private investments and multi-lateral funding.

Paradigm shift during the last couple of years

In the last couple of years, government has taken several initiatives to increase the pace of highway construction, improve road safety, integrate different programs, introduce E-initiatives and Green initiatives and significantly reduce logistics costs in the sector.[23]

- Under the **High Density Corridor program**, the Government has approved a plan for constructing 1,000 km of expressways, e.g., the Vadodara-Mumbai Corridor and the Delhi-Meerut Corridor. Two out of the four packages under the 66 km Delhi-Meerut section have already been awarded. The 135 km Eastern Peripheral Expressway is expected to be completed by March 2018.
- **Bharatmala Project**, the second largest program after NHDP, has been envisaged as an umbrella program that will subsume unfinished parts of NHDP and also focus on the new initiatives like development of border and international connectivity roads, coastal and port connectivity roads, economic corridors development and others. Award for 20,000 km of road construction planned in the first phase is expected to begin soon.
- **SetuBharatam program** aims to make national highways free of railway level crossings by 2019 by building railway over bridges/underpasses. 1,500 old and worn down bridges are planned for improvement.
- **Logistic Efficiency Enhancement Program (LEEP)** aims at enhancing the freight transport through improved tracking system, enhanced infrastructure, IT interventions and procedural reforms. Government has shortlisted 15 locations with the highest freight movement for the development of multimodal logistics parks worth INR 32,850 crore. 44 Economic Corridors, 170 feeder routes and inter-city corridors, 35 logistics parks and 191 choke points have been identified for development to improve logistics efficiency of National Highways.
- Under the r**oad connectivity projects with neighboring countries**, 558 km of roads have been identified after signing of Bangladesh, Bhutan, India and Nepal (BBIN) Motor Vehicle Agreement in June 2015 for facilitating seamless movement of passenger and cargo vehicles and increase trade in the sub-region.

[23] Source: http://pib.nic.in/newsite/PrintRelease.aspx?relid=155892

- **E-initiatives and green initiatives** have been made vital components of the sector development. Under E-initiatives, E-tolling, state-of-the-art real time Project Monitoring and Information System (PMIS), and INFRACON, a National Portal for Infrastructure Consultancy Firms and Key Personnel have been introduced. Electronic tolling across 300 national highways has been initiated.
- **Green Highways** (Plantation, Transplantation, Beautification and Maintenance) Policy – 2015 was adopted on 1st of July, 2016. Under the **Green Highways Project** the government has made it mandatory to set aside 1% of the total project cost of any NH contract to a Green Fund corpus that will be used for plantation purposes.
- In 2017-18 union budget, the government has allocated approximately total INR 64,900 crore for development of national highways (11% growth over last year).
- According to a recent announcement by the honorable Union Minister Shri Nitin Gadkari, the government plans to develop a 1,300 km express highway project in the northeast region along the Brahmaputra riverin Assam at an estimated investment of INR 40,000 crore.[24]
- Shri Nitin Gadkari has also announced a host of road, rail and inland water linking projects worth INR 1 lakh crore in Andhra Pradesh at AP-CII summit conducted this year.[25]
- In another announcement, Shri Nitin Gadkari said that the Government would soon launch three expressway projects — Delhi-Amritsar-Katra, Delhi-Jaipur and Vadodara-Mumbai, at a cost of about INR 1.32 lakh crore.[26]
- Many state governments have also taken initiatives to develop roads on PPP mode. For example, the government of Rajasthan plans to award 20,000 km of state highways through this mode. The government is also exploring Swiss Challenge method for procurement of road projects. Similarly, Chhattisgarh Government has finalized a plan for massive development of about 2,300 km long road network at an estimated cost of more than INR 25,000 crore in the next four years.[27]

Key stakeholders include government authorities, developers and financial institutions

At the national level, overall policy formulation, integration and plans approval and development and maintenance of roads and highways are carried out in coordination with the Ministry of Roads, Transport and Highways (MoRTH), NHAI and NITI Aayog (erstwhile the Planning Commission). Besides, there are government authorities / agencies at state level to supervise and develop roads and highways in the state. Financial institutions include public and private sector banks and private equity.

[24] "Nitin Gadkari announces Rs 40,000 crore expressway project in northeast," a Times of India article dated April 4, 2017 available at http://timesofindia.indiatimes.com/india/nitin-gadkari-announces-rs-40000-crore-expressway-project-in-northeast/articleshow/58014279.cms

[25] "Gadkari promises Rs1 lakh crore worth of projects to Andhra at AP-CII summit," an article published on Live Mint available at http://www.livemint.com/Politics/Z5ab9krFLsV2SKmxNvi8pJ/Gadkari-promises-Rs1-lakh-crore-worth-of-projects-to-Andhra.html

[26] "Govt to launch 3 e-way projects at cost of Rs 1.3 lakh crore: Gadkari," an article published in the Hindu, available at http://www.thehindu.com/news/national/other-states/Govt-to-launch-3-e-way-projects-at-cost-of-Rs-1.3-lakh-crore-Gadkari/article14983004.ece

[27] "Plans for 2300km road network in Chattisgarh finalized: CM Raman Singh," an article published in The Times of India, available at http://timesofindia.indiatimes.com/india/Plans-for-2300km-road-network-in-Chattisgarh-finalized-CM-Raman-Singh/articleshow/49477239.cms

Type	Stakeholders	Descriptions
Government (Centre)	▶ Ministry of Roads, Transport & Highways ▶ National Highways Authority of India (NHAI) ▶ NITI Aayog	▶ Overall policy framework, integration and plans approval ▶ Development, maintenance and management of NHs
Government (State / ULBs)	▶ State Roads & Buildings Department ▶ State Highways Development Bodies ▶ Public Works Department (PWD)	▶ Framing of state level policies ▶ Development and execution of projects
Financial Institutions	▶ Public and Private Sector Banks ▶ Private Equity	▶ Provide financing for road sector projects
Developers	▶ Private developers ▶ Public Sector Enterprises e.g. NHAI, TNRSP*, APRDC*, KRDCL*, etc.	▶ Development and execution of projects

** TNRSP: Tamil Nadu Road Sector Project; APRDC: Andhra Pradesh Road Development Corporation; KRDCL: Karnataka Road Development Corporation Limited*

Slowdown in private participation in road projects due to variety of reasons

PPP has been the cornerstone of the NHDP's project development model with more than 245 PPP projects (approximately 23,000 km) having been awarded. After successful award of PPP projects for close to a decade, the sector took a sharp turn in 2012-13. Slowdown in economy, led to pessimistic business sentiments and high interest rates. As a result, lending to the highways sector got restricted. The financial challenges only worsened due to aggressive traffic projections to access funds and achieve financial closure. In addition, there were some policy and authority level impediments such as unavailability of ROW (Right of Way), environmental clearances, approval from Railway Authority, etc. which slowed the pace of execution of already awarded projects. Out of the proposals to award 1,500 km of highways under build, operate, and transfer (BOT) in the first quarter of 2012-13, the private players submitted bids for only 100 km. Major reasons for slowdown in private participation in road projects are listed below.

- Lack of equity with the Concessionaire in some projects has delayed the projects much beyond the scheduled completion date
- Diversion of funds resulting in lack of financial resources to develop the project
- Delays due to reasons not attributable to the Concessionaire
- Refusal of banks to accept first charge of NHAI for languishing projects in which NHAI is willing to infuse fund
- Overleveraged Balance sheet of the developers anticipating high level of growth
- Stress on the existing road infrastructure loan portfolios of FIs
- Sector exposure norms of FIs getting exhausted
- Debt sanctioned by Banks higher than total project cost estimated by NHAI
- Increased cost of lending to the sector considering downside risks

Adoption of alternate PPP models to revive the private sector interests in road projects

After the decline in the private sector participation, NHAI adopted the EPC (engineering, procurement and construction) as the preferred model to award contracts. The NHAI aimed to award 5,400 km of road construction over 2015-16, out of which 2,500 km (46%) was planned to be awarded under the EPC model. In order to efficiently cater to the specific project requirements, the authorities are also deploying other PPP models in the road sector such as Modified Annuity, Toll-Operate-Transfer (TOT), BOT Toll with funded EPC for structures and Swiss Challenge method. Alternate PPP models are discussed below:

- **Modified annuity:** Concessionaire to partly finance, construct, toll and manage the project. This model facilitates reduced debt requirement and cost of borrowings for the private sector (up to 50-75 bps), when compared to BOT annuity.[28]
- **Toll-operate-transfer (TOT):** Under this model, Brownfield assets are to be refinanced by private parties, with a medium- to long-term investment horizon (30 years of concession period).[29]
- **BOT toll (with funded EPC for structures)[30]:** As per EY research, this model can be deployed for complex projects such as tunnels and bridges, in a BOT toll stretch a complex structure could be developed on EPC basis by the same developer or separate developer/contractor. The critical infrastructure components of the project could be funded separately, wherein the EPC payment and milestones for key structures are predetermined. This model facilitates better availability of capital to finance the project, better managed cost of financing and balanced construction risk.
- **Swiss Challenge method:** The model is being explored, especially for expressway development projects.[31] This is essentially a bidding process, wherein private investors may conceptualize and enlist potential projects in core sectors. Innovative ideas emerging from this method are expected to expedite the development of expressways in India.

Unlocked equity from completed BOT projects can be re-invested in new projects

Lack of availability of equity in the market among qualified bidders is one of the primary reasons for low participation in roads PPP projects bids during the last few years. Therefore, the CCEA approved a comprehensive Exit Policy framework that now permits concessionaires/developers to divest 100% equity, two years after completion of construction. This would help unlock equity from completed projects making it potentially available for investment into new projects.

There are 80 such BOT projects awarded prior to 2009 that have been completed and the locked in equity in these projects works out to approximately INR 4,500 crore. Once this is unlocked and is re-invested in new projects this could support 1,500 km of new highways on PPP mode, thus help in reviving the response to BOT (T) projects.[32]

Fund infusion to salvage languishing projects that are in advanced stage of completion

Projects in advanced stage of completion are like low hanging fruit. These projects are languishing due to delays on account of land acquisition, grant of statutory clearances, local issues and shortage of construction

[28] EY Research

[29] EY Research

[30] EY Research

[31] "Govt. may open Swiss challenge for private players to develop highways," Indian Express website, http://indianexpress.com/article/business/business-others/govt-may-open-swiss-challenge-for-private-players-to-develop-highways/, accessed 10 August, 2015.

[32] PIB notification dated 13 May 2015 on "Approval for Permitting 100 percent equity divestment after two years of construction completion for all BOT projects" available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=121628

materials etc. NHAI has been authorized to provide funds to such projects from within its overall budget/ corpus on a loan basis at a pre-determined rate of return. This loan is to be recovered along with interest as the first charge from the toll receipts immediately after completion of construction.[33]

Subsequently, NHAI has decided to provide financial assistance in order complete BOT Toll/Annuity road project that has achieved at least 50% physical completion. However, refusal by banks to accept the first charge of NHAI on the toll/annuity receivables has stopped any progress on these projects.

Rationalized compensation to concessionaires in case of delays not attributable to them[34]

The CCEA has authorized NHAI to allow extension of concession period for all current projects in BOT (Toll) mode that are languishing during the construction period due to causes not attributable to the concessionaire.

Further, NHAI has been authorized to pay compensatory annuities to the concessionaire corresponding to the actual period of delay not attributable to the concessionaire upon successful completion of the project i.e. on achieving COD. While the construction period will get enhanced, the tenure of the concession will remain unchanged in this case.

Securitization of future cash flows in BOT Projects to improve liquidity of prospective bidders

With a view to ameliorate the shortage of equity and improve liquidity of the prospective bidder, NHAI board has approved granting of permission by NHAI to the Concessionaires of PPP projects which have Toll/Annuity revenue significantly surplus to the repayment obligations to raise subordinate loan on the strength of future surplus cash flows of their operational BOT Road projects.[35]

Deferment of premium payment to provide comfort to lenders

The Government has allowed restructuring of premiums committed by Concessionaires during the bid stage in highway projects for the awarded projects in order to salvage the stressed projects. Such a renegotiation is permitted only once through the life of the Concession.

This step would give huge comfort to the lenders as debt obligation would now get priority over the premium payable to NHAI. NHAI would be able to recover the deferred premium with interest in the latter period of the concession. The deferment shall be limited to the actual revenue shortfall after meeting the debt obligation and operation expenditure. The concessionaire would not be allowed to declare any dividend until the shortfall in premium is made good. The concessionaire would also be required to share their toll collection data with NHAI on real time basis. In 2014, NHAI approved 9 projects for deferment of premium.

Harmonious substitution of the concessionaire in financially distressed projects

In view of the difficulties being faced by the Concessionaire in PPP projects Government has decided to permit substitution of existing Concessionaire or the selected bidder /consortium member of such project SPV in a harmonious manner.

---

[33] PIB notification dated 13 May 2015 on "Approval for Permitting 100 percent equity divestment after two years of construction completion for all BOT projects" available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=121628

[34] PIB notification dated 18 Nov 2015 on "Authorizing National Highways Authority of India (NHAI) for rationalized compensation to concessionaires in case of delays not attributable to concessionaires for languishing highway projects on BOT mode" available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=131601

[35] NHAI circular dated 29 May 2013 and Report no. 236 of Rajya Sabha on "Infrastructure lending in roads sector," August 2016, point 66, p. 29.



2.2 Railways

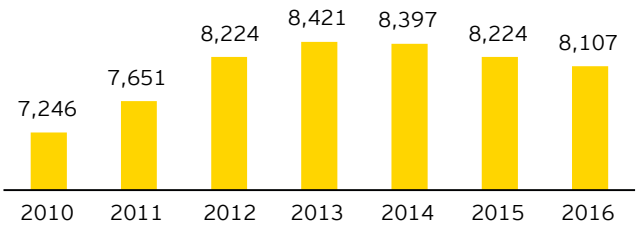
Indian railways has witnessed a steady traffic growth during last 10 years

Indian Railways (IR) holds great importance in development and growth of Indian economy as it provides connectivity to remote regions by providing affordable transport services to a large population and facilitates industrial and economic development through transport materials such as coal, iron ore, fertilizers and food grains.

IR is one of the largest transport networks in the world running more than 19,000 trains over 66,687 Route km. It runs about 12,000 trains to carry over 23 million passengers per day connecting about 7,216 stations spread across the sub-continent. It runs more than 7,000 freight trains per day carrying about 3 million tonnes of freight every day.

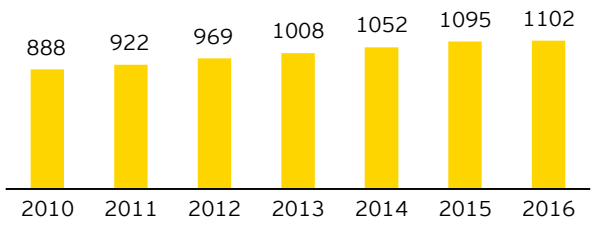
Both passenger and freight traffic volumes have increased steadily in the past six years. While passenger traffic witnessed a CAGR of 2.3% during FY 2008-09 to FY 2015-16, freight traffic registered a CAGR of 4.1% during the same period.[36]

Passenger traffic in million



Source: Ministry of Railways

Freight traffic in million tonnes



Source: Ministry of Railways

For the FY 2016-17, the revenue from passenger operations stood at approximately INR 44,283 crore against the total revenue of INR 1.68 lakh crore.

[36] Source: Data available at http://www.indianrailways.gov.in/railwayboard/uploads/directorate/stat_econ/IRSP_2015-16/Summary%20Sheet_Eng_pdf_pdf.pdf and EY analysis

Railway's share of freight traffic has decline due to higher transport costs

Indian Railways has been running with significant capacity constraints due to a long spell of under-investment. Currently, around 65% of the sections are running at 100% or above line capacity on High Density Network (HDN) routes. As per an assessment, the Railway's share in transport traffic had fallen from 62% in 1980 to 36% in 2012. One of the key reasons for such decline is higher freight transport costs which compensate for subsidized passenger traffic.

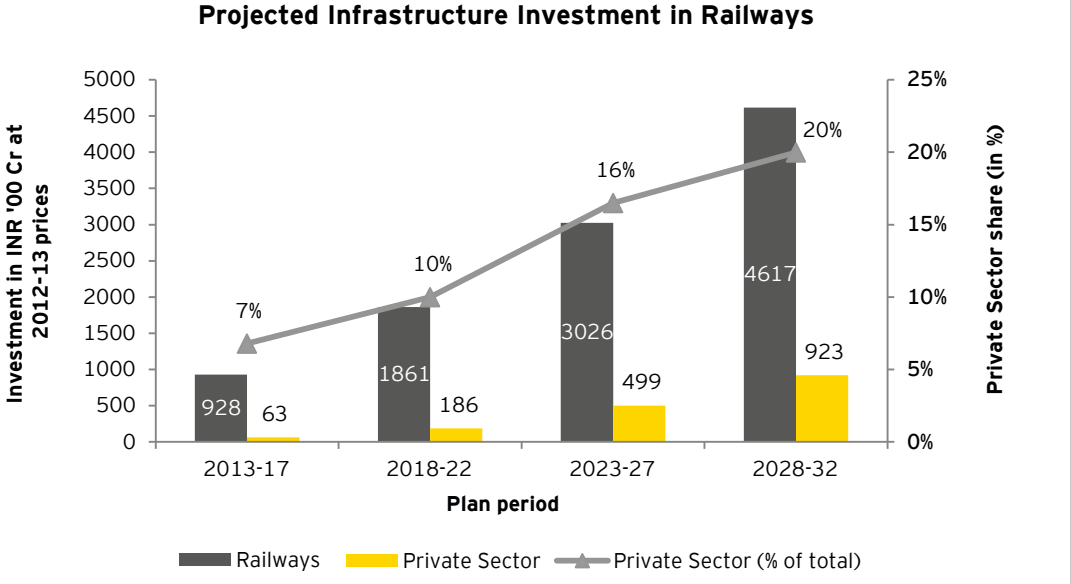
Freight revenue constitutes nearly 67% of total revenue of IR. Passenger services are charged at highly subsidized rate. In 2012-13, recovery of cost (ratio of cost and earnings) from passenger was 49.4% as against 163.7% for freights. The low recovery of costs on the passenger segment and high freight rates have led to an imbalance in the revenues from these two business segments. This has been one of the main reasons for decline in freight traffic share over years.

Emphasis given to private participation in modernization of Indian Railways

The report of Expert Committee on Modernization of Indian railways formed under the chairmanship of Dr. Sam Pitrodia released February 2012 had laid heavy emphasis on involvement of private in sector in modernization activities. The report had identified key areas which would need to be taken up under as part of PPP initiative. The list of the key areas is as below:

- Stations and terminals
- High speed rail corridors
- Elevate rail corridors
- Private freight terminals
- Leasing wagons
- Loco and coach manufacturing units
- Captive power generation
- Renewable energy projects
- Railway hospitals and schools
- Merchandizing

Private sector investment in railways infrastructure is expected to be approximately INR 0.92 lakh crore (around 20% of the total investment) during the plan period of 2028-32 up from 7% for the plan period 2013-17.



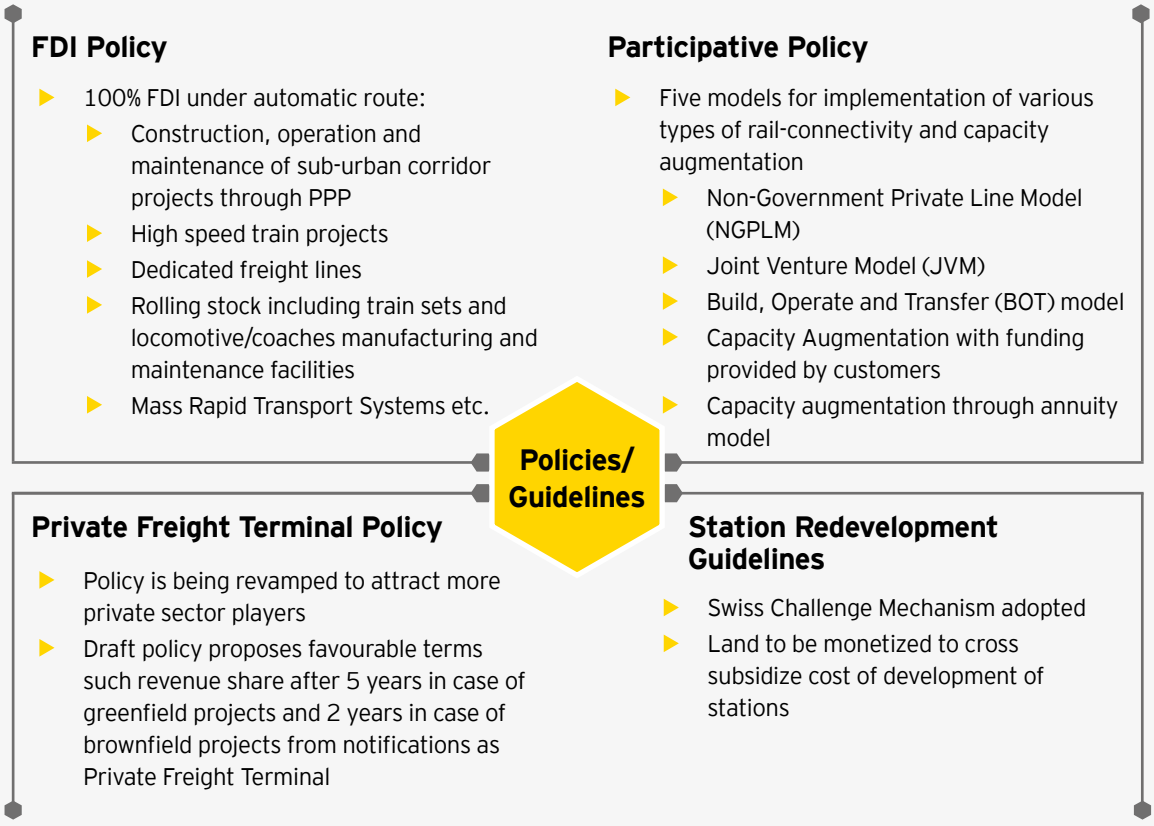
Source: NTDPC report

The government has brought some policy and regulatory changes to encourage privatization

Driving factors in the railways sector include government focus, demand for passenger transport, and growth in freight traffic, improved safety and modernization needs, and private sector involvement. Some of the key policies and guidelines in the railways are provided below:

The government has brought some policy and regulatory changes to encourage privatization

Driving factors in the railways sector include government focus, demand for passenger transport, and growth in freight traffic, improved safety and modernization needs, and private sector involvement. Some of the key policies and guidelines in the railways are provided below:



Pace of implementation has increased during the last couple of years[37]

During 2014-16, 3105 route km (RKM) have been electrified, which is an average of 1,552.5 RKM/ annum as against 1,236 RKM/annum during previous five years. Indian Railways commissioned 2,828 Km of Broad Gauge lines, highest ever in 2015-16 against an average of 1,528 Km from 2009-14.

One of the most challenging railway projects, conversion of 1,500 V DC to 25,000 V AC traction system, has been successfully completed over the entire Mumbai division of Central Railway.

Significant efforts towards elimination of unmanned level crossing has resulted in safe operations. In 2015-16, a total of 1,253 unmanned level crossings were eliminated and 1,024 Road over/ Road under bridges were constructed. This marks an improvement of 35% against the average number from 2009-2014.

[37] http://pib.nic.in/newsite/mbErel.aspx?relid=145908

PPPs in rail line projects has been on the rise since last few years[38]

In 2015-16, IR generated an investment of INR 15,000 crore through PPP. Partnership with State Governments, Industry is being encouraged to undertake coal and mining connectivity projects.

To encourage port connectivity projects, thrust has been given to implementation of projects under the participative model policy of 2012. Rail connectivity to Tuna Port at a cost of INR 142 crore has been implemented in 2015. Further, approvals under joint venture model have been granted to build rail connectivity to the ports of Jaigarh (INR 771 crore), Rewas (INR 349 crore) and Dighi (INR 724 crore).

Ministry of Railways for the first time has decided to launch three annuity projects Badrak- Nargundi 3rd line (INR 900 crore), Nagpur – Wardha 3rd line (INR 550 crore) and Kazipet-Vijayawada 3rd line (INR 1,566 crore) in the calendar year 2016.

High-speed rail corridor projects to play a critical role in revitalization of Indian Railways

The Indian Railways' VISION 2020 envisages the development of at least four corridors of 2,000 kms would be developed and planning for 8 other corridors would be in different stages of progress by 2020.

Ministry of Railways have formed a new Special Purpose Vehicle (SPV) named National High Speed Rail Corporation Limited to implement the project of Mumbai-Ahmedabad High Speed Bullet Train. Indian Railways has already allotted INR 200 crore for the SPV, in which Maharashtra and Gujarat states will have equity of 25% each and the Indian Railways will have remaining 50%. Total project cost (TPC) is estimated to be INR 97,640 crore, of which 81% would be funded by Government of Japan through a 50-year loan at 0.1% interest per annum with 15 years moratorium period. The implementation of this project has already begun and is now targeted for commissioning in 2023-24. In January 2017, a memorandum of understanding (MOU) worth INR 77,000 crore was signed between the Government of Gujarat and High Speed Rail Corporation for the Mumbai-Ahmedabad Bullet train project. Besides Mumbai-Ahmedabad high-speed rail project, Delhi-Chennai high-speed rail project is expected to take off soon in a similar manner.

Station redevelopment program to monetize land for cross-subsidization of station development cost

Indian Railways Station Development Corporation (IRSDC) has recently awarded the Habibganj project in Bhopal to Bansal Pathways, thereby paving way for the rolling out of the redevelopment program of 400 stations on PPP mode. Other stations like Bijwasan, Anand Vihar and Gandhi Nagar are also underway. First phase of the program comprising of 23 stations and approximately INR 6,000-9,000 crore in size has been recently launched. After the first phase, 100+ stations are expected to be launched in Phase 2 and the remaining A1 and A stations will be launched in Phase 3 of this program.[39]

Accounting reforms have been initiated with pilot project for the NWR

As part of the accounting reforms project, IR has prepared financial statements of North Western Railways (NWR) for 2014-15 and completed the pilot implementation of accrual based financial statements in NWR.[40] The Ministry is planning to roll out accrual accounting across seventeen zonal railways and eight production units in addition to Central Organization for Railway Electrification (CORE) soon.

[38] http://pib.nic.in/newsite/mbErel.aspx?relid=145908

[39] A PIB notification dated 8 February 2017, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=158286

[40] A PIB notification dated 20 December 2016, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=155690

Plans to enhance non-fare revenues in Indian Railways

During the last couple of years, the Ministry of Railways (MoR) has undertaken some concrete steps to enhance the capacity and increase the share of non-fare revenue. MoR has also constituted a new directorate named as Non-Fare Revenue Directorate (NFR) to increase revenue by 10% to 20% from non-tariff sources such as advertising and commercial exploitation of vacant rail land. Among initial steps, railways will install about 100,000 networked large screens across 2,000 stations. The government is also planning to explore selling of advertisement rights for stations, coaches, locomotives, structures, sponsorship of uniforms for railway personnel, and commercial farming / plantation alongside railway tracks to generate revenues. Indian Railways is planning to start mega auctions for the branding and advertising rights of over 1,000 of its trains.

Other initiatives

- Indian Railways Freight and Passenger Business Action Plan 2017-18 was launched in March 2017 to inaugurate several key freight sector initiatives.
- "Roll-on-Roll-off" (Ro-Ro) services in the Delhi NCR region have been introduced as a pilot project to provide multimodal transport mix. Ro-Ro scheme has been launched on Digha Rail Bridge over River Ganges near Patna. Under this scheme, loaded trucks would be moved on the flat wagons to avoid congested roads across Ganges.
- Further, policy of Long Term Tariff Agreements/ Contracts with Railway's key freight customers using pre-determined price escalation principle has been launched.
- Among other such initiatives, a trial run of Double Stack Dwarf Containers was undertaken between Ambala and Jamnagar. Commercial runs are expected to start soon.
- Cleaning of 50 major stations has been outsourced to professional agencies. Cleanliness audit for railway stations through third party has been institutionalized. Ranking of stations based on cleanliness would be generated periodically.
- 10 MW Solar Plants installed during 2014-16. Massive solarization (1,000 MW Solar Power Plants) planned in the next five years with an eye on making Railways the largest solar power producer in the country. Honorable Union Minister for Railways, Shri Suresh Prabhu has recently unveiled Mission 41k aimed at saving INR 41,000 crore in the next decade in the rail network's energy costs.[41]
- Now, procurement of goods above INR 1 lakh is by e-procurement across all Divisions and Depots, besides headquarters of Zonal Railways and PUs. Indian Railway E-Procurement System (IREPS) today has more than 29,000 vendors registered on the system.[42]
- Integrated Mobile Application for passengers has been launched. New Policy of reservation for Foreign Tourists have been approved to promote rail tourism.
- As on date, about 67,000 bio-toilets have been installed in passenger coaches and 45 bio-toilets have been set up at railway stations. During 2017-18, it is targeted to install 40,000 bio-toilets in passenger carrying coaches and funds of INR 600 crore have been allocated in Railway Budget 2017-18 for Environment Friendly Coach Toilet systems.[43]
- Other passenger amenities include All India Security Helpline 182, The All India Passenger Helpline "138," e-catering facility, destination alert and wake up alarm services, etc.

[41] "Railway Minister Suresh Prabhu announces plans to save Rs 41,000 crore in energy costs," an article published in the First Post, available at http://tech.firstpost.com/news-analysis/railway-minister-suresh-prabhu-announces-plans-to-save-rs-41000-crore-in-energy-costs-357992.html

[42] A PIB notification dated 7 June 2016, available at http://pib.nic.in/newsite/mbErel.aspx?relid=146021

[43] A PIB notification dated 31 March 2017, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=160297

Merger of the railways budget with the union budget 2017-18 is a historical moment for the Indian Railways

Key announcements made in the union budget 2017-18 include:

- Government plans to spend INR 1.3 lakh crore on railways in 2017-18 with a focus on passenger safety, cleanliness and overhauling of accounting practices. Of the INR 1.3 lakh crore, gross budgetary allocation would be INR 0.55 lakh crore and the balance is expected to come from private investment.
- Railway line of 3,500 km would be commissioned in 2017-18 as against 2,800 km in 2016-17.
- Government plans to eliminate all the unmanned railway level crossings by 2020.
- It is planned that at least 25 stations re-development contracts would be awarded in 2017-18.
- A railway safety fund with a corpus of INR 1 lakh crore over five years would be created.
- A new metro rail policy would be announced to enable easier financing and implementation of metro projects.
- It is planned to fix railway tariffs on the basis of cost, social obligation and competition.
- Government proposes Coach Mitra facility to redress grievances related to rail coaches.





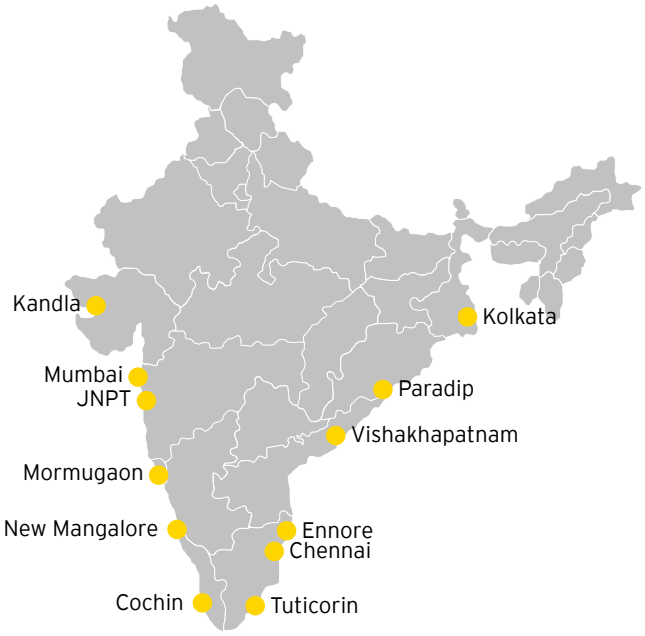
2.3 Ports and Shipping

Ports and shipping are the backbone of the Exports and Imports (EXIM) trade in India

India has a coastline that is more than 7,500 km long, interspersed with more than 200 ports. Most cargo ships that sail between East Asia and America, and Europe and Africa pass through Indian territorial waters. There are 12 major ports in the country – 6 on the eastern coast and 6 on the western coast. India has about 200 non-major ports of which one-third are operational.

Ports play an important role in the trade of the country. In fact, they are the gateways for EXIM Trade. The ports in the country handle 90% by volume and 70% by value of India's external trade.

India has a total of 1,299 ships comprising of 11.24 MGT as on 31 October 2016. India has one of the largest merchant shipping fleet and ranked 17th among the developing countries with average age of the fleet being 18.03 years.[44]



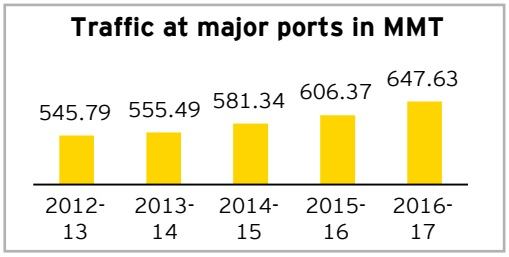
[44] A PIB notification dated 22 December 2016, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=155754

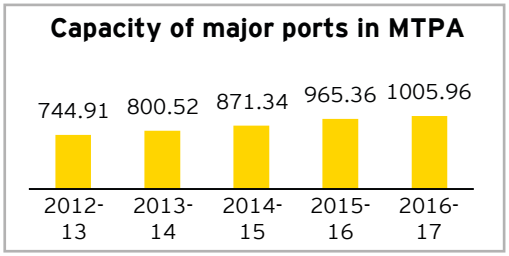
Both cargo traffic and port capacity have grown steadily during the last couple of years

Cargo traffic at major ports in India stood at 647.6 Million Metric Ton (MMT) in 2017 from 545.8 MMT in 2013, increasing at CAGR of 4.4% during 2013-2017.[45]

Capacity of major ports has grown over years in view of the increasing demand. Capacity at major ports grew to 1,005.96 MTPA in 2017[46] from 744.91 MTPA in 2013, at a CAGR of 7.8% during the period.

During 2015-16, 30 projects were awarded, involving an investment of approximately INR 15,335 crore and additional capacity of 162.1 MTPA. In 2016-17, 33 projects were targeted for award of which 23 have already been awarded.





Efficiency gains at ports would positively affect the logistics costs in India

In 2016, overall capacity utilization at major ports was 63%. Utilization rates of major ports in India such as JNPT port, Kandla port and Ennore port are much above the world's average.

The average turnaround time, which is influenced by factors such as type of cargo, parcel size and entrance channel, registered a significant improvement in 2015-16 and was 3.63 days as against 4.00 days in the corresponding preceding year. This further improved to 3.49 days in the current year (up to October 2016).

Average output per ship berth day also increased from 12,458 tonnes in 2015 to 13,151 tonnes in 2016. This has further increased to 13,949 Tonnes during the current year (up to October 2016).

Share of non-major ports in total cargo traffic has been increasing steadily[47]

It has been observed that non-major ports are evolving faster than major ports and are gaining shares of total traffic. The contribution of non-major port's traffic to total traffic rose to 43.5% in 2016 from 28.6%in 2007. Cargo traffic at non-major ports stood at 466.1 MMT in 2016 and is expected to reach 815.2 MMT in 2017, increasing steadily at CAGR of 10.7% during 2007-2016.

Maritime India Summit 2016, conducted to create awareness and showcase investment opportunities, was a huge success

The Summit drew enthusiastic response from 197 exhibitors, including 81 international companies, 80 Indian private sector companies and 36 Government-owned entities. More than 140 business agreements worth total investment of around US$ 13 billion (approximately INR 83,000 crore) were signed during the Summit.

Significant progress has been made under the Sagarmala Program

The Sagarmala Program is now moving from the conceptualization and planning stage to the implementation stage. The objective of this project is to promote port-led development and to provide infrastructure to quickly transport goods to & from ports, with higher efficiency & at lower cost. The projects identified under the Sagarmala Program are expected to mobilize more than INR 7 lakh crore of infrastructure investment, double the share of domestic waterways (inland and coastal) in the modal mix, generate logistic cost savings of INR 35,000-40,000 crore per annum, boost merchandize exports by US$ 110 billion and enable creation of 1 crore new jobs, including 40 lakh direct jobs, in the next 10 years.

[45] Ministry of Shipping, Government of India data available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=155754

[46] Provisional data up to November 2016

[47] Source: IBEF presentation available at https://www.ibef.org/download/Ports-June-2017.pdf

The National Perspective Plan (NPP), for the comprehensive development of India's coastline and maritime sector, has been prepared and was released at the maiden Maritime India Summit 2016. As part of Sagarmala, more than 415 projects, at an estimated infrastructure investment of more than INR 8 lakh crore, have been identified across the areas of port modernization and new port development, port connectivity enhancement, port-linked industrialization and coastal community development. These projects will be implemented by relevant central ministries, state governments, ports and other agencies primarily through private or PPP mode. INR 242.9 crore has been released for 14 projects under Sagarmala.

S. No.	Project theme	No. of projects	Project cost (INR crore)
1	Port modernization	189	1,42,828
2	Connectivity enhancement	170	2,30,576
3	Port-linked industrialization	33	4,20,881
4	Coastal community development	23	4,216
	Total	**415**	**7,98,500**

The Sagarmala Development Company (SDC) was incorporated on 31 August 2016, after receiving Cabinet approval on 20 July 2016, for providing equity support to residual projects under Sagarmala. Master Plans have been finalized for the 12 major ports. Based on the same, 142 port capacity expansion projects worth total cost INR 91,434 crore have been identified for implementation over the next 20 years.

Out of the final list of 27 rail connectivity projects identified under Sagarmala, 21 projects (approximately 3,300 km at a total cost of INR 28,000 crore) are being taken up by the Ministry of Railways and 4 projects (approximately 151 Km worth total cost of INR 3,590 crore) are to be taken up either in Non-Government Rail (NGR) or JV model through Indian Port Rail Corporation Limited (IPRCL).

Out of 79 road connectivity projects identified under Sagarmala, 45 projects will be done by MoRTH and NHAI, including 18 projects under the Bharatmala scheme. The remaining 34 projects will be done by State PWD, Port Authorities and Sagarmala Development Company in coordination with MoRTH / NHAI.

To promote port-led industrialization, 14 Coastal Economic Zones (CEZs) covering all the Maritime States and Union Territories have been proposed. Based on availability of land with the Major Ports, Ministry of Shipping is developing a SEZ at JNPT, Free Trade Warehousing Zone (FTWZ) at Ennore and has also identified Kandla and Paradip for development of Smart Port Industrial Cities (SPICs).

Chabahar port will get India access to Eastern Transit Corridor and benefit Kandla, Mumbai and JNPT ports

In 2016, a commercial contract for the development and operations of Chabahar Port was signed for development of two terminals (five berths) at Chabahar Port. India will get access to Eastern transit Corridor to Eastern part of Iran, Afghanistan, which is a landlocked country, CIS countries like Turkmenistan and Uzbekistan, and alternative to North South Corridor (Access to Russia and North Baltic countries).[48]

Ports plan to operate on Green Energy and Zero discharge

The Government of India is targeting to make the country the first in the world to operate all 12 major domestic government ports on renewable energy. The government plans to install almost 200 MW wind and solar power generation capacity by 2019 at the ports. The energy capacity could be ramped up to 500 MW in future years.

Further, Indian Ports Association (IPA) is exploring the viability of reuse of wastewater from the port area to fulfil the growing water requirement at all the major ports at various locations.

[48] As per PIB notification dated 25 July 2016 available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=147636

Ports are transforming themselves into "Landlord model"

To promote private investments, the government has reformed the organizational model of the ports from the "Service Port" model, where the port authority offers all the services, to the "Landlord Port" model, where the port authority acts as a regulator and landlord while port operations are carried out by private companies. Major ports following the landlord port model are JNPT, Chennai, Vishakhapatnamand Tuticorin ports.

Actions on national waterways under the National Waterways Act, 2016 have been initiated

The National Waterway Act, 2016 declaring 111 national waterways, including the 5 national waterways declared earlier, has been enforced w.e.f. 12th April, 2016. The Government is planning to develop 32 new national waterways and 5 national waterways declared earlier in the next three years. DPRs for 8 waterways are available whereas DPRs preparation for remaining 24 waterways have been initiated.

Sub-projects under the Jal Marg Vikas Project (National Waterway - 1 on river Ganga) are under various stages of development. The project includes the development of multi-modal terminals at Varanasi, Sahibganj and Haldia. Works on National Waterway – 4 and National Waterway – 5 are also under progress.

Ports hospitals to be upgraded on PPP mode

A committee headed by Medical Council of India member Ved Prakash Mishra was appointed to study how the existing healthcare infrastructure at major ports can be upgraded under PPP mode to provide world-class health services, along with affordable medical and paramedical education. The committee has recommended that existing hospitals at ports be upgraded to super specialty hospitals and medical colleges.[49] A feasibility study for the development and operation of Mumbai Port Trust hospital on PPP mode is currently underway.

Some regulatory and institutional changes have also happened in recent times

Major ports are under the jurisdiction of the Government of India & are governed by the Major Port Trusts Act 1963, except Ennore port, which is administered under the Companies Act 1956. Non-major ports come under the jurisdiction of the respective state Governments' Maritime Boards (GMB).

The tariff guidelines were revised to provide flexibility to port operators to align the tariff closer to market tariff subject to achievement of certain performance standards. 100% FDI is being allowed in PPP projects in the port sector. The Model Concession Agreement is being amended so as to take care of the contingencies affecting the execution of PPP Projects.

A new Major Ports Authority Act to replace existing Major Ports Act, 1963 to provide greater autonomy and modernization of institutional structure is under consideration. A new berthing policy and stevedoring policy has been formulated.

FDI up to 100% under automatic route has resulted in PPP projects coming up in the major ports

FDI up to 100% under the automatic route is already permitted in the port sector. This has resulted in several PPP projects coming up in the major ports. As on March 2017, a total of 33 PPP Projects with an investment of INR 17,817.96 crore are operational and 20 more PPP projects with an investment of INR 22,362.67 crore are under implementation.[50]

Vizhinjam is being developed as transshipment hub under PPP mode by Government of Kerala with Viability Gap Funding from Government of India.

[49] A PIB notification dated 14 July 2017 available on http://pib.nic.in/newsite/PrintRelease.aspx?relid=167425

[50] A PIB notification dated 16 March 2017 available on http://pib.nic.in/newsite/PrintRelease.aspx?relid=159373

The Twelfth Plan envisaged higher share on private investments in the ports and shipping sector

The Government has targeted a total investment of INR 1.98 lakh crore in ports under the Twelfth Plan, which is 4.4 times the investment in the previous plan. In 2014, the Government awarded 30 port projects to the private sector, entailing a total investment of INR 21,000 crore, more than thrice the total cost of projects awarded in 2013.[51/52]

Around 87% of the total targeted investment in the Twelfth Plan is expected to come from the private sector. The remaining 13% shall be funded by the Central and State Governments. This translates into a four-fold increase in private investments, from INR 36,300 crore in the Eleventh Plan to INR 1.7 lakh crore in the Twelfth Plan.[53]

[51] http://economictimes.indiatimes.com/news/economy/infrastructure/sagarmala-project-government-to-spend-rs-70000-crore-on-12-major-ports-says-nitin-gadkari/articleshow/49229434.cms

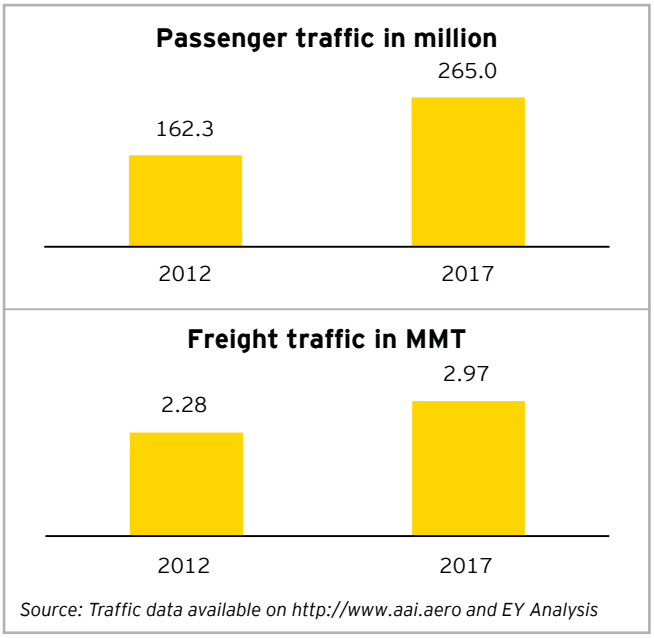
[52] "Shipping Min confident to award Rs 26 k cr projs this fiscal," Press Trust of India, 25 September 2013, via Factiva © 2013 The Press Trust of India Limited; "Experts signal positive outlook for port sector," Dion News Service, 10 March 2014, via Factiva © 2014 Dion Global Solutions Ltd.

[53] "Twelfth Five Year Plan (2012–2017)," Planning Commission, 2013.

2.4 Airports

India's civil aviation industry is on a high-growth trajectory

India is currently ranked 3rd in the aviation market globally[54] with total passenger traffic grown to 264.97 million in 2017 from 162.3 million in 2012 (registering a CAGR of 10.3% over the last five years).



Source: Traffic data available on http://www.aai.aero and EY Analysis

During the same period, aircraft movement increased from 281,223 to 301,633 and freight traffic increased from 2.28 MMT to 2.97 MMT. Operational airports include 18 international airports, 6 JV international airports, 8 customs airports, 45 domestic airports, and 5 state government or private airports.

Rising private participation and investments in the sector

Until 2013, AAI was the only major player involved in developing and upgrading airports in India. Post liberalization, private sector participation in the sector has been increasing. Private sector investment is expected to increase to US$ 9.3 billion during the Twelfth Plan from US$ 5.5 billion in the Eleventh Plan. Currently, five international airports (Delhi, Mumbai, Cochin, Hyderabad, and Bengaluru) have been completed successfully under the PPP mode. These five airports together handle over 55% of the country's air traffic.



[54] A PIB notification dated 30 May 2017, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=163267

The Government of India has granted "in principle" approval for setting up of the 18 Greenfield airports in the country. The list of these airport is as under: Mopa in Goa, Navi Mumbai, Shirdi and Sindhudurg in Maharashtra, Bijapur, Gulbarga, Hasan and Shimoga in Karnataka, Kannur in Kerala, Durgapur in West Bengal, Dabra in Madhya Pradesh, Pakyong in Sikkim, Karaikal in Puducherry, Kushinagar in Uttar Pradesh, Dholera in Gujarat and Dagadarthi Mendal, Nellore Dist., Bhogapuram in Vizianagaram District near Visakhapatnam and Oravakallu in Kurnool District, Andhra Pradesh. Government of India has granted "site clearance" approval for setting up of the 5 Greenfield airports in the country. The list of these airports is as under: Machiwara, Ludhiana Airport, Itanagar in Arunachal Pradesh, Jamshedpur in Jharkhand, Alwar in Rajasthan and Kothagudem in Telangana.[55] Total estimated cost for setting up of above mentioned 18 Greenfield Airports in the country comes out to approximately INR 30,000 crore.

The Government of Goa has issued Letter of Award to the successful bidder for the new airport project at MoPA in Goa, and the foundation stone for the airport was laid on 13th November, 2016. The first phase of construction of the airport is likely to be completed in the year 2019.[56]

National Civil Aviation Policy, 2016 will make regional air connectivity a reality[57]

The policy aims to take flying to the masses by making it affordable and convenient; establish an integrated eco-system that will lead to significant growth of the civil aviation sector to promote tourism, employment and balanced regional growth; enhance regional connectivity through fiscal support and infrastructure development; and enhance ease of doing business through deregulation, simplified procedures and e-governance.

The policy covers 22 areas of the civil aviation sector including Regional Connectivity Scheme (RCS), Route Dispersal Guidelines (RDG), 5/20 requirement, bilateral traffic rights, ground handling policy etc.

Under the RCS, airfare will be capped at INR 2,500 per passenger for a one-hour flight for 50% of the seats. The aim of the 5/20 requirement is to provide a level playing field to all airlines. All airlines can now commence international operations provided that they deploy 20 aircraft or 20% of total capacity, whichever is higher, for domestic operations.

The policy also encourages the development of airports by AAI, state governments, the private sector or PPP mode. It has been decided that the future tariffs at all airports will be calculated on a "hybrid till" basis unless specified otherwise in concession agreements. Thirty % of non-aeronautical revenue will be used to cross-subsidize aeronautical charges.

Under the policy, separate regulations for helicopters will be notified by DGCA after due stakeholder consultation.

RCS to make regional air travel affordable and promote balanced growth

On 30 March 2017, the Government **kick-started its RCS known as UDAN by awarding 128 regional routes to five airlines** – Alliance Air, SpiceJet, Turbo Megha, Air Odisha and Air Deccan.[58]

The objective of RCS is to make flying affordable for the masses, promote tourism, increase employment and promote balanced regional growth. It also intends to breathe life into un-served and under-served airports. Under the scheme, the Government has proposed that at least half the seats on every flight be available under a fare cap of INR 2,500 per seat per hour of flying. On 27 April 2017, the Prime Minister, Shri Narendra Modi, launched **UDAN from Shimla Airport.[59]**

---

[55] A PIB notification dated 21 March 2017 available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=159645

[56] A PIB notification dated 22 November 2016 available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=154056

[57] A PIB notification dated 15 June 2016 available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=146238

[58] Source: http://www.thehindubusinessline.com/economy/logistics/43-airports-to-get-flights-under-regional-air-connectivity-scheme-minister/article9607388.ece

[59] A PIB notification dated 27 April 2017 available at http://pib.nic.in/newsite/printrelease.aspx?relid=161335

Much awaited Jewar airport gets government's nod

It is estimated that the capacity of the Indira Gandhi International Airport in Delhi would be exhausted by 2024 based on expected traffic growth. Therefore, the NCR region would require a second airport in the next 7-10 years. The Government has granted in-principle approval for a green-field airport at Jewar in Greater Noida in view of the rapidly growing flying requirements of the NCR region.[60]

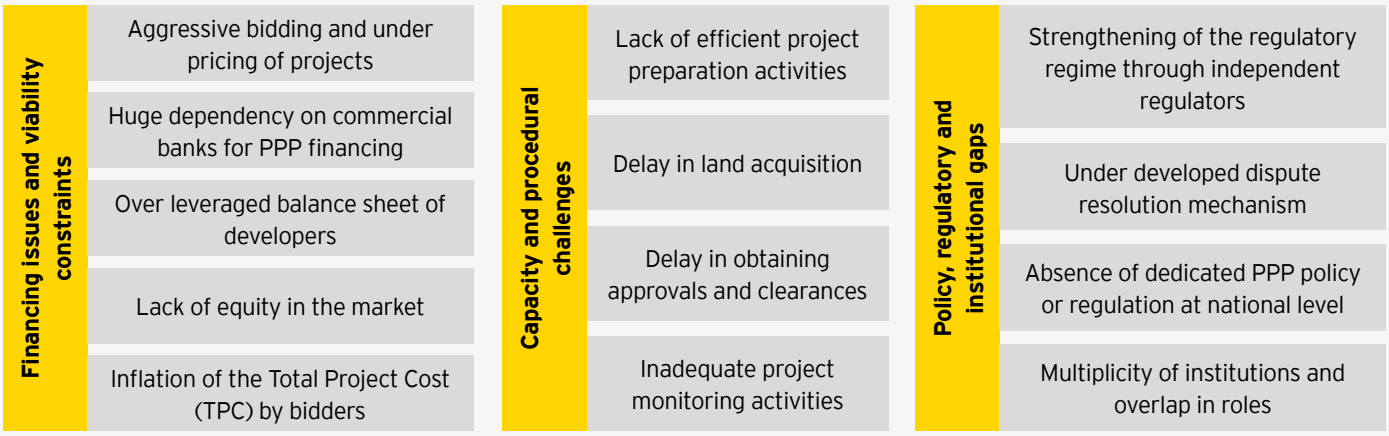


[60] A PIB notification dated 24 June 2017 available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=166876

3 Impediments in scaling up PPP implementation



Challenges across the PPP lifecycle can be broadly classified into three categories: i) financing issues and viability constraints, ii) capacity and procedural challenges, and iii) policy, regulatory and institutional gaps. Issues such as aggressive bidding, underpricing of projects and funding constraints can be clubbed under the financing issues and viability constraints category. Institutional challenges including multiplicity of approval system capacity and resource constraints, information dissemination etc. can be clubbed under capacity and procedural challenges category. Besides, issues such as unbalanced risk sharing, dispute resolution and delay in approvals and clearances may be clubbed under the policy, regulatory and institutional gaps category. It is to be noted that some issues may fall under more than one category.



3.1 Financing issues and viability constraints

PPP projects in the transport sector are facing financing issues, including aggressive bidding, underpricing of projects, and funding constraints (debt and equity). These financing issues are discussed below.

Aggressive bidding and underpricing of projects

Aggressive bidding and underpricing of projects have been a big challenge in the transport sector, particularly in roads and ports projects. India witnessed a cycle of aggressive bidding between 2009 and 2012 under the Build-Operate-Transfer (BOT) model for NHAI projects. Underpricing of projects can be observed in EPC and the newly adopted Hybrid Annuity Model (HAM) projects in roads and some ports projects during the last few years. Aggressive bidding is one of the major reasons for delays or cancellation of PPP project as banks are becoming more and more cautionary in funding such projects. It also causes low participation from genuine bidders.

Example 1

- Underpricing of projects is one of the biggest challenges in highways development. Often, the total project cost (TPC) is 30% lower than the actual costs.[61] In case of termination of the project, the NHAI's termination payments are linked to the TPC and not the actual cost, which leads to private players running into losses.[62] ICRA's sample study of 80 National Highway (NH) projects awarded during 2015 and 2016 on EPC mode suggests that more than two-third of the NH projects awarded through the EPC route were quoted at a discount to NHAI's base price, with some EPC contracts being awarded for as low as 62%–75% of NHAI's base price.[63]

[61] EY Research

[62] "Challenges before Modi govt in reviving road sector," ET Auto website, assessed on 10 August 2015.

[63] Source: http://www.constructionworld.in/News.aspx?news=Aggressive-bidding-seen-for-EPC-projects-in-road-sector-&nid=oc5Q0+u7/UIEMX/bgZ27wQ==

Example 2

- In 2011, selected bidder for the fourth container terminal project at Jawaharlal Nehru Port agreed to share about 52 % of the revenues with the Government. After the project was awarded, the bidder refused to sign the concession agreement, forcing the port trust to withdraw the letter of award. Two years later, the same project was re-tendered and the same company was given the project but at a much lower revenue share of about 35 per cent.[64] In the process, not only was the project delayed by more than two years, its cost too had gone up significantly.

Huge dependency on commercial banks for PPP financing

Project sponsors in PPP projects depends hugely on commercial banks for financing the debt portion of the project. These banks have reached their corresponding exposure limits for the sector and run with high level of non-performing assets (NPAs) in the sector. Therefore, the infrastructure sector, in particular the transport sector, has been facing financing constraints of lately.

Key challenges faced by the commercial banks in PPP financing

- Commercial banks have been the largest contributor of PPP financing in India since the beginning. As on March 2016, outstanding credit to the sector stood at approximately INR 9.6 lakh crore (20% CAGR during 2009-2016) and exposure to the sector stood at around 35%.
- Asset liability mismatch (ALM) has always been a major concern for banks due to long tenor of infrastructure loans and short tenor of retail deposits. Basel-III liquidity norms has put further pressure on banks to undertake prudent financing.
- Poor selection and appraisal of projects by banks is one of the key reasons for relatively high non-performing assets (NPAs). As on March 2016, bank's infrastructure NPAs stood at around 7.6%.

Over leveraged balance sheet of developers

- The projects awarded are saturated among a few players. A variety of reasons including macroeconomic conditions, project delays and aggressive bidding have resulted in poor recovery from the projects, thereby making these companies over leveraged. This limits their capacity to raise funds from external sources and to take any more new projects. As per an estimate, 70% of the projects awarded in the highway sector are with the 30-40 prominent highways development companies.
- Balance sheets of most prominent developers in the country are stressed and over leveraged. This festers twin balance sheet problem and results in inter-twined economic issues of over leveraged and distressed corporate and NPA encumbered banks.
- It is estimated that around 40 % of the corporate debt was owed by companies, many of them in the infrastructure (especially power generation) and metals sectors, which had an interest coverage ratio less than 1, meaning they did not earn enough to pay the interest obligations on their loans.[65]

[64] Source: An article on "How to clean up the PPP mess" dated June 19, 2014 available at http://www.thehindubusinessline.com/opinion/how-to-clean-up-the-ppp-mess/article6130579.ece

[65] Chapter 4 of the Economic survey 2016-17

[66] Source: http://www.hindustantimes.com/business/now-debt-ridden-gvk-puts-its-road-projects-up-for-sale/story-5ReKDHPoToc5m5NYHfAWwK.html

Lack of equity in the market

- Further, there is a shortfall in equity capital with local sponsors. Delays in execution of projects further lead to equity getting trapped in ongoing projects, thus not being available for newer projects.
- For example, in several sections (Motihari-Raxaul section, Rohtak-Jind section, Gurgaon-Kotputli-Jaipur section, Haridwar-Dehradun section etc.), the lack of equity with the concessionaires has delayed the projects much beyond the scheduled completion date. In some projects, this has also resulted in the bankers not disbursing even the loan sanctioned at financial close.

Lack of equity in the market

- Further, there is a shortfall in equity capital with local sponsors. Delays in execution of projects further lead to equity getting trapped in ongoing projects, thus not being available for newer projects.
- For example, in several sections (Motihari-Raxaul section, Rohtak-Jind section, Gurgaon-Kotputli-Jaipur section, Haridwar-Dehradun section etc.), the lack of equity with the concessionaires has delayed the projects much beyond the scheduled completion date. In some projects, this has also resulted in the bankers not disbursing even the loan sanctioned at financial close.

Inflation of the Total Project Cost (TPC) by bidders

It has been observed that some developers play opportunistically, facilitated by poor appraisal capacity of banks, by inflating the TPC and thereby achieving financial closure at an amount substantially greater than the reasonable TPC. If the project is then jeopardized, the funds at risk are those of the lenders as there is virtually no obligation on the developer.

3.2 Capacity and procedural challenges

Many steps have been taken so far to address capacity and procedural challenges in the implementation of PPP projects. These steps include development of PPP approval mechanism, creation of autonomous bodies, launching of capacity building programs and publishing of guidelines, toolkits and MCAs. Despite these efforts, PPP projects in India face challenges such as lack of efficient project preparation activities, delay in land acquisition, delays in obtaining requisite approvals and clearances, and poor project monitoring activities. The capacity and procedural challenges in PPP projects are discussed below.

Lack of efficient project preparation activities

One of the most important steps in a PPP life cycle is the project preparation activities. Proper planning and preparation of projects improves the chances of success and smooth project implementation. Project preparation activities involve Value for Money (VfM) or Public Sector Comparator (PSC) analysis, project structuring, risk assessment, and technical and financial due diligence. Other activities such as approvals and clearances can also form part of project preparation.

Despite the availability of an online toolkit on project preparation procedures, there is lack of capacities at various levels of government to properly plan and prepare PPP projects. Lack of capacities at various levels of the governments are evident in project preparation activities in many projects, resulting in problems such as cancellation or delay of project, arising of disputes and undue advantages to the private partner.

A study of roads sector projects suggests that there is an inverse relation between spending on DPR preparation and cost overruns in a project. It is observed that low investment in planning and engine engineering in India generally leads to high costs of implementation. India spends around 2% of the project cost on DPR preparation, whereas developed countries such as England (approximately 5%) and the US (6%-9%) spend much more. On average, cost overruns in projects in India are more than thrice the cost overruns in these countries.

Examples of issues with traffic estimations[68]

- In the Delhi–Gurgaon Expressway project, NHAI relied on an outdated traffic study. Thus, the actual traffic volume grossly outnumbered the projections from the very beginning of commercial operations. In fact, as soon as the expressway was opened to traffic, the unexpected high number of vehicles led to heavy queuing at the tollbooths and delays in traversing the stretch.
- Similarly, in the Gangavaram Port project, realistic traffic projections were not prepared, thus leading to speculative bids. The government of Andhra Pradesh had to reject the bids and the process was launched again. This could have been avoided if robust traffic projections had been prepared and shared with the bidders. The launch of the bid process delayed the commencement of the port development.

Examples of lack of clarity on determination of tariff

- In the Nhava Sheva Integrated Container Terminal project, lack of clarity in the concession agreement on whether the royalty payment was to be considered as a part of cost or a share in the profit in the SPV's accounts while determining the port tariff, became a serious issue between the public and the private sector. Measures were adopted to address these inconsistencies but with limited success.

Delay in land acquisition and/or delay in obtaining approvals and clearances

Infrastructure projects require multiple clearances at the center, state and local levels, resulting in serious delays. The time taken to obtain all the requisite approvals for an infrastructure project can vary between

[68] "Public Private Partnership Projects in India: Compendium of case studies," Department of Economic Affairs, Ministry of Finance, Government of India, December 2010, https://www.pppinindia.gov.in/toolkit/pdf/case_studies.pdf

a low of 18 months to as much as four to five years. Land acquisition and environmental clearance are the major contributing factors for project delays.

Examples of delay due to land acquisition or approval and clearances

- As on 8 August 2016, as many as 112 NHAI projects including projects under implementation are delayed beyond the scheduled date of completion. Delay in land acquisition, utility shifting, non-availability of soil/aggregates, and delay in statutory clearances are some of the key reasons for delay in projects execution.[69]
- The first phase of the Navi Mumbai airport was supposed to be operational by end-2014 or early 2015. However, the project may not take-off before 2017 mainly due to inordinate delays in land acquisition and securing environment clearance. It took three years to obtain environment clearances. Further, delay in land acquisition has resulted in a lag in issuing request for qualification (RFQ) to shortlist bidders.[70]

Inadequate project monitoring activities

Project monitoring involves identification and enforcement of the Concession Agreement clauses during project implementation i.e. during construction and O&M period. Key activities include monitoring of the construction timeline, ensuring performance and safety standards, preventing misuse of assets, preventing any revenue or fund leakages, etc. While many activities are regularly monitored by the project authorities either directly or through an appointed agency, projects are not efficiently monitored on certain aspects like revenue safeguarding or fund management.

Problems arising due to poor project monitoring

- Revenue leakage has been a major problem in highway projects, particularly projects involving revenue share with the authority. NHAI, on a pilot basis, awarded the toll collection job at 11 toll plazas to private parties and the revenue increased by 23 %. According to estimates, the government is losing over INR 1,500 crore annually due to leakages in toll collections.[71] It is estimated that revenue leakage in a highway toll project is as high as 20 %.
- NHAI has observed that in few road projects, amount of funds withdrawal does not commensurate with the physical progress of the project. These are likely cases where the funds may not have been utilized towards the projects and concessionaires are finding it difficult to bring back the funds so diverted.

[69] "Regulatory issues, land acquisition delay 112 NHAI projects," Indian Express, http://indianexpress.com/article/india/india-news-india/regulatory-issues-land-acquisition-delay-112-nhai-projects-mansukh-lal-mandaviya-2961503/

[70] "Land acquisition delays may push Navi Mumbai airport take-off to 2017," The Business Standard, http://www.business-standard.com/article/companies/land-acquisition-delays-may-push-navi-mumbai-airport-take-off-to-2017-112122300036_1.html

[71] "Revenue Assurance in Highway Toll Management - The Road Ahead," A research report by KPMG

3.3 Policy, regulatory and institutional gaps

Besides financial issues and capacity and procedural challenges, there are policy, regulatory and institutional gaps that need to be filled in order to strengthen the PPP ecosystem in the country.

Need to strengthen the regulatory regime through independent regulators

Due to the long-term nature of PPP contracts, uncertain market conditions, lack of capacity at both government and private player levels, etc. disputes are bound to arise during the life cycle of PPP projects. Absence of regulators or multiplicity of regulators results in many of these issues and disputes being unresolved, leading to litigations and cases. This in turn leads to delays or cancellation of projects and results in cost escalation, thereby making the projects unviable.

Major gaps and challenges in existing regulatory regime

- In the roads sector, NHAI has held the double portfolio of a highway regulator as well as a nodal agency for the development, operation and management of highways in India. At present, NHAI, also a signatory to PPP projects, plays various roles and is addressed as the accused and defendant in several cases. NHAI is also entrusted with making policy decisions on matters, creating a conflict of interest and raising the need for an independent regulator.[12] The Ministry of Road Transport and Highways (MoRTH) decided to constitute a regulator with adjudicatory powers to resolve issues around road projects and subsequently prepared the draft Regulatory Authority for Highways in India Bill, 2013.
- Both NHAI and the Planning Commission had reservations on certain aspects of the drafted Bill. Reopening of concession agreements was cited as a major concern since it has been believed that renegotiations often tend to benefit the private sector more.
- In the railways sector, passenger and freight tariffs on Indian Railways are often influenced by political decisions. Due to cross-subsidization of passenger fares, Indian Railways has lost its share of freight traffic to other modes of transport. There had been serious concerns about the financial sustainability of the Indian Railways system as a whole. In this context, the government approved a major policy reform in Railway sector in 2017. The Rail Development Authority (RDA) will be set up within the ambit of the Railway Act, 1989 to perform functions such as pricing of services, enhancement of Non Fare Revenue, protection of consumer interests, creation of positive environment of investment, benchmarking of service standards etc.[73] Since RDA comprising a Chairman and three Members shall make recommendations to Government for appropriate consideration/decision, it is yet to be seen as to what extent the government approves the recommendations of RDA. Therefore, in essence, the Railways Board would continue to function as a regulator.
- In the ports sector, The Tariff Authority for Major Ports (TAMP) was constituted in April 1997 to provide for an independent Authority to regulate all tariffs, both vessel related and cargo related, and rates for lease of properties in respect of Major Port Trusts and the private operators located therein. The Major Ports Trust Act, 1963 was amended by Port Laws (Amendment) Act 1997 to constitute the TAMP. While TAMP structure was initially put in place to prevent monopolistic behavior by terminal operators, the TAMP guidelines issued in 2013 regarding tariff hike linked to performance has been hindering the growth of major ports which now faces huge competition from minor ports that has the liberty to fix their own tariff.[74] Hence, there is a need to review TAMP regime to ensure level-playing field for major and minor ports.

[72] "The long road to a regulator," an article published in Business Standard, http://www.business-standard.com/article/opinion/the-long-road-to-a-regulator-114012600735_1.html

[73] A PIB notification dated 12 April 2017 available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=160937

[74] "Major ports regulator on way out; rates to be market-based," An article published in Business Standard, available at http://www.business-standard.com/article/economy-policy/major-ports-regulator-on-way-out-rates-to-be-market-based-114120401040_1.html

Need to strengthen the regulatory regime through independent regulators

- In airports sector, Airports Economic Regulatory Authority (AERA) was established by the government in 2009 as a statutory body under the Airports Economic Regulatory Authority of India Act, 2008 to act as an economic regulator of the airport infrastructure sector and air navigation services in the country. There have been multiple instances of AERA's decisions being overturned by the government, thereby raising concerns over its autonomy. For example, AERA had passed an order in 2014 to use Single Till methodology in determination of tariffs of GMR Hyderabad International Airport Limited (GHIAL). GHIAL challenged the order and the Honorable High Court of Andhra Pradesh directed Ministry of Civil Aviation (MoCA) to pass an order on the appropriate Till methodology to be used for tariff determination of GHIAL. Subsequently, MoCA vide its order dated June 11, 2015 has directed AERA to adopt a Hybrid Till with 30% cross subsidization for the tariff determination of GHIAL.[75] In light of such instances, there is a need to relook and streamline the roles of the regulator in airports sector.
- Further, the Planning Commission of India has drafted a separate Bill, titled the Regulatory Reform Bill, 2013, setting out principles by which all regulatory authorities must abide. Under the Regulators Bill, the government has the power to limit the tariff-making power of a regulatory authority, by notification.[76] This might lead to clash between the government and the regulator on the applicability of notified tariffs. Hence, these kinds of overlaps and gaps need to be addressed to create effective regulators in the transport sector.

Underdeveloped dispute resolution mechanism

Dispute resolution mechanisms are slow and not very well developed, often derailing project timelines and freezing funds. According to the Chaturvedi Committee Report on the faster implementation of the National Highway Development Project (NHDP), an investment to the tune of INR 10,000 crore is held up in the NHDP alone, on account of the disputes between the National Highway Authority of India (NHAI) and the contractors.[77]

While some states have developed framework and institutions in their states to fast-track the dispute resolution mechanism for PPP projects, there is absence of an efficient and credible dispute resolution mechanism at the national level. Various methods of alternative dispute resolution like amicable settlement, conciliation mediation, arbitration, expert adjudication, etc. are generally provided for in the concession contracts. However, these methods are proving to be inadequate for timely resolution of conflicts and issues in PPP projects.

Mode of dispute resolution at state level[78]

- In Punjab, Punjab Infrastructure Regulatory Authority, with powers of civil court, is empowered to adjudicate disputes between two or more Concessionaires, operators of infrastructure projects, the State Government and the Board. Appeal can be referred to the High Courts.

[75] GMR Hyderabad International Airport: Approval of Hybrid Till with 30% cross-subsidization,", an article published in the Hindu Business Line, available at http://www.thehindubusinessline.com/companies/announcements/others/gmr-hyderabad-international-airport-approval-of-hybrid-till-with-30-crosssubsidization/article7306078.ece

[76] "The need for a roads regulator: a tale of two bills,", an article by Economic Laws Practice, http://www.lexology.com/library/detail.aspx?g=dbe66fb7-a735-4b4e-b808-1bc2131fdd19

[77] Second Report of the Committee under the chairmanship of Shri B.K Chaturvedi available at http://planningcommission.nic.in/reports/genrep/rep_nhdp_2.pdf

[78] "Rethinking Dispute Resolution in Public–Private Partnerships for Infrastructure Development in India," An article by Harisankar K.S and Sreeparvathy G. published in 2013, available at http://www.nlujodhpur.ac.in/downloads/JOI_5-1_02.pdf

- In Andhra Pradesh, a Conciliation Board is set up, which shall have the powers of a civil court. The settlement award by the Board under the Andhra Pradesh Infrastructure Development Enabling Act, 2001 shall have the same effect as that of an arbitral award under the Arbitration and Conciliation Act, 1930. There is a bar on the parties to resort to arbitral or judicial proceedings during the conciliation procedure.
- In Bihar, a Conciliation Board is set up which shall assist the Government Agency, or Local Authority and any Developer in an independent and impartial manner to reach an amicable settlement of their disputes arising under the Bihar Infrastructure Development Enabling Act, 2006 or the Concession Agreement. Every proceeding before the Board shall be deemed to be a judicial proceeding and it shall be deemed to be a Civil Court. Subordinate courts are barred by providing that dispute settlement or dispute resolution in respect of any matters under the Act shall be heard only by the High Court and by no other court or courts subordinate to the High Court.

Absence of dedicated PPP policy or regulation at national level

Some countries have a legal framework for PPPs in the form of PPP act/law/policy. A comprehensive National PPP act/policy which should clearly spell out the objectives, scope and implementing principles of the PPP program envisaged by the Government is required to impart an authoritative framework to implementing executive agencies as well as to legislative and regulatory agencies charged with oversight responsibilities.

It may be relevant to mention that an attempt to formulate a National PPP Policy was made by the Ministry of Finance (DEA) in 2011 but it could not be concluded. Hence, there is a need to assess what went wrong in the process and whether we really need a Policy or Act to facilitate successful expansion of PPP in the country.

Multiplicity of institutions and overlap in roles

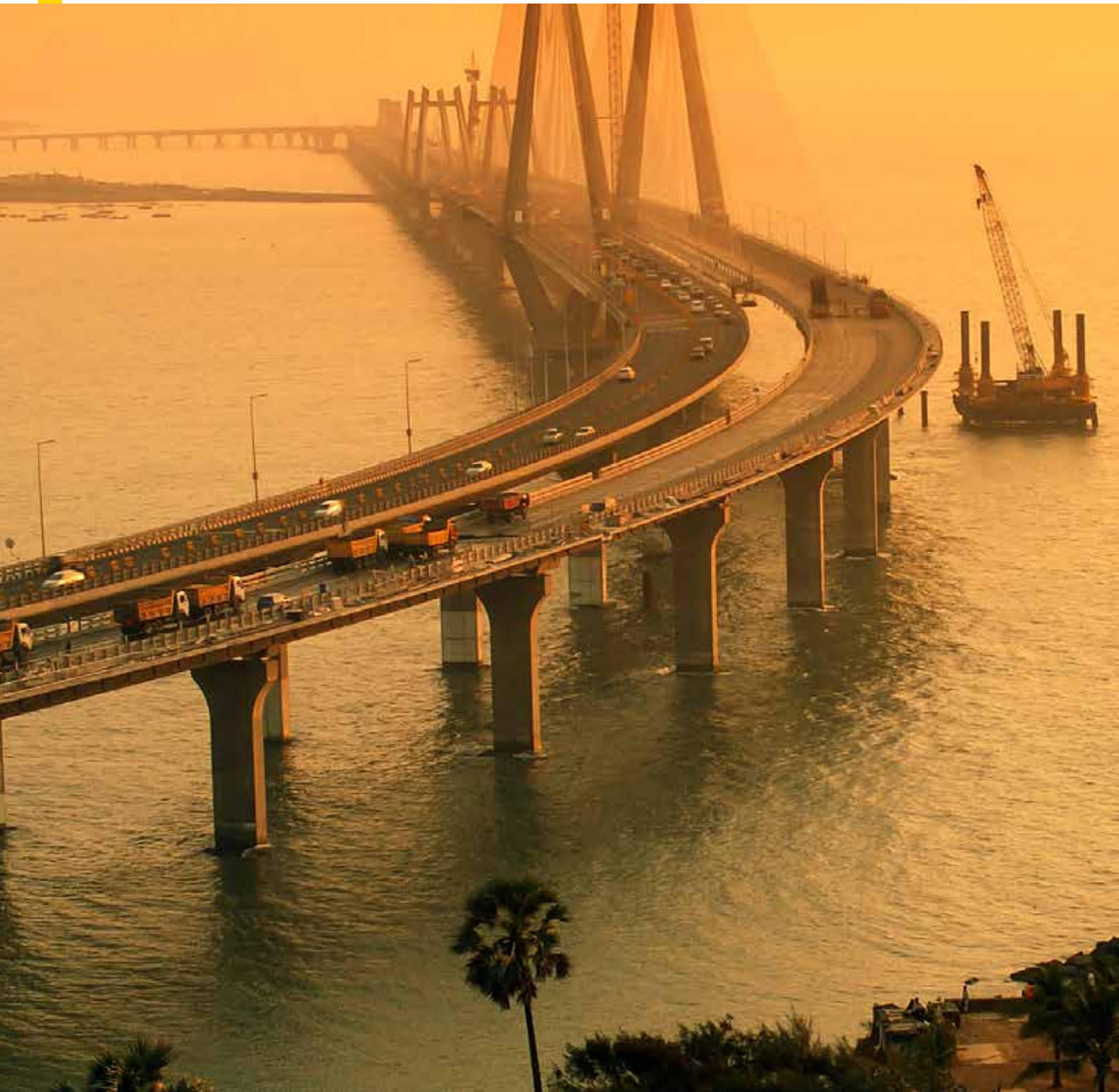
Governments at all levels, including urban local bodies (ULBs), line departments, state agencies, are by and large unable to create a steady pipeline of projects due to institutional capacity constraints. The network of multiple agencies involved in project implementation and an overlap in the functions of these agencies is leading to inordinate project delays. Agencies involved in PPP projects include NITI Aayog (erstwhile Planning Commission), Ministry of Finance, Department of Economic Affairs (DEA), various ministries, statutory entities like NHAI, AAI, and state governments.

For example, in May 2015, the Union Ministry of Civil Aviation withdrew the "in-principle clearance" granted in 2011, for the proposed KGS Aranmula International airport. This came after the National Green Tribunal (NGT) had cancelled the environment clearance granted to the project, by the Union Ministry of Environment and Forests, and the Ministry of Defence withdrew the No Objection Certificate (NOC) conveyed to the project.[79]

[79] "Civil Aviation Ministry withdraws nod," The Hindu website, assessed on 10 August 2015.

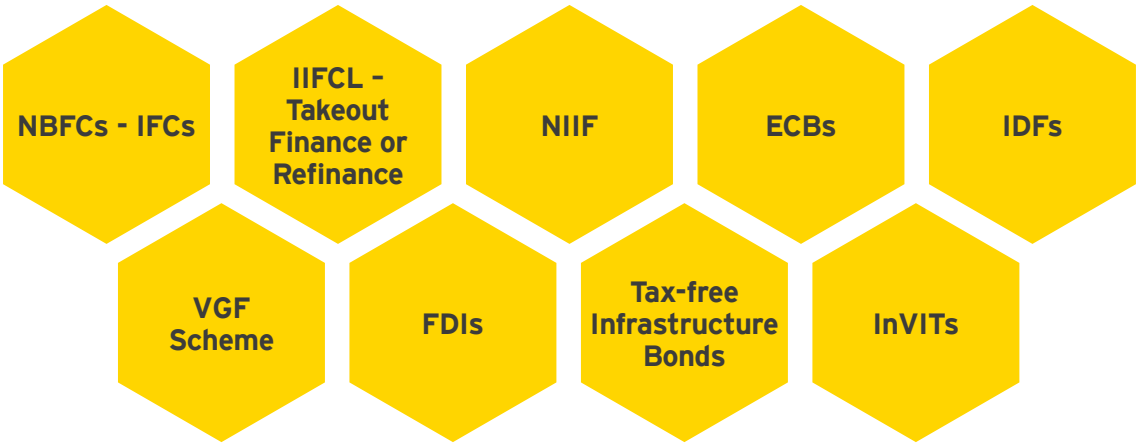


4 Initiatives taken by the Government to tackle issues



4.1 Steps taken to resolve financial issues and viability constraints

The government has undertaken several initiatives to reduce dependency on commercial banks and improve the PPP financing market in the country. In the past, VGF scheme was launched and institutions such as IIFCL and IDFs were created. The government, through these institutions, also introduced financing instruments such as take-out finance, refinance, Masala bonds etc. to boost private investments in the infrastructure sector.



The box below highlights the steps taken by the government to resolve financial issues in chronological order.

Name of scheme or institution or instrument	Description about the scheme / institution / instrument	Performance or status
Viability Gap Funding (VGF) scheme	**VGF scheme set up to fund economically justifiable but financially unviable projects** In the beginning of 2000s, many roads and power projects were stuck despite the availability of financing in the market. These projects were economically justifiable but financially not viable. Hence, in 2004, the Government of India launched the VGF scheme to reduce the capital cost of the projects by credit enhancement, and to make them viable and attractive for private investments through supplementary grant funding.	As on 16 May 2017, 61 projects worth INR 34,112 crore had been granted final approval under the VGF scheme. Out of 61 projects, 51 projects belong to the transport sector.
India Infrastructure Finance Company Ltd. (IIFCL)	**IIFCL was created to reduce the financing cost for infrastructure projects** Despite VGF scheme and other policy reforms, there were many infrastructure projects that were financially viable but, in the then current situation, faced difficulties in raising resources due to higher cost of funding. In 2006, the Government of India approved a Scheme for Financing Viable Infrastructure Projects (SIFTI) through a Special Purpose Vehicle (SPV) called the India IIFCL. ...*Cont'd*	As on March 2016, IIFCL had a lending portfolio of INR 48,900 crore. In addition, IIFCL had been able to raise INR 5,800 crore through bonds as on December 2015.

Name of scheme or institution or instrument	Description about the scheme / institution / instrument	Performance or status
	Besides direct lending to projects through the SIFTI scheme, IIFCL subsequently designed many financing products to ease banks' exposure to the sector and create environment for bond market. Though Take Out Financing (which offers to free up bank capital for financing new projects by taking over banks loan) has not worked effectively, other products such as refinancing (used to effectively address Asset-Liability mismatch of commercial banks and FIs) and credit enhancement scheme (credit enhancement of at least BBB rating commercially viable infrastructure project to raise bonds for repayment of debts) has gathered much response.	
Non-Banking Financial Companies (NBFCs) - Infrastructure Finance Companies (IFCs)	**RBI introduced NBFCs to provide credit facilities to projects** In a next step, Reserve Bank of India (RBI) introduced a special category of NBFCs known as IFCs in 2010 to provision of credit facility including term loan, and project loan subscription to bonds/ debentures/ preference shares/ equity shares in a project company to the infrastructure sector. RBI mandates that minimum 75% of total assets of the IFC be deployed in infrastructure loans.	IFCs have been a success so far with 9 IFCs existing as on January 2017. Size of infrastructure loan portfolio was INR 6.6 lakh crore as on March 2015 with only 1.6% NPAs.
Tax-free infrastructure bonds	**First tax-free infrastructure bonds were issued in the country** Till 2010, there was no direct involvement of retail investors in PPP financing in India. In 2010, IDFC launched the country's first tax-free infrastructure bonds to raise INR 3,400 crore. In 2016, the Government of India allocated INR 40,000 crore for raising funds through tax-free infrastructure bonds.	
Infrastructure Debt Funds (IDFs)	**IDFs act as vehicles for refinancing existing debt of infrastructure companies** The involvement of domestic/offshore institutional investors had been low in infrastructure financing. In order to tap resources from insurance and pension funds (which have normally long term tenure), the Government of India made provisions for creation of IDFs, which would act as vehicles for refinancing existing debt of infrastructure companies.	There has been little success as banks are unwilling to let go their performing assets. As a result, IDFs have total assets of INR 6,000 crore, which is miniscule when compared to bank lending of INR 9.6 lakh crore.

Name of scheme or institution or instrument	Description about the scheme / institution / instrument	Performance or status
Masala bonds	**Rupee denominated bonds or masala bonds were launched to eliminate foreign exchange risk** Currency risks had been restricting foreign investors to invest in infrastructure bond market in India. In order to tap in the huge offshore potential, a new product known as rupee denominated bonds or masala bonds was launched to eliminate foreign exchange risk. Multilateral agencies such as Asian Development Bank (ADB) and IFC utilize their credit worthiness to raise local currency bonds from international markets.	For example, ADB has recently issued its fourth bond issue in the offshore market to raise INR 700 crore through Rupee-linked bonds.
National Infrastructure Investment Fund (NIIF)	**NIIF has been created to rescue ailing projects and provide a stimulus to PPP financing** Many projects have been stuck due to various reasons, including aggressive bidding and lack of financial capacity of developer to raise additional funding for the project. To rescue such ailing projects and provide a stimulus to PPP financing, the Government of India has created National Infrastructure Investment Fund (NIIF) in 2015 with an initial corpus of INR 40,000 crore (including 49% Government of India contribution).	
Infrastructure Investment Trusts (InvITs)	**InvITs would act as an enabling vehicle for refinancing stressed assets** Several existing infrastructure projects that are under development in India are delayed and "stressed" on account of varied reasons, including increasing debt finance costs, lack of/locked up equity of private investors in projects which precludes them from undertaking new projects, lack of international finance flowing to Indian infrastructure projects, project implementation delays caused by various factors like global economic slowdown, cost overruns, inability of concessionaire to meet funding requirements on time, etc. Hence, in 2014, SEBI (a regulatory body) paved the way for the creation of InvITs, which would act as an enabling vehicle for refinancing such assets as well as creating an investment option which may otherwise not be possible for smaller investors.	In 2016, SEBI granted three companies – IRB Infrastructure, GMR and MEP Infrastructure – permission to launch the trusts.

Besides these measures, the government has taken many policy decisions to increase private sector funding in the sector.

- CCEA has approved a comprehensive Exit Policy framework in the roads sector that now permits concessionaires/developers to divest 100% equity two years after completion of construction. This would help unlock equity from completed projects making it potentially available for investment into new projects.
- With a view to ameliorate the shortage of equity and improve liquidity of the prospective bidder, NHAI board has approved granting of permission by NHAI to the Concessionaires of PPP projects, which have toll/annuity revenue significantly surplus to the repayment obligations to raise subordinate loan on the strength of future surplus cash flows of their operational BOT Road projects.[80]
- In the railways sector, the government has signed a Memorandum of Understanding with LIC of India for obtaining funds to the tune of INR 1.5 lakh crore. Further, MOF has approved issuance of tax-free bonds by IRFC amounting to INR 6,000 crore.[81]
- Further, the government is planning to set up a Railway Infrastructure Development Fund of around US$ 30 billion to finance railways projects. It is envisaged that all special purpose vehicles and concessionaires will be able to draw from the fund in the form of equity and debt. The fund may be set up through contribution from domestic and international pension funds along with domestic and multilateral borrowings agencies.[82]
- As on date, 100% FDI under automatic route is allowed for roads, ports and airports development projects.[83] 100% FDI is allowed in identified areas of railway sector.[84]
- In order to expand the source of funding for the infrastructure sector, RBI has allowed infrastructure companies and non-banking finance companies (NBFCs) that lend to the sector to raise external commercial borrowings (ECBs) with a minimum maturity of five years subjected to 100% hedging.[85] Earlier, the maturity period limit was 10 years. It is envisaged that this move will make it easier for infrastructure companies to raise funds as well as refinance costlier debt, as loans with shorter maturity are cheaper than long-term borrowings. However, demand for 100% hedging may put off many borrowers.
- For the transport sector as a whole, including rail, roads, and shipping, provision of INR 2.41 lakh crore has been made in the union budget of 2017-18. In the road sector, budget allocation for highways increased from INR 57,976 crore in BE 2016-17 to INR 64,900 crore in 2017-18. For 2017-18, the total capital and development expenditure of Railways has been pegged at INR 1.31 lakh crore. This includes INR 55,000 crore provided by the Government.[86]

[80] NHAI circular dated 29 May 2013 and Report no. 236 of Rajya Sabha on "Infrastructure lending in roads sector," August 2016, point 66, p. 29.

[81] A PIB notification dated 2 June 2016, available at http://pib.nic.in/newsite/mbErel.aspx?relid=145908

[82] "Indian Railways to set up Rs. 35,000 crore fund for projects," an article published in the Hindu, available at http://www.thehindu.com/business/indian-railways-to-set-up-35000-crore-fund-for-projects/article18586076.ece

[83] A PIB notification dated 20 June 2016, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=146338

[84] A PIB notification dated 2 June 2016, available at http://pib.nic.in/newsite/mbErel.aspx?relid=145908

[85] RBI circular dated 30 March 2016, available at https://rbi.org.in/scripts/NotificationUser.aspx?Id=10314&Mode=0

[86] "Key features of Budget 2017-18," available at http://indiabudget.nic.in/ub2017-18/bh/bh1.pdf

4.2 Steps taken to tackle capacity and procedural challenges

The government has taken some concrete steps to tackle capacity and procedural challenges faced during implementation of PPP projects in the country. One such step is the setting up of the Project Monitoring Group (PMG) in 2013 under the Cabinet Secretariat to monitor and fast-track the stalled PPP projects in the country. The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR) which came into force from 1 January 2014 may be termed as another step in the right direction despite having some gaps which need to be filled. The government is in the process to amend the LARR Act, 2013 to fill those gaps. Standardization of documents has been undertaken to facilitate faster approval and preparation of PPP projects.

The PMG has been set up to expedite implementation of large projects

The PMG is an institutional mechanism for resolving a variety of issues, including fast-tracking the approvals for setting up and expeditious commissioning of large public and PPP projects. PMG has been functioning under Prime Minister's Office (PMO) since 14 September 2015. The projects considered by PMG mainly pertain to sectors such as national highways, railways, civil aviation and shipping, petroleum and natural gas, chemicals and fertilizers, coal, power and mines, and cement, construction and steel. PMG is tasked to resolve issues and clearances at both union ministries and state government levels. Types of issues/clearances considered for resolution by the PMG are listed in the table below.[87]

Union ministries

- Environment, forest and wildlife clearances
- Eco-sensitive zone clearance
- Tree cutting permission
- Grant of working permission by Forest Department
- Approval for private railways siding construction
- Industrial license permission
- Road crossing of pipelines/transmission lines
- Grant of right of way
- Shifting of utilities

State governments

- Land acquisition issues
- Removal of encroachments
- Relief and rehabilitation plan
- Certificate under the Forest Rights Act
- Power and water supply
- Consent to establish and operate from the State Pollution Control Board
- Transfer of government land
- Law and order issues
- Right of way permission

All of PMG's processes are online, with the aim of achieving enhanced efficiency and greater transparency, thereby fast-tracking the entire process of approvals and communication between investor and Government. E-suvidha portal (http://esuvidha.gov.in/) has been created to facilitate the resolution process. The PMG further went on to digitize the applications for forest and environment clearances. The purpose of this was to help the Government further speed up the process in a more transparent manner and track the progress of projects. This would help in building customer confidence and in attracting more private investments.

PMG's performance so far

As on 31 March 2017, the group had facilitated the speedy implementation of 503 projects, with investments of over INR 17 lakh crore, by addressing issues such as limited fuel availability, green clearances and land acquisition. The group is currently reviewing 251 projects worth INR 10.7 lakh crore.

Out of the 251 projects, 129 projects (51.3%) are in the transport sector. A break-up of the 129 projects in given below.

Road transport and highways – 71 projects | Railways – 54 projects Shipping – 3 projects | Civil aviation – 1 project

After PMG's national success, some states such as Odisha, Uttrakhand, Rajasthan and Uttar Pradesh have introduced their individual PMG mechanism to address the problems faced by the PPP projects in their states.

[87] "Role of the Project Monitoring Group (PMG)," accessible at http://www.pmindia.gov.in/en/role-of-project-monitoring-group-pmg/

Standardization of documents facilitates faster approval and preparation of PPP projects

Key principles and best practices related to bidding and awarding of PPP projects are being incorporated through the development of standardized guidelines and model documents. These documents include:

- Model Concession Agreements (MCAs), which are being designed in accordance with the international standards. The guidelines clearly state the policy and regulatory framework, which is essential to address the hurdles in PPPs.
- Model bidding documents subject to pre-qualification and selection of bidders and for selection of technical, financial and legal consultants for PPP projects.
- Guidelines for the formulation, appraisal and approval, financial support, and monitoring of PPP projects.
- Manual of standards and specifications for two-lane and four-lane highway projects.

LARR Act being amended to further streamline the land acquisition process

ARR Act, 2013 was enacted to bring transparency in the land acquisition process and provide fair compensation to the affected parties. It was a step in the right direction; however, there are some gaps in the Act that are still causing delays in land acquisition for infrastructure projects. Hence, the government seeks to amend the LARR Act, 2013 by bringing in the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Amendment) Bill, 2015 (LARR Amendment Bill 2015). Major changes suggested in the approved Bill is discussed below.[88]

Creation of five special categories	The Bill creates five special categories of land use: 1. defence, 2. rural infrastructure, 3. affordable housing, 4. industrial corridors, and **5. infrastructure projects including Public Private Partnership (PPP) projects where the central government owns the land**
Exemption from consent of land owners	The Bill exempts the five categories from provisions of the LARR Act, 2013 which requires the consent of 80 per cent of land owners to be obtained for private projects and that of 70 per cent of land owners for PPP projects.
Exemption from Social Impact Assessment	The Bill allows exemption for projects in these five categories from requiring Social Impact Assessment and from the acquisition of irrigated multi-cropped land imposed by LARR Act 2013.
Integration of provisions under other Acts	The Bill brings provisions for compensation, rehabilitation, and resettlement under other related Acts such as the National Highways Act and the Railways Act in consonance with the LARR Act.

4.3 Steps taken to fill policy, regulatory and institutional gaps

The government has taken several policy decision and undertaking regulatory reforms to boost infrastructure development in the country. Rail Development Authority (RDA) is being set up as advisory wing of Indian Railways, existing Acts such as the Major Port Trusts Act, 1963 and the Arbitration and Conciliation Act 1996 are being amended and MCAs are being modified to redistribute risks and make them more flexible and attractive to private players. In roads sector, exit clauses have been relaxed, new contract modalities like TOT, HAM etc. have been adopted, and compensation to concessionaire has been rationalized.

[88] "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Amendment) Ordinance, 2015," available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=122149

Rail Development Authority (RDA) to be set up as an advisory wing of Indian Railways

The government has recently approved a major policy reform in Railway sector in 2017. RDA will be set up within the ambit of the Railway Act, 1989 to perform functions such as pricing of services, enhancement of non-fare revenue, protection of consumer interests, creation of positive environment of investment and benchmarking of service standards.[89]

Regulatory reforms in the ports sector to provide greater autonomy to port authorities

The Union Cabinet has approved the proposal of Ministry of Shipping to replace the Major Port Trusts Act, 1963 with the Major Port Trust Authorities Bill, 2016. This will empower the major ports to perform with greater efficiency on account of full autonomy in decision making and by modernization of their institutional structure. The government is planning to abolish the TAMP. The new Major Ports Authority Bill, 2016 would help to impart faster and transparent decision making benefiting the stakeholders and better project execution capability.[90] The salient features of the bill are presented below.

Composition of the Board	Power to determine Tariff	Creation of Independent Review Board
To be reduced from 17-19 members to 11 members	To be transferred from TAMP to Port authorities/ Concessionaire	To look into disputes between ts and PPP concessionaires

The government has initiated steps to make arbitration a preferred mode for settlement of commercial disputes[91]

In order to make arbitration a preferred mode for settlement of commercial disputes by making it more user-friendly and cost effective, the Lok Sabha has passed the Arbitration and Reconciliation (Amendment Bill), 2015 to amend the Arbitration and Conciliation Act 1996. The salient features or changes in the bill are discussed below.

- The Arbitral Tribunal to make its award within a period of 12 months
- Reduction in fees of the arbitrator in the event of delays beyond the prescribed timeline
- Provision for a fast-track procedure for conducting arbitration (award in such cases shall be given in a six-month period)
- Application to challenge the award to be disposed of by the court within one year
- Appointment of an arbitrator to be disposed of by the High Court or Supreme Court as expeditiously as possible and an endeavor to be made to dispose of the matter within 60 days
- Mere filing of an application for challenging the award to not automatically stay the execution of the award
- Only where making of award was induced or affected by fraud or corruption, or it is in contravention with the fundamental policy of Indian law or is in conflict with the most basic notions of morality or justice, is the award to be treated as against the public policy of India

[89] A PIB notification dated 12 April 2017 available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=160937

[90] A PIB notification dated 14 December 2016, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=155386

[91] A PIB notification dated 26 August 2015, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=126356

Plans to modify MCAs for more equitable allocation of risk and for handling of unforeseen circumstances during the concession period

Inefficient and inequitable allocation of risk in PPPs can be a major factor in PPP failures. Further, PPP contracts are generally long term in nature, implying greater chances of unforeseen and advert situations happening. Therefore, existing MCAs need to be modified and updated to allocate risks more equitably and to take care of unforeseen circumstances.

Ministry of Shipping, Government of India, has proposed revisions in the MCA existing since 2008 after taking into account the suggestions provided in various reports by Member Planning Commission (2010), Indian Ports Association (IPA-2015) and Kelkar Committee Report (2015).[92] In the railways sector, the Ministry of Railways has issued MCA for implementation of railways projects on the BOT model.[93] The salient features of both the MCAs are discussed below.

Proposed MCA for the Ports sector	MCA for BOT projects in Railways
▶ Concessionaire is required to hold 51% equity until 3 years after COD and 26% thereafter for another 3 years ▶ Concessionaire free to exit after 6 years from COD ▶ Concessionaire can issue Bonds on completion of one year of operation for refinancing of debt ▶ Concessions may be reviewed by a Review Board (or any such competent authority) under applicable laws at the end of 15 years from COD to arrive at required mitigation measures	▶ Concessionaire to Design, Build, Finance, Construct and maintain the project ▶ Indian Railways will pay user charges to the concessionaire equal to 50 per cent of the apportioned revenue ▶ The normal concession period will be for 25 years ▶ A minimum of eighty percent of the projected revenue has been guaranteed under this model ▶ Escalation of base tariff linked with Wholesale Price Index (WPI) during the concession period, to take care of the inflationary risk

Some focus on the policy and regulatory aspect in the Union budget 2017-18

In the Union Budget of 2017-18, the government has planned to bring a new Metro Rail Policy that will focus on innovative models of implementation and financing, as well as standardization and indigenization of hardware and software. Further, the government plans to enact a new Metro Rail Act by rationalizing the existing laws. This will facilitate greater private participation and investment in construction and operation.

The government also plans to take up for operation and maintenance of select airports in tier 2 cities on the PPP mode.

The Government has plans to put in place a revised mechanism and procedure to ensure time bound listing of identified CPSEs on stock exchanges. The shares of Railway PSEs such as IRCTC, IRFC and IRCON will be listed in stock exchanges.

[92] A PIB notification dated 22 September 2016, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=151034

[93] A PIB notification dated 24 April 2015, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=118632



5 Key recommendations



The evolution of PPPs in India over the past two decades has been instrumental in attracting large-scale investments into the infrastructure sector. The new Government is planning to increase the scale of private investment and attract global players for investing in the transport sector. There is, however, a need to resolve multiple issues dampening the private sector interest and slowing the rate of private investment in the sector.

There is need to undertake some key interventions to remove the roadblocks to PPP and accelerate the implementation of PPP projects. These interventions would include policy actions, regulatory changes and push the reforms agenda, which will create conducive environment for bringing investments into the sector.

Strengthening of lending institutions

Despite the creation of other lending institutions such as IIFCL, IDFs, and IFCs, commercial banks remain a major source of debt financing of PPP projects in India. However, banks are faced with issues such as asset liability mismatch (ALM) and liquidity constraints as they have been funding long-duration infrastructure projects with their short-term deposits. Hence, strengthening of banks and other financial institutions has been long due.

In 2014, RBI attempted to resolve the issue by bringing in the 5:25 scheme, which allows banks to extend long-term loans of 20-25 years to match the cash flow of projects, while refinancing them every five or seven years. At present, the scheme is applicable to projects in which total exposure of lenders is more than INR 500 crore. Therefore, the government should also look into inclusion of projects with less than INR 500 crore of lending exposure in order to expand the scope of the scheme. On the supply side, RBI has relaxed reserve requirements and lending norms for banks so that they can issue long-term bonds with a minimum maturity of seven years to raise resources for lending to long-term projects in infrastructure sub-sectors.[94] However, more such measures are required to augment financing in the sector. The Kelkar Committee has suggested that banks and financial institution be encouraged to issue Deep Discount Bonds or Zero Coupon Bonds (ZCB) in order to lower debt servicing costs during the initial phases of the project. Further, refinancing terms may be streamlined to allow automatic refinancing of infrastructure loans. In addition, there is an urgent need to develop appraisal skills and capacities among banks to evaluate lending proposals.

Greater participation of insurance and pension funds

Companies need access to long-term funds for infrastructure projects with long gestation periods. Globally, long-term capital is raised via capital markets where major investors are pension and insurance managers. There is an urgent need in India to tap such markets to fund its infrastructure requirement. However, there are regulatory constraints on insurance and pension funds which restricts them to invest in infrastructure sector. It is recommended that investment and exposure norms posed by the Insurance Regulatory and Development Authority (IRDA) and Pension Fund Regulatory and Development Authority (PFRDA) be relaxed in a rational way so as to encourage these funds to actively participate in infrastructure projects.

Further, as discussed above, the government should actively promote and issue rupee denominated Zero Coupon Bonds (ZCB). This will also help promote the general bond market in the country and attract investments from certain categories of investors such as pension funds and insurance companies.

Establishment of Infrastructure PPP Project Review Committee (IPRC) and the Infrastructure PPP Adjudicatory Tribunal (IPAT)

The Kelkar Committee's report on "Revisiting and Revitalizing the PPP Model of Infrastructure" suggested a two-tier framework of the IPRC and IPAT for faster resolution of disputes relating to private sector partnerships and public procurement.

One of the roles of the IPRC would be to screen and identify actionable stress in any infrastructure PPP project in a time bound manner. The detailed evaluation of the underlying technical and financial issues should be considered by the IPRC. Constitution of IPRC by IPAT would ensure that only relevant and deserved cases which involves substantial question of law reaches the tribunal for hearing in order to save time and money during the entire process. It is suggested that IPAT be chaired by a judicial member (former Judge SC/Chief Justice

[94] RBI notification dated 15 July 2014, available at https://rbi.org.in/scripts/NotificationUser.aspx?Id=9103

HC) with a technical and/or financial member. Since an independent tribunal for PPP projects in India has been long due and the list of stressed or disputed PPP projects is growing year on year, it is recommended that the a framework for establishment of the tribunal in line with the Kelkar Committee report suggestions be developed and the independent tribunal be set up through an Act of Parliament on priority basis.

Setting up of 3P India

PPPs have so far delivered some of the iconic infrastructure like airports, ports and highways. Once termed as the panacea for infrastructure funding issues in the country, PPPs today face a plethora of challenges including but not limited to lending constraints, lack of equity in the market, poor project preparation activities, and absence of dedicated policy or regulation. There is an imminent need for continuous evolution of the PPP framework in view of the ever-changing PPP environment in the country. The absence of a dedicated institution to oversee and guide the sector on the evolutionary path has led to delays in many policy and regulatory decisions.

To resolve the issue, the government in the Union Budget 2014-15 has proposed to set up an institution to provide support to mainstreaming PPPs called 3P India with a sum of INR 500 crore. It is envisaged that the institution would be set up as a Center of Excellence (CoE) for PPPs, facilitating nuanced and sophisticated models of contracting, developing quick dispute redressal mechanism of PPPs, building capacities and providing support to mainstreaming of PPPs in India. Not much progress toward a dedicated institution has been observed till now; nonetheless, there is an urgent need to set up 3P India.

Mechanism to keep a check on aggressive bidding

Aggressive bidding is a major cause of concern in PPP projects. Developers bid aggressively to bag projects on account of booming economy in order to capture the significant portion of the market share. Any adverse situation in the economy results in huge losses to the developers who then become incapable of raising funds and executing projects within the stipulated timelines. Of late, many PPP projects in roads and ports sector have witnessed aggressive bidding.

Today, authorities lack the capacity to assess whether a particular bid is aggressive or not. Hence, it is recommended that the government develop a framework that would enable authorities to analyze the lowest bid with respect to internal estimates. For each project, authorities should be able to decide the range of variation, i.e., the upper and lower limit of variation in bidding parameter (total project cost, revenue share, annuity etc.) to check aggressive bidding. Authorities may be given the power to outrightly reject any bid that is outside the prescribed range. Appropriate mechanism needs to be put in place to create a balance between transparency and safeguarding authorities and its officials. Alternatively, any outlier bid may be evaluated and scrutinized further by the authority or any institution specifically created to do so to assess the viability of the project and validity of the assumptions taken by the developer. Probably, 3P India (if set up) may be assigned the tasks of developing the framework and capacities to check aggressive bidding in PPP projects. Bid capacity of the bidder should be given due consideration during technical bid evaluation.

Need for independent regulators

For long, authorities in the transport sector have played dual roles of regulators and executing agencies. NHAI is a perfect example of this. Besides, there are gaps and overlaps in roles and functions of some of the regulatory authorities. For example, the recently created RDA is not truly independent as it is required to send recommendations to the government for decision making. In ports and airports sectors, the presence of TAMP and AERA is restricting the growth of the sector by imposing unnecessary restrictions and causing delays in certain cases. Overlap in functions of regulatory authorities and executing agencies is also a major cause of concern, resulting in decisions being taken at arm's length in many cases. It is understood that creating a truly independent regulatory body would be opposed by existing agencies or department. However, establishment of independent sector regulators is expected to enable faster and smoother implementation of infrastructure projects. Therefore, it is recommended that independent regulators be created in sectors that currently do not have one and roles and responsibilities of existing regulators be refined and streamlined to bridge existing institutional gaps and remove any redundancies in roles.

Passing and enactment of pending Bills

The government has taken steps to amend some existing acts in order to streamline the regulatory framework for PPP projects in the country. Some bills have been drafted and are under different stages of approval system. These bills include:

- The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Amendment) Bill, 2015
- The new Major Ports Authority Bill, 2016

The government is taking all possible steps to get these bills passed by the Rajya Sabha. It is recommended that all genuine differences be resolved and any positive comments or suggestions be incorporated at the earliest so as to turn these Bills into Acts.

Need to put strong emphasis on performance-based contracts

In India, PPPs have mostly been used to tap private sector investment in the infrastructure sector. However, authorities generally miss out on another important aspect of PPPs, which is to tap private sector expertise to gain efficiencies in operations. India has created huge infrastructure assets base in terms of roads, railways, ports, airports, etc. over the last 10-15 years. Maintenance of these assets is going to be a huge challenge for the government in the coming years. Hence, there is a need to develop frameworks for private participation in the operation and maintenance of created assets with an objective to improve service levels and gain efficiencies.

One such new approach to road network management is Output- and Performance-based Road Contracts (OPRC). In this approach, the government can achieve better maintenance and service levels at road for similar or lesser costs. In this model, the government can award the work to a private player for management and maintenance, rehabilitation, improvement and emergency works of a road stretch or network. Similar approaches can be developed for other sectors as well. For example, in railways, project such as mechanization of track maintenance works, implementation of Automatic Block Signaling with Train Management System, and establishment of Centralized Maintenance Control Centres may be explored in the PPP mode. In ports, the government may design a partnership model that will maximize port efficiency in integration with inland transport network.

Better preparation of DPR

A study of roads sector projects suggests that there is an inverse relation between spending on DPR preparation and cost overruns in a project. It is observed that low investment in planning and engine engineering in India generally leads to high costs of implementation.

Hence, it is recommended that the government adopt a value engineering mind-set to project design by building strong in-house value engineering teams, putting in place the right performance tracking and incentive mechanisms, and enforcing value engineering in all steps of the design process. Focus on attention to detail and quality, field investigation and topographical surveys should be conducted to prevent surprises during construction (subsequent changes in the scope of projects, re-drawing of plans and cost over runs). The scope of consultant should include ways and means of minimizing the land requirement. The design for the project should be thoroughly reviewed to minimize land acquisition to the extent possible.

Revisiting the Viability Gap Funding (VGF) Scheme

At present, the limit of the VGF scheme is 40% of the total project cost. The Government should consider increasing this limit. Further, there is a need to relook at the disbursement mechanism of the VGF fund. State governments may be allowed to disburse funds directly from their own corpus to project SPVs, which could then be reimbursed by the Central Government.

The Government should incentivize innovation for financial support to PPP projects as long as the spirit of PPP is safeguarded. For instance, there is a current no-go in case state governments are willing to extend capital support beyond the threshold 40% of the total project cost in the form of innovative structures, such as deemed shadow toll and EPC for funded works. In light of improving the project economics, these initiatives could be revisited. Further, the basis of calculation of VGF should be as per market rates and not as per Schedule of Rates.

Notes

Notes

Notes

EY offices

Ahmedabad
2nd floor, Shivalik Ishaan
Near C.N. Vidhyalaya
Ambawadi
Ahmedabad - 380 015
Tel: + 91 79 6608 3800
Fax: + 91 79 6608 3900

Bengaluru
6th, 12th & 13th floor
"UB City", Canberra Block
No.24 Vittal Mallya Road
Bengaluru - 560 001
Tel: + 91 80 4027 5000
+ 91 80 6727 5000
+ 91 80 2224 0696
Fax: + 91 80 2210 6000

Ground Floor, 'A' wing
Divyasree Chambers
11, O'Shaughnessy Road
Langford Gardens
Bengaluru - 560 025
Tel: +91 80 6727 5000
Fax: +91 80 2222 9914

Chandigarh
1st Floor, SCO: 166-167
Sector 9-C, Madhya Marg
Chandigarh - 160 009
Tel: +91 172 331 7800
Fax: +91 172 331 7888

Chennai
Tidel Park, 6th & 7th Floor
A Block (Module 601,701-702)
No.4, Rajiv Gandhi Salai
Taramani, Chennai - 600 113
Tel: + 91 44 6654 8100
Fax: + 91 44 2254 0120

Delhi NCR
Golf View Corporate Tower B
Sector 42, Sector Road
Gurgaon - 122 002
Tel: + 91 124 464 4000
Fax: + 91 124 464 4050

3rd & 6th Floor, Worldmark-1
IGI Airport Hospitality District
Aerocity, New Delhi - 110 037
Tel: + 91 11 6671 8000
Fax + 91 11 6671 9999

4th & 5th Floor, Plot No 2B
Tower 2, Sector 126
NOIDA - 201 304
Gautam Budh Nagar, U.P.
Tel: + 91 120 671 7000
Fax: + 91 120 671 7171

Hyderabad
Oval Office, 18, iLabs Centre
Hitech City, Madhapur
Hyderabad - 500 081
Tel: + 91 40 6736 2000
Fax: + 91 40 6736 2200

Jamshedpur
1st Floor, Shantiniketan Building
Holding No. 1, SB Shop Area
Bistupur, Jamshedpur – 831 001
Tel: +91 657 663 1000
BSNL: +91 657 223 0441

Kochi
9th Floor, ABAD Nucleus
NH-49, Maradu PO
Kochi - 682 304
Tel: + 91 484 304 4000
Fax: + 91 484 270 5393

Kolkata
22 Camac Street
3rd Floor, Block 'C'
Kolkata - 700 016
Tel: + 91 33 6615 3400
Fax: + 91 33 6615 3750

Mumbai
14th Floor, The Ruby
29 Senapati Bapat Marg
Dadar (W), Mumbai - 400 028
Tel: + 91 22 6192 0000
Fax: + 91 22 6192 1000

5th Floor, Block B-2
Nirlon Knowledge Park
Off. Western Express Highway
Goregaon (E)
Mumbai - 400 063
Tel: + 91 22 6192 0000
Fax: + 91 22 6192 3000

Pune
C-401, 4th floor
Panchshil Tech Park
Yerwada
(Near Don Bosco School)
Pune - 411 006
Tel: + 91 20 6603 6000
Fax: + 91 20 6601 5900

Ernst & Young LLP

EY | Assurance | Tax | Transactions | Advisory

About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

Ernst & Young LLP is one of the Indian client serving member firms of EYGM Limited. For more information about our organization, please visit www.ey.com/in.

Ernst & Young LLP is a Limited Liability Partnership, registered under the Limited Liability Partnership Act, 2008 in India, having its registered office at 22 Camac Street, 3rd Floor, Block C, Kolkata - 700016

© 2017 Ernst & Young LLP. Published in India.
All Rights Reserved.

EYIN1707-081
ED None

This publication contains information in summary form and is therefore intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. Neither Ernst & Young LLP nor any other member of the global Ernst & Young organization can accept any responsibility for loss occasioned to any person acting or refraining from action as a result of any material in this publication. On any specific matter, reference should be made to the appropriate advisor.

BC

EY team

Gaurav Taneja

National Director and GPS Leader
Email: gaurav.taneja@in.ey.com

Amit Khandelwal

National Director and Partner
Transaction Advisory Services
Email: amit.khandelwal@in.ey.com

Abhaya Krishna Agarwal

Partner, Infrastructure and PPP
Email: abhaya.agarwal@in.ey.com

Adil Zaidi

Partner, Infrastructure and PPP
Email: adil.zaidi@in.ey.com

T: +91-11- 6671 8000
+91-124-4430000
W: www.ey.com/in

@EY_India EY|LinkedIn YouTube EY India EY India careers

About Federation of Indian Chambers of Commerce and Industry (FICCI)

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies.

FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community.

Contact information

Neerja Singh

Director -Transport Infrastructure

(Civil Aviation, Railways, Ports and Shipping, Roads and Highways)

Federation of Indian Chambers of Commerce and Industry (FICCI)

Federation House
Tansen Marg, New Delhi- 110001

T: +91-11-2348 7326
+91-11-2376 5082

F: +91-11-2332 0714

E: neerja.singh@ficci.com
infra@ficci.com

W: www.ficci.in