

## Crisis Management & Infrastructure Financing in India — Role of ‘PPP’



Higher industrial growth has improved our global competitiveness. But, more importantly, of late, there has been a steady growth in industrial production, which has improved the prospect of sustained GDP growth back home. This is reflected in the rise in contribution of the industrial sector to GDP. However, the contribution of the agricultural sector has not been substantial. For an improved GDP, there has to be an overall growth in all infrastructure sectors of the economy. Now the Government is looking at the private sector for greater involvement with investments in physical infrastructure in India, since it does not have the required finance for infrastructure investment for the next 10 years. It is now realised that infrastructure projects need to be developed in partnership with the State entities through the public-private partnership (PPP) model, which has come to be recognised as a bankable model that can enhance timely and requisite returns for developers. A successful PPP model requires participation of both public and private sectors, with an entrepreneurial approach. This will satisfy both sectors, while maximising the benefit for the user public at large. Ultimately, in such a partnership, will and insulation from political parties will be decisive factors in guaranteeing success.



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India has scored well on innovation and sophistication of firm operations as well as in the adoption of technologies from abroad. But its level of fiscal deficit, along with the lack of appropriate infrastructure, is still an area of concern. Infrastructure investments as percentage of GDP has grown from 4.6% in 2003-04 to 5.1% in 2005, and then further increased to more than 6% from 2006 onwards. Despite the recent uptake in infrastructure investments, India lags way behind the most emerging economies and developed economies in absolute terms. China

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spends seven to eight times more on infrastructure vis-à-vis India. Better infrastructure has propelled the Chinese economy ahead of India's.

Most infrastructure projects tend to be on a large scale, which requires huge labour, especially in semi-skilled and low-skilled areas. Given the surplus pool of workforce in the Indian economy, infrastructure projects could help reduce the overall unemployment in the country. To continue the revival in infrastructure investments, the Government faces two key challenges: to be able to generate enough funds (which may be a bit difficult, given the state of the government balance sheet), and to try and attract participation from the local private sector and foreign investors to generate more capital for those sectors. Since the Government is looking at the private sector to become more involved with investments in physical infrastructure of India, it expects Indian companies to bear a significant portion of the burden, as improved infrastructure helps the private sector - whether domestic or foreign - reduces cost, and increases profits and profitability.

India's level of industrialisation is very low, despite its emergence as one of the top ten manufacturers of the world. The country's per capita manufactured value added – a measure of income generated by the manufacturing sector per person – was one-eighth of China's and one-sixth of Brazil's in 2010, the two other developing countries in the group of 10, according to UNIDO statistics.

India has shown an impressive annual average growth in manufacturing, second only to China, at 7.1% over the last decade, and has increased its share in world manufacturing from 1.1% to 1.8% during the period. The MVA per capita growth in India was lower than that in China and Republic of Korea due to relatively higher population growth in India. India's MVA per capita in 2010 was just \$107, which is much lower compared to \$648 in Brazil, \$842 in China and \$4880 in the Republic of Korea.

Although there has been a steady growth in manufacturing, India needs a change in trade pattern and GDP composition to get the kind of acceleration required to make a dent in the overall scheme of things. For four consecutive years, India's GDP has grown at over 8%, expecting to maintain a healthy growth trajectory. Following several years of robust economic growth, the need to improve the country's existing infrastructure has also increased. To sustain growth, we must not only remove existing infrastructure

**Table 1: Growth and contribution of Indian Manufacturing Sector**

(Average Annual growth in manufactured value added over) 2000-10

Sl. no	Country	MVA Growth % from 2000-10 (10 Years)	MVA per Capita in 2000 ( In Dollar)	MVA per Capita in 2010 ( in Dollar)
1	US	1.1	5417	5465
2	China	11.4	303	842
3	Japan	0.2	8140	8249
4	Germany	1.4	4768	5497
5	Rep. Korea	5.9	2859	4880
6	UK	(-) 1.2	3876	3293
7	France	(-) 0.2	3218	2999
8	Italy	(-) 1.9	3562	2877
9	India	7.11	63	107
10	Brazil	3.0	552	648

Source: UNIDO (United Nations Industrial Development Organisation)

**A** commission chaired by Shri C. Rangrajan in 2001 attempted to define infrastructure along six characteristics – natural monopoly, high-sunk costs, non-tradability of output, non-rivalry in consumption possibility of price exclusion and bestowing externalities on society. However, these characteristics were not considered absolute with regard to taxation purposes. ”

bottlenecks, but also lay a healthy foundation for the future. Clearly, India has a long way to go before it catches up with other developed and developing countries, and this gap provides a very attractive long-term investment opportunity.

The following table shows the position of India vis-à-vis some important developed countries in the infrastructure sector:

**Table 2: Position of India in some of the selected Infrastructure sector**

Name of the Infrastructure Sector	India	US	UK	China
Electronic consumption per capita (KWT)	618 (4)	14240 (1)	6756 (2)	1684 (3)
Roads per million people(Km)	2983 (3)	21443 (1)	6467 (2)	1471 (4)
Steel consumption per capita (Kg)	34 (4)	357 (1)	195 (3)	244 (2)
Rail route per million people(Km)	56 (4)	755 (1)	276 (2)	57 (3)
Petroleum refining capacity per capita (Kg)	131 (4)	2900 (1)	1629 (2)	248 (3)
Petroleum consumption per capita (Kg)	108 (4)	3458 (1)	1467 (2)	287 (3)
Cargo handled at ports per capita (Kg)	572 (4)	7953 (2)	9733 (1)	4265 (3)
No. of passengers handled at Airports per 1000 persons	71 (4)	4780 (1)	3517 (2)	151 (3)

Source: Economic Times 07-01-2008.

( ) indicates ranking

India remained fourth in most of the infrastructure sectors, except in road infrastructure, where it maintains its third position. Among developed countries, the US is on the top in all except in cargo handled at ports per capita sector, where it is at number two, while the UK is at the top. The UK retained the second slot in all other sectors except in rail route per million people sector, where it is at number three. China has been ahead of India in all sectors except in the roads per million people sector.

India's GDP has grown at over 8% and is expected to maintain a healthy trajectory. Following several years of robust economic growth, the need to improve the country's existing infrastructure has increased tremendously. To sustain growth, we must not only remove the existing infrastructure bottlenecks, but

also lay a healthy foundation for the future. The most important constraint in achieving a faster and effective growth of India's GDP is that the infrastructure that includes roads, railways, ports, airports, communication and electric power, etc., is not up to the mark as compared to its competitor countries.

#### International Norm of Infrastructure

Defining infrastructure globally has become a tedious task for policymakers. The US and most of the European nations have defined infrastructure sectors for tax purposes. When it comes to defining what constitutes infrastructure, there is no consistency across developed nations. Many of them have also defined sub-sectors, e.g., core infrastructure, social infrastructure, retail infrastructure, urban and rural infrastructure, etc. Besides, these countries are frequently changing the list of infrastructure sectors as per their socio-economic needs.

#### Need for Precise Definition

A clear understanding of what is covered under the roof of infrastructure is necessary for policy formulation, setting of sectoral targets and monitoring projects to ensure consistency and comparability in the data collected and reported by various agencies over time. Moreover, the emphasis on infrastructure has led to the government extending many sops and tax benefits to infrastructure companies. Without a proper definition, these benefits can be misused.

#### Definition of Infrastructure in Indian Context

While infrastructure is considered a crucial input for economic development, there is no clear definition of infrastructure according to the current usage of the term in India. Understanding of the term in India is currently

based on a series of observations and reports made by different government agencies and committees.

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The RBI and IRDA have also tried to define infrastructure and identify sectors. The Ministry of Finance will identify the sectors primarily based on the

characteristics set out by the Rangarajan Committee with some additional requirements. Based on the criteria, the Ministry is likely to notify 25 sectors as infrastructure. Now, this list includes power, roads, ports and telecom. Union Finance Minister Shri Pranab Mukherjee in his Budget 2011-12 proposes to include cold chains and post-harvest storage as infrastructure sub-sectors. The Ministry is now preparing a detailed paper on the potential of viability gap funding (VGF) for infrastructure and is likely to notify its budget announcement of extending VGF to schools. Schools, hospitals, industrial training institutions and skill-development centres are likely to be eligible for VGF. The Ministry is likely to invest ₹500 crore in 2011-12 in the viability gap funding eligible projects.

### Cross-Border Infrastructure

There has been a large but uneven investment in infrastructure in developing countries. Over the next few decades, more people would move into urban areas in developing countries than the number residing in cities presently. Several trillion dollars of investment is required for orderly and environmental-friendly urbanisation.

The cross-border connectivity to contiguous countries is also particularly deficient, mainly on account of difficulties of burden sharing in international cooperation and also due to political risks. Since intra-regional trade is going faster than total trade, greater cross-border connectivity is needed, particularly in South Asia, which is the least integrated region in the world. The absorptive capacity of several developing countries, including those in Africa, which have been growing at much faster rates than before, has increased of late. Large infrastructure investments will increase national income and also make higher developing country growth rates more sustainable. This would also help converge national per capita incomes and help bridge the development gap.

Now, a big challenge is the diversion of large savings of developed countries towards investment in the infrastructure sector, because it has been experienced in the past that excess savings were directed towards unsustainable leveraged consumption. With most of advanced countries currently under recession, it is now a big challenge to invest excess savings on the infrastructure sector to overcome the recession. Since most of these excess global savings are generated in developing countries themselves, rebalancing also requires an *enabling environment* for investment, so that these savings are spent on infrastructure and not diverted towards emerging market economies (EMEs), where most of the money is kept under the custody of the central banks. The surplus money is



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**W**ith the completion of projects falling short of the target, the Government has focused on expediting project implementation by setting up more offices across the country. The NHAI has now set up two regional offices and six zonal offices headed by general managers and executive directors to coordinate with state governments on pre-construction activities. ”



not available with the Government and, as a result, infrastructural activities are not properly carried out. It is necessary that public expenditure patterns must shift from subsidies to allocating more taxpayer funds for infrastructure investments.

More private savings need to be attracted to infrastructure through public-private partnerships (PPPs). This would entail a more enabling investment environment and can get greater political support for user charges to facilitate cost recovery for long-term finances invested in the infrastructure sector. Multilateral development banks (MDBs) have a wealth of experience and expertise in the area of infrastructure financing to channelize global surpluses productively into financing infrastructure in developing countries. They can mop up the global savings glut and redirect the resources to infrastructure investment, thereby shifting the utilisation of these savings from leveraged

consumption to leveraged investment. This will require massive recapitalisation of MBDs.

#### Government Initiative

**Table 3: Budget Allocation for some of the Infrastructure sectors (₹ in crore)**

Ministry/department	2009-10	2010-11 (RE)	2011-12 (BE)
Civil aviation	11,104	6,356	8,606
Atomic energy	2,725	1,622	1,750
Telecommunication	8,723	7,700	7,673
New and renewable energy	550	1,007	1,213
Power	6,294	8,551	9,506
Road transport & highways	18,908	25,562	26,437
Shipping	2,099	6,143	5,774

Source: Budget Documents, 2011 RE=Revised Estimate, BE=Budget Estimate.

Table 3 represents the budget allocation towards different infrastructure sectors from 2009-10 to 2011-12. The highest amount of budget allocation has been made to the road sector, whereas the lowest has been made to the new and renewable energy sector. The civil aviation sector was allotted ₹11,104 crore in 2009-10, but the revised estimate in 2010-11 reduced it to ₹6,356 crore. In 2011-12, it was again increased to ₹8,606 crore. This shows that due to constant losses of the sector, the government has been constrained to reduce the budget allocation, and after the reform measures in the subsequent year, i.e., in 2011-12, the allocation has increased. Besides telecommunications and shipping sectors, the budget allocation has increased in all other sectors, which indicates that the government has taken steps towards development of the infrastructure base in the Country.

The focus under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) has clearly shifted to implementation of projects and reforms, which include revamping of procurement/contracting, tendering procedures, standardisation of pre-qualification criteria, etc. In the past, the Urban Development Ministry has conducted many workshops on mega cities, financial institutions and engineering firms. As an outcome of these workshops, several committees have been formed to look into ways to improve procurement procedures, which would consequently help attract FIs to support JNNURM projects.

**Table 4: State-wise Approved Projects under JNNURM (as on 06-04-2011)**

States	Projects	Value (₹ In Crore)
Andhra Pradesh	31	1956.66
Arunachal Pradesh	2	89.19
Assam	1	35.16
Bihar	1	36.95
Chandigarh	2	56.98
Chhattisgarh	1	303.64
Gujarat	41	2348.29
Haryana	2	134.47
Himachal Pradesh	2	26.13
J&K	2	262.15
Karnataka	14	1188.38
Kerala	6	680.05
Madhya Pradesh	13	987.99
Maharashtra	45	6007.34
Manipur	1	25.8
Orissa	2	504.93
Puducherry	1	203.4
Punjab	2	328.83
Rajasthan	5	399.34
Tamil Nadu	18	1484.12
Uttar Pradesh	5	142.8
West Bengal	18	1263.58

Source: Financial Express, dated 6<sup>th</sup> April, 2011

The Urban Development Ministry is also putting in place a grading system for Indian cities to guide investors wanting to pump money into urban infrastructure. The concept is inspired from European nations, where cities are branded and graded annually to make them compete with each other. The Ministry constituted a panel comprising senior bureaucrats, credit rating companies and people from the public from outside to grade cities. The cities that have carried out projects on the PPP model will get bonus points under JNNURM. The centre has allocated ₹2,460 crore to select cities in 2006-07. The grading system would not only monitor development of a city on a sustainable manner, but will also help potential investors select cities for investment based on development factors.

Although the government has fixed a target of building 3,165 km of national highways under the National Highway Development Programme (NHDP) in 2009-10, it could build only 2,693 km or 85% of the annual targets. The trend, so far, indicates that the scenario is deteriorating. Even after reduction by the Government in highway construction target under the NHDP to 2,500 km, the progress has been slack with only about 1,322 km, or half the target, completed till January 2011. With the completion of projects falling short of the target, the Government has focused on expediting project implementation by setting up more offices across the country. The NHAI has now set up two regional offices and six zonal offices headed by general managers and executive directors to coordinate with state governments on pre-construction activities. This has helped improve the review of projects both at the headquarters and field units.

**Table 5: Construction of Highways under NHDP**

NHDP phases	2009-10			2010-11		
	Target	Achievement	% of Achievement	Target	Achievement	% of Achievement
Phase-1	201	140	69.65	94	68	72.34
Phase-II	1785	1635	91.60	1143	519	45.41
Phase-III	1102	793	71.96	985	467	47.41
Phase-V	77	108	140.26	278	252	90.65
Others	--	17	--	---	15	--
<b>Total</b>	<b>3165</b>	<b>2693</b>	<b>85.09</b>	<b>2500</b>	<b>1322</b>	<b>52.88</b>

Source: Ministry of Road Transport and Highways

The main reasons for delays in project implementation arise from many different sources, especially delays in securing forest and environmental clearances, clearance for road over-bridges from the railways, problems with land acquisition and shifting of existing utilities, performance of contractors and the poor law and order scenario in some areas.

**Table 6: Foreign and Joint venture companies in National Highway Projects (in 2010)**

Country	Contractors	
	Joint venture	Independent
China	13	2
Dubai	3	---
Malaysia	26	10
Iran	1	---
Saudi Arabia	1	---
UK	4	---
Indonesia	2	2
Korea	9	5
Spain	5	---
Taiwan	---	4
Thailand	3	1
Turkey	2	---
Philippines	1	---
USA	1	---
Russia	8	2
Italy	1	---
<b>Total</b>	<b>80</b>	<b>26</b>

Source: Financial Express, dated 6<sup>th</sup> April, 2011

**Table 7: Power generation and capacity addition (April to January 2010-11)**

Category	Power Generation		Capacity Addition (MW)		
	Target Achieved (%)	Growth (%)	Target	Achievement	Target Achievement (%)
Thermal	95.9	3.5	16519	9500	57.51
Nuclear	113.5	37.7	220	220	100
Hydro	100.4	8.9	1009	490	48.56
<b>Total</b>	<b>96.9</b>	<b>5</b>	<b>17748</b>	<b>10210</b>	<b>57.53</b>

Source: Central Electricity Authority

Most impressive gains have been made on the nuclear power front, where 20,618 MU of power generated in April-January 2010-11 was 113% of the target period. And power generation from nuclear stations has been pushed up by 37.7%, probably aided by the increased availability of fuel after the fuel embargo was lifted by nuclear suppliers. Another segment that has made impressive gains is hydel power, aided by bountiful rains during the year. Numbers till end January show that the 97,721 units of hydel power generated during the period surpassed the full year target, as production increased by an impressive 8.9%, faster than the overall growth of the economy.

The major laggard in the power sector was the thermal power segment. Although the 545,232 MU of power generated from thermal power stations in the first 10 months of the year is an impressive 96% of the total power generation targets set for the period, power production in the segment rose by a mere 3.5%, which was less than half the GDP growth. A major reason for the poor performance of coal-based thermal units was the shortfall in coal supplies in almost all regions, except the north-eastern region, which pulled down power generation by 5.9 BU, because only 85% of the requirements were met. Numbers in January indicated that the coal stock was critical at 27 stations and super-critical at 17 stations.

#### Concept of PPP

A PPP refers to alliances and joint ventures between the government, NGO and the corporate sector to tackle broad social issues. It can be a powerful catalyst for change solving development changes. The key features of a partnership include voluntary collaboration, mutually agreed objectives and a pooling of resources and risk. True partnership implies equality between different partners, with each contributing its different strengths and, in turn, receiving what they lack when the relationship becomes that of superior/subordinate or principal/agent or master/servant a partnership

cannot last. Only when partners feel that they are receiving as much as they give, the partnership can be a lasting relationship. The most important requirement for a successful partnership is trust and subordination of personal ego in the larger interest.

### Reasons for Private Participation for Infrastructure Sector

India's infrastructure investment in 2002 was a mere 6% of GDP as compared to 20% in China. This needs to be changed rapidly. There is a general consensus now that India should invest a minimum of 10% of GDP in asset creation in infrastructure. Till now, India has achieved only 5% (GCFI) gross capital formation in infrastructure as a percentage of GDP. The gap is high. To get India to reach even 9% in next five years will require an investment to the tune of \$275-300 billion, which cannot be supplied by the State or the Central Government. Hence, we require private capital in infrastructure.

### Views of Global CEOs

According to a survey conducted by KPMG and Economist Intelligence unit, executives expressed serious concern over the Government's effectiveness in improving vital infrastructure in the country. Nearly 9 out of 10 respondents in India said the current investment in infrastructure is insufficient to support the long-term growth of their firms. Nearly 90% of executives in India who participated in the survey said poor energy infrastructure burdens their organisations with additional cost. A majority of global CEOs stressed the need for the government to partner the private sector to finance major infrastructure projects. Social services infrastructure was also cited as an area of concern globally. Further, they have opined: *Availability of infrastructure impacts operating cost and is therefore a major factor in strategic planning and decision making.*

According to the survey, most of the executives termed roads and power generation key infrastructure. They also suggested that the Government needed long-term strategies for infrastructure adequately funded and backed by political will. From the international experience, it has been revealed that 10% to 20% of GCFI can be achieved from private capital sources. But for making the private capital efficient, SPVs under a viable PPP format have to be created for receiving such private capital.

Stimulating of infrastructure projects require, on an average, four years from concept of commissioning. It means that there must be a ready-to-invest agency, which should come forward and take the risk for such a long gestation period. The Government does not have

the requisite fund to invest for getting the benefit after a long period of time. So the private sector should play a complementary role for the infrastructure finance. For better operating contracts linked to service delivery standards, the private sector is more efficient than the public sector. A PPP not only brings capital, but also efficiencies as well as best practices into public utilities management. For better managerial performance, it is imperative that the public sector comes forward, and if it does take initiatives, then public utilities can be managed more efficiently and more productivity can be achieved. Successful PPPs have much to do with how a private partner is chosen. One rational criterion should be not to allow the private sector involved in developing the project for bid agreement, because profiteering motive will lead to degradation of the quality of the project. A mutual agreement on a commission between the public and the private sectors in accomplishment of a particular project work will be more fruitful.

Both free market capitalism and dominant state control have been seen in their best and worst forms in the 20<sup>th</sup> century. The lesson for the 21<sup>st</sup> century is that public and private capital has to learn to work with each other with more maturity. The public-private partnership in the Latin American context has broadly been achieved by privatisation. If Asian economies follow the same route, private players would be able to deliver better to closed markets.

**Table 8: Sector-wise Number of PPP Projects as in March, 2011**

Sl.no	Name of the PPP sector	Nos. of projects
1	Roads	371
2	Energy	46
3	Ports	56
4	Urban Development	131
5	Tourism	38
6	Airports	05
7	Education	06
8	Healthcare	03
9	Railways	04
<b>Total</b>		<b>660</b>

Source: The Economic Times, dated 29<sup>th</sup> March, 2011

Table 8 represents sector-wise PPP projects as in March 2011. The highest number of projects has been approved in the road sector. More than 56% of total



PPP projects have been diverted towards the road sector. The urban sector PPP projects ranked number two. In the healthcare sector, only three PPP projects have been undertaken.

**Table 9: Selected State-wise Number of Projects with Project Cost (₹ in crore)**

Sl.no	Name of the State	Number of projects	Amount
1	Karnataka	106	44414
2	Gujarat	65	35930
3	Maharashtra	65	40037
4	MP	50	10969
5	Rajasthan	60	14595
6	Andhra Pradesh	83	65564
7	Tamil Nadu	45	18626
8	Punjab	30	3117

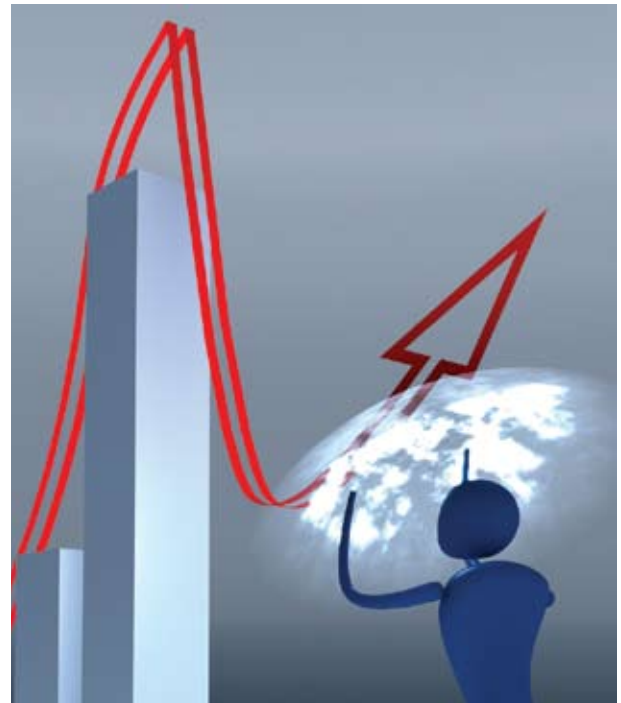
Source: The Economic Times, dated 29<sup>th</sup> March, 2011

Karnataka has undertaken 106 PPP projects amounting to ₹44,414 crore, while at the same time Andhra Pradesh had 83 PPP projects amounting to ₹65,564 crore. The number of projects in Andhra Pradesh remained low as compared to those undertaken by Karnataka, but the higher amount of money has been approved for Andhra Pradesh towards the implementation of PPP projects. Punjab has 30 PPP projects approved amounting to ₹3,117 crore, the lowest among the States as shown in Table 9.

### Recommendations and Policy Implementation

1. In a gathering of CEOs in New York in 2005, Dr. Manmohan Singh mentioned that India would need around \$150 billion of foreign investments in infrastructure over the next decade. To attract foreign investments in the infrastructure sector, there is an urgent need to form PPPs, as it has been realised that foreigners are interested to invest in the sectors where they are assured of getting timely and requisite returns, which is only

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possible through the PPP model. Therefore, the Government of India should take initiatives to form PPPs to meet the long-term financial requirements for investments in the infrastructure sector.

2. Development of the infrastructure sector requires huge labour, especially in semi-skilled and low-skilled areas. To provide employment to the surplus pool of workforce, it is the best possible method where dual purpose, i.e., the problem of unemployment and the economic imbalance of the country can be solved to a greater extent.
3. For road financing the OMT (Operate-Maintenance-Transfer) model is recommended, because in this model, the Government funds the road project, while the contractor operates and maintains. The Government should not take up the maintenance part because of the leakage of the administrative machinery, where there is every possibility that the Government may incur a heavy loss. If the maintenance aspect is handed over to private parties with an agreed fee for a stipulated period of time, it will be a cost-saving method, and after the expiry of the stipulated period the project can be again transferred to the Government by the private caretaker.
4. **Land acquisition:** Land acquisition is a major problem, especially in the case of power and road projects, which are land-intensive. Private operators should not be involved in such problems, as the acquisition of land from private bodies is very

sensitive and sometimes leads to litigations and violence from the side of the public. The Government should interfere in such land acquisition problems and adequate compensatory measures should be provided to private landholders and sometimes, if necessary, some special incentives such as subsidies may be provided to them for acquiring land. If possible, as an incentive, jobs may be offered for the acquisition of land for development of the infrastructure sector in a particular locality.

5. **Regulators:** Our former Finance Minister Shri P. Chidambaram had recommended us to think out of box. There is enough private capital jostling around the world. We will have to change or contemplate to tap these resources. The creation of sufficient attractive investment opportunities to channelize FDI and domestic capital is the *sin-qua-non* for development in the infrastructure sector. The only way to do this is to have PPP initiatives, leading to a large pool of bankable projects. For regulating the progress of various infrastructure sectors, there is an urgent need for setting up multi-sectoral regulators. There should be regulators for sectors such as communications, electricity, fuel

and gas and transport, which will help in building capacity and expertise, in promoting consistency of approach, and in saving costs.

6. The setting of a regulatory body in each and every sector initially would involve a huge expenditure. This may not be supplied at a time by the State government for which the State governments are recommended to establish at least a single regulatory commission for all infrastructure sectors functioning in the state, so that a major portion of the performance appraisal of agencies in the infrastructure sector can be controlled and suggestive measures can be implemented for the future course of action. Monitoring of activities of regulators on a quarterly basis should be taken up with topmost priority.
7. Political and ministerial constraints should be removed in the formulation of regulatory bodies. In order to avoid any unnecessary delay, it is imperative that central and state legislations should be passed for the formation of regulatory bodies for better interest of economic development in the country as a whole.
8. The structure of large-scale projects (such as Rail Freight Corridor, NHDP and Bharat Nirman) involving substantive public expenditure is to be taken up along with the out-of-the-box initiatives to raise savings and resources for the purpose. The resources generated out of such projects can be further channelized for the creation of additional infrastructure projects, which, in turn, can further increase the income generating capacity for the future.

### Conclusion

The key ingredient of a successful PPP project is its structuring procedure. One variable parameter has to be chosen as the basic bidding criteria for a BOT project. The others then become fixed parameters and must have constant values assigned to them. A successful BOT project is one where there is full involvement of stakeholders. Non-cooperation of stakeholders may lead to wrong choice of fixed and variable parameters, for which there is every possibility of failure of the project. A successful PPP model requires participation from both public and private sectors and requires a major change in the mindset of the government and its agencies. It requires an entrepreneurial and innovative approach. The basic desire of both sectors can be fulfilled, and eventually maximum benefit will flow towards the public at large. Ultimately, in a PPP, it is the political will and insulation from political interferences that can guarantee success. ■

