

Public Private Participation in Indian Infrastructure

Poised for Growth

A BACKGROUND NOTE

About KPMG

KPMG is the global network of professional services firms of KPMG International. Our member firms provide audit, tax and advisory services through industry focused, talented professionals who deliver value for the benefit of their clients and communities. With nearly 1,00,000 people worldwide, KPMG member firms provide services in 144 countries.

KPMG's member firms in India were established in September 1993. As members of the cohesive business unit that serves the Middle East and South Asia (KPMG's MESA business unit), they respond to a client service environment by leveraging the resources of a globally aligned organization and providing detailed knowledge of local laws, regulations, markets and competition.

In India, KPMG's range of services includes Audit, Tax, and Advisory services to over 2,000 international and national clients. Clients range across five sectors namely financial services; consumer markets; industrial markets; information, communication and entertainment; and infrastructure and government. KPMG has offices in India in Mumbai, Delhi, Bangalore, Chennai, Hyderabad, Kolkata, and Pune. The firms in India have access to more than 1,700 Indian and expatriate professionals, many of whom are internationally trained. KPMG provides rapid, performance-based, industry focused and technology enabled services, which reflect a shared knowledge of global and local industries and experience of the Indian business environment.

KPMG also operates India Desks in a few countries around the world. The objective of the India Desk is to help clients on India related issues such as conducting industry reviews; developing business strategies to invest in new projects; identifying opportunities for partnerships and acquisitions; rendering transaction advisory, and providing advisory on investment structures from a regulation and tax perspective.

KPMG's Infrastructure and Government (I&G) practice has undertaken a number of pioneering projects in sectors such as power, ports, roads, oil and gas, amongst others. These projects cover areas such as business planning, policy formulation, traffic assessment, capacity planning, competitor analysis, strategy development and business continuity services.

To know more about KPMG's Infrastructure and Government practice contact:

Pradeep Udhas

Head, Markets
Kamala Mills Compound
448, Senapati Bapat Marg
Lower Parel
Mumbai 400 013
Tel: 91-22-3983 5400
Fax: 91-22-3983 6000
e-Mail: pudhas@kpmg.com

Arvind Mahajan

Head, Infrastructure Advisory Group
Kamala Mills Compound
448, Senapati Bapat Marg
Lower Parel
Mumbai 400 013
Tel: 91-22-3983 5400
Fax: 91-22-3983 6000
e-Mail: arvindmahajan@kpmg.com

Table of contents



Overview	3
Power	6
Transportation	13
Urban infrastructure	24

Overview

The state of infrastructure in India has been a source of concern for local and foreign investors interested in tapping its potential as a business destination. Perceptions about Indian infrastructure are reflected in infrastructure rating comparisons drawn with Brazil and China, which indicate that India has some way to go on infrastructure development before it can match its peers.

EIU Infrastructure Development Ratings

	Brazil	India	China
2001-05 Rating (out of 10)	5.4	3.1	4.5
2001-05 Ranking	47	75	55
2006-10 Rating (out of 10)	5.9	4.1	5.4
2006-10 Ranking	49	75	54

Source: Economist Intelligence Unit, Country Monitor

For a fast-growing economy like India, a sustained growth rate of about 8–9 percent is feasible and necessary to maintain global competitiveness. According to the Government of India, investments of around 320 billion U.S. dollars (USD) are expected in the infrastructure sector as part of the Tenth Five-Year Plan (2006-2011) to meet this growth.

The creation of world class infrastructure would require large investments in addressing the deficit in quality and quantity. Therefore, it is necessary to explore the scope for plugging this deficit through Public Private Partnerships (PPPs) in all areas of infrastructure like roads, ports, energy, etc.

Recently, legal and regulatory changes have been made to enable PPPs in the infrastructure sector, across power, transport, and urban infrastructure. For example, the Electricity Act allowed for private sector participation in the distribution of electricity in specified area(s) of the distribution licensees under the role of a “franchisee”. The recognition of the franchisee role is a significant step towards fostering PPP in the distribution of electricity. In some cases, the impact of private sector involvement in terms of end-user benefits has been felt almost immediately. A case in point is the initial Build-Operate-Transfer (BOT) experience at Jawaharlal Nehru Port, where the Minimum Guaranteed Traffic requirement at the end of 15 years, identified as part of the concession agreement, was met in just 2 years. The experiment is being replicated across other major ports as well.



Though the PPP model has gained significant importance in the country, there is a need to refine and evolve it further to make it a successful proposition. The key issue that must be addressed is an approach to satisfy the conflicting interests of multiple stakeholders (governments, private players, users, financial institutions, etc.).

Some approaches have been highlighted below to enable private sector players to secure a reasonable return at manageable levels of risk, provide the user adequate service quality at an affordable cost, and facilitate the government in procuring value for public money.

Competitive dialogue process

Detailed discussions must be held with pre-qualified bidders to identify solutions that best meet the needs of the stakeholders prior to seeking final offers from bidders. Such discussions at an early stage would assist in the maintenance of accountability and transparency, contestability of solutions, clarity of roles and responsibilities, and pragmatic optimal risk allocation.

Flexibility and evolving needs during the lifecycle of the project

Typically, the differences in risks and economic consequences during building, stabilization, and completion are not understood, underestimated, and disregarded. To have a fair, transparent and successful PPP, these three stages can be seen as different elements within a project leading to the independent assessment of risks and returns, mitigation strategies, etc. This will help identify the roles and responsibilities of private players, their consortium members, and their public counterparts.

Protection against factors beyond the control of the private player

The feasibility and economic gains of a project would be dependent on several controllable and uncontrollable factors. It is critical to identify both sets of factors and shield private players against factors beyond their control. For instance, in the electricity distribution business, elements such as subsidy and category-wise tariff substantially affect the project's cash flows and financial risks. These are not regulated by the contract between the public and private parties, but would be controlled by the government or regulator.

Risk allocation in the context of long term consequences

During the competitive tendering and negotiation process, bidders may accept risks simply to stay in the game, without adequate consideration on either side as to the sustainability of the position. In other situations, political commitments and timetables have apparently left public authorities with no choice but to assume risks, which the private sector could more suitably bear. Hence, risk allocation, management, and pricing should be in the context of long-term consequences to both public and private sectors, ease of integration into delivery of the intended outcome and provider competence, and not political expediency.

Performance standard setting and monitoring

Whole life accountability needs to address any potential failings, to achieve a state in which ongoing measurement and incentive systems encourage and motivate consistent long-term stewardship of assets and services. This can be done through clear identification of levels of service quality based on benchmarks.

Identification of termination and extension mechanism at the outset

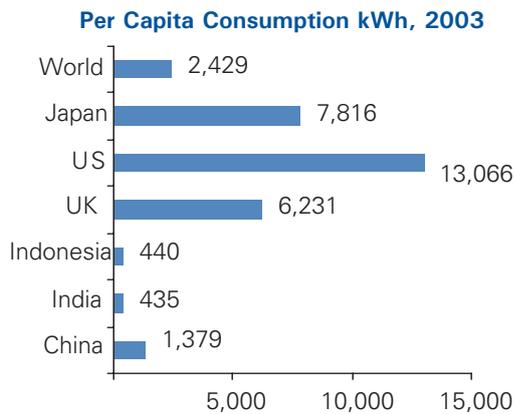
The principles for the termination and extension of the contract should be objectively defined at the outset along with the consequences of the same. A pre-agreed, objectively defined mechanism would assist planning for exit strategies and avoid any potential dispute.

Power



Background

The elasticity of electricity consumption with respect to gross domestic product (GDP) was around 1.5 in the '90s. However, as more capacities are created, the government projects an elasticity of 0.95 for the future.



Source: IEA

Per capita consumption, which was 238 kWh in 1990 rose to 435 kWh in 2003 and currently stands at 606 kWh (2005), far below the world average of 2,429 kWh. At an 8 percent GDP growth, India's per capita consumption in 2032 is estimated to be 2,643 kWh, which is just comparable to the present day world average.

Forecasted energy requirement for India

Year	Installed Cap. Req. (GW)	Energy Req. (Billion kWh)
2003-04	131	633
2006-07	153	761
2011-12	220	1097
2016-17	306	1524
2021-22	425	2118
2026-27	575	2886
2031-32	778	3880

Source: Draft report of Expert Committee on Integrated Energy Policy, 2005

With an installed capacity of 123 GW, the country currently faces an energy shortage of 8 percent and a peak demand shortage of 11.6 percent. To sustain a growth rate of 8 percent, it is estimated¹ that the power generation capacity in India would have to increase to 778 GW, unless adequate measures are taken to reduce requirement.

¹ Draft Report of the Expert Committee on Integrated Energy Policy, December 2005

Policy and regulatory framework

The regulatory system now consists of a Central Electricity Regulatory Commission (CERC), State Electricity Regulatory Commissions (SERCs) and an Appellate Tribunal (being the higher court of appeal against the two regulators). In addition, there is a Central Government authority, the Central Electricity Authority (CEA), which is responsible for power planning for the country and according approvals for large hydro projects.

The recent emphasis of policy and regulatory framework, as guided by the provisions of the Electricity Act, 2003, is on bringing in competition, private sector participation and independent regulation. The policy now increasingly emphasizes power for all, especially the rural masses (lifeline consumption of 1 unit/household/day and increasing per capita consumption to 1,000 kWh), and a national program for rural electrification has been taken up.

The main enablers for competition are

- Generation is de-licensed (except large hydro projects) and now all new generation in the private sector has to be contracted through the competitive bidding route
- Open access on common carrier principle is allowed on transmission networks and is soon to be phased in on distribution networks as well
- Provisions for parallel distribution networks in existing areas are made. This would create a competitive environment in distribution

Key issues

Socio-political influences

Over the decades, the power sector has played a key role in the implementation of the social policies of state governments and is characterized by poorly targeted heavy subsidies, the state governments' involvement in the functioning of power utilities in the form of influence in investment decisions, waiver of consumer dues for political gain, etc.

High level of network losses

The power utilities in India suffer from a high level of network losses of around 40 percent. These losses include both legitimate technical losses and losses due to theft, pilferage, and non-collection of dues. These are partly due to the state of the network involving long low voltage lines and the high level of theft and leakages in the system. This has made the financial position unsustainable and has sent the power sector into a downward spiral.

Inadequate generation and transmission capacity

Peak shortfall in generation capacity is estimated at over 15 percent. This is mainly due to inadequate resource generation in the sector leading to inability to attract investments. Private investors demand payment security mechanisms that have been difficult to provide on account of the financial situation. Likewise, the transmission capacity in the country is inadequate to meet power flow needs. This has led to a situation where regional surpluses were not utilized to meet deficits elsewhere.

Poor quality of supply

Inadequate generation capacity and the poor quality of the distribution network have resulted in poor quality of supply. Supply is characterized by planned and unplanned interruptions and deviations in voltage and frequency from prescribed parameters.

The India opportunity and PPP

Generation

In the generation segment, opportunities exist due to the large demand-supply shortfall. While most of the power generated would be sold through long-term contracts, there is a policy focus on enabling open access that would allow generators to sell directly to large consumers. This and the evolving power trading market imply that generators can also look at the possibility of setting up merchant plants or at least set aside a part of the capacity for merchant use.

The government has also made significant progress towards the establishment of ultra mega power projects (projects of a size of around 4,000 MW). While public equity in such projects will be absent, the public participation concept involves a government agency that would undertake the preparatory work related to land acquisition, environmental clearances, etc. and then award the projects to private developers on a competitive basis. As a result, significant risk issues perceived by a developer (particularly foreign ones) are being addressed upfront leading to easier project management. As part of the process, for captive coal mine-based generation plants, the government agency is also identifying the coal blocks that would provide fuel over the life of the plant, while allowing generators to take up coal mining for self use. These measures, along with fiscal concessions for large generation projects such as the waiver of customs duty, make this an attractive opportunity.

Ultra Mega Power Projects

The Ministry of Power has initiated the establishment of projects with a rated capacity of around 4,000 MW. Known as Ultra Mega Power Projects (UMPP), these would use supercritical technologies and supply power at competitive tariffs. Project developers would be selected through a tariff-based bidding route; interested parties would have to quote tariffs for the life of the project (25 years). In the first phase, five such projects are envisaged, bidding for two of which (Sasan and Mundra) is now complete². For a pit-head based plant like Sasan, identified coal blocks would be transferred to the successful bidder for development and operation. Due to the integrated nature of the project, the variable cost of power is expected to be less than 0.35-0.40 Indian rupees (INR) per kWh, leading to substantial savings in the average cost of power. This could also lower demand risks and the plant could operate at a plant load factor of around 90 percent. The capital expenditure requirement for this project is INR 20,000–24,000 crore. Payment risks remain a concern in spite of mitigating mechanisms in the power purchase agreements like escrow accounts, irrevocable letters of credit, and exit clauses. Removing regulatory barriers and helping to ensure adequate investments in inter- and intra-state transmission can mitigate these risks.

Transmission

The transmission business, being monopolistic in nature and of strategic importance, is likely to be primarily under state control. However, two routes have been identified for private investment: the Independent Power Transmission Company (IPTC) route and the Joint Venture Company (JVC) route. Under the IPTC route, the private promoter would infuse 100 percent equity, whereas, in the JVC route a minority holding with the state-owned central transmission utility (CTU), Power Grid Corporation of India Ltd. (PGCIL), has been envisaged.

Both forms of private participation are envisaged largely in creation of the national grid³ along with the CTU. The participation is expected to be in projects requiring a capital outlay of around INR 20,000 crore⁴.

The JV arrangement, allowing a public company (CTU) to hold equity in the project, is expected to remain more popular as it allows better management of critical commercial issues like payment security and operational issues like obtaining right of way (RoW), environmental clearances, etc.

² The Hindu, Dec 29th 2006

³ Formation of the National Grid is a plan for strengthening of the inter-state and inter-regional transmission network that will enable unrestricted flow of electricity across regions and enable development of a deep electricity market in India

⁴ Source: Ministry of Power, Government of India

Private Sector Participation in Transmission: An Example

PGCIL had invited offers from eligible bidders as a prospective Independent Private Transmission Company (IPTC) to establish transmission lines associated with the Western Region System Strengthening Scheme (the Project). The scheme is made of two distinct sub-projects (Project B and Project C) of total value of around INR 2,500 crore. The bidder had the choice to participate in one or both of them. The successful bidder has been chosen based on criteria of International Competitive Bidding (ICB) based on a combination of technical as well as commercial considerations

Distribution

Whole scale private participation opportunities are few owing to the large risks involved and issues involving direct interaction with the retail consumer. Risks related to measurement of operational parameters such as losses (due to inadequate metering), regulatory risks (due to relative immaturity and lack of sufficient independence from the government), information risks (state of assets in the ground) and political risks (preventing cost reflective tariffs) are too high at this point in most states in the country.

However, due to a combination of factors, the distribution segment offers various PPP possibilities. While the overall ownership of the utility remains with the state, private participation through infusion of management expertise, use of technology, etc., can lead to substantial commercial benefits that can be shared between the utility and the private party.

Participation Model	Outsourcing	Revenue Collection	Revenue Collection with O&M	Input Based Franchise	Input & Investment Based Franchise
Key Activities	Individual activities like. - Metering - Bill Distribution - Collection	Metering, billing, collection and remittance of collection to Utility	Metering, billing, collection, remittance of collection to Utility & O&M of network	Operation of supply from identified input points, metering, billing, collection and O&M of network	Operation of supply from identified input points, metering, billing, collection and O&M of investment

Private Sector Participation in Distribution: An Example

The Torrent Group now has the rights to distribute electricity in Bhiwandi, north of Mumbai for 10 years. The Bhiwandi circle's estimated annual revenues are about INR 500 crore and around 600 MW of power is distributed in this circle. Large-scale theft has led to a very high level of transmission and distribution losses of close to 45 percent. This loss-making circle has over INR 800 crore pending as collection arrears to the public utility. In such a scenario, Torrent Power has taken over the challenge of cutting transmission and distribution losses from 44 percent to 14 percent over the 10-year period. It has also agreed to increase collection efficiency from the current 62 percent to 98 percent.

Trading

Power trading volumes in India, though small, have been growing steadily over the years. Investment opportunities arise due to the following:

- Traders can trade bulk power through open access on the transmission system. Distribution open access is in various stages of introduction in the various states in the country. This will enable direct sales to large consumers.
- The policy of allowing 100 percent foreign direct investment (FDI) in power trading will result in the entry of foreign players in the trading market and the depth and maturity of the trading market will increase.
- At present, trading is constrained by inadequate transmission capacity. However, in the medium-to-long run, the initiative of setting up of the national grid to facilitate inter-region transfers is expected to address the problem.

Again, while public equity is not expected in power-trading companies, public infrastructure in the form of a national power exchange is expected to play a key role in the exponential growth of power trading, the development of innovative trading products, the introduction of sophisticated risk-management practices, and the development of peaking power plants and/or merchant power plants in the country.

Further Requirements

The above examples/possibilities notwithstanding, PPP practices can be further improved by taking key initiatives across the energy value chain as discussed below:

More clarity in policy framework is required in matters related to pricing of energy, the target market structure, cross-border investments, and imports and exports of energy products.

Stronger independent regulatory mechanism is required to enable the development of a competitive market structure and to facilitate a level playing field for all.

Well-functioning and integrated energy markets are important to attract investments and bring efficiency in the sector. To develop markets, multiple players should be allowed in the energy sector in the first instance followed by the development of the organized marketplace in the form of exchanges for energy products. A well-functioning market enables transparency and competition, sets the right price signals, and enables liquidity for different players. Physical markets would enable energy derivative products that meet the important objective of risk management for the different players.

Transportation

Background

While India has been clocking an average GDP growth rate of 7.6 percent driven by expansion of the domestic economy and growth in international trade, the performance of the transport sector has lagged the economic and trade growth resulting in a significant transport infrastructure gap.

Trade and Transport Growth in India

Year	2002-03	2003-04	2004-05	2005-06
GDP (US\$ Billion)	467.0	553.9	632.7	724.8
% Growth	3.8%	8.5%	7.5%	8.4%
Trade (US\$ Billion)	114.7	142.1	191.5	235.8
% of GDP	24.6%	25.7%	30.3%	32.5%
% Growth	—	23.9%	34.8%	23.1%
Transport Sector Share (% of GDP)	7.9%	8.2%	8.5%	—
% Growth	9.6%	17.2%	14.8%	—

Source: CMIE 2006

The total logistics cost in India, at 11 percent of the GDP, compares unfavorably with the global average of 6 percent. It is estimated that this gap is affecting India's GDP by at least 1.5 percent to 2 percent.

As India aspires to achieve greater growth, achieving and sustaining such growth requires that constraining factors causing the gap are addressed on priority.

Policy and regulatory framework

The Transport sector comprises the following sectors:

- Roads
- Ports
- Airports and
- Railways

The policy and regulatory framework is defined by the various Central and State level Acts and Nodal Agencies. A number of reform measures have been undertaken at the policy, institutional, and regulatory level in each of the transport sectors for attracting private sector investment, improving institutional capacity for project delivery and enhancing efficiency of services.



Roads

The road sector is a concurrent subject, where the jurisdiction of Central Government is limited to National Highways, while the jurisdiction of State Governments is across State Highways, Major District Roads, Village and Other Roads. At the Central Level, the overall policy and programme development and planning is done by the Planning Commission in consultation with the Ministry of Shipping, Roads, Transport and Highways (MOSRT&H) and Ministry of Rural Development (MoRD). At the State Level, the overall policy and programme development and resource planning is done by the State Planning Cell in consultation with Central Planning Commission and State Ministry in charge of Roads.

The sector is governed by a number of legislations comprising the Indian Tolls Act of 1851, The Land Acquisition Act of 1894, Dispute Settlement Act of 1940, National Highways Act of 1965, Motor Vehicles Act of 1988, National Highways Authority of India Act of 1988 and the Central Road Fund Act of 2000. Many State Governments have set up State Road Development Corporations for the Development and maintenance of Roads.

Ports

The ports sector in India is divided into "Major Ports" and "Non-Major Ports" which are under the jurisdiction of Central Government and State Governments respectively. The legal framework governing the sector comprises the Indian Ports Act of 1908 and the Major Port Trusts Act of 1963.

- Major Ports under Central jurisdiction are governed by policy and directives of Ministry of Shipping of Government of India
- Minor Ports under State's jurisdiction and governed by policy and directives of respective State Government's nodal departments/ agencies
- Tariff Authority for Major Ports (TAMP) has been constituted for regulating tariffs in major ports and its functioning/role is being revised to ensure uniform and transparent norms relating to fixing tariffs as well as prescribing quality of service for port authorities/terminal operators.

Railways

Currently Railway is a central subject with Ministry of Railways. Indian Railways (IR) are a departmental enterprise wholly owned by the Ministry of Railways. The legal framework governing the sector comprises the Indian Railways Act of 1989.

- Railways have allowed private entry into container rail transport services with licenses issued to 14 private parties and are commencing the next round of issuing licenses.
- Railways have announced a revamped Wagon Investment Scheme for private participation in rolling stock
- Railways have announced intent to pursue PPP framework for expansion of infrastructure and services.

Airports

Currently Civil aviation is a central subject with Ministry of Civil Aviation. The ministry controls two important bodies:

- Bureau of Civil Aviation security, which oversees safety aspects, and
- Directorate General of Civil Aviation which is responsible for enforcement of regulations.

The key policies governing the sector include Airport Authority of India Act, Policy on Airport Infrastructure, Domestic Air Transport Policy, Aircraft Act and Aircraft Rules and the Open Sky Policy.

Sector Specific Enablers

Roads	Ports	Railways	Airports
<ul style="list-style-type: none"> • 100 percent FDI allowed • Capital Grant of 40 percent of capital cost by NHAI to enhance project viability. NHAI also permitted to participate into equity of BOT projects • Institution of Central Road Fund for assured funding of road development projects. • Provision of encumbrance free site for work by Government • BOT guidelines for private sector participation put in place • Toll / shadow toll / annuity based concessions to private participants • New model concession agreement (MCA) finalized. The new agreement includes design, build, finance, operate and transport activities instead of build, operate and transfer. This implies that government, instead of owning the asset after the concession period, would continue to buy 'road services' from the concessionaire • Partial traffic risk mitigation introduced • Concession period linked to 6-laning of projects • Toll rates indexed to 40 percent of WPI • Sector has been declared an industry to allow commercial borrowing 	<ul style="list-style-type: none"> • Draft National Maritime Policy developed with the aim of for strengthening the sector through synergies of initiatives at the centre and state level and encouraging investment flows. • Central and State Governments have come out with policies for private participation in Major and Minor ports respectively. • A comprehensive Model Concession Agreement (MCA) has been developed for building and operating major port terminals on a BOT basis. The framework of MCA addresses the issues important for limited recourse financing of infrastructure projects and also elaborates on the basis for commercializing ports in a planned and phased manner. • Concession mechanisms have also been developed by some State Governments (Gujarat, Andhra Pradesh and Orissa) 	<ul style="list-style-type: none"> • Railways have allowed private entry into container rail transport services with licenses issued to 14 private parties and commencing the next round of issuing licenses. • Announced a revamped Wagon Investment Scheme for private participation in rolling stock • Announced intent to pursue PPP framework for expansion of infrastructure and services 	<ul style="list-style-type: none"> • 100 percent FDI permitted for existing airports with automatic approval upto 74% and FIPB approval beyond 74 percent. • 100% FDI under automatic route permissible for Greenfield airports. • Bill for creation of Airport Economic Regulatory Authority (AERA) currently under consideration.

Key issues

The key issues facing the transport sectors exist at project as well as policy and regulatory levels.

In the roads sector, the risks associated with land acquisition have the potential to derail a project timetable. The projects for road development and maintenance are also too small (less than 100 km) to attract major international bidders and strategic investors.

Bangalore-Mysore Highway

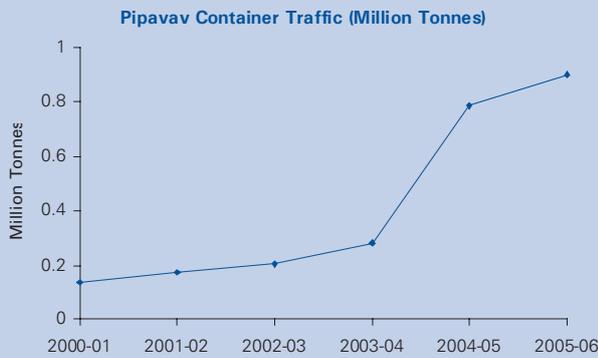
In 1995, the Government of Karnataka approved the development of a massive urban and transport related infrastructure corridor between Bangalore and Mysore called the Bangalore-Mysore Industrial Corridor (BMIC), which involves building an expressway between these two cities, and development of five cities along the corridor with the goal of decongesting Bangalore. The agreement between the state government and Nandi Infrastructure Corridor Enterprises (NICE) was signed on October 14, 1998. Although the project was awarded to NICE a decade ago, delays in land acquisition, red tape, and 5-year legal battles have pushed up the original cost by INR 6 billion from the original INR 22.5 billion. This is a reminder that all big infrastructure projects stumble at land acquisition and related issues. Increased transparency in land records and rigorous land reform are fundamental to successful delivery of PPP projects. The leeway for big and influential private developers, political parties, or a government to hamper public interest infrastructure projects, should be curtailed.

In the ports sector, while reforms have witnessed an increase in investments in capacity creation, the burgeoning traffic growth rate has resulted in critical constraints in cargo-handling capacities.

This has resulted in a high capacity utilization of close to 100 percent on various major ports and adversely effected port performance. Greenfield port development has also been constrained by lack of adequate port connectivity.

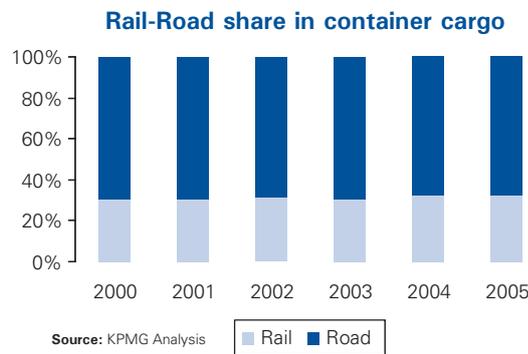
Port connectivity issues hampered cargo growth at Pipavav Port

Gujarat Pipavav Port Limited (GPPL), India’s first private port company was commissioned in 1996. However, the port was not well connected by rail as the nearest rail link at Rajula was 18 km from the port. This affected the port’s container traffic and it was below 200,000 TEUs in 2002. To overcome this problem, Pipavav Rail Corporation Limited (PRCL), a 50:50 JV between GPPL and the Ministry of Railways was formed and it undertook the task of converting the existing 250 km meter gauge into broad gauge between Surendranagar and Rajula and extending the line from Rajula city to the port. At the same time, a 30,000 sq meter rail container terminal was developed. The rail project was completed in April 2003, and the terminal became operational in November 2003. As can be seen from the following graph, there has been a dramatic increase in container throughput since 2004



Source: Pipavav port statistics

Similarly, the capacity and service level constraints in railways have resulted in a shift of cargo from rail to road especially in high-volume low-value manufactured cargo segments.



Source: KPMG Analysis

In the airport sector, a long-term privatization strategy for the development and modernization of airports in India is a key requirement. The need for this arose from the dynamic scenario where all four metro airports were to be privatized on similar lines but Kolkata and Chennai airports were left behind. Similarly, the idea of splitting the development of non-metro airports between the Airports Authority of India (AAI) and PPP routes is also a shift from the earlier strategy. It is imperative that to build and restore investor confidence, the Government of India crystallize a long-term strategy for the holistic development of the sector. Investors also need clarity on the process of bidding. The privatization plans are not appropriately notified to the bidders. The concept design of the bid has also not been standardized. The timeframe for submission of bids and parameters for evaluation are also decided by the government and are not common for all bidders.

Sector Specific Considerations

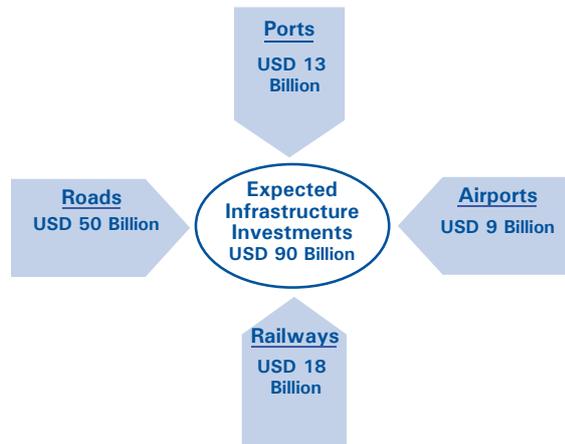
	Policy / Institutional / Regulatory Issues	Project-level issues
Roads	<ul style="list-style-type: none"> • Project for road development and maintenance failed to evoke interest from large reputed foreign and international firms (as size is small lesser than 100 km) • No uniform tolling policy • Disparity in tolling rates between private-funded projects and public-funded projects leading to user resistance 	<ul style="list-style-type: none"> • Acquisition of land is an impediment that delays project implementation • Traffic figures of government are on the higher side, leading to independent traffic projections by entrepreneur and project lender(s) causing delay in financial closure
Ports	<ul style="list-style-type: none"> • Tariff controls by TAMP for major ports, whereas no such overall body exists for minor ports leading to unfair competition • TAMP vested with limited powers and inadequate role definition and function. No provision to ensure compliance and impose penalties for non-compliance. TAMP does not have sufficient powers to requisition records and cross-examine witnesses for tariff-related issues • Lack of regulator for ports • Major ports perform the role of full service ports rather than landlord ports • No significant manpower rationalization and training for developing multi-skilled workers for major ports which is consistent with traffic and cargo handling requirements 	<ul style="list-style-type: none"> • Poor rail and road connectivity to ports

Railways	<ul style="list-style-type: none"> • Ministerial, commercial, and regulatory powers are vested with a single entity: the Railway Board • Indian Railways as an enterprise is integrated with the government and hence is not able to function with commercial objectives • The vertically integrated monolith structure of Indian Railways leads to product pricing and costing being determined on non-commercial principles 	<ul style="list-style-type: none"> • Wagon Investment Scheme (formerly Own Your Wagon scheme) started in 1990s to increase private investment in rolling stock but private interest was limited by one-sided clauses favoring Indian Railways as well as the inability of Indian Railways to adhere to service levels • Lack of customer orientation by Indian Railways • Non-concomitant by Indian Railways to agree to known freight rate formula
Airports	<ul style="list-style-type: none"> • AAI is both an operator and regulator • Lack of independent regulator in the sector. Currently, the Ministry of Civil Aviation is regulating all aspects • Restrictions on foreign ownership of airlines 	<ul style="list-style-type: none"> • Lack of transparency and consistency in project conditions and executions • Inordinate delay between setting up of greenfield project and its financial closure
Multimodal services	<ul style="list-style-type: none"> • Need for a single authority with overall control, as coordination is required among multiple agencies • Need for a policy to usher transparency and regulate trade practices • Lack of a well-defined liability regime coupled with minimum standards of entry for multimodal transport operators • Lack of ready availability / access to appropriate liability insurance cover • Lack of simplified / streamlined documentation and procedures 	<ul style="list-style-type: none"> • Lack of adequate and efficient port infrastructure • Lacuna in port-rail-road interfaces • Inadequate hinterland connectivity • Customs declarations, procedures are generally found to be inefficient and costly, and are often subject to irregular practices

The India opportunity and PPP

While sectoral reforms are being pursued, ambitious project plans have been developed for various transport sectors to bridge the infrastructure gap. These measures have opened up various opportunities for private participation in the provision of transport infrastructure and services.

The initiatives in developing transport infrastructure alone are estimated to require a total investment of USD 90 billion over the next 5 to 10 years.



Ports

The National Maritime Development Program targets investments of the order of almost USD 13 billion over the next 10-year period. About 60 percent of this investment is envisaged to come from the private sector amounting to approximately USD 8 billion. The balance investments would come from the port's internal accrual as well as budgetary support from the government. The NMDP includes projects for the creation of berths, port facilities, landside infrastructure, etc. as well as the Sethu-Samudram Project, which will dredge a navigable channel between India and Sri Lanka at an estimated cost of USD 540 million to enable ships up to 10 meter draft a shorter passage.

An additional USD 580 million is proposed to be pumped into the sector for hinterland connectivity projects.

Roads

To cater to investment needs of the road sector, the investments in the sector are projected to grow by around 24 percent over the next 5 years.

The state and the central governments have planned investments in the road sector to the tune of almost USD 50 billion by 2011. The share of private participants is expected at USD 4 billion by way of equity alone for NHAI BOT projects under the National Highway Development Program from Phase III to Phase VII.

Railways

The dedicated Rail Freight Corridor is being developed at a total cost of USD 15 billion. A large proportion of the capital investment is proposed to be raised through PPP. In addition to capacity expansion of rail network, an investment of USD 3-4 billion is planned for upgradation of rail safety. Apart from safety-related investments, there would also be substantial investments in upgradation and laying of new railway lines. Key areas of PPP in Railway sector comprise:

- Development and operation of the dedicated heavy duty rail freight corridor
- Development of terminals and warehousing facilities
- Privatization of branch lines
- Commercial exploitation through PPPs of the excess, vacant and unutilized land available with Indian Railways
- Setting up of rolling stock manufacturing facilities for IR

Airports

The Committee on Infrastructure chaired by the Prime Minister estimates an investment of USD 9 billion for the development of airports during 2006-07 to 2013-14. Out of the total, it is estimated that USD 6.9 billion would come from PPPs. This comprises

- Modernization of Chennai and Kolkata airports and greenfield airports for Navi Mumbai, Pune, Goa, Nagpur, Pune, Navi Mumbai, Greater Noida, and four North-eastern states
- Modernization of 35 non-metro airports but private participation allowed in development of city-side facilities only
- Upgradation of equipment / instrumentation at all airports in country

Further Requirements

Review of successful projects indicates that these have clear boundaries and measurable performance for the private party, sufficiently large scale of operations, competitive market for provisioning of the services, significant service delivery, and ability for the private sector to control factors for which it is responsible. PPP projects have not been successful where the private sector has been asked to manage risks beyond its control. The contour of the PPP procurement process also has a bearing on the success of the project. In this context, attracting private participation for the transport sector necessitates that following key areas of concern are addressed:

Project preparation

Significant efforts need to be invested in preparing projects for PPP to ensure that issues on traffic realization, land acquisition, and associated delays do not arise. The project preparation should ensure the following:

- Establish clear boundaries and measurable performance
- Scale and value of interest to be assumed by private sector contractors especially in case of road project
- Cost-effective allocation of risk to the private sector
- Opportunity for innovation
- Scope for the generation of additional third party revenue
- Competitive market for the provision of the service

Procurement procedures

A fair, transparent, and standardized process for the procurement of PPP services needs to be established, especially for airports and railways. Privatization plans need to be communicated to private participants and the design of bids should be standardized including parameters for evaluation.

Contractual framework and contract management plan

The PPP contract is central to identification of risks and placing it on the party best able to bear it. Therefore, a robust contractual arrangement needs to be established for each sector depending upon the type of PPP being procured.

Simultaneously, a robust contract management is required to enable the private sector and the government to meet their respective obligations and anticipate future needs by managing proactively rather than merely reacting to situations as they arise.

Regulatory set up

A robust regulatory set up needs to be established, either sectoral or cross sectoral, to create a level playing field, establish equitable tariff structures, and redress disputes between the concerned stakeholders.

Outreach

An outreach program, must be initiated to attract international bidders / investors for investing in the transport sectors.

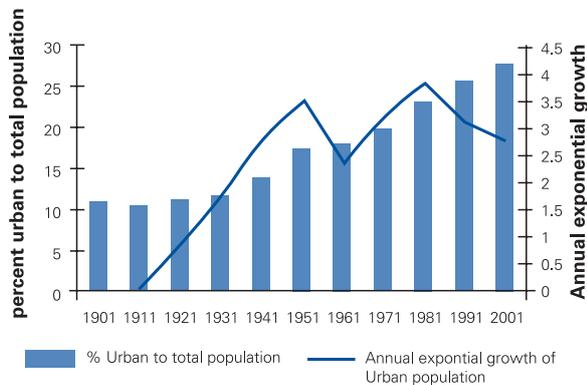
Urban infrastructure



Background

India is witnessing rapid urbanization, which is fuelling the growth of our mega-cities. However, rapid urbanization coupled with under-investment in urban infrastructure and municipal services has resulted in serious environmental and health problems in India's cities. Urban households, particularly the poor, have limited access to potable water and adequate sewerage, drainage, sanitation, and waste disposal facilities. The graph alongside attempts to capture the magnitude of the exodus to urban areas.

Growth in Urbanization



Source: India Infrastructure report 2005

Based on the last census (2001), it is estimated that more than 300 million live in "Urban India"—that is about 30 percent of the total population. Studies also indicate that while the population of India has grown two and half times in the last 50 years, urban India has grown nearly 5 times, during the same period. Forecasts suggest that more people would migrate to urban India in the years to come.

The 74th Amendment of the Indian Constitution (in 1992) is often cited as a historical benchmark in creating an environment for better infrastructure service provision through the decentralization of urban governance. However, it can be said in retrospect that while the spirit of the amendment was laudable, it has largely remained dysfunctional as far as delivering its mandate is concerned. Vesting power with Urban Local Bodies (ULBs) has not been synonymous with building institutional capacity, improving administrative efficiency, or augmenting financial resources, which are integral for meaningful service provision. On the flip side, the inertia of urban/local governance has spawned in its wake, a host of non-governmental organizations (NGOs), who have donned the mantle of ensuring accountability from local governments and espousing the cause of the urban poor / underprivileged through independent initiatives.

Policy and regulatory framework

Urban infrastructure can be broadly defined to include the following areas:

- Drinking water
- Sewage and sanitation
- Waste management
- Roads and (public) transport
- Housing
- Civic services (street lighting, parking lots, public conveniences, public health, etc.)

Water supply and sewerage

The National Water Policy (NWP), 2002 provides the overarching framework for provision of drinking water and sanitation services both in urban and rural areas and management of water assets in the country. Several states such as Karnataka, Madhya Pradesh, Orissa, Rajasthan, and Tamil Nadu already have a state water policy drafted along the lines of the new NWP. PPPs in water supply projects are still in a nascent stage in India.

Timeframe for the Implementation of the Rules

S.No.	Compliance criteria	Schedule
A	Setting up of waste processing and disposal facilities	By 31 December 2003 or earlier
B	Monitoring the performance of waste processing and disposal facilities	Once in six months
C	Improvement of existing landfill sites as per provisions of these rules	By 31 December 2001 or earlier
D	Identification of landfill sites for future use and making site(s) ready for operation.	By 31 December 2002 or earlier

Source: India Infrastructure Report, 2005

Solid waste management

Guidelines for treatment and disposal of municipal solid waste (MSW) were officially notified in 2000 by the Ministry of Environment and Forests following recommendations from the Supreme Court.

States like Karnataka, Rajasthan, West Bengal, and Maharashtra have set out policies and programs for MSW management, including facilitating private sector participation (PSP) in collection, treatment, and disposal of MSW through appropriate technologies. Uttar Pradesh, Madhya Pradesh, Tamil Nadu, Andhra Pradesh, Maharashtra, Haryana, Karnataka, Gujarat, and Rajasthan have also announced policy measures pertaining to the allotment of land at nominal lease rent, free supply of garbage, and facilities for evacuation and sale and purchase of power to encourage the setting up of Waste-to-Energy (WtE) projects. The tariff-for-power purchase is agreed upon as per the general guidelines issued by the Ministry of Non-Conventional Energy Sources (MNES).

Urban transport

The Government of India has formulated a draft National Urban Transport Policy with the following key objectives:

- To bring about better integration of land use and transport planning to improve access to jobs, education, etc.
- To encourage public transport and non-motorized transport so that the dependence on personal motor vehicles is reduced
- To have a more coordinated approach to urban transport management through Unified Metropolitan Transport Authorities
- To provide concessions for the adoption of cleaner fuel and vehicle technologies so that the pollution caused by motor vehicles is reduced

The focus of the policy is on

- Integrating land use and transport planning
- Facilitating an equitable allocation of road space
- Prioritizing the use of public transport
- Discouraging the use of personal motor vehicles
- Providing adequate parking infrastructure

For high-cost mass transit systems, the Central Government plans to encourage such facilities being set up through the mechanism of Special Purpose Vehicles (SPVs) and could offer financial support either in the form of equity or a one-time viability gap financing support, subject to certain guidelines for project development, under the scheme for support to PPPs announced by the Ministry of Finance in 2005.

Urban Housing

To facilitate the mobilization of funding for housing development, the government recently declared the housing sector an infrastructure sector, thereby enabling access to tax benefits on investments. The Government is also supporting the implementation of mortgage securitization as well as trading and investment in securitized papers. Moreover, several measures have been implemented to further policy reforms, including the repeal of the Urban Land Ceiling Act and the preparation of model legislation to enable states to amend their rent control acts. The government has also allowed 100 percent FDI in the property and constructions sectors for this purpose.

The scheme “Integrated Housing and Slum Development Programs (IHSDP)” has been introduced by the Government of India for improvement of slums in cities / towns not covered under JNNURM.

Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

The JNNURM is a significant step to address the crucial issue of urban infrastructure. It was launched to encourage cities to initiate steps to improve existing service levels in a financially sustainable manner. This program has an outlay of INR 50,000 crore over a 7-year period beginning from 2005-06. The program targets ULBs or para-statal agencies achieving the following key outcomes on completion of the 7-year period:

- Modern and transparent budgeting, accounting, and financial management systems designed and adopted for all urban services and governance functions
- Establishment and operation of city-wide framework for planning and governance
- Access for all urban residents to a basic level of urban services
- Establishment of financially self-sustaining agencies for urban governance and service delivery will be established, through reforms to major revenue instruments
- Transparent and accountable local services and governance
- Introduction of e-Governance applications in core functions of ULBs / para-statals, resulting in reduced cost and time of service delivery processes.

Key issues

Water supply and sewerage

India is lagging behind other countries in expanding reliable and sustainable services. The water supply in most cities is still intermittent, mostly between two and four hours a day. Of 27 Asian cities with populations of over 1 million, India's four largest cities are ranked among the five worst ones in terms of hours of availability of water per day. A number of areas are already in crisis, including the most populated and economically productive parts of the country. Overall, the provision of inadequate services has been attributed to public monopoly, internal inefficiencies, technical flaws (unaccounted for water, absence of preventive maintenance, high leakage, and old piping system) as well as a lack of autonomy.

Waste generation in cities with population above 100,000

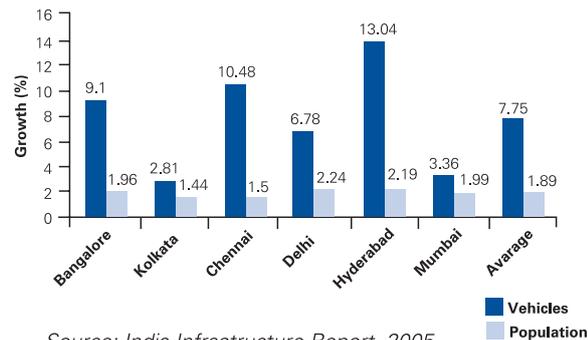
Type of citie	Tonnes/day	percent of total garbage
The 7 mega cities	21,100	18.35
The 28 metro cities	19,643	17.08
The 388 class 1 towns	42,635	37.07
Total	83,378	72.50

Note: Mega cities are above 4 million population and metro cities (also known as million plus cities) are the same as the identified cities under the proposed JNNURM. Class 1 cities with population in the 1,00,000 to million range are 388 in number.

Source: MOUD (2005)

Private participation has been considered a viable alternative, to overcome the systemic problems described above and to infuse efficiency into the operation and maintenance of the infrastructure, while bringing in much-needed capital to supplement public funds. The key challenge continues to be augmenting the institutional capacity of ULBs in developing, structuring, and managing privatized management contracts as also to provide access to reliable, sustainable, and affordable water supply and sanitation services, as envisaged under the policy.

Population growth in major cities



Source: India Infrastructure Report, 2005

Solid waste management

There have been many problems in the rendering of Solid Waste Management (SWM) Services. - the systems applied are outdated and inefficient; population coverage is low; and the poor are the most affected. Municipal laws are inadequate to deal effectively with the ever-growing problem of SWM. With rapid urbanization, the need for scientific waste management solutions is accentuated. The reasons for poor waste management include organizational inefficiencies and more critically, lack of community participation (particularly to ensure segregation of waste at source). In developed countries, the private sector manages most of the SWM services.

Urban transport

The burgeoning urban population of India is engaging in a variety of economic activities in rapidly expanding cities, which are, therefore, encountering fast escalations in urban travel demand. The significant increase in vehicles, combined with a lack of road space, has resulted in congestion in most Indian cities. Growth in the number of motor vehicles cannot be matched by a corresponding expansion in road space, as there are limits to road space expansion within a city. Resource constraints have come in the way of adequate investments in increasing road capacity and even in undertaking timely repair. An associated problem has been the shift from public transport to personal motor vehicles.

Urban housing

Rapid population growth, increased urbanization, relatively low investment in housing, and affordability for the poor have created a serious shelter problem in India, contributing to increased demands for urban infrastructure and services, and a declining quality of life particularly for low-income households.

Various studies have said that India could have a demand-supply gap of 17.9 million housing units by 2010. The Tenth Five-Year Plan says that out of the total shortage of 22.4 million dwelling units, over 70 per cent is for the middle- and low-income brackets. The additional requirement of housing per year during the plan period of 2002-2007 has been put at 4.5 million units per year.

A significant proportion of the population, especially the urban poor living in slums, lack access to housing finance from the formal sector. Additional factors that have aggravated the housing situation include institutional deficiencies, especially among state and local housing agencies, and regulatory constraints to new housing development and investment such as the Urban Land Ceiling Act and the Rent Control Act. Thus, there is an urgent need to address the institutional and regulatory aspects and strengthen and expand the capacity of financing institutions, including community-based organizations, to respond to the need for housing finance, particularly for poor families.

Development initiatives and PPP experience

Water supply and sewerage

The Delhi Jal Board is considering a management contract for two zones in the south of the city, with the objective of raising the level of service and 24-hour supply. Mumbai is contemplating reviving a management contract in the K/est ward for a population of one million. The Karnataka government has issued an Urban Water Policy, where Private Sector Participation (PSP) would be introduced gradually as a tool to foster change in public organizations.

The Bangalore Water Supply and Sewerage Board (BWSSB) is contemplating the development of the Greater Bangalore Water Supply and Sewerage Project through suitable management contracts outsourced to the private sector. The project development is being assisted by the World Bank.

One of the key PPP initiatives in the provision of water supply services is the Tiruppur Water and Sewerage Project. The project is on a Build-Own-Operate-and-Transfer (BOOT) basis for a 30-year concession, at the end of which it is to be transferred to the government. The venture has a "fixed operation and maintenance fee" that would be recovered entirely from the Tiruppur municipality. The Visakhapatnam Industrial Water Supply Project was also completed under a PPP framework.

Solid waste management

PSP has been attempted in door-to-door collection of waste, street sweeping, secondary storage of waste, transportation of waste, composting of waste, power generation from waste, and final disposal of waste at the engineered landfill.

Bangalore has entered into two kinds of service contracts: One, for primary waste collection from the doorstep and transportation to the disposal site through small contractors, and another for integrated treatment and disposal of waste through payment of tipping fees to expert agencies.

In Chennai, a seven-year contract has been awarded to the private operator Onyx through a transparent competitive bidding process for primary collection, street sweeping, secondary storage at a transfer station, and transportation of waste to the disposal site. Onyx has engaged its own manpower, tools, equipment, and fleet of vehicles. It is paid on an INR-per-tonne basis with an annual increase of 5 per cent in this rate built into the contract. The cost per tonne of waste in this arrangement is merely 50 per cent of the departmental cost for the same service provided by the city administration in the other zones. The efficiency of service has gone up and the quantity of waste collected has increased substantially.

Selco International is running a waste to energy facility using Refuse Derived Fuel (RDF) technology in Hyderabad in consultation with TIFAC to produce 200 tonnes RDF per day from 700 tonnes of municipal solid waste provided by the municipality free of charge. Selco recently set up an RDF based power plant of 6.6 MW capacity at Shadnagar, 55 km from Hyderabad. The fluff prepared at the RDF plant is transported to the power plant where it is used along with 30 percent agro-waste for generating power. The plant has been functional since November 2003. This plant is expected to reduce greenhouse gas emission equivalent to 43,705 MT of carbon dioxide per year. Cities like Surat and Ahmedabad have reported similar success stories.

Urban transport

Of late, there has been an increased recognition of the importance of public transport as a means to mitigate congestion and air pollution in urban areas. New mass transit systems are, therefore, being planned in several cities. Bangalore proposes to construct a rail-based mass transit system to cover 33 km in two lines. Mumbai proposes to construct a 15-km line from Versova to Ghatkopar on a BOT basis. Two sections of the 65-km long Phase I of the rail-based system in Delhi have been commissioned and the third section is scheduled for completion in March 2006. A second phase of the same system, covering another 53 km, is proposed to be taken up shortly. There are also proposals for extending the Delhi metro to Gurgaon and Noida, though the precise modalities are yet to be finalized. Proposals have also been initiated for rail-based systems in Hyderabad and Ahmedabad. The latter is also exploring a bus rapid transport system for the city.

Urban Housing

Lucknow achieved a successful PPP housing project under the Kanpur Road Extension Scheme. In this project, land was provided to private developers by the development authority and the cost of this land was to be paid back in a specific time frame. The private developer was to create internal physical and social infrastructure and reimburse the development authority for the cost of external services like trunk infrastructure connection points to the development authority. The development authority mandated that 40 percent of the total number of constructed units should be of the economically weaker section (EWS) category, with a built-up area of 30 sq m. The developer was to be reimbursed at the predetermined rate for construction of EWS houses through Lucknow Development Authority and Housing and Urban Development Corporation.

The predominant range of houses was between INR 3 and 7 lakh, while the EWS houses were sold at INR 65,000 in 1997. Initially the developer sold 25 percent of the stock at the "launching price," which was comparatively less. After this, the firm stopped selling the units for a considerable time, by when the prices appreciated significantly. Then the developer brought the stock in the market and disposed of it at the high market rate to generate surplus.

A recent example of a successful public-foreign partnership in the urban housing sector is the joint venture between the Andhra Pradesh Housing Board (APHB) and IJM Infrastructure of Malaysia to create a large residential project in Hyderabad. However, the project was primarily designed for the medium-to-high income group. The welfare motive of the APHB ensured a proportion of low income housing within the project.

The India opportunity and PPP

At present, there are only few projects that can be showcased in the PPP domain in the aforesaid sectors. However, several new opportunities are likely to emerge in each of these sectors for private sector participation including

- Water-supply schemes under long-term lease / management contracts (Greater Bangalore Water Supply Project)
- Solid waste management facilities (sanitary landfills, integrated waste-to-energy projects), including collection and transportation of municipal solid waste, under appropriate service / management contracts in several class-I cities
- Mass rapid transport systems in cities such as Bangalore, Hyderabad, Ahmedabad, and Goa
- Integrated housing development similar to the experience in Lucknow and Hyderabad

Further Requirements

Future PPP proposals would need to mitigate risks in the following key areas to allow private sector participation with a fair degree of comfort:

- Building institutional capacity: This is needed to be able to award bids and monitor performance
- Project structuring: Evolving suitable project structures for private participation
 - Leases/ service contracts/ management contracts
 - JVs/ SPV-based concessions with equity participation by central and state governments including provision of asset-based support such as land/ commercial development rights
- Financial structuring: Creating innovative financing mechanisms (to support EWS housing, etc.) where cost recovery is an issue
- Risk mitigation: Strong political will is crucial to the success of such projects in view of the intense public scrutiny and opposition from locals / stakeholders.

If these concerns can be tackled upfront, private participation could significantly improve the situation in Indian cities and achieve the targeted levels of improvement in basic necessities.

About Commonwealth Business Council

The Commonwealth Business Council (CBC) was established by the Commonwealth Heads of Government Meeting in October 1997 to involve the private sector in the promotion of trade and investment.

We act as a bridge for co-operation between business and government, helping to remove barriers to trade, and mobilise investment into Commonwealth countries. Today we also address the following challenges, working in partnership with Commonwealth governments and the private sector.

Many Commonwealth countries offer good investment opportunities but suffer from popular misconceptions, uneven media coverage and failure to promote their economic strengths to important external audiences.

The CBC is well placed to work with governments and investors to bring focus to their sound fundamentals and the investment opportunities that these countries represent.

The Commonwealth legacy has equipped member countries with affinities in language, legal systems, and administrative procedures and political outlook - the "Commonwealth Factor". This goes a long way towards ensuring that members are prepared to function individually or as a group in the fast-moving global context.

Governments and the private sector have demonstrated that this relatively homogenous trading group is also capable of drawing investment from non-Commonwealth members including the United States, China, Japan, the EU and the Middle East.

About Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the growth of industry in India, partnering industry and government alike through advisory and consultative processes.

CII is a non-government, not-for-profit, industry led and industry managed organisation, playing a proactive role in India's development process. Founded over 111 years ago, it is India's premier business association, with a direct membership of over 6000 organisations from the private as well as public sectors, including SMEs and MNCs and indirect membership of over 98,000 companies from around 342 national and regional sectoral associations.

A facilitator, CII catalyses change by working closely with government on policy issues, enhancing efficiency, competitiveness and expanding business opportunities for industry through a range of specialised services and global linkages. It also provides a platform for sectoral consensus building and networking. Major emphasis is laid on projecting a positive image of business, assisting industry identify and execute corporate citizenship programmes.

With 56 offices in India, 8 overseas in Australia, Austria, China, France, Japan, Singapore, UK, USA and institutional partnerships with 240 counterpart organisations in 101 countries, CII serves as a reference point for Indian industry and the international business community.

KPMG in India

Mumbai

KPMG House, Kamala Mills Compound
448, Senapati Bapat Marg,
Lower Parel, Mumbai 400 013
Tel: +91 22 39896000
Fax: +91 22 39836000

Delhi

4B, DLF Corporate Park
DLF City, Phase III
Gurgaon 122 002
Tel: +91 124 2549191
Fax: +91 124 2549101

Pune

703, Godrej Castlemaine
Bund Garden
Pune - 411 001
Tel: +91 20 30585764/65
Fax: +91 20 30585775

Bangalore

Maruthi Info-Tech Centre
11-12/1, Inner Ring Road
Koramangala, Bangalore – 560 071
Tel: +91 80 41766000
Fax: +91 80 41766999

Chennai

Wescare Towers
16 Cenotaph Road, Teynampet
Chennai 600 018
Tel: +91 44 39844900
Fax: +91 44 39844905

Hyderabad

II Floor, Merchant Towers
Road No. 4, Banjara Hills
Hyderabad 500 034
Tel: +91 40 23350060
Fax: +91 40 23350070

Kolkata

Park Plaza, Block F, Floor 6
71 Park Street
Kolkata 700 016
Tel: +91 33 39823210
Fax: +91 33 39823222

Contact Us

Pradip Kanakia

Head, Risk Advisory Services
Telephone: +91 80 4176 6100
e-mail: pkanakia@kpmg.com

Pradeep Udhas

Head, Markets
Tel: +91 22 3983 5400
e-mail: pudhas@kpmg.com

Arvind Mahajan

Head, Infrastructure Advisory Group
Tel: +91 22 3983 5526
e-mail: arvindmahajan@kpmg.com