

Infrastructure in India

The American Heritage Dictionary, defines the term “infrastructure” as “The basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools, post offices, and prisons.” However, the areas of infrastructure have broadened over the years and cover Agriculture, Food, Water, Public Health, Emergency Services, Government, Defense Industrial Base, Information and Telecommunications, Energy, Transportation, Banking and Finance, Chemical Industry, Postal and Shipping and many other sectors. Infrastructure has been a subject that has traditionally been in the hands of the government.

Right from the year 1947, till around 1994, there have been some debates about which part of the infrastructure sector needed to be in the private sector, and which part in the public sector. Compared to countries of the Far East such as Malaysia, Thailand and China, India has struggled in getting these regulations together. Privatization of infrastructure is not simple as there is a social aspect to it. Roads, bridges, railways and dams are public thoroughfares and there are sensitivities involved, particularly when taking into account the realities and socio-demographic characteristics of the country. But over the last nine years, different infrastructure sectors have also moved at different speeds. The telecom sector, after initial hiccups has moved very fast indeed. On the other hand, the power sector has hardly moved at all. Moreover, the present UPA government has taken many initiatives in this field, which will help to boost the economy.

Infrastructure sector is divided into hard and soft infrastructure. The hard

infrastructure includes roads and bridges, ports, airlines, railway, power, telecom while the soft infrastructure includes education, health, tourism, etc.

Hard Infrastructure

In transport sector, BOT (Build-Operate-Transfer) projects have had some success. One of the most prestigious projects is the “Golden quadrilateral project” launched by NDA government which aims to connect the four metros. This is a forward step to upgrade the standard of transportation and to enhance the quality of life and economic development of the country. The cost would be generated in part through grant and in part through the extra cess on petrol. The first phase of golden quadrilateral is targeted to be completed by December 2005. NHDP II and III phases are in the pipeline and much groundwork has been done to complete the project in targeted time.

Another important aspect is how to provide better transport facility to urban people. Different state governments have taken the initiatives to improve the suburban network. Delhi, Hyderabad, Bangalore, Chennai and Mumbai are having the existing rail network but they need to be improved to handle the urban mobility and therefore, state governments are working on this aspect. Bangalore city is planning to implement the light rail network. Delhi, Hyderabad and Chennai are extending their rail network. The credible work done by Mumbai Railway Vikas Corporation (MRVC) to improve the Mumbai suburban railway system since its inception has taken care not only to extend the suburban rail network but also resettlement and rehabilitation of slum dwellers along the railway tracks in both the Central and Western

sections. Moreover, railway sector needs to be part of multimodal transport system and the railway network would be enhanced by having railways’ golden quadrilateral plan same as golden quadrilateral projects for the roads.

The Government of India’s targeted is \$150 bn and a global share of 1.5% by 2010. This has created the urgency to have the standard cargo handling equipments, modernization of the port systems and transforming the port sector from labor-intensive to autonomous system. However, such modernization has been done in the past by restructuring the major and minor ports in India viz., Nhava Sheva International Container Terminal (NSICT) Tuticorin port and Mundra Port. Recently, Vallarpadam container terminal project was inaugurated by PM Dr. Manmohan Singh on February 16 this year. The Shipping Ministry of India has also formulated the National Maritime Policy in 2005, wherein the private sector participation is encouraged.

In the civil aviation sector, Airports Authority of India (AAI) has also made a list of bidders and there is an attempt to lease the airports. The privatization of Bangalore international airport is a forward step, which is supposed to be completed by the end of 2005. The international airport project at Hyderabad is being built on private-public partnership model. Even the AAI Amendment Bill 2003 has formulated a framework to invest in new and existing airports. The increase in FDI in airports from 49% to 74% also aims to increase the involvement of private parties.

Power has traditionally been one of the areas, which has caused the maximum trouble in terms of effective utilization, and management of resources. Two of the core issues revolving around the regulation are:

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Proper management of the power sector, and the rationalization of tariffs. The former has been addressed somewhat by the authorities in the Electricity Act, 2003. The latter is yet to be properly addressed due to socio-political nexus. The government is looking to exploit the hydel power to generate electricity as it is cheaper and abundant, particularly in the north and east.

There is a lot of conceptual development in the area of rural infrastructure where rural telecom is being used to increase the tele-density, connection of the rural roads by *pradhan mantri gram sadak yojana* and development of rural power through the Accelerated Power Development Program. It is pertinent to note that as per government data only 78,205 villages out of 5.8 lakh villages are left to electrify.

Soft Infrastructure

The government aims to provide the free primary education and therefore a cess of 2% on direct tax has been imposed. The satellite technology aims to provide education in the remotest areas. EDUSAT is one of such efforts of the government. However, the direct interaction with teachers can't be ignored and the government provides mid-day meals for school-goers to encourage their participation whereby the literacy of the country should be increased. National Literacy Mission has been launched in April 2005 by Government of India for the same. Higher education has undergone a profound change and requires continuous updating to stay competitive. An educational body has to be a source of creation of information and not just a purveyor of somebody else's information.

Rural Health Mission was launched in April 2005, it aims to provide effective healthcare for rural population

especially women and children. The health plan for each villager will be through village health committee of the panchayat. It will cover 18 states and aims to have 24 hours functional hospital in each block. There will be special community health insurance for the poor. Another issue in health sector is telemedicine, which has attracted a lot of interest in this country. Telemedicine enables the doctor to be where he is, and yet treat a geographically dispersed set of patients, thereby increasing the coverage and lowering the cost. The health sector, as of now, needs the better delivery network of distribution of medicines, availability of doctors at right time, functional hospitals and modern equipments.

Investment in infrastructure is a long-term concern and the investors expect assured return on investment. Now 100% FDI or substantial FDI with automatic approval is permitted. Transport, power and end use of urban infrastructure, permits 100% investment and telecom, airports and civil aviation have recently shown an increase from 49% to 74%.

Great strides have been made in telecom, roads and ports. Power continues to be the area with the maximum bottlenecks.

It is observed that after the opening up of the economy in 1991, foreign companies have shown a lot of interest but it had died down. In the meantime, companies from Asia had continued to do excellent business in this sector, particularly in the last five years. Having gained the experience, know-how and contacts, these companies are poised to take full advantage of the same in the coming years.

The critical aspect in Indian infrastructure is the policy development, with specific steps being laid out for specific policies such as bidding and procurement process, policy planning

Initiatives of UPA Government (2004-05)

- All road projects to be built on BOT concept.
- First ever Container Terminal Project inaugurated at Vallarpadam, Kochi.
- New maritime policy has been launched.
- Establishment of Rural Infrastructure Fund.
- Implementation of education cess of 2%.
- Launched National Literacy Mission.
- Government commitment to interlink rivers.
- FDI in Airlines from 49% to 74%.
- Launched Rural Health Mission.
- Launched Rajiv Gandhi *viduthikaran yojana*.
- Implementing irrigation projects in Andhra Pradesh.
- 100% FDI in construction industry.

methodology and the linkages between policy development and economic growth. The bidding and procurement process basically goes through the various steps, needed to get Private Sector Participation (PSP) in various sectors of the infrastructure. No doubt, both PSP participation and investment would be welcomed, but without a transparent bidding process, there would be sizeable irregularities, leading to more problems. In order to get the best value from the private sector, it is necessary for them to compete against each other, and to get the best value from the society. The expertise in setting up the criteria for the same is what would determine the final outcome of this process.ⁿ

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