

Infrastructure Development Can Boost Steel Demand

Part - I

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Introduction

In the mid-nineties of the last century, the World Bank published a report which estimated that the services provided by the infrastructure sector in value-added terms together account for up to 11 per cent of the GDP of a country.

More than a decade back, International Iron & Steel Institute (IISI), Brussels, observed that infrastructure is a set of assets which underlines the society and its economic activities especially the railways, roads, bridges, ports, power generation and its distribution, water treatment plants, hospitals, schools and other facilities.

IISI further observed that “The 1990s will be a decade of strong spending on infrastructure: after two decades of neglect, it has become clear that inadequate infrastructure is a brake on economic activity, holding down industry's competitiveness and harming the quality of life. Those countries which have neglected infrastructure are falling behind their competitors, where facilities are better. This is true not only for transportation infrastructure and economic performance. Infrastructure is not only an input into the production process,

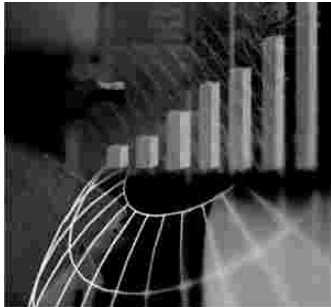
but also a public good; there is a strong social benefit in having adequate road and rail networks, as well as sewers, water treatment plants, hospitals etc.

Governments are running on budget deficits and cannot accommodate further spending plans, yet unemployment levels are high, leading to high levels of social security transfer payments. Proceeding with well chosen infrastructure projects, which offer demonstrable gains, in terms of cost benefit analysis, would transform some receivers of unemployment benefit into tax payers, while producing assets which would raise national productivity. Infrastructure spending has a proven track record for stimulating economic revival, it produces jobs in the construction sector and there is relatively little leakage outside the domestic economy.

Furthermore, the financing of infrastructure need not necessarily or totally be a burden on the public purse. Increasing ways are being found to involve the private sector in the financing and provision of infrastructure which results in a more efficient and competitive infrastructure sector. Infrastructure development is good for the economy and good

for demand. The industry's interests coincide with the national interest on this issue. The industry, therefore has an enlightened self interest in promoting the need for increased spending on infrastructure, targeting the opinion formers and governments to get the message across.

GDP & INFRASTRUCTURE



Gross Domestic Product (GDP) is one of the several measures of the size of the economy. It is defined as the market value of all final goods and services produced within the geographical boundary of a country during a given period of time.

The growth of infrastructure of a country depends largely on the growth of GDP. In 2006-07, India's GDP has been estimated by the Central Statistical Organisation (CSO) to have grown by 9.4 per cent as compared with 9 per cent in the previous year. Provisional figures released by CSO shows that the six infrastructural industries known as 'Core sector' have recorded a growth of 8.2 per cent during 2006-07, over 6.2 per cent during the previous year.

In 2006-07, the share of Secondary sector in GDP which includes mining, manufacturing, oil and gas, construction, water supply etc. has recorded a growth of 26.4 per cent as against 26.2 in 2005-06. The Tertiary sector has grown by 55.1 per cent over 54.1 percent. The tertiary sector for GDP includes trade, hospitality, transport, real estate etc. The 'Infrastructure Report' prepared by the Infrastructure Reforms Committee set up by the Central Government made the following important observations:

Infrastructure services are intermediate inputs to production and any reduction in these inputs costs raise the profitability of production, thus permitting higher levels of output income and /or employment.

The infrastructure services raise the productivity of other factors including labour and capital. Infrastructure is, therefore, often described as an 'unpaid factor of production'.

The report also projected that India's GDP would grow by 8.5 per cent by 2005-06 and would require a rise in infrastructure project investment up to 31.5 per cent by 2005-06.

In actual terms India's Gross Domestic Product rose by 9 per cent in 2005-06 and further improved to 9.4 per cent in the last fiscal (2006-07) and the investment on infrastructure has gone up to an estimated 34 per cent.

BHARAT NIRMAN PROGRAMME

The 'Bharat Nirman Programme' launched by the

government of India has detailed six goals for the development of the rural infrastructure to speed up the work of development of the rural sector. The goals are:

1. Provision of electricity by 2009. This will involve in connecting 125,000 villages and nearly 2.3 crore of rural households. This will require at least one 33/11 KW sub-station in each block and at least one distribution transformer in each village.
2. Every inhabitant of over 1000 population (500 in hilly and tribal areas) to be provided all-weather roads. This will involve connecting about 66,800 habitations by 2009.
3. Every habitation is to have a source of safe drinking water. A total 55,607 habitations are to be covered by 2009. In addition, the planning commission has estimated that 2.8 lakh habitations, which have slipped back after having developed the above source of drinking water, are also to be covered.
4. About 10 millions hectares of additional irrigation capacity to be created by 2009. The targets set have been broken up into plans through major, medium and small irrigation projects and ground water development.
5. Sixty lakh houses are to be built for the rural poor by 2009. The objective will be implemented through Indira Awaas Yojna. The government expenditure may touch Rs. 18,000 crore.
6. Each village is to be connected by telephone in future. About 68,822 villages have been targeted to be connected by 2007-08. About 22 per cent of these targeted areas need to be connected through satellite phones as these are located in far flung areas.



BUDGET 2007-2008

HIGHER INVESTMENTS FOR RURAL AREAS

The government has allocated the funds for many rural development programs.

The Bharat Nirman (Rural Infrastructure) program - Budgetary allocation has been

increased by 31.6 per cent from Rs. 18,696 crore to Rs. 24,603 crore.

Rural Infrastructure Development Fund (RIDF XIII) - Budgetary allocation in 2007-08 has been increased from Rs. 10,000 crore to Rs. 12,000 crore; separate window for rural roads to continue with a corpus of Rs. 4000 crore.

Pradhan Mantri Gram Sadak Yojna (Prime Minister's Scheme for rural road network) - Budgetary allocation 2007-08 has

been made of Rs. 6,500 crore.

Rajiv Gandhi Gramin Vidyutikaran Yojana (Rural Electrification Scheme) - Budgetary allocation increase from Rs. 3000 crore to Rs. 3,983 crore.

Rural Housing - Budgetary allocation of Rs. 4,040 crore has been met to provide assistance to rural BPL households for construction of houses.

Budgetary allocation for Rajiv Gandhi Drinking Water Mission for accelerated rural water supply programme for supplementing states in their efforts to provide safe drinking water to all rural inhabitants has been increased to Rs. 5,850 crore in 2007-08 from Rs. 4,680 crore in the previous year.

Rural Sanitation - In selected districts identified by the state, the budgetary allocation has been increased from Rs. 720 crore to Rs. 954 crore in 2006-07.

If all the above plans succeed to a reasonable extent, the consumption of steel in rural areas, which was 2 kg per capita, may reach a level of 4 kg per capita at a CAGR of 4.4 per cent as envisaged in the National Steel Policy (NSP) of 2005. According to a projection made by R. K. Markan, CMD, H & K India, the steel consumption in the India's rural areas will reach about 6.2 MT with a per capita consumption of 7.5 kg in 2010. Planning and projection is one thing but implementation of projects on time with no cost over runs is vital for the growth of country's economy and the steel industry. Only time will tell what happens in future.

National Steel Policy and Infrastructure

The National Steel Policy announced in November 2005 has prescribed some important measures to augment steel usage particularly in the infrastructure sector.



Strategy - A multi-pronged strategy would be adopted to move towards the long term policy goal. On the demand side, the strategy would be to create incremental demand through promotional efforts, creation of awareness and strengthening the delivery change, particularly in rural areas. On the supply side, the strategy would be to facilitate creation of additional capacity, remove procedural and policy bottlenecks in the availability of inputs such as iron ore and coal, higher investments in R&D, HRD and creation of infrastructure such as roads, railways and ports.

Steel Demand -

a) Urban Areas: The estimated urban steel consumption per capita per annum is around 77 kg at present (2004-05) is expected to grow approximately to 165 kg in 2019-20, implying a CAGR of 5 per cent. Apart from anticipated growth in construction, automobile, oil and gas transportation, an infrastructure sector of the economy, conscious promotion of steel usage by architects, engineers and students, by the INSDAG and large producers will drive additional steel

consumption in urban areas.

b) Rural Areas- The rural consumption of steel in 2004-05 was about 2 kg per capita per annum, primarily because steel is perceived to be expensive amount the village folk. By an active focus on opening new block level rural stock points, a target is set for raising the per capita rural consumption of steel to 4 kg per annum by 2019-20, implying a CAGR of 4.4 per cent.

Infrastructure - The National Steel Policy has made following observations on the need of improved infrastructure in the steel industry up to 2019-20.

Inland Transportation - It is estimated that every turn of steel production involves transportation of 4 tons of materials. The envisaged addition of 75 MT (from 35 MT in 2004-05 to 110 MT in 2019-20) annually implies 300 MT of additional traffic. In a globally integrated economy, minimisation of overall cost of transportation becomes an important instrument of maintaining the competitive edge in both domestic and overseas markets.

Railways - The railways transport iron ore & coal from mines and ports to the plants, and steel to ports and consuming areas.



However, over the last decade railways have been consistently losing traffic to road transport. The share of railways in transporting finished steel has declined from 71.9 per cent in 1991-92 to 34.4 per cent in 2001-02. The decline has been largely on account of railway's competitive weakness in the face of challenges from other modes of transports like road, pipelines and coastal shipping. Replacement of 'equalised railway freight' by 'freight ceilings' is also partly responsible for the modal switch. On the basis of the present shares of railways and roads in the movement of raw materials and finished steel or saleable steel, the expected scenario by 2019-20 as envisaged by National Steel Policy is presented in table 1.

Table 1 – Model Distribution of Traffic, 2004-05 and 2019-20
Expected traffic originating in the Steel sector to be handled by the railways (mt)

| | 2004-05 | | 2019-20 | |
|----------------|----------|-------|----------|------|
| | Railways | Roads | Railways | Road |
| Raw materials* | 80 | 34 | 230 | 100 |
| Finished Steel | 11 | 27 | 33 | 77 |
| Total | 91 | 61 | 263 | 177 |

Based on the average lead distance over which the freight needs to be computed for raw materials for steel making and finished products, it is estimated that the total traffic generated for railways originating due to the iron and steel industry would be

around 120 billion tonne km by 2020. The total traffic for railways including export of iron ore would be around 150 billion tonne km. This estimate however, may change somewhat depending on the exact location of the new (green field) plants and mines coming up in the next two decades.

The railways facilities, therefore, would need to be expanded substantially in view of renewed investor interests in the creation of additional steel capacities - both in green field and brown field projects. The outlay for railways as a percentage of total plan outlay has come down from 10.3 percent (up to 4th plan) to 6.8 per cent (10th plan). However, it may be observed here that apart from NSP's observations the railways has geared up to build freight corridors, online booking of freight and planned other measures which may see a turn around in its performance during the 11th plan up to 2011-12.



Roads: The existing road network needs to be expanded and strengthened considerably for reducing transaction cost of Indian steel producers. The steel plants and mines need to be integrated with the ongoing programmes of national highway development and

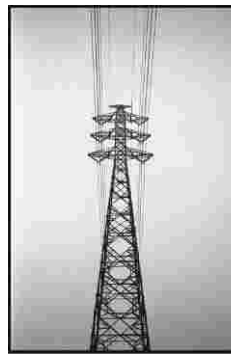
also with the proposed rural road schemes for expanding the delivery chain of steel across the country, especially the rural areas.

The roads now carry an overwhelming 85 per cent of passenger traffic and 70 per cent of freight and the highways account for around 40 per cent of this movement while making up only 2 per cent of overall network. The steel industry would be encouraged to create links to the nearest available highways. But the task of expanding the highways network would continue through public-private partnerships.

Ports : The Indian steel industry has become highly dependent both in terms of imports of critical materials like coal and coke and export of saleable steel. Keeping in view the strategic goal of production of 110 mt of steel per annum and an annual export target of 26 mt by 2019-20, the port facilities would also have to

be expanded substantially. The projected bulk to be handled at port is shown in Table-2

The current government policy allows private capital in port development. Steel producers would be encouraged to develop port and berth facilities so as to improve productivity, turn around time, capacity to handle larger and other operational parameters of efficiency.



Power: The additional requirement of power for the steel industry would be 7,000 MW by 2019-20, requiring an additional investment of Rs. 24,500 crore. The Electricity Act, 2003 and the National Electricity Policy allow captive generation of power and trading of surplus power. This will facilitate growth of investment in captive power plants by the steel industry. At the same time, the government would encourage the industry and the secondary sector in particular, to bring down the specific consumption of power.

Steel, Construction & Infrastructure: Construction sector builds the basic framework of the economy. The construction industry has one of the strongest economic linkages with other sector of the economy and has a strong multiplier effect. The construction segment is estimated at 6 per cent of the economy. However considering the multiplier effect, it has on critical sectors like steel and cement, the contribution of the sector to GDP will be much higher. Having regard to India's major thrust on building basic



Table 2 :

(Bulk to be handled at port in million tonnes)

*Including iron ore

| | 2004-05 | | | 2019-20 | | | CAGR(%) |
|----------------|---------|--------|-------|---------|--------|-------|---------|
| | Import | Export | Total | Import | Export | Total | |
| Raw materials* | 19.3 | 78.0 | 97.3 | 85.0 | 100.0 | 185.0 | 4.4 |
| Steel | 2.0 | 4.0 | 6.0 | 6.0 | 26.0 | 32.0 | 11.8 |
| Total | 21.3 | 82.0 | 103.3 | 91.0 | 126.0 | 217.0 | 5.1 |

infrastructure, it now accounts for 35 per cent of all investments.

The construction sector plays a very significant role in the development of most of the infrastructure projects. It has been found by experts that the construction component in most infrastructure projects is about 70 per cent on an average. In case of roads, bridges, flyovers and house building projects, the construction component is over 90 per cent. For hydro-electric and irrigation projects it is in the range of 70 to 90 per cent. Even in case of thermal and nuclear power projects, the construction component is 30 to 35 per cent.

At the behest of Construction Industry Development Council (CIDC), a chapter on construction was introduced in the Tenth Plan (2002-07).

Recognising the importance of construction as a major economic entity it was decided to give greater thrust on construction sector in the 11th plan as well.

The 11th Plan envisages a GDP growth of 10 per cent in the final years, which will see the infusion of substantial capital estimated at over Rs. 1,400,000 crore. The development of physical infrastructure, through such massive investments, will egg growth in the delivery potentials of the construction industry. Apex bodies like the CIDC and similar other organisations have already launched various initiatives that will augment capacities in the construction sector.

With experience gained through various infrastructure projects, the government is already providing necessary support to the sector underlying the importance of completing the project strictly avoiding time and cost overruns.

Construction demand forecast made by CRISINFAC up to

2005-06 is shown in Table-3.

Infrastructure growth during 11th plan

According to CRISINFAC, the anticipated infrastructural growth during the 11th plan period (up to 2011-12) would touch 9 per cent driven by investments in roads, water supply, sanitation and irrigation which are supported by regulation/ government policies, increasing private sector participation like PPP projects and availability of funds (budgetary support and multilateral funds). Moreover, industrial construction is expected to grow in sectors such as oil & gas and metals.

In the real estate construction, a growth of 5/6 per cent CAGR is anticipated, mainly driven by favourable demographics rising affordability levels and fiscal benefits on availing of a home loan.

According to the projections of industry experts, the dependence of steel sector on the construction which is presently 30 per cent will reach a level of 33 per cent by 2011-12.

The steel sector and construction sector are very much interdependent. They should support each other for their own growth and for the economic development of the country. These two sectors should work in tandem with each other and help each other.

Steel Demand From Construction Sector

Steel demand from the construction sector was estimated at 10.5 Mt in 2004-05. IISI, Brussels, has projected that on an average yearly growth of 7 per cent India's real steel

Table 3 – Construction Demand Forecast for Infrastructure Segment (Rs. billion)

| Sector | Construction component of Investment (%) | Infrastructure Investment | | | |
|----------------------|--|---------------------------|---------|---------|---------|
| | | 2002-03 | 2003-04 | 2004-05 | 2005-06 |
| Airport | 42/- | 20 | 15 | 15 | 24 |
| Irrigation | 80 | 151 | 139 | 208 | 222 |
| Ports | 50 | 7 | 5 | 5 | 1 |
| Power | - | 232 | 312 | 340 | 350 |
| of which Thermal | 20 | 136 | 204 | 224 | 226 |
| Hydel | 70 | 90 | 96 | 98 | 98 |
| Nuclear | 30 | 6 | 13 | 18 | 26 |
| Railways | 42 | 121 | 135 | 153 | 146 |
| Roads | 100 | 206 | 190 | 199 | 358 |
| Telecom | 10 | 133 | 126 | 89 | 116 |
| Tourism | 55 | 2 | 4 | 5 | 7 |
| Urban Infrastructure | 60 | 162 | 174 | 184 | 220 |
| Total | | 1034 | 1101 | 1197 | 1444 |

Source : CRIS INFAC

demand would reach 54 mt in 2010. Therefore, it is likely that steel demand from the construction sector will attain a level of 18 mt or more by 2010. IISI has also mentioned that the growth of steel demand in India. The average annual steel growth will increase from 7 per cent to 7.7 per cent between 2010-2015. Steel demand from the construction sector will grow accordingly during the above period.

Thrust on Infrastructure

a) Roads - The focus of the Government on the development of National Highways through the National Highways Development Programmes (NHDP) has been one of the biggest drivers of steel demand in recent years in India. The NHDP has taken up the development



of 13,200 km of highways, 6,000 km in the Golden Quadrilateral (GQ) and 7,200 km in the East West and the North south corridors. The estimated investment in these projects is Rs.54000 cr. In June 2006, the Prime Minister had announced that investment in the country's road development would be increased Rs. 222,000 crore to be spent in the next 7-8 years.

The GQ is nearly complete and considerable progress has been made in the East-West & the North-South corridor. To build a well knit roadway network, seven phases of road building under NHDP have been planned. In addition to NHDP I and II, NHDP III will built 11,000 km highway to connect state capital, major touring spots and the economic zones. NHDP V & VI are in advanced stages of planning and implementation.

Under the programme for the North Eastern Region (SARDP – NE), 450 km has been awarded in 2006–07 and the balance would be awarded in 2007-08. Besides the above, the government would improve 20,000 kms of 2-lane highways. About 1,000 kms Access-Controlled Express way will be built around cities and a number of by-passes and ring roads will come up.

Programmes for rural road development have been mentioned earlier.



b) Railways - The railways have started its reforms by holding the tariff line, curtailing the superficial staff strength thereby increasing labour productivity, commercial initiatives and capacity expansion. It has responded to the competitive challenge by introducing three types of macroeconomic changes like:

1. It has enhanced economic value generated by railway assets.

2. It has increased economic linkages between transport and other assets in the economy.

3. It is reassessing risks and modifying incentives between the public and private sectors associated with asset productivity improvement, such as giving licences to the private sector to operate container trains.

4. The railways have undertaken the following measures for improving its spread :

- a) Loyalty Discount on freight has been announced to encourage transportation of steel and cement by rail.
- b) Additional projects in Maharashtra, Gujarat and Madhya Pradesh
- c) Construction of Mumbai and Bangalore Metro Rails.
- d) Construction of Dedicated Freight Corridors for faster movement of goods traffic between the four metro cities.

Besides, the carrying capacity of wagons has been increased by 4 tons for covered wagons and by 8 tons for open wagons which meant a 7 per cent and 15 per cent argumentation of train load respectively.

The railways have earned a net revenue of Rs. 8,544 cr in 2006-07 (B.E.) over Rs. 8,006 crore in 2005-06 – up 6.7 per cent. It had a surplus of Rs. 4,673 crore in 2006-07 (B.E.) against Rs. 4,338 crore in the previous year recording a growth of 7.7 per cent

c) Power: The power generation capacity in India in January 2007 was 128435 MW. The capacity owned by utilities in Central, State and private sector in the ratio of 33 per cent, 55 per cent & 12 per cent respectively. In addition, there is a captive power generation capacity of 41,000 MW.

The power generation capacity level in the 11th Plan has been placed at 68,869 MW. Industry experts are doubtful about meeting the target especially when the 10th Plan target was in substantial deficit.

Ultra Mega Power Projects: Governments much publicised seven Mega Power Projects 4,000 MW capacity were to be operational during the 11th Plan period to help tide over the shortfall in power and the slip up in the 10th Plan target. It is now clear that most of the projects may not be operational by 2011-12.

Captive Power Generation: Faced with a peak power shortage of 14 per cent, the government wants to tap the surplus power of Captive Power Plant (CPPs). The CPPs including co-generation plants are set up by industries to meet their power needs. Their production cost is lower that of the SEBs. The installed capacity of the CPPs in India has increased from 580 MW in 1950 to 41,000 MW in January, 2007.

The CPPs can play an important supplementary role in meeting the country's power demand. Generation from non-utility CPPs is expected to reach 131 bl units by 2011-12 at a CAGR of 10.5 per cent.

During the 11th Plan power position will not improve very much. The steel industry is taking wire decisions to build their own CPPs in a massive way to face the power shortage from the SEB grids.

d) Ports: The National Maritime Development Programme (NMDP) envisages an investment of Rs. 55,804 cr. in 276 projects at major ports in two phases through PPP model up to 2011-12. Out of these, 76 projects pertain to new berths and jetties. In the first phase, about 180 projects involving Rs. 31,871 crore are to be completed. The remaining projects will come up by 2011-12.

Port modernisation

Chennai – A second container terminal is being built in a joint venture with port Singapore Authority and SISCAL LOGISTICS PVT. LTD on BOT basis. Development plans under NMDP mostly relate to modernisation of Chennai port, apart from a ship repairing facility.

Vizag - Vizag port trust has planned another five berths in its inner phalanx and one in the outer harbour besides providing an extension to the container terminal in the outer harbour.

Kochi - An international container terminal at Kochi is being built by a joint venture between Cochin Port Trust and India Gateway Terminals Pvt. Ltd. at a cost of Rs. 2118 cr on BOT basis. On completion the terminal will have a capacity to handle 3 million TEUs per annum.

In Marmugao Port, ABG Goa Port Ltd., has modernised its 5A & 6A berths and are handling 5 million tons of coke & coal annually.

Kandla Port Trust is a building a state-of-the-art container terminal on BOT basis with ABG Heavy Industries and will be able to handle 5 lack TEUs per year.

Paradip Port's Container yard now handles 600 TEUs annually. Its capacity is being expanded to 5 lack TEU's per year at a cost of Rs. 150 crore.

Tutocorin's all weather port's new container terminal has been built by ISA SICAL. Its Berth number is now being converted to a container terminal.

Kolkata Port - A massive investment has been plan to harness the best potential of Kolkata Dock system (KDS) and Haldia Dock Complex (HDC) while KDS is aiming at further improving its operational system, HDC is Keen to build two multipurpose riverine jetties and two month purpose berths. Up-gradation and replacement of port equipment will get priority.

The new Mangalore Port Trust has undertaken to build a container terminal on BOT basis, deepening a good number of berths and setting up an SEZ to be done by Suzlon India Ltd.

JNPT is planning fourth container terminal and a fifth box terminal. Deepening and widening of port channels to 14 metres draught is underway to receive vessels of over 6000 TEUs. According to FICCI's estimates the traffic projection by 2012-13 will be about 1,174 MT per year. The cargo handling capacity of major Indian ports in 2006-07 was about 500 mt. FICCI has observed that this plus 520 mt addition will be insufficient. FICCI has suggested an investment of Rs. 100,000 crore towards port development

in the next seven years.

Airports: There are 449 airports / airstrips in India. The Airports Authority of India owns and managers 92 airports. Airports in India vary from state of the art to downright prehistoric conditions.

The government has taken up up-gradation and modernisation of Delhi and Mumbai through the joint venture route. About Rs. 15,000 crore would be required to modernise these two airports. Out of the total Rs. 20,000 crore assessed by ministry of civil aviation required for the modernisation, Rs. 5000 crore will go to Chennai and Kolkata airports.

The JV companies will spend Rs. 2800 crore for Delhi and Rs. 2600 for Mumbai in the first five years.

Two new green field projects at Bangalore and Hyderabad are coming up on Build, Own Operate and Transfer (BOOT) basis.

A consortium led by Siemens of Germany with Unique Zurich and L & T of India will be the J V partner in Bangalore. Total estimated cost is Rs. 1,400 crore. The airport may be operational by mid April 2002.

Another green field airport project on BOOT basis at Hyderabad will be built at a cost of Rs. 1700 crore. The JV partner is a consortium of GMR Enterprises, Malaysian Airport Holidays Berherd. Completion of the project is scheduled for August 2008. Work on the up gradation and moderisation of airports at Chennai, Kolkata, Goa, Ahmedabad, Pune etc. will be taken up in the near future.

Contribution of steel to National Economy: According to experts, steel sector has a capital base of Rs. 151,000 crore. New investments of Rs. 350,000 crore are expected for brown field expansions and green field projects. Steel from 6 per cent of the country's GNP. About 19 per cent of railway goods movement is accounted for by the steel sector. Steel sector gives 11 per cent of total industrial turnover in the country.

Conclusion

Massive thrust has been given on infrastructure development in the country by the government with special emphasis on public-private partnership (PPP) projects. While Roads, Railways and Ports are likely to fulfill their target to a reasonable extent up to 2011-12. The power sector would lag behind despite power generation by the CPPs. The steel producers are building CPPs in a big way and the major producers like Tata steel, JSW steel and foreign investor like POSCO are building their own ports. Vizag steel plant is going for a SEZ.

The growth of infrastructure has to be over 10 per cent up to 2019-20 to help the steel industry to reach its targets. But, the main problem in India is the successful completion of the infrastructural projects without time and cost overruns. The government and the private sector have a major responsibility to boast the growth of infrastructure in the country as per plans.

