P: ISSN NO.: 2321-290X RNI : UPBIL/2013/55327 Shrinkhla Ek Shodhparak Vaicharik Patrika
E: ISSN NO.: 2349-980X Vol-III * Issue-II* October -2015

Dimensions of Infrastructural Growth in India

Balwant Singh
Assistant Professor,
Deptt. of Commerce,
Tilak P.G. College,
Auraiya

Abstract

The main objective of economic planning in India was to ensure the overall development of the country. This required heavy investments in the field of agriculture, establishment of heavy industries and the establishment of the public sector. In view of economic development, several medium, heavy and small and cottage industries were set up with huge amount of investment. During the first, second and third planning period huge amount was invested in heavy industries. The process of massive industrialization demands a sound and efficient base of infrastructural facilities. The process of industrial and economic development demands energy, power, sources of raw materials, transportation (rail, road and water), communication system, finance, insurance and an efficient system of physical distribution. It is evident that nations which have a high growth rate of economic development have a high level of basic infrastructural facilities. The establishment and maintenance of infrastructural facilities assumes a more vital position in the Indian context. The process of economic development in India has to be well backed up by a sound base of basic infrastructural facilities. Thus, it can be said that infrastructure forms the basis of every economic activity and is the basic ingredient to economic development.

Keywords: Infrastructure, Per Capita Income, Credit Creation, Energy.

Introduction

The Indian economy comprises basically of its three pillars-agriculture, industry and services. The three sectors combined together determine the rate at which the Indian economy grows vis-à-vis the world economy. The present era of globalization has thrown our economy open to several internal and external challenges. The most serious challenge before the Indian economy is the cut throat competition posed by several developed and developing nations in the global markets. It is but obvious that in order to survive and sustain in the global competitive environment any country needs to maintain a sound base of its primary, secondary and tertiary sectors. The productive capacities in these sectors have to be enhanced keeping in view the issue of cost efficiency. Along with production, the efficiency relating to quality, price, extent of markets, advertisement and promotions, a prompt distribution and delivery system and customer response becomes vital in facing internal and external competition. The role of infrastructural growth and development becomes very crucial in raising the efficiency of different sectors of the Indian economy.

Infrastructure

Infrastructure is an all inclusive term which refers to mean every activity that helps in the process of rapid growth of an economy. Production is the basis of all economic activity. The process of production of goods and services has to be well backed up by irrigation, land developments, power, energy, transport, communication, distribution systems, innovations in the field of science and technology, banking, finance, insurance, social welfare, health and education. All these activities combined together forms the basis of a sound infrastructural base for an economy. It is true that every economic activity, in order to prosper, has to be well supported by a sound system of infrastructural facilities. In absence of infrastructural facilities even a very efficient and strong economy may not be able to achieve its objective.

Structural Development in Basic Infrastructure

There can be no limit to the list of infrastructural facilities that are required for achieving success in the present global economic scenario. However, there a certain few basic needs in the field of supporting infrastructural facilities that has to be maintained at any cost in order to succeed in the present business and economic conditions. Through this study, an attempt has been made to identify and highlight the basic infrastructural facilities that have become inevitable in facilitating the economy and achieving economic goals and objectives.

Energy

Energy in the first and foremost infrastructure required to in the production process. The size and growth of an economy and per capita income is positively related to the per capita availability and use of energy. India is the seventh largest producer of energy and fifth largest consumer of energy in the world. Energy basically comprises of coal, oil, gas and electricity used by all the three sector of the economy for enhancing the efficiency of production. A country with higher per capita consumption of energy has a higher per capita income. The relationship between the two variables of per capita energy consumption and per capita income of selected countries has been depicted in the following table:

Table 1
Per Capita Income and Per Capita Consumption of Energy

Country	Per capita income (in U.S. dollars) 2008 (ppp)	Per capita consumption of energy (kgs. of oil equivalent) 2007
India	2,930	529
China	6,010	1.484
U.K.	36,240	3,464
Japan	35,190	4,019
U.S.A.	46,790	7,766

Source: World Development Report, 2009- and World Development Indicators (2010)

It is very much clear from the above table that the per capita consumption of energy in India was only 13% of that in Japan and only 6.8% of that in USA. The per capita consumption of energy of China was about three times higher than India. The same is reflected in terms of per capita income also. Countries such as USA, Japan, U.K., and China with high per capita consumption of energy has higher per capita income also.

The share of commercial use of different forms of energy in India has been depicted in the following table:

Table 2
Percentage Share of Different Fuels in Commercial Energy Consumption (in Percentage)

	1953-54	1970-71	2005-06
Coal	80	56	29
Oil and gas	17	35	54
Electricity	3	9	17

Source: World Development Report, 2009- and World Development Indicators (2010)

It is evident from the above table that during the initial phases coal was the most abundantly used source of energy. The share of coal in commercial energy consumption which was 80% in 1953-54 declined substantially to 29% in 2005-06. The share of oil and gas has increased from 17% to 54% and that of electricity has gone up from 3% to 17% during the same period. Thus there is a clear indication that the traditional sources are being replaced by oil, gas and electricity. It is, however, significant to note here that nearly 65% of the total coal produced in the country is used for generating thermal power. The important of coal has assumed its own position. Its use has just changed from being a direct source to a intermediate in the production of energy.

Electricity

Electricity is the most widely demanded source of energy particularly in industry, transportation, and agriculture. It in equally demanded by individuals and households for domestic and personal consumption as well. It would be very interesting here to analyse the changes in the pattern of electricity consumption in India which is reflected in the following table:

Table 3
Pattern of Electricity Consumption (Utilities) (per cent)

	1950-51	1970-71	2009-10
Industry	63	68	36.7
Agriculture	4	10	21.0
Railway traction	7	3	2.2
Public lighting and commercial	13	10	15.2
Domestic use	13	9	24.9
Total	100	100	100

Source: Economic Survey, 2011-12

The prime focus of the economic planning after independence was the enhancement of productive capacity through setting up of heavy and small and cottage industries and agriculture. The heavy industries demanded automation and therefore power was highly demanded by these sectors. The electricity consumption of industry which was 63% of the total electricity consumption in 1950-51 declined to 36.7% in 2009-10 and that of agriculture increased from 4% to 21% during the same period. The electricity is also being highly demanded for domestic use. In the year 2009-10 15.2% of the total electricity was used for public lighting and other commercial purposes.

Transportation

An efficient delivery system emphasizes the establishment of a prompt and sound system of transportation so that goods produced at different centres can be easily and conveniently made available to the ultimate consumers. India is a geographically diverse country with a huge regional disparity and as such it demands a interlinked channel of rail, road, and water communication to deliver goods and services in such a big country. The significance of transportation stems from the fact that there are several products which are perishable in nature and hence have to be moved quickly from the production centre to the centre of consumption. The extent and reach of Indian railways has been depicted in the table presented below:

Table 4
Progress of Railways since 1950-51

	At the end of		
Particulars	**1950-51**	**1970-71**	**2012-13**
Route length (km) of which	53,600	59,800	65,400
Electrified (km)	390	3,700	20,900
Passengers originating (millions)	1,290	2,430	8421
Goods originating (million tonnes)	93	197	1014

Source : Economic Survey 2014.

The progress of Indian Railways began with a journey of 22 kms in 1853. It achieved a route length of 53,600 kms in 1950-51 and 65,400 in 2012-13. The total electrified route length was 20,900 kms in 2012-13. The passengers originating at the end of 1950-51 were 1290 millions which increased to 84.21 millions by the end of 2012-13. The goods originating during the same period increased from 93 million tonnes to 1014 million tonnes. The Indian Railways recorded a surplus of Rs. 8266 crores during 2012-13.

An efficient system of railways has to be well backed up by an efficient system of road transportation. The route length of road communication has been depicted in the following table:

Table 5
Progress of Road Construction (000 kms.)

Year	Length of roads	Length of national highways	Length of state highways	Share of surfaced roads to total (%)
1951	400	22.2	NA	39.25
1961	524.5	23.8	NA	50.1
1971	915	24	56.8	43.5
1981	1485.4	31.7	94.4	46
1991	1998.2	33.7	127.3	51.3
2011	4690.0	70.9	163.9	49.9

Sources (i) Economic Survey, 2009-10
(ii) CSO, Infrastructure Statistics 2013

It is clear from the above table that the length of road in India has increased from 4,00,000 kms in 1950-51 to 46,90,000 kms in 2011. Though the national highways is only 1.5% of the total road length of the country but they carry 40% of the total goods and passenger traffic. The state highways account for only 3.5% of the total road length in the country. These it is clear that majority of the roads in India are district and rural roads which facilitate the process of moving the goods produced in the interiors to the point of rail, water and air network.

The total navigable waterways in India includes rivers, canals and backwater etc which extends altogether to 14,500 kms of which only 5200 kms of rivers and 483 kms of canals are suitable for use of mechanized crafts. Out of the total freight traffic of about 550 million tonnes by all mode of transport, the Inland water transport carries around 17 million tones. This figure equals to only 0.15% of the total domestic transportation.

Air transport is the fastest moving means of transport. The growth in the field of civil aviation has been quite slow during the initial years of planning because of lack of infrastructure in the field of civil aviation and more especially because of increased emphasis laid by the govt on road and rail system of network. However, after 1990s there were significant growth in this field also. The number of passengers carried by air transport increased from 79,12,000 in 1990-91 to 61,718,000 in 2013-14. In the year 2013-14, the domestic services carried cargo over 3,92,000 tonnes and the international services carried Cargo to the extent of 2,46, 000 tonnes.

Banking and Finance

Finance is the life blood of business in absence of which economic activities cannot be undertaken in any form. The process of nationalization was undertaken by the govt primarily with the objective of mobilizing the savings of the various sectors and create investment avenues for such savings and to increase the rate of capital formation in the country. The nationalization process and reforms in the banking system led to remarkable achievements in the field of banking and investment. The banking infrastructure in the country and its contribution in economic development in the form of credit creation have been explained in the following table:

Table 6
Deposits and Credit of All Scheduled Commercial Banks

Year	Bank deposits (Rs. crores)	Bank credit (Rs. crores)
1950-51	820	580
1970-71	5,910	4,690
1990-91	1,92,541	1,16,300
2000-01	9,62,620	5,11,430
2007-08	31,96,941	23,61,916
2008-09	38,34,110	27,75,549
2009-10	44,92,826	32,44,788
2010-11	52,07,969	39,42,083
2011-12	59,09,082	46,11,852
2012-13	67,50,454	52,60,459

Source : RBI Report on currency and finance,2000-01,vol.ii RBI Bulletin June, 2013, may 2010 RBI Handbook of Statistics on Indian Economy (2011-2012)

It is clear from the table that the scheduled commercial banks play a major role in the credit creation process. The total bank credit by these banks which amounted to Rs. 580 crores in 1950-51 increased to Rs. 52,60,459 crores in the year 2012-13. The total number of branches of all commercial banks increased from 8260 in 1969 to 98,607 in 2013.

Conclusion and Recommendations

All economic activities must be well backed up by an efficient infrastructural base. The development of primary, secondary and tertiary sector depends highly upon the status of the infrastructural facilities available in the country. In India, the objectives of creating and maintaining a sound base of infrastructure has been given a prime position in various five year plans. The nation has been quite successful in the regard. However, there are certain suggestions that can be put forth for improving the present conditions:

1. New and alternate sources of energy must be created to be used in enhancing production,
2. The railway network has to be increased in the country because it has increased by only 20.5% between 1950 and 2011 but the freight transport has increased by 948%.
3. There has to be a proper coordination between railways and road network.
4. The banking sector must work in such a manner as to achieve the target of lending to priority sector to the extent of 40% of its total lending,
5. There are regional disparities in the development of industries in various parts of the country. This hampers the growth process and therefore, the govt must strive for achieving the targets of

balanced development of various parts of the country.
6. A special emphasis is also required over the development of inland water transportation system.

References

1. Mishra J.P., Indian Economic Structure, Sahitya Bhawan Publications, Agra, 2012, pp. 239.
2. Lekhi R.K., Public Finance, Kalyani Publishers, New Delhi, 2013 pp. 280.
3. Dutt and Sundaram, Indian Economy, S. Chand & Co. Pvt. Ltd., New Delhi, 2015 pp. 1066.
4. Shekhar K.C. Shekhar L., Banking Theory and Practice, Vikas Publishing House Pvt. Ltd., Noida, 2014, pp. 1036.
5. Trehan R, Trehan Mukesh, Jain T.R., Business Environment, V.K. Global Publications Pvt. Ltd, New Delhi 2012-13, pp. 420.
6. Singh S.K., Singhai G.C., Money and Banking, Sahitya Bhawan Publications, Agra, pp. 354.
7. Mishra J.P., Money and Financial systems, Sahitya Bhawan Publications, Agra, 2009, pp. 252.