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RURAL INFRASTRUCTURE DEVELOPMENT UNDER BHARAT NIRMAN YOJNA: A REVIEW

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Literally translated infrastructure means something that lies below or comes before (infra) the structure. Thus, it is the foundation on which the structure of the economy that will lead to growth and development is built upon. This is mainly because, access to basic, adequate facilities is viewed as strongly related to the wellbeing of general population in any country. Present study is to study the Review of Rural Infrastructure development under Bharat Nirman Yojna.

Keywords: Infrastructure, Development and Bharat Nirman Yojna

INTRODUCTION

Infrastructure development has become a much-debated topic since scholars from various countries have utilised the aspect of infrastructure development as a parameter and index to measure the ability of each country to complete globally. This is mainly because, access to basic, adequate facilities is viewed as strongly related to the wellbeing of general population in any country. Infrastructure development is also the key aspect that is used to measure leader's performance in a country. Therefore, discussions on the concept and definitions of infrastructure development have to consider the viewpoints of researchers from different backgrounds. Such consideration is vital to facilitate understanding of the concept of infrastructure development. According to Sullivan & Sheffr in (2003), infrastructure could be defined as organisational structure and physical amenities that are needed by the community in general. These infrastructures include industries, buildings, roads, bridges, health services, governance, and many others. Sullivan and Sheffrin argue infrastructure development are needed as economically it affects the demand and supply as well buy and sell activities.

The concept of infrastructure development also refers to the provision of fundamental infrastructure facilities such as the construction of roads and highways, availability of transportation, bridges, and ports and telecommunication systems. The basic physical development mentioned is considered important as it serves as an indicator to the progress and developmental process of a particular country. Lack of basic facilities shows that the country or region can be categorised as under-developed and is left behind by progress and modernisation.

The rapid growth in the rural economies is determined by the accessibility and the delivery of essential infrastructures such as fine roads. The importance of road infrastructure to thrive the economy in certain areas has been emphasised specifically in the rapidly developing areas. Investments in the land transport infrastructure give a significant impact on the country's long term economic growth. The importance of the development in infrastructure in thriving several important sectors in the country such as manufacturing, service, international trade, production and agriculture sectors. Development of basic infrastructures like road infrastructure is essential in order to increase the rural communities' life well-being through the provision on amenities for the community use.

The importance of the infrastructure development for the rural communities is more focused on the growth of agriculture sectors which is synonymous with the rural community's major economic resources. The advancement in the aspect of basic infrastructure for rural communities is seen as an accelerator for the growth of the rural communities' economy which in turn will give a positive impact for the quality of life for the community as a whole. Development of the infrastructure such as road infrastructure is seen as the key for the development in the rural areas because by having these developments, basic amenities such as clean water, electricity and communication network will be brought into the rural areas as well.

The impact of the infrastructure development is also related to the quality of social services especially in the aspect of education, health and the quality of life of rural communities in general. Basic infrastructure is an integral part of the rural development strategies because the infrastructure development is integrated with all other aspects, including agriculture, education, health, nutrition, electricity and clean water, which subsequently be developed as well. The development of the basic infrastructure in the rural areas is seen as a holistic approach where it could be the solution for the problems of inequality and social justice for rural areas in general.

The need to develop the basic amenities for rural areas should be considered as a part of an overall development which needs to include the economic growth, the increase in the health services, access to education and the community development itself. The provisions of sufficient and good quality of infrastructure can maintain the balance in the quality of life between rural and urban areas. The provision of sufficient and efficient basic infrastructure is the basis of a good quality of life among rural communities. The development of basic infrastructure in the rural areas such as roads can be considered as the medium of communication between the rural communities with the outside communities. The development of efficient basic infrastructure will enhance the access for social communication devices, the growth in economy and the environment sustainability.

Rural communities that do not have access to electricity supplies are among those in the developing countries. The rural communities with no access to electricity supplies is seen as having a low quality of life compared to their counterparts in the urban areas because electricity supply is a necessity for everyday life. Several negative implications caused by the absence of electricity supplies in rural areas such as the inability to store materials in the cold storage especially food and medicines, low exposure of lightings which can impact the education sector and economic productivity, the hindering of modernisation process and the limitation of communication network and its effects during emergencies.

The development of basic amenities is essential for a better quality of life. The inefficiencies in the provision of basic infrastructures such as roads, clean water supply, electricity supply and communication systems can affect the quality of life of the rural communities. It is pertinent to develop the network of basic amenities in the rural areas in order to reduce the gap between rural and urban areas community. Furthermore, it is necessary to reduce this gap in order to maintain the quality of life in general.

Importance of Rural Infrastructure in India

Basically, rural infrastructure has the potential to provide basic amenities to people that can improve their quality of life. To give an example, development of rural infrastructure can lead to improved access to market centers for the rural producers, better availability of inputs and raw materials at reduced prices and improved mobility. Here is a look at how different sections of rural infrastructure play their role in improving the rural economy as well as life of the people.

1. Rural Road Infrastructure: It provides mobility and connectivity to people living in rural areas. It also provides the much-needed boost to agricultural activities by making available water, seeds and other raw materials to the farmers. By improving connectivity, rural roads also enhance employment opportunities for the rural people in non-agriculture sector, thereby, increasing livelihood opportunities. Rural roads also ensure that the rural areas are served with better public services and all the benefits offered by the state reach the far-flung areas easily. They can even provide access to education and health services.

2. Rural Electrification Infrastructure: It basically caters well to the requirements of agriculture and other activities including irrigation pump sets, small and medium industries, khadi and village industries, cold storage chains, healthcare and education

3. Rural Water Supply System: It can lead to sustainability of systems and sources and tackle the problem of water quality, thereby, increasing good health of people.

4. Rural Housing Infrastructure: It has the potential to improve living standard of the people. Overall and as per various studies, development of rural power, irrigation, water, sanitation and road infrastructure can increase productivity, savings, income and tourism and result in better jobs and health of rural people.

OBJECTIVES OF THE STUDY

The objective of this paper is to study the Review of Rural Infrastructure development under Bharat Nirman Yojna.

DATA AND METHOD

The study is based on Secondary data. Secondary set of data has been collected from official records, various governmental and non-governmental organization and other sources were collected. The data collected from the different sources has been classified and arranged according to requirement of analysis.

ANALYSIS AND DISCUSSION

The importance of infrastructure for economic growth and development in rural area can hardly be overemphasised in a developing economy like India. With poor rural infrastructure, even a marginal improvement in its quantity and quality could significantly improve economic development and human well-being. Improving basic infrastructure, such as roads, transport, electricity, telecommunications, housing, health, water and sanitation, is essential for development and well-being of the rural population. The development of rural infrastructure could promote economic growth, improve the standard of living of the population and reduce the incidence of poverty by generating both farm and non-farm employment and earning opportunities, increasing productivity, providing access to basic goods and services and improving the health and physical condition of people (NCAER, 2007). Empirical studies also report a strong relationship between infrastructure, economic growth, rural development and poverty reduction. In spite of the crucial importance of infrastructure, significant deficiencies have persisted in rural infrastructure across Indian states. The quantity and quality of infrastructure facilities are substantially lower in rural areas than in urban areas. A relatively low density of population, low household incomes and the absence of scale economies are considered to be challenges to the expansion of basic infrastructure facilities in rural areas.

There is universal consensus that investments in physical infrastructure (roads, electricity, telecommunications, fast Internet, dams, irrigation, etc.) are important determinants of economic growth (World Bank, 1994). These infrastructural investments are inherently place-based, and are often directed either to economically lagging regions to incentivize growth or to potentially fast-growing regions to further accelerate growth. This non-random placement often complicates the analysis of the causal effects of infrastructure investments. Studying the impacts of infrastructure is especially harder in the context of rural and low-income populations where demand for these services may be low. For example, rural households may not experience the benefits of electricity grid connections if they do not have complementary appliances (Lee et al., forthcoming). Similarly, households in less populated villages may not be able to fully utilize the benefits of rural roads owing to their remoteness (Asher and Novosad, forthcoming). However, the demand for infrastructure investments is more likely to be higher forms because these services are both production inputs, and are important for the supply chain. Therefore, analysing responses of firms is of central importance in order to understand the efficacy of infrastructure provision on local economic activity.

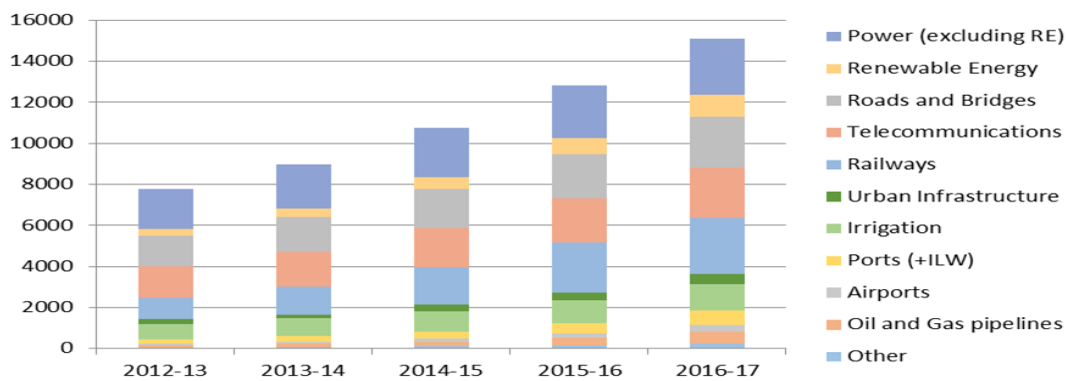
Programmes for Rural Infrastructure Development in India

Infrastructural development has always been a major concern for the government since independence. Therefore, the government has always given this the priority. Here are some of the programmes by the government which has improved the status of infrastructure thereby developing the economic condition of the country.

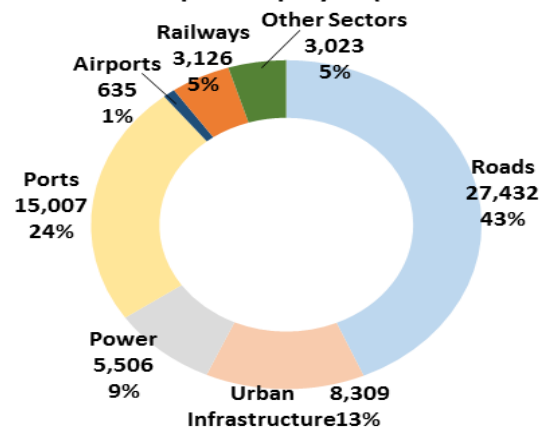
The Government of India, through the Ministry of Rural Development, has always focused on rural development programs to revitalize and expand our country's rural sector. The Ministry of Rural Development and Ministry of Land and Resources have been set up specifically to prepare various plans for rural India. As Rural India also plays a great role in Indian economy so their advancement is also important for both the economic betterment of people as well as for greater social transformation. Better participation of people in the rural development programmes, decentralization of planning, better enforcement of land reforms and more access to credit are required to provide the rural people with better opportunities for economic development. Some of the initiatives taken by the government of India:

- Deen Dayal Upadhyay Gramin Kaushalya Yozna
- Swarnjayanti Gram Swarozgar Yojana (SGSY)
- National Rural Livelihoods Mission (NRLM)
- Prime Minister Rural Development Fellow Scheme (PMRDF)
- Mahatma Gandhi National Rural Employment Guarantee (MGNREGA)
- Sansad Adarsh Gram Yozna(SAJY)
- National Social Assistance Programme (NSAP)
- Pradhan Mantri Awaas Yojana (GRAMIN)/ Indira Awas Yojana
- Pradhan Mantri Gram Sadak Yojana (PMGSY)
- Bharat Nirman Yojna

Infrastructure Investment Planned during 2012-2017 (in Rs. Billions)

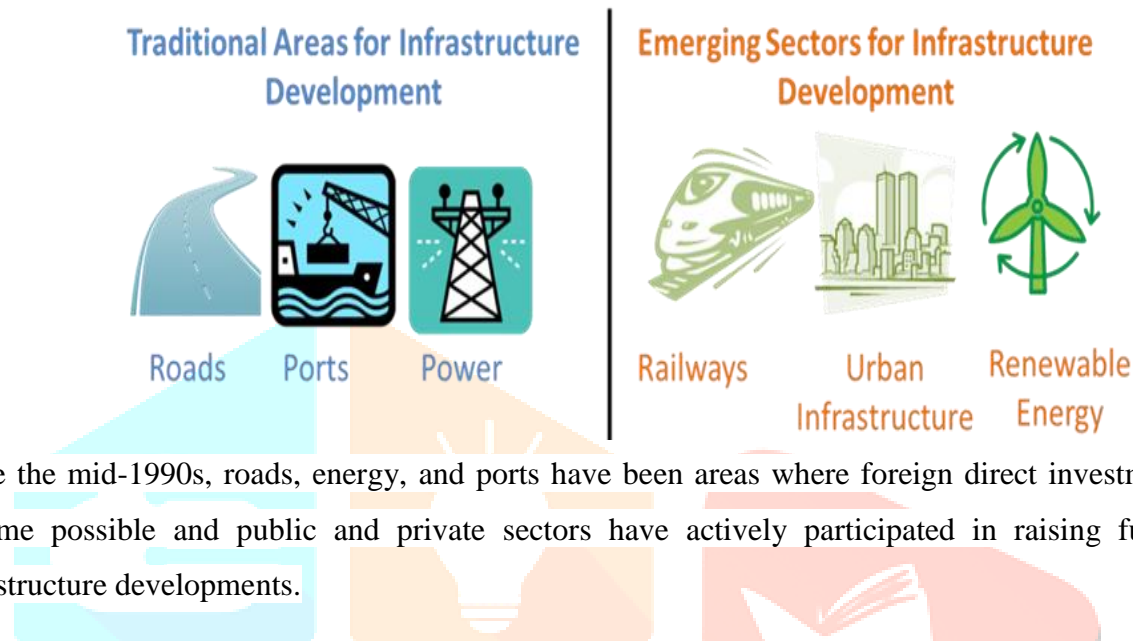


Amount of capital deployed (In Rs. Billions)



As evident from the chart above, most of the private sector involvement in infrastructure development in India has traditionally been limited to roads, urban infrastructure, energy and port development. Most urban infrastructure projects included the construction of roads and commercial and residential complexes.

Road has been the most invested in PPP mode since 2000. This is mainly because road construction projects generally take less time and the Indian Highways Authority prefers his PPP as the preferred investment method for projects.



Since the mid-1990s, roads, energy, and ports have been areas where foreign direct investment (FDI) has become possible and public and private sectors have actively participated in raising funds for these infrastructure developments.

However, changing market needs and evolving population demands appear to be driving infrastructure development into sectors that are largely the responsibility of the public sector. These sectors include areas such as urban infrastructure (subway systems, sanitation, bus rapid transit systems, city roads), railways and renewable energy.

BHARAT NIRMAN YOJNA

Infrastructure is regarded as a major indicator of the growth of any nation as it provides the economic and socio-logical strength to the country. Physical infrastructure boosts economy, attracts prospective entrepreneurs and helps alleviate poverty and reduce unemployment through a number of backward-forward linkages in the primary, secondary and tertiary sector and similarly social infrastructure helps provide drinking water, food, sanitation facilities for inhabitants in the county. With this approach in mind the Bharat Nirman programme was launched by the Government during the year 2005-2009 as a time bound programme to boost rural infrastructure in order to alleviate poverty and provide employment to people. Now what we really need to question is whether the programme has been really effective or just an eye wash for the people especially in the rural areas. If we look at different components of the Bharat Nirman Programme, we can see where the programme stands compared to its promised goals.

Review of Rural Infrastructure under Bharat Nirman Yojna

Around 83.5 crore (70 per cent) of India's population lives in rural areas. The large magnitude of the rural population, their prevailing socio-economic conditions and the quality of life calls for an all-round

development in rural infrastructure to achieve the long-cherished objectives of equitable and inclusive growth with social justice. During the last six decades of the planning period, the country's economists and planners have identified the potential of a vibrant rural India and advocated for the improvement and the expansion of rural socio-economic infrastructure. While the Eleventh Five Year Plan (2007-2012) noted a direct and significant causal relationship between infrastructure and the incidence of poverty in states, the approach to the Twelfth Five Year Plan (2012-2017) laid a renewed emphasis on the creation of physical infrastructure like roads, railways, ports, airports, power and telecommunications.

Considering the importance of infrastructure in the sustenance of economic growth, the Government of India (GoI) had launched a programme on rural infrastructure called 'Bharat Nirman' as a time-bound business plan for implementation in four years (2005-2009). The six components included under the programme were irrigation, drinking water, electrification, roads, housing and rural telephony. The initiative had sought an active and transparent public-private partnership for immediate execution of various infrastructure related development projects in a mission mode. Although Bharat Nirman registered considerable progress by 2009, non-achievement of goals set under the programme prompted GoI to expand the time line for the completion of targeted activities to 2012.

Water Resources

Irrigation Indian agriculture is primarily rain-fed. The goals of agricultural plans in India have aimed at food and fodder availability, growth in agriculture, sustainable agro-practices and easy access to agro-inputs. Creation of irrigation potential in the country and expansion of installed capacity of various irrigation projects have also been important policy objectives of India's development planning. By 2005-06, a large number of irrigation related projects were facing financial constraints and the investment already made in these projects were treated as 'sunken investment'. In 1951, the irrigation potential from major and medium irrigation was about 10 million hectares and from minor irrigation projects was 13 million hectares. By 2006-07, the total irrigation potential created was 103 million hectares.

Bharat Nirman ambitiously targeted the creation of an additional 10 million hectares irrigation potential by 2009-10. At the end of March 2010, the country could achieve the creation of an additional irrigation capacity of 73 lakh hectares, thereby leaving a gap of 27-million-hectare irrigation potential. It was during the second phase of Bharat Nirman (i.e. 2010-11 and 2011-12), in which the creation of irrigation potential surpassed the original target fixed for this component by 1.16 million hectares. From 2005-06 up to 31st March 2012, irrigation potential of 1.18 million hectare has been created under this initiative. This has been achieved by either completion of various on-going major and medium irrigation projects, extension, modernization and renovation of major and medium irrigation projects.

While the achievement of targets on creation of additional irrigation potential is praiseworthy, it is desirable that the irrigation potential so created over the years should be utilized fully and the gap between the potential created and the actual utilization be narrowed. The full utilization of irrigation potential requires actions like (i) timely completion of field channels and drains; (ii) appropriate land leveling and shaping; and (iii) involvement of farmers in taking decisions on usability of such created potential.

Rural Water Supply

The target for providing access to safe drinking water to identified habitations was achieved well before March 2012. Against 55,067 uncovered habitations to be covered during the Phase-I of Bharat Nirman period (2005-09), 54,477 habitations were covered by March, 2009. The remaining habitations, of which many were in difficult areas lacking sustainable sources of drinking water, were covered by March 2012. The strategy adopted to cover uncovered habitations which include both Not Covered and Partially Covered habitations is to ensure that the rural population gets at least 40 litres per capita per day of safe water from sources lying within the village or nearby. Now the focus has shifted to improving the quality of water supplied to targeted habitations.

Studies indicate that the ever-growing dependence on groundwater and its unsustainable over-extraction are lowering the ground water table and adversely impacting the rural drinking water supply. Planning Commission has found that between 1995 and 2004, the proportion of unsafe districts (semi-critical, critical and overexploited) has grown from 9 per cent to 31 per cent, the proportion of areas affected grew from 5 per cent to 33 per cent and population affected from 7 per cent to 35 per cent (Planning Commission, 2010).

The major challenge before the government is now to ensure (a) safe drinking water in the slipped back habitations through vigorous restoration of defunct bore pumps, carrying out repairs to water supply pipelines, augmentation of supply wherever required; and (b) sustainability of quality water supply to areas covered under Bharat Nirman. The Eleventh Five Year Plan (2007-2012) called for convergence of various rural development programmes of the government (such as Mahatma Gandhi National Rural Employment Guarantee Act, Backward Region Grant Fund, watershed development, restoration of water bodies, etc.) backed by a need-based village-level water planning. This issue was also re-emphasized in the Twelfth Five Year Plan (2012-17).

Electrification

Power infrastructure plays a vital role in sustained economic development of a country. The quality of power supply and power accessibility has been a matter of concern in rural India as capacity addition in this sector has been falling short of its targets/demand. For example, the actual capacity addition during the Tenth Five Year Plan (2002-07) was only 19,092 MW against a target of 41,110 MW. The Eleventh Plan (2007-12) has an ambitious target of 62,374 MW against the actual capacity addition as on 31st March 2010 was 22,301 MW.

The policy of privatization of power sector in various States has not reaped the desired results in raising the efficiency in generation, distribution and transmission of electricity. Keeping in view the power availability and accessibility situation and the importance of electricity in rural agriculture and allied sector, Bharat Nirman vowed to supply electricity to 2.3 crore households in 1.25 lakh unelectrified villages within four years i.e. 2005-2009.

Accordingly, the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) focused to provide electricity to rural unelectrified villages. This programme, by March 2012 from 2005-06, could ensure intensive electrification in 2.9 lakh already electrified villages. Works in about 1.07 lakh unelectrified villages have

been completed and free electricity connections were provided to nearly 2 crores below poverty line (BPL) households in rural areas.

To ensure quality and sustained power supply in rural areas, we now need to switch-over from free or subsidy-driven power distribution system to a competitive user-based revenue collection and sharing model. The Mid-Term Appraisal of Eleventh Five Year Plan calls for active involvement of grassroot institutions like Panchayati Raj Institutions (PRIs), Non-Government Organisations (NGOs), Cooperatives, etc. in revenue collection, local management, operation and maintenance of power infrastructure in rural areas.

Rural Roads

Bharat Nirman entailed providing connectivity to all habitations of 1,000 and above (500 and above in the case of Hill States including North East, Tribal and Desert Areas) by 2012. The programme envisaged to provide connectivity to 63,940 habitations till the year 2012. Up to March 2012, projects to connect 58,387 habitations were sanctioned. Out of this, 44,089 habitations were connected by constructing 1,41,095 kms of new roads. Systematic District Rural Roads Plans were prepared, listing out the complete network of all roads in the districts i.e., Village Roads, Major District Roads, State Roads and National Highways and the construction and allocation of resources were prioritised. To ensure quality in construction of rural roads, vigorous quality control measures were followed, backed by independent quality checks and measurements. The inbuilt clause of five years maintenance within the construction contract also helped in the maintenance of the newly created assets.

Rural Housing

Under Phase I of the Rural Housing component of Bharat Nirman, 60 lakh houses were to be constructed through Indira Awas Yojana (IAY) during 2005-06 to 2008-09. Against this target, 71.76 lakh houses were constructed. During 2009- 10, as against the target of construction of 40.52 lakh houses, 33.87 lakh houses were constructed. It was proposed to double the earlier target and to construct 120 lakh houses during the next five-year period starting from the year 2009-10. Against this, 65.87 lakh houses were completed by 31st March 2012.

While the physical progress in the provision of rural housing is much more than the Bharat Nirman target, the involvement of beneficiaries in the construction of a house under the scheme was not found to be satisfactory. For effective implementation of the scheme, the beneficiaries need to actively participate throughout the construction process i.e. making own arrangements for procurement of construction material, engaging skilled workmen and also contributing family labour. The beneficiaries should also take their own decisions about the manner of construction of the house. The active participation of beneficiary in the housing project like IAY will result in economy in cost, ensure quality of construction, lead to greater satisfaction and acceptance of the house by the beneficiary himself/herself.

Rural Telephone Connectivity

India has witnessed a rapid expansion of the telecommunication sector in the last decade. This has led to an intense competition amongst various service providers which ensured quality services at affordable prices. The revolution in the field of communication has the potential in supporting the rural folk in improving their quality of life and livelihood. As in 2005, as many as 66,822 villages were without telephone connection.

Bharat Nirman was expected to provide every Indian village with telephone access by end-2007. The successful implementation of this programme registered an increased tele-density in rural areas. Rural teledensity in 2009-10 was 15.11 and rose by 17.88 percentage points to 32.99 as on February 28, 2011. During phase II of Bharat Nirman, the target was fixed for connecting 2.47 lakh village panchayats with broadband. By March 2011, as many as 1,10,695 village panchayats were connected with broadband facility. Out of 5.93 lakh inhabited villages in the country, about 5.81 lakh villages have been provided with Village Public Telephone (VPTs). Out of 3.5 lakh targeted village panchayats, 1.57 lakh have been connected through broadband as in March 2012. It is expected that the National Optical Fibre Network (NOFN) project of the government of India would take broadband connectivity to 2.5 lakh villages by 2014.

Infrastructure provides the basic framework for economic and social progress of a country. Physical infrastructure strengthens the economy, boosts investment, attracts prospective entrepreneurs, helps alleviate poverty and reduces the incidence of unemployment through numerous positive forward and backward linkage effects on the primary, secondary and tertiary sectors of the economy. Similarly, social infrastructure helps in improving the quality of life of millions of rural inhabitants. Considering these, the country's economic reform measures of 1990s envisaged, inter alia, the improvement of infrastructure for enhancing the country's productive capacity and for enabling the gradual reduction in poverty and the related deprivation. The initiatives of Bharat Nirman during 2005-2012 and the related central sponsored plan schemes envisage enhancement of socio-economic status of our rural people. A considerable part of the total expenditure under the programme is considered as development expenditure. Many projects aiming at enhancing rural infrastructure are also routed through the National Bank for Agriculture and Rural Development which is the apex financial body for agriculture and rural infrastructure. As a follow up action to the Bharat Nirman programme, a synchronized approach is required to converge the infrastructure-building initiatives of Bharat Nirman components with various other development-oriented programmes already in operation like programmes for alleviating poverty, generating gainful employment, ensuring social security, enhancing standard of health, hygiene, sanitation and education. Ministries/Departments of Panchayati Raj, Rural Development, Drinking Water and Sanitation, Water Resources, Agriculture, Information Technology and Land Resources, etc. This endeavour would not only enrich the rural economy by creating productive and durable infrastructure but also would be able to narrow down the gap between rural and urban India by spreading growth benefits uniformly.

CONCLUSION

Literally translated infrastructure means something that lies below or comes before (infra) the structure. Thus, it is the foundation on which the structure of the economy that will lead to growth and development is built upon. This is mainly because, access to basic, adequate facilities is viewed as strongly related to the wellbeing of general population in any country. Bharat Nirman programme was launched by the Government during the year 2005-2009 as a time bound programme to boost rural infrastructure in order to alleviate poverty and provide employment to people. The six components included under the programme were irrigation, drinking water, electrification, roads, housing and rural telephony. Although Bharat Nirman registered considerable

progress by 2009, non-achievement of goals set under the programme prompted GoI to expand the time line for the completion of targeted activities to 2012.

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