CHAPTER – I

INFRASTRUCTURE -

A KEY FACTOR FOR DEVELOPMENT
INFRASTRUCTURE – A KEY FACTOR FOR DEVELOPMENT

The concept of infrastructure has itself gone through changes over time. These changes reflect the deepening of the concept of development and the process of economic development. There are three important aspects of the concept of infrastructure as explained here under.

Physical Infrastructure: Physical infrastructure refers to a set of facilities without which an integrated, independent modern economy could not function. The emphasis on physical infrastructure was based on the following characteristics of these facilities.

i) They involve technological indivisibilities and considerable lumpiness in investment

ii) The investment projects have long gestation lags

iii) They are subject to substantial external economies and diseconomies through the interdependence of economic activities.

Social Infrastructure: The identification of infrastructure with only physical capital was considered inadequate for two main reasons. First, there was the recognition of the importance of human capital in the growth process. Human capital affects growth both through its changes on innovations and technological changes as well as increases in labour productivity. Investment in human capital has similar features and characteristics of physical infrastructure investment. For example, investments in the areas of health, education, water supply, housing etc. have got marked good characteristics.

They have linkages with each other and with physical productivity, for example, literacy is an important requirement for the adoption, and spread of public health.
measures, health and literacy have direct effects on productivity. Investments in these areas have long gestation lags sometimes even longer than in the case of physical infrastructure. The second reason was dissatisfaction with the identification of economic growth measured in terms of national product. This dissatisfaction was on two groups. Firstly, considerations of equity would draw attention on a number of issues of basic needs like health and education. Further the recognition that equality of life is not perfectly related to measures of income and hence these other factors become better proxy for other needs of human society.

Institutional Infrastructure: The emphasis of development strategy has shifted from state control to market friendly mechanism. This has highlighted the importance of institutions of governance and regulation as well as of agencies, which facilitate the flow of information and investible resources. The importance of administrative systems, legal mechanisms, public safety has long been recognized as important preconditions to growth and development. But, in addition to these institutions like banks and financial institutions, insurance agencies etc. can also be seen to play critical infrastructural roles. Banks and financial institutions mobilise capital, help in reducing risk and can assist in information flows regarding a number of economic actions.

World Development Report 1994 grouped them under economic infrastructure focussing on (1) Public utilities – Power, Telecommunications, Piped water supply, sanitation and sewerage, solid waste collection and disposal, and piped gas, (2) Public works – Roads, major dam and canal works for irrigation and drainage (3) other transport sector – urban and inter – urban railway, urban transport, ports, waterways and airports.
Infrastructure essentially relates not only to the development but also adequate provision of facilities and sciences such as energy, baking, marketing facilities and transport sciences and communication facilities. In other words, infrastructure facilities are often referred to the economic and social overheads in developing economies. These overheads consist of:

a) energy-coal electricity, oil and non-conventional sources
b) Banking – finance and insurance
c) Transport – Railways, Roads, shipping and civil aviation
d) Communications – Posts and Telegraphs, telecommunications etc.

e) Social overheads – education, health care, housing etc.
f) Science and Technology.

**Infrastructure as a means of economic development:**

The development and expansion of infrastructure facilities is an essential prerequisite for economic development. The importance of infrastructure in a developing economy can be understood from the words of Dr. V.K.R.V. Rao “The link between infrastructure and development is not a once for all affair. It is a continuous process, and progress in development has to be preceded, accompanied and followed by progress in infrastructure, if we are to fulfil our declared objectives of self-accelerating process of economic development”.

The economic development of a developing economy primarily depends upon the growth and progress of the primary and secondary sectors namely Agriculture and industrial sectors. The past-experience in the last 200 years or more reveals that industrial and agricultural revolution in England and other countries were accompanied by revolutions in transport and communications. Further, the extensive use of coal and later oil as source of energy, tremendous expansion of banking, insurance and other financial
institutions to finance production and trade of agricultural and industrial products accelerated the rate of growth of the economies.

Increase in the agricultural production requires expansion of irrigation facilities, power supply for rural electrification and energisation of irrigation wells, expansion of banking institutions to cater to the needs of agricultural credit, godown facilities for the storage of agricultural products, transport facilities for marketing the agricultural produce. Heavy investments by the Government on these infrastructural facilities provide the necessary impetus for rapid agricultural development.

The growth of industrial production requires not only machinery and equipment but also skilled manpower and better management. Further, adequate power supply for the running of the industry, banking institutions for the supply of capital investment, warehousing facilities for the storage of industrial products, Road, Railways and Shipping facilities to market the industrial goods promote the industrial progress. Provision of these facilities requires massive investments by the government and these requirements are to be met over a period of time continuously on a priority basis.

Provision of infrastructural facilities by building institutions like Banking, Insurance, Warehousing and market committees results in the creation of employment opportunities. Absorption of unemployed people in the "service" sector relieves the excessive pressure on agriculture sector. The increase in the growth of employment in the "sciences" sector itself is an indication of economic development. In India it would have been impossible to register the three-fold rise in agriculture production and seven fold rise in industrial production during the fifty years of plan period without rapid
development of infrastructure facilities. Hence, it is realised that the availability of adequate and efficient infrastructure facilities is a key factor not only to facilitate the socio economic development of a country but also to accelerate its pace.

**Significance of Telecommunications:**

Provision of Telecommunication services is the crucial means for the growth and modernisation of the economy. It is the main sector for spreading the benefits of science and technology. Widespread Telecommunication network is essential for the exchange of information especially in the present information age. In the context of global competition and globalisation, expansion of Telecommunication network assumes immense significance. The importance of this sector was recognised early and the great visionary Pandit Jawaharlal Nehru laid the foundation for an excellent telecommunication network when he established the Indian Telephone Industries at Bangalore in 1948.

With the increasing priorities given to the Telecommunications sector during the successive five year plans, the Department of Telecommunication undertook expansion and modernisation of telecommunication services in the country. As a means to facilitate rural development provision of public Telephones in villages was taken up from 1994. Expansion of STD facilities throughout the length and breadth of the country was undertaken The major thrust has been on the induction of modern digital electronic exchanges in the network. High priority was given for massive expansion of rural telecommunications and to ensure world class quality to the consumers.
Review of Literature:

Dilip Haider's "Infrastructure - concept and Provision" (1995) clears the confusion between infrastructure and social overhead capital. One study highlights the logic of Public Provision of infrastructure by stating that the Government expenditure for the construction of infrastructure finds justification in technical indivisibilities. Contravention to this idea, it also deals with the invitation of domestic and foreign private investment to develop infrastructure in Third World Countries allowing market forces to operate in their own way. He remarks that the change from the private to public carrier has been a slow process.

Kuldip Kaur in his work "Infrastructure and growth - Evidence from Major States in India" 1994-95 reiterates the views of Rosenstein Rodan, Ragnan Nurkse and Albert Hirschman that infrastructure is an umbrella to many activities referred to as social overhead capital. He attempted to clarify the relationship between infrastructure investment growth and Net State Domestic product of seventeen major states of India. He argued that previous year's investment in infrastructure contributes still more significantly to the Net State Domestic Product in the subsequent year.

Tushar Kanti Das in his work on "Infrastructural Development of major states of India" outlines the importance of infrastructure as a key pre-requisite for sustained growth. Basing on the analysis of data relatively to physical infrastructure and social infrastructure and Institutional infrastructure he remarked the states in India. His conclusions include the interesting fact that "the available infrastructure facilities in a state is a more prominent indicator of development compared to the per capita income."
“Regional imbalance in infrastructure and Income in India” by Buddadev Ghosh and Kunal Chattopadhyaya analyses the very crucial sub-sector of the transport network. He presented a clear picture of disparities in infrastructure development Index and Income. He concludes that one of the major sources of failure in infrastructure development is the exclusive government monopoly coupled with increasing budget deficit.

Rakesh Mohan’s work on “Estimation of Requirements for infrastructure investment in India” analyses the infrastructure investment in 1980’s and projects the economic growth 1996-2006 on the basis of Public – Private divide. While dealing with the mobilisation of domestic savings and foreign savings the study outlines the implications for foreign capital flows and the capital market. A key conclusion from this exercise is that infrastructure investments of the projected level imply a sustained growth in exports which is necessary for both the servicing of increasing level of external liability and for equipment imports in the infrastructure sector. This macroeconomic exercise suggests that it is quite feasible for total investments in infrastructure to increase from the current level of 5.50 percent of Gross Domestic product to 7.00 percent by 2000-01 and 8.00 percent by 2005-06

The work of D.P. Pal and Dipika Basu on “Energy use, Transport Development and economic growth in India”, using CMIE data identified the determinants of energy demand. They found that rising energy intensity in agriculture and other sectors has offset the declining energy intensity in industry and consequently the overall energy intensity has tended to rise overtime.
"Development of Roads, key to accelerate the growth of Indian economy" by S.S.S. Chauhan and Ravikanth presents the growth of road network during 1950-92 and supplied the information for framing a new road policy.

Relating the economies of infrastructure with political arena Lopamudra Misra in his work on "Political economy of electric power in Orissa" points out that Orissa government has initiated reform of the State power sector with substantial restructuring of the State Electricity Board to make the operation of the sector more efficient and financially more viable. He also welcomed the decision of Orissa Government to seek participation from private sector in setting up of power generation projects.

In his exercise on "Power Development in Tamil Nadu – New challenges" K. Padmanavan dealt with the issues relating to privatisation in Tamil Nadu. S. Iyyampillai and M. Saravanan examined the "Trends and structural changes in Indian Railways" since 1950-51.

Micro level studies on transport sector were carried out by K.S. Nagarajan for Tamil Nadu on "A case study of Pallavan Transport Corporation" and by Kalipada Basu on "Transport bottlenecks in West Bengal" and by Odeyar M. Heggade on "A neglected social infrastructure sector – urban water supply system".

Methodology and Scope of the Study:

In spite of the priority and emphasis given for the provision of infrastructure facilities, particularly telecommunication services, on a large scale there have been clear cut differences between the urban and rural areas in the growth of these services. Infact,
the urban population could take full advantage of the expansion of modern, qualitative and latest Telecommunication services compared to the rural people. The dominance of urban areas or the relative neglect of rural areas resulted in inadequate generation of employment in rural areas and thereby inadequate rural development.

Anantapur is one of the backward districts of Rayalaseema and the Department of Telecommunications is striving hard to provide telephone services in rural areas of the district. Anantapur District Telecommunications Department is installing the village public telephones to cater to the needs of villagers. It is also encouraging the villagers to use these services by providing STD facilities and granting private telephone connections to individuals in rural areas.

**OBJECTIVES OF THE STUDY:**

In this context, it is attempted to study the impact of Village Public Telephones on the growth of Village economies. The important and relevant objectives of this are:

1. to describe the growth of Telecommunication services in Anantapur district, particularly the Village Public Telephone services.
2. to analyse the cost and revenue receipt structure of Village Public Telephone services (economic viability).
3. to examine the distribution of benefits from Village Public Telephones among the weaker sections, and
4. to evaluate the impact of these services on the socio-economic development of the villages.
In the light of these objectives, a set of hypotheses has been formulated for testing and verification. The important hypotheses are:

1. Provision of Village Public Telephones is growing at a higher rate,
2. The benefits of Village Public Telephones are reaching the weaker sections
3. The revenue recovery position of the Village Public Telephones is not satisfactory
4. The Village Public Telephone services are contributing to the socio-economic progress of the villagers.

Data Base:

The information on the need for the development of Telecommunication services has been collected from several publications, journals and related literature on infrastructure. The five year plan documents of India and Economic survey of India, are referred to prepare the review and growth of infrastructure including telecommunication services.

To describe the position of Village Public Telephone services in Anantapur district necessary data and information are collected from the official files and records of the office of the district Manager Telecommunications, Anantapur.

To analyse the cost and revenue accounts of Village Public Telephones the details are collected from the Annual accounts and revenue receipts records of the Department of Telecommunications. These data are analysed to estimate the cost – revenue ratios of Village Public telephones.
Statistical tools and techniques such as ratios, percentages, averages are used to classify and tabulate the data and suitable diagrams are used to present the information effectively. Time series analysis is attempted to explain the growth of village public telephones and the trends in the expenditure incurred on them are presented in suitable graphs.

To evaluate the impact of Village Public Telephones a survey has been conducted in selected villages in the district. The questionnaire containing the details of the survey is presented in the Appendix and the findings of the study are presented at the end.

Scheme of the Study:

The present study is organised into six chapters and the following are the details.

The first chapter introduces the theme of research, outlines the importance of infrastructure and presents a brief review of literature on the theme.

The second chapter analyses the growth of infrastructure services including Telecommunication facilities.

The third chapter gives a brief account of the review of telecommunication service programmes.

The fourth chapter describes the position of telecommunication services including Village Public Telephone facilities in Anantapur district.

The fifth chapter deals with the survey of Village Public Telephones and analyses the results of the survey.
The last chapter summarises the findings of the study and presents the suggestions for the improvement of efficient functioning of Village Public Telephones.

References:


