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Role of Infrastructure in Economic Development of India

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Introduction:

India continues to suffer from lack of basic infrastructure and finds it difficult to undertake activities that can accelerate the pace of economic development. In absence of infrastructure facilities, there is lack of market-access to rural population, and thus, limited livelihood opportunities, stagnation in agriculture and aggravation of rural poverty levels. Absence of infrastructure also makes rural markets fragmented, characterized by high costs of transactions and high information asymmetry.

A robust public-private partnership for developing rural infrastructure is the need for the hour, and such a joint effort between the government and the corporate shall open new business opportunities, both for the corporate as well as the rural populace. The economics literature has debated a lot between two opposing notions of infrastructure leading economic growth and that of growth leading to a greater demand for infrastructure facilities. Numerous studies the world over have revealed that investments in rural infrastructure is one of the most potent tools that governments can use to enhance growth and reduce poverty in rural areas.

Infrastructure and Economic Growth:

There is the question of measuring infrastructure. While there do exist many infrastructure indices in India like the AKC Index (Anant et. al), the CMIE Index-and the India Today Index, each of these indices have some inherent contradictions. Take for instance, the CMIE Index. It is unable to capture an essential ingredient of such an index. Consider two districts with similar population size and the same number of schools, hospitals, road length, etc. In one all the infrastructure facilities are in and around the district headquarters (town) while in the other, they are more dispersed across the villages. For most of the CMIE variables that make up their index, the two districts will be judged to be similar. This is because, the CMIE index normalizes every infrastructure variable they use by the size of the population. Just the presence or absence of an infrastructure measure is not sufficient. Apart from availability of the

resource, the accessibility of the resource is also of paramount importance. None, of the infrastructure indices we currently have takes this into account in a systematic fashion; For instance for proper development planning at the district level, one needs to know at what distance is the infrastructure facility available to the people. More infrastructure may not necessarily be better, especially when it is not in tune with the economic needs of the region.

Infrastructure Facilities:

In this section, we analyse the status of rural access to infrastructure facilities for the country as a whole, followed by a similar analysis for some major states in the country. Infrastructure facilities have been categorized as infrastructure that enables market access. For this purpose, this study considered metalled roads, all weather roads, bus stops, railway stations, post offices, telephone/email connections, banking facilities, agriculture inputs shop, fair-price shops and markets/weekly markets or hats. In the analysis, a village is said to have no access to any particular infrastructure facility if that infrastructure facility is beyond a radius of 10 kms from the village. The data does not suggest the exact distance (beyond 10 kms) and thus such infrastructure facilities are not taken as a part of the basket of services accessible to a village.

The postal service in India has covered the length and breadth of the country, and a large section of the rural population has access to communication services through post offices. Almost 80 percent of villages in the country have postal facilities available within-a radius of 5 kms. There has been a substantial improvement in telecommunications infrastructure in the country as well. In a short-span of a decade and a half, the network of telephone facilities has expanded to rural areas. As per the data, in 2002 around 60 per cent villages had access to telephone facilities within a distance of 5 kms. This has also opened up opportunities of providing internet connectivity through telephone lines to the rural population as the telephone booths can be converted into internet kiosks.

Many corporations in India, both in the public and the private sectors, are looking to expand the reach of mobile and internet services to rural India. However, despite the giant strides in the growth of tele-communication infrastructure in rural India, there still needs to be substantial investments as more and more villages are required to be brought under the ambit of telecommunication services as even a distance of 5 kins may be quite high for availing such services as these services are such whose usage-frequency is high. It may not be very cost-effective for any rural

household to travel 5 kms to make a phone-call. By making these services accessible right in the village, there shall be an upward spiral in the consumption of such services by the rural people.

Banking facilities are present within the villages in only 6.5 per cent villages in the country. Another 12 per cent villages have banking services available at a distance of less than 2 kms from the village. Around 34 per cent villages have banking services available within a radius of more than 2 but less than 5 kms. Thus, despite the rapid developments made in extension of banking infrastructure, a large proportion of villages in the country do not have access to banking services. It is in this context that the micro-finance movement through self-help groups gains importance in bridging the gap between the formal banking systems and the rural demand for credit.

Many micro-finance institutions (MFIs) are operating in-different regions of the country and are expanding, the coverage of banking facilities in rural areas. The SHG Bank linkage programme of National Bank for Agriculture and Rural Development (NABARD) is a step towards linking the microfinance system to the formal banking system. Under this programme, more than 3.5 million self-help groups have been linked to the formal banking system. This has contributed to enhancing the spread of banking infrastructure to remote corners of the country. The weekly markets of haats are the markets where rural people sell their produce, and also buy the items for consumption and daily use. Around11 per cent Villages have haats or weekly markets within the village, while 15 per cent villages have haats within a radius of less than 2 kms. A sizeable 33 per cent villages have such haats available within a distance of 2 to 5 kms. The presence of weekly markets or haats in close proximity to the village, provides the rural workforce (especially weavers, artisans, potters arid so on) an outlet for sale of their goods. These weekly markets and haats are the nodal business-centers in rural-India and numerous transactions take place on a weekly basis in these markets which provides incomes to many rural households.

Roads:

We now look at the rural infrastructure for market access in these states. Infrastructure for market access generates access to income-sources and livelihood opportunities. Developed states like Punjab in the north have a wide network of metalled and all weather roads covering a majority of villages in the state. In Punjab, for instance, 81.10 per cent villages have metalled roads right upto the village. Southern states like Maharashtra also has a majority of villages connected through all-

weather roads (78.10 per cent and 74 per cent respectively) and bus connectivity is 52 per cent.

Post Offices and Telecommunication Facilities

Post offices and Telecommunication facilities (PCO) have a more or less similar picture in almost all these states. In Punjab, post offices are.-accessible to 56. per cent villages within a distance- of 2 kms or less. However, 95 per cent villages in Punjab have access to postal services within a radius of 5 kms from the village. Telecommunication, facilities through public telephone kiosks are also accessible to 53.7O per cent villages within a radius of 2 kms from the village, and accessible to 90.per cent villages within a radius of 5 kms from the village. Similarly, in West Bengal, 87.50 per cent villages have post offices within a radius of 5 kms from the village, while telecommunication facilities are accessible to 67 percent villages within a radius of 5 kms from the village.

Banking Facilities:

In Punjab 89.80per cent villages have access to banking and credit facilities within a distance of less than 5 kms, of which 22.20 per cent villages have banking facilities present within the village itself. In Rajasthan however, banking facilities are not as widespread as in case of Punjab. Less than 50 per cent villages have access to banking services within a radius of 5 kms from the village. Only 6/70 per cent villages have banking facilities within the village. Even in West Bengal 52.5O percent, villages have access to banking facilities within a radius of 5 kms from the Village. In Maharashtra, approximately 50 per cent villages have access to banking facilities within a distance of less than 5 kms from the village. 57.30 per cent villages in Madhya Pradesh have access to banking facilities within a radios of 5 kms from the village, while in Uttar Pradesh 53:80 percent villages have access to banking facilities in similar range.

As is evident from the census data, the size of the village market, in every way, is smaller than the urban market. Infrastructure is a large upfront expenditure where, often, the operational costs are significantly less than the set-up costs. Given this lumpiness of investment, it may be extremely expensive to provide all the infrastructure facilities in each and every village. It may be more cost effective to let the same infrastructure facility be available to a group of villages rather than to every one of them. Or, one village may have a middle school catering to the children of a number of close-by villages, while a secondary school set up in some neighbouring

village may be able to serve the children from the first village. For primary schools, however, it may be more meaningful to have one in every village.

We also distinguish between connectivity and nearness. Thus, a facility that is 5 kilometres away without any bus service is actually more difficult two access than one which is 10 kilometres away but is connected by bus. In defining access to infrastructure, we take these into account. The census variables thus have been redefined to arrive at the rural gap score. First, we have not only looked at the availability of the infrastructure facility within the village, but also when such a facility is not available within the village. In the latter case we have considered the range within which such a facility is available for the village. The range data has been used from the Census itself. Second, the range has been clubbed with presence of adequate transportation facilities. It is emphasized that not all infrastructure services need to be available at one's doorstep, while others need to be so. Measuring infrastructure access in this fashion helps in planning the geographical location of resources and identifies the regions, and the facilities, that are to be immediately targeted. Based on these fundamental calculations, the gap scores are estimated for access to different infrastructure variables.

Conclusion:

Infrastructure and economic growth are inherently related. Infrastructure ensures speedier flow of information, and reduces transaction costs in doing businesses. Social infrastructure facilities like health and education ensure a better quality of life for the people. Since a vast majority of the population resides in rural areas, provisioning of infrastructure facilities in rural areas enables a more market led growth. Infrastructure also enables diversification of the rural economy by opening newer vistas for economic activities especially non-farm activities arid agro-based industries.

Keeping this imperatives in consideration, the Government of India in the year 20O4-05 announced the 'Bharat Nirman' programme for rural reconstruction. Under this programme, the government allocated INR17.600 billion, to develop infrastructure facilities, especially in rural India, irrigation infrastructure would get an allocation of INR 6850 billion, while roads and housing shall be allocated lNR-4755.4 billion and INR 11 billion respectively.. Rural electrification has a share of INR 2330 billion, while drinking water has an allocation of INR 2530 billion in the fund.

While the government needs to play a proactive role in developing rural infrastructures, there is also a need for the private sector to contribute their share. There are examples from Indian corporates like the ITC. Limited, which have invested heavily in providing rural access to internet and telecom facilities. However, such examples are exceptions and not the norm in rural India. A robust public-private partnership for developing rural infrastructure is the need for the hour, and such a joint effort between the government and the corporate shall open new business opportunities both for the corporate, as well as the rural populace.

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