

A Study of Transportation System and Economic Development in Rural Rajasthan

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Abstract:

The economic development of infrastructure in India, the country has progressed at a rapid pace and today there is an availability of wide variety of modes of transport by land, water and air. But, overall Road Transport is the primary and preferred mode of transport for most of the population and India's Road Transport system is among the most heavily utilized system in the world. It plays a pivotal role in the economic development of a nation by increasing the productivity and competitiveness. Over the last ten years (2009-10 to 2018-19) Road Transport sector GDP grew at an annual average rate close to 11 per cent compared to an overall annual GDP growth of 7 per cent. Today Road Transport serving occupies an irresistible dominance within the transport sector with a share of 5.8 per cent in GDP compared to a too little 1.0 per cent share GDP in case of railways. Also annual average growth in freight transport at 7.5 per cent for road was much higher in comparison to railways which clocked a modest annual average increase of 4.6 per cent during the past reforms phase (1998-99 to 2018-19).

Key-Words: GDP,PPP,EPC,BOT.

Introduction:

Transport System and Economic Development in India:

A good transport system can broaden the market for goods. It can also make the movement of raw materials, fuel, equipment, etc. to the places of production easy.

Further, it opens up remote regions as well as resources for production. Also, as transport facilities increase, the demand for motor vehicles, locomotives, ships, etc. increases too.

This leads to the start of industries which specialize in these goods. let's take a quick look at the transport system and understand how it contributes to the economic development in India.

Indian Railways:

Pre-Independence, Englishmen-owned private companies operated the Railways. However, post-Independence, it became a unified State enterprise. Indian Railways is India's biggest nationalized enterprise.

Further, it is one of the largest railway systems in the world. In the last few years, the Indian Railways is taking huge initiatives in shifting to Public-Private Participation (PPP) for constructing and operating certain railway infrastructure.

Since it is a public utility undertaking, it has to bear the social burden in the form of:

- Loss due to coaching services like suburban passenger traffic and
- Loss due to lower than cost freight rates for food grains, coal, fodder, fruits, vegetables, salt, ores, etc.

Roads and Road Transport System in India:

In India, we can classify roads into three types:

1. **National Highways** – The National Highways cover a total road length of 66.8 thousand kilometers. This is a mere 1.5 percent of the total length of the road system in India. However, these highways take the burden of nearly 40 percent of the goods and passenger traffic. The National Highway system is our primary road grid. Further, it is the direct responsibility of the Central Government.
2. **State Highways** – The State Highways cover a total road length of 154.5 thousand kilometers. This is around 3.8 percent of the total length of the roads in India. The individual States are responsible for the construction and maintenance of State Highways.
3. **District and Rural Roads** – There are many roads that have been constructed under the Minimum Needs program (MNP), Rural Landless Employment Guarantee Program (RLEGP), National Rural Employment Program (NREP), and Command Area Development (CAD). The core idea is to link all the villages in the country.
4. **Express Highway**- Express highway are the highest class of road. They usually have 6 to 8 lanes. Currently, approximately 1,583.4 km of expressways are operational in India. The National Highways Development Project by Government of India aims to expand it by adding an additional 18,637 km by 2022.

In India, we have two types of water transport services:

1. **Inland Water Transport or River Transport** – This comprises of a wide range of rivers, canals, backwaters, creeks, etc. this is the cheapest mode of transport for certain kinds of traffic.
2. **Coastal or Marine Transport** – This comprises the sea surrounding the peninsula of India.

Civil Aviation of India

Air transport helps in the optimization of technological, managerial, and administrative skills in a resource-scarce economy. There are several agencies which provide civil aviation services in India.

Transportation in Rajasthan:

For travelers travelling in the state of Rajasthan is easy. Economy of Rajasthan depends on tourism therefore it is important for the State to have a good network of Transportation. Rajasthan has an impressive transportation system. If the visitors happen to have a short time they will not face a problem visiting the State in the little time they have due to the good transport system of Rajasthan.

In order to sustain investments in large scale, Rajasthan, has superb transportation infrastructure.

Among the Indian dominion the State of Rajasthan is the largest one. Therefore flight is the best option if one wants to travel from one city to another like Udaipur, Jodhpur and Jaipur. Rajasthan is also well connected to the other parts of the world by means of air. Jaipur, the capital city of Rajasthan has an international airport.

The most famous railway entity in Rajasthan is the 'Palace on Wheels.' It provides the most luxurious means to view the beautiful monuments of the past. Royal background of the train's coaches is responsible for its current name.

Heritage on Wheels is another famous train that takes you through Rajasthan. This train makes it possible to see small cities that one cannot view while travelling in Palace on Wheels. The small cities form a part of ethnicity of Rajasthan. Ramgarh, Mandawa, Nawalgarh, Gajner, Shekhawati, and Bikaner can be viewed by means of this train.

The Fairy Queen Train can be boarded in the winter season. For the ease of tourists local transport system is also developed. Regular tours are also available from cities like Agra, Delhi along with many other neighboring cities.

Man touring packages are available for visitors keen on visiting the State. They can also avail tours of the local cities. Many travelling agencies as well as RTDC organize such tours. Tours include places like Barmer, Kota, Chittorgarh, Mount Abu, Ajmer, Jaisalmer, Udaipur, Jodhpur, Jaipur along with other places including religious sites and national reserves.

Airways

Rajasthan is the largest of all the Indian dominions. So, flights are the best choice to travel within the State between cities such as Udaipur, Jaipur and Jodhpur. Rajasthan has a good connectivity by air to the entire world. Jaipur has an international airport.

Regular flights are run from Mumbai and Delhi to Rajasthan by Jet Airways and Indian Airlines. Foreign tourists land either at Mumbai or New Delhi and then fly to their destination by means of a connecting flight.

Directs flights to Kuwait, Abu Dhabi, Sharjah, Singapore and Dubai are available from Jaipur International Airport. An air-cargo complex is also there at the Jaipur airport.

Railway

Rajasthan has a good railway network across the State with Indian Railway (world's largest railway service) extending its services there. There is a good connectivity of the four metro cities (Chennai, Kolkata, Mumbai and New Delhi) of the country with the major towns and cities of this State. All the major cities of India are connected to Rajasthan via the rail network.

There are plans for setting up a novel Dedicated Freight Corridor (DFC) from Delhi to Mumbai.

Palace on Wheels is the most famous railway entity. It gives a luxurious way to view the magnificent monuments of the glorious past. The derives its name from the coaches' royal background.

Heritage on Wheels is another famous means of viewing Rajasthan. It lets the tourists witness the State's small cities, unlike Palace on Wheels, which are inseparable part of the State's ethnicity. Ramgarh, Mandawa, Nawalgarh, Gajner, Shekhawati, and Bikaner can be viewed by means of this train.

During the winter season the Fairy Queen train can be availed. For the convenience of touring the local transport system has been improved. Tours from cities such as Delhi, Agra and other neighboring places are also organised.

Roadways

Bus services are abundant in Rajasthan with its wide network. Admirable bus services are made available by private operators of buses and the Rajasthan State Road Transport Corporation in the State. A good connectivity is available between New Delhi and Bikaner. Every 15 minutes a bus leaves for New Delhi.

The condition of Rajasthan's road is good. The most comfortable way of travelling in Rajasthan is by means of coaches and buses. They're a fairly large range of buses in the State of luxurious air conditioned buses to the mundane buses that link the entire State. Generally passengers purchase the tickets at the departure time but if one wishes to obtain the seats in the first row tickets must be booked in advance.

Taxicabs: One can easily hire cabs and taxis from all the major destination of tourism in Rajasthan. It includes the utility ones to the luxurious chauffeured ones.

Cycle rickshaws and Auto rickshaws: Auto rickshaws are ideal for travelling over short distances. Basically they are an extension of scooter having a canvas roof and can carry 3-4 passengers along with luggage. They ply on basis of meter.

There are these manually driven Cycle rickshaws which are a bit larger than the auto rickshaws but run slower than the engine driven vehicles. They are ideal vehicles for sightseeing apart from being the non-polluting environment friendly vehicle.

Tempos: These are noisy vehicles that are a bit larger than the auto rickshaws. They fly on fixed rate basis. The rates they charge are variable and according to the distance covered.

Tongas: They are carriages which are horse driven. They are a great means to enjoy the glory of the era lost in time. Motors have no doubt become popular transport means but foreign people still like to ride a Tonga. Apart from being a favorite among the foreigners it is also used as a means to transport vegetables from one place to another.

Rajasthan a Geographical Study:

Rajasthan is an Indian State located in the Western region of India. Rajasthan State is established on 1-Nov-1956. The largest city in Rajasthan is Jaipur.

Total area of Rajasthan is 3, 42,239 km² including 3, 35,606.04 km² rural area and 6,632.96 km² urban area. Rajasthan has a population of 6, 85, 48,437 peoples. There are 1, 27, 11,146 houses in the state.

Hindi, Rajasthani are the main languages of Rajasthan. As per ISO 3166-2: IN standard - the ISO code of Rajasthan is IN-RJ. Rajasthan state is further divided in to districts for administrative purposes which you can browse from following districts list (zilla) along with area & population.

List of Districts in Rajasthan

S.no.	District	Area (km ²)	Population (2011)
1	<u>Ajmer</u>	8,481	25,83,052
2	<u>Alwar</u>	8,380	36,74,179
3	<u>Banswara</u>	4,522	17,97,485
4	<u>Baran</u>	6,992	12,22,755

S.no.	District	Area (km ²)	Population (2011)
5	<u>Barmer</u>	28,387	26,03,751
6	<u>Bharatpur</u>	5,066	25,48,462
7	<u>Bhilwara</u>	10,455	24,08,523
8	<u>Bikaner</u>	30,239	23,63,937
9	<u>Bundi</u>	5,776	11,10,906
10	<u>Chittaurgarh</u>	7,822	15,44,338
11	<u>Churu</u>	13,835	20,39,547
12	<u>Dausa</u>	3,432	16,34,409
13	<u>Dhaulpur</u>	3,033	12,06,516
14	<u>Dungarpur</u>	3,770	13,88,552
15	<u>Jaipur</u>	11,143	66,26,178
16	<u>Jaisalmer</u>	38,401	6,69,919
17	<u>Jalor</u>	10,640	18,28,730
18	<u>Jhalawar</u>	6,219	14,11,129
19	<u>Jhunjhunun</u>	5,928	21,37,045
20	<u>Jodhpur</u>	22,850	36,87,165
21	<u>Karauli</u>	5,524	14,58,248
22	<u>Kota</u>	5,217	19,51,014
23	Nagaur	17,718	33,07,743
24	Pali	12,387	20,37,573
25	Pratapgarh	4,449	8,67,848

S.no.	District	Area (km ²)	Population (2011)
26	Rajsamand	4,655	11,56,597
27	Sawai Madhopur	4,498	13,35,551
28	Sikar	7,732	26,77,333
29	Sirohi	5,136	10,36,346
30	Tonk	7,194	14,21,326
31	Udaipur	11,724	30,68,420

Rajasthan State Rural Part, with population of about 5 crore is India's the 6th most rural populous state. Total geographical area of Rajasthan state rural part is about 3.4 lakh km² and it is the biggest rural state by area in the country. Population density of the state is 153 persons per km². There are 33 districts in the state, among them Jaipur Rural is the most populous district with rural population of about 31.5 lakh and Jaisalmer Rural is the least populous district with rural population of about 5.8 lakh. Jaisalmer Rural is the biggest district in the state with a rural area of about 38 thousand km² and Dhaulpur Rural is the smallest with 2964 km.

Impacts of Rural Roads:

Impacts of rural roads are summarized as given below:

- **Improvement in transportation services:** which leads to improved access to market centers for the rural producers, better availability of farm inputs at reduced prices;
- **Diversification of agricultural:** improved market access promotes shift in

favour of cash crops and commercialization of agricultural activities.

- ***Diversification of livelihood opportunities:*** better connectivity enhances employment opportunities in the non-agricultural sectors.
- ***Improved services:*** improved road connectivity, inter- alia, enhances access to education, health and financial services.
- ***Increase in the outreach of the State:*** Improved rural roads facilitate better availability of public services and functionaries in rural areas.

Efficient transport system for sustained economic development:

An efficient road transport system is a pre-requisite for sustained economic development. It is not only the key infrastructural input for the growth process but also plays a significant role in promoting national integration, which is particularly important in India. The transport system also plays an important role of promoting the development of the backward regions and integrating them with the mainstream economy by opening them to trade and investment. In a liberalized set- up, an efficient transport network becomes all the more important in order to increase productivity and enhancing the competitive efficiency of the economy in the world market.

Of the various modes of transport that connect the cities and villages of the country, road transport constitutes the crucial link. Road infrastructure facilitates movement of men and material, helps trade and commerce, links industry and agriculture to markets and opens up backward regions of India. In addition, the road system also provides last-mile connection for other modes of transport such as railways, airports, ports and inland waterway transport and complements the efforts of these modes in meeting the needs of transportation.

The road transport sector in India has expanded manifold in fifty years after independence, both in terms of spread and capacity. The growth in the importance of road transport within the transport sector is borne out by its

growing share in GDP. The share of road transport in GDP is presently 3.69 per cent which accounts for a major share of all transport modes which contribute 5.5 per cent to GDP and handles more than 60 percent of the freight and more than 80 percent of the passenger traffic in India.

Environment & Road Infrastructure:

In the Road Transport Sector, energy planning has a special significance, because transport is the second largest consumer of energy. The growth of transport not only leads to pressure on limited availability of non- renewable energy but also gives rise to broader environmental issues. As the demand for transport services rises, it leads to increased use of scarce land and contributes to the atmospheric pollution in a big way. Sound pollution, road congestion, etc are other environmental hazards due to transport. It is, therefore, necessary that environmental concerns should be built into road infrastructure project planning right from the beginning – at the stage of site selection, alignment finalization, etc. The Government of India is alive to these concerns and has mandated that all road infrastructure projects require environmental clearance before they are taken up.

Development of Backward Areas:

The need for adequate and efficient transport system for promoting economic development is well known. While considering the creation of new transport facility in backward regions however, it must be borne in mind that transport is only one of the essential elements for development of the region and it is not necessary that highly capital- intensive transport projects will by themselves bring about economic development. There has also been persistent demand for subsidizing transport operations in backward and remote areas on the plea that the traffic and the low level of income would not generate the kind of demand which could bear the cost of providing transport services. While the responsibility of ensuring efficient operation of transport services in these regions is that of the State, it does not necessarily mean that the state should be direct

provider of these services. Whether it relates to providing transport services in the backward area or in isolated and hilly region, the State could involve private operators and award routes on the basis of least subsidy, so that benefits are targeted and costs become apparent.

Induction of New Technology:

There is an urgent need for the introduction of the new technology in the designs, engineering and construction methods as also carrying out surveys through remote sensing techniques particularly in the up gradation of the roads which are covered by the HDC. Use of machines to improve both the quality and speed of construction needs to be pursued more vigorously. The possibility of creating equipment leasing companies need to be encouraged. The concept of awarding road projects with huge costs as turnkey Engineering Procurement Construction (EPC) contracts helps to reduce construction time and improves quality. These steps would help in reducing the abnormally high time taken for construction of roads by at least 50 per cent. Several new materials of road construction are also emerging such as polymer modified bitumen, geosynthetics etc that would need to be encouraged depending upon the cost effectiveness.

Indian infrastructure policy on roads permit duty free import of high capacity and modern road construction equipments, complete tax holiday for any 10 consecutive years out of 20 years. Longer concession periods of up to 30 years are permitted as per the roads policy of India. To attract private investment in the road sector, the Government has taken up the policy initiative of providing capital grant of 40 per cent of the project cost to enhance viability, Foreign direct investment up to 100 per cent, Easier external commercial borrowing norms, 100 per cent tax exemption in any consecutive 10 years out of 20 years. Build, Operate and Transfer (BOT) project entrepreneurs are also allowed to collect and retain the amounts from tolls on selected stretches.

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