

The Impact of Road Transport on Economic Activities in Bihar: A Review

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ABSTRACT

Nearly 120 million population is living in Bihar with road density of only 861 kilometres per million population, compared with 2,828 kilometres nationwide. Road transport is one of the significant pillars of social and economic development of the state. The significance of transportation is relative to population and the economy of the state and it is necessary to provide adequate and well-coordinated transport system for economic and social development. The paper studies the role of road transport on economic activities in Bihar.

Keywords: Road Transport, Economic Activities, Road Density

Introduction:

The pulsating economy of a country or any state is only possible through the expansion of economic infrastructure, social infrastructure and most importantly the roads that serve as its arteries. Therefore, road transport has emerged as a dominant segment with a share of around 5 percent in India's GDP. Notably, scripting the country's growth story, India has the second largest road network globally, spanning a total of around 6.2 million km. If we particularly talk about the road infrastructure which includes Expressways, National Highways (NH), State Highways (SH), District Roads, Rural Roads, Border Roads etc. provides amenity to millions of people every day, thus the effects of roads are vital on the social and economic development of the state. Roads are one of the best parameters of measuring the pace and size of economic activity. Road infrastructure plays a crucial role by providing efficient mobility of people and goods, as well as providing access to a wide range of economic and social activities.

High-speed roads that can carry goods to customers in far-off markets raise productivity,

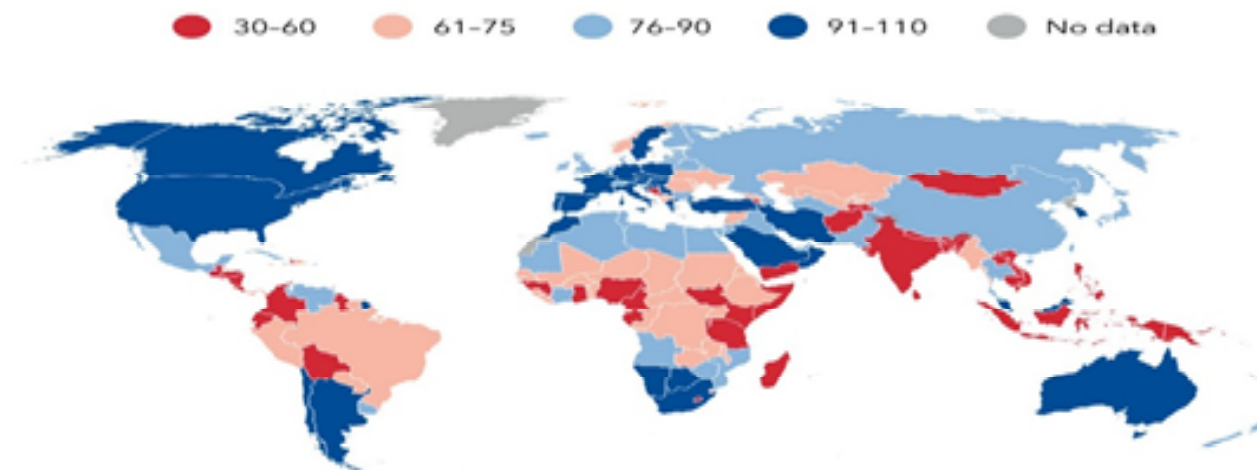
reduce poverty and are an important contributor to sustainable and inclusive economic development.

International Monetary Fund (IMF) working paper published in May, 2022 ranked India 127th among 162 countries in terms of speed of road transport. A comparison of the rankings shows that even Pakistan is ranked higher than India in terms of average speed. In this report, the Indian cities selected for the study are Mumbai, Ahmedabad, Bangalore, and Delhi. The mean speed calculated for the country as the sum of the distances for each these routes divided by the sum of the time taken on each route. This report also highlights that, fastest countries are generally the wealthiest ones as measured by the size of the GDP per capita. For developed economies, a slight increase in the mean speed was associated with a higher GDP per capita than for low-income developing countries.

This report of IMF also highlights that 75.2% of rural population in India have access to all-weather roads within two kilometres distance.

Speed bumps

The world's slowest roads are found in the poorest countries—presenting another obstacle to economic development.
(mean speed ranges, km/h)



Source: IMF staff calculations.

Note: Country borders nor names necessarily reflect the IMF's official position.

IMF

Review of Literature

A study of Infrastructural Constraints of Development in Bihar by **Debjani Sarkar Ghose (2020)**, found a positive relationship between the level of economic development and the density of road network in an area.

Sam Asher and Paul Novosad (2019) in their study on Rural Roads and Local Economic Development highlighted that, rural roads lead to a large reallocation of workers out of agriculture. A new road causes 9 percentage point decrease in the share of workers in agriculture and an equivalent increase in wage labour. They also found suggestive evidence that new highways and railroads have substantial impacts on the allocation of economic activity, land use, and migration.

Ghose and De (1998) found positive and significant relationship between level of physical infrastructure and per capita net state domestic product between 1971-72 and 1994-95.

Majumdar (2002), on the basis of regression analysis of the State wise cross-sectional data for the years 1971 to 1995 pointed out that among all the physical infrastructures, it was the transport and road infrastructure that significantly affected the agricultural output level and the agricultural development index.

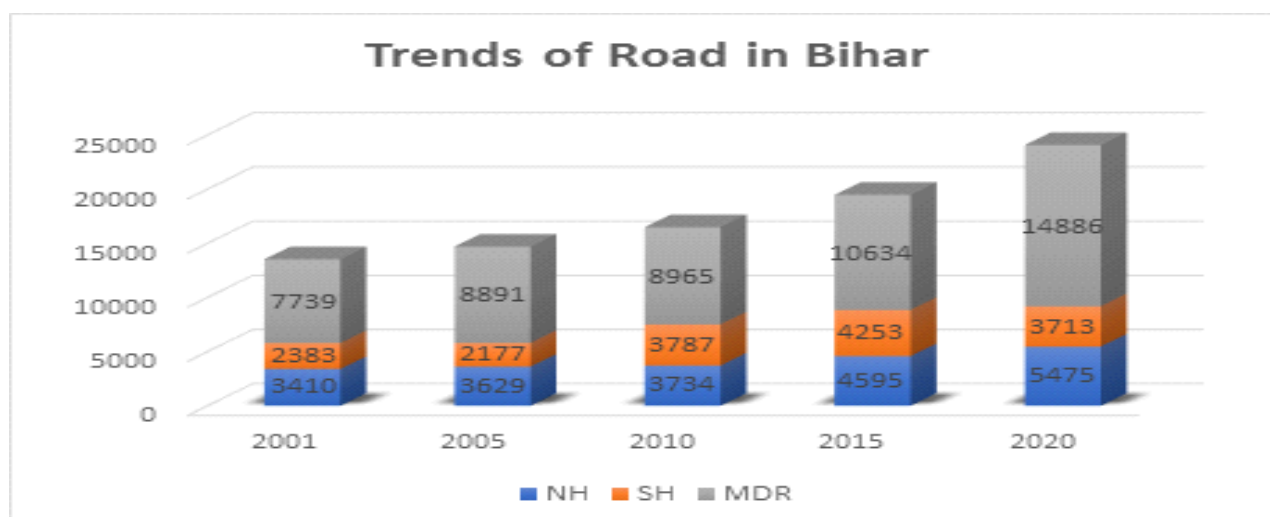
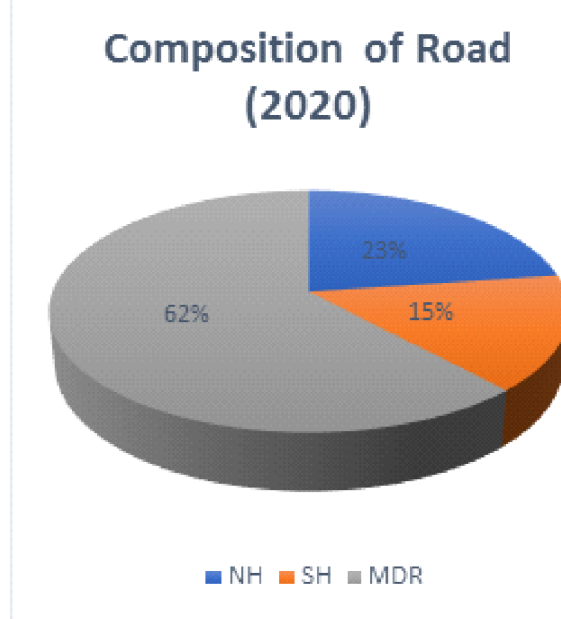
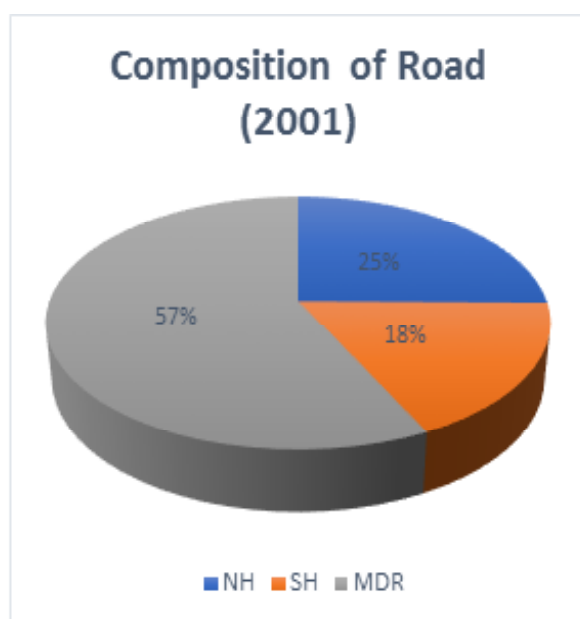
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Status of Road Network in Bihar (as on September 2015)

Category of Road	National Highways		State Highways		Major District Roads	
	Length	Percentage share	Length	Percentage share	Length	Percentage share
Single Lane (3.75m width)	675	14.7	845	19.9	5737	54.0
Intermediate Lane (5.50m width)	795	17.3	623	14.7	3273	30.8
Double Lane (7.0m width)	1803	39.2	2741	64.5	1440	13.5
More than 7.0m width	1289	28.1	44	1.0	184	1.7
Missing Link	34	0.7	00	00	00	00
Total	4595	100.0	4253	100.0	10634	100.0

Status of Road Network in Bihar (as on September 2020)

Category of Road	National Highways		State Highways		Major District Roads	
	Length	Percentage share	Length	Percentage share	Length	Percentage share
Single Lane (3.75m width)	525.20	9.6	467.92	12.6	6805.33	45.7
Intermediate Lane (5.50m width)	578.79	10.6	401.78	10.8	5879.60	39.5
Double Lane (7.0m width)	2108.67	38.5	2513.24	67.7	1928.03	13.0
More than 7.0m width	1248.03	22.8	285.61	7.7	170.25	1.1
4 Lane/6 Lane & 8 Lane	957.46	17.5	45.0	1.2	103.15	0.7
Missing Link	56.90	1.0	-	-	-	-
Total	5475.05	100.0	3713.53	100	14886.36	100

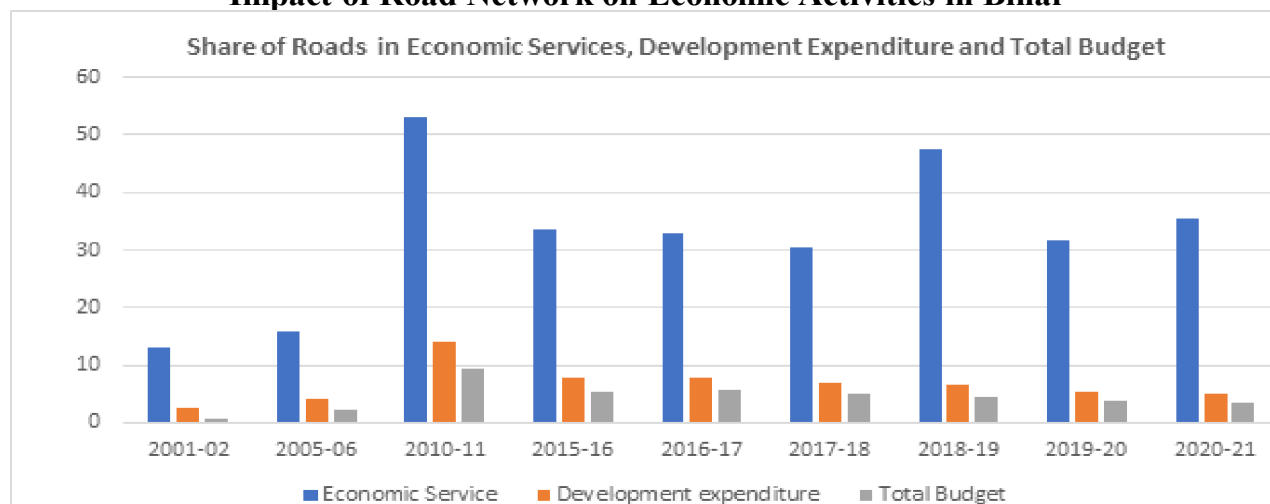
Source: Road Construction Department, GoB

In case of Bihar adequate infrastructure, particularly the road infrastructure is the main catalyst of economic growth. Till 2021 Bihar has state highways with total length of 4,006 km and national highways with total length of 5,358 km. If we could trace the development of roads in the state Bihar for the last fifteen years, the State Government has invested considerably in the road and bridge sector, resulting in a phenomenal leap in the expansion of infrastructure in the State. This investment has created a multiplier and accelerator effect in the overall development of economic activities in Bihar. Apart from expanding the road network, the State Government has been

continuously improving the quality of roads through better use of technology and raw materials and widening of roads. The transport sector has registered double digit growth rate in the recent period and has contributed significantly in its share in the economy.

Earlier, majority of villages and habitants in Bihar were not connected to roads and rural roads were in a very poor condition, particularly were unreachable during the rainy seasons but now Bihar ranks third among major Indian states in terms of road density (per 1000 sq. km.). The State Government has been expanding rural roads in a massive manner and has doubled its length in the past five years.

Impact of Road Network on Economic Activities in Bihar

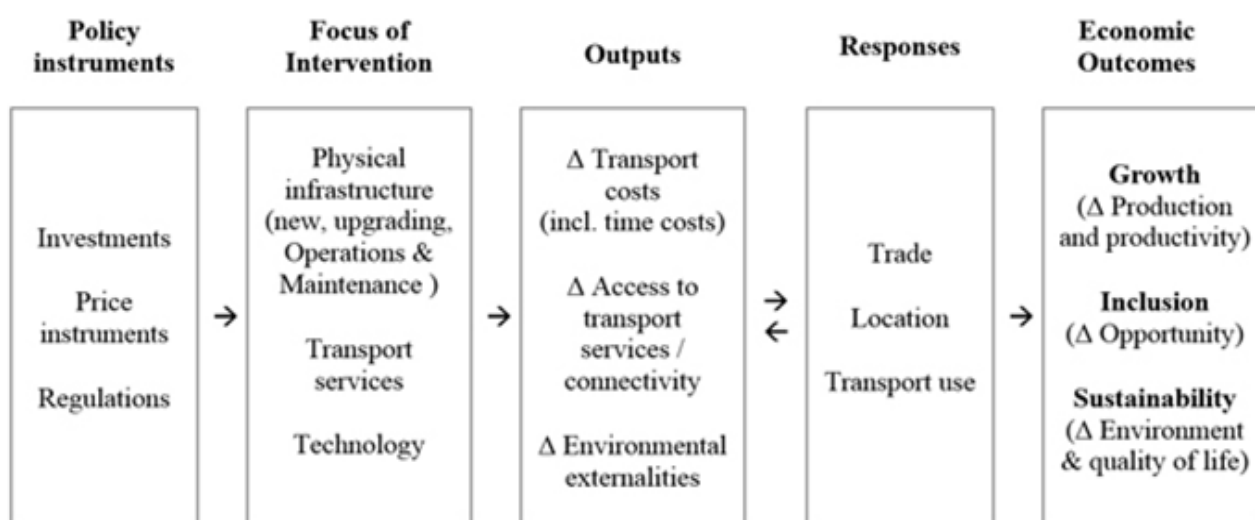


Source: State Budget Documents, Government of Bihar

The above chart shows the expenditure by the State Government on roads and bridges construction and on their maintenance over the last two decades (2001-2021). This expenditure was only 0.8 percent of the total expenditure and 2.5 percent of the development expenditure in 2001-02. For the next few years, it grew marginally to 543 crores in 2005-06. Thereafter, huge investment was made by the State Government during the period 2005-10 for establishing the foundation of road network in the state. The investment on road infrastructure has steadily increased at 5 percent during those years which includes

improvement of the existing roads. During 2020-21, the public investment on roads and bridges has reached Rs. 7603 crores. The share of expenditure on roads and bridges has become 3.6 of the total budget and 5 percent of the development expenditure in 2020-21. It clearly indicates that construction of new roads was more important than just maintenance of existing roads in the last one and a half decade. The share of investment in roads was the highest during 2010-11 (14.1 and 9.3 percent), while the lowest during 2001-02 (2.6 and 0.8 percent) of development expenditure and total budget respectively.

The Benefits of Rural Roads: Enhancing Income Opportunities.



Over the years, In India and in Bihar the pace of developing the rural roads is significant because they are the lifeline of rural peoples and other various benefits associated with rural roads which makes them as important as National Highways. It plays an important role in poverty alleviation by enabling better transport facilities of men, material and goods. It encourages diversification of the agricultural activities and helps to improve rural as well as overall economic growth of the country.

Better transportation facilities offered by quality rural roads contribute significantly by creating linkages between goods and services located in rural settlements to the nearby markets. Thus, it can lead to better access to the local as well as market centres located in small towns or cities which will help the rural producers to

sell their produce or buy raw materials for enhancing their production. Hence, better connectivity via rural roads can highly impact the income as well as economic opportunities of the rural poor.

An improved network of rural roads will provide a great boost to the agricultural activities and productivity by making available all the required inputs such as seeds, fertilisers, pesticides and other essential raw materials in due course of time. This will directly help to reduce rural poverty by making agriculture more profitable and by raising agricultural or rural wages and by lowering food prices.

Greater density of rural roads and better connectivity to the markets ensures diversification of agricultural activities by providing a great potential for the growth of cash crops and commercialisation of agricultural activities.

Presence of better road network enhances the mobility of labour, goods and raw materials, thus increasing the livelihood of rural society. Better and faster road network saves time by reducing the travel time. The time saved due to access of better road network can be used by farmers and rural people for doing off-farm activities and hence creating some more income opportunities for them.

Improved road network provides access to quality education as the rural population can travel to nearest towns or cities and can get better and higher education which will open many other economic opportunities in the form of better employment.

Conclusion:

Roads are the arteries through which the economy pulses. By linking producers to markets, workers to jobs, students to school, and the sick to hospitals, roads are vital to any development agenda. In case of Bihar, it very important to focus on the growth of better quality and all seasoned road network as it directly impacts the growth of better economic

and income opportunities for the people living in Bihar.

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