

Role Of National Highways Development Project In The Economic Growth And Development Of India

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Abstract: Infrastructure development is an essential component of the economic growth and development of a country. The vital link between infrastructural facilities and economic growth was realized from the First Five Year Plan onwards and as a result high priority and emphasis were given to the development of infrastructure. The most distinct part of India's physical infrastructure development in recent years is the development of road network across the country. Road Transport is vital to India's economy. It enables the country's transportation sector contribute 4.7 percent of India's gross domestic product. The government of India considers road network as critical to the country's development, social integration and security needs of the country. The main roads in India are under huge pressure and in great need of modernization in order to handle the increased requirements of the Indian economy. In addition to maintenance, the expansion of the network and widening of existing roads is becoming increasingly important. The National Highways Authority of India (NHAI) is an autonomous agency of the Government of India, responsible for management of a network of over 60,000 km of National Highways in India. The National Highways Development Project (NHDP), the largest highway project ever undertaken by the country, is being implemented by the National Highway Authority of India (NHAI).

The paper finally reveals that It is evident that infrastructure plays an important role in the overall economic growth and development of a country. The economic development of India is impossible without a well-developed infrastructure.

Keywords: Infrastructural Development, NHDP, NHAI, National Highways, Economic Growth and Development.

I. INTRODUCTION

Infrastructure development is an essential component of the economic growth and development of a country. The overall agricultural, industrial and service sector development of a country depends on a number of support components like power, transportations, communications, banking and insurance, marketing facilities, and skilled man power. All these support components collectively constitute the term infrastructure. The appropriate infrastructure network lays the foundation for sustainable economic growth and development by promoting connectivity between producers and markets, lowering transaction costs and providing people with access to important services like education and health care.

II. INFRASTRUCTURE DEVELOPMENT IN INDIA

The vital link between infrastructural facilities and economic growth was realized from the First Five Year Plan onwards and as a result high priority and emphasis were given to the development of infrastructure. The Industrial Policy Resolution of 1956, reserved infrastructure exclusively for the public sector and as a result GOI took on the responsibility for the development of infrastructure. The economic liberalization and restructuring policies, introduced by GOI in 1991, gave special priority to the infrastructure development because by then it was clear that if India were to emerge as a strong nation, a well developed infrastructure on international reckoning had to be created and used as an engine of growth.

PROFILE OF INDIA'S PHYSICAL INFRASTRUCTURE: ROADS

Performance of physical infrastructure in Indian economy in last one and half decades has been mixed and uneven. Over years, India's soft infrastructure grew much faster than the hard infrastructure. In contrast, hardware components, like railways, roadways and airways, witnessed little expansion in last one and half decades. Therefore, in order to unleash India's full potentials, development of hardware component of India's physical infrastructure perhaps deserves utmost attention. This also indirectly indicates high investment potentials in roadways, railways, power and the associated components in India. The most distinct part of India's physical infrastructure development in recent years is the development of road network across the country. India has a road network of over 4,320,000 kilometres (2,680,000 miles) in 2011, the third largest road network in the world. At 0.66 km of roads per square kilometre of land, the quantitative density of India's road network is similar to that of the United States (0.65) and far higher than that of China (0.16) or Brazil (0.20). However, qualitatively India's roads are a mix of modern highways and narrow, unpaved roads, and are undergoing drastic improvement. As of 2008, 49 percent - about 2.1 million kilometres - of Indian roads were paved.

Road Transport is vital to India's economy. It enables the country's transportation sector contribute 4.7 percent of India's gross domestic product, in comparison to railways that contributed 1 percent, in 2009-2010. Road transport has gained in importance over the years despite significant barriers and inefficiencies in inter-state freight and passenger movement compared to railways and air. The government of India considers road network as critical to the country's development, social integration and security needs of the country. India's road network carries over 65 percent of its freight and about 85 percent of passenger traffic.

India has one of the largest road networks in the world, aggregating to 3.34 million km. The country's road network consists of Expressways, National Highways, State Highways, Major District Roads, Other District Roads and Village Roads. The major road networks have been discussed below:

A. NATIONAL HIGHWAYS

The main highways running through the length and breadth of the country connecting major ports, state capitals, large industrial and tourist centres, etc. National Highways in India are designated as NH followed by the highway number. Indian national highways are further classified based on the width of carriageway of the highway.

As of March 2012, India had completed and placed in use the following newly built highways:

- ✓ 5,839 kilometres of its 4-lane Golden Quadrilateral highway,
- ✓ 6,011 kilometres of its 4-lane North-South and East-West Corridor highway,
- ✓ 353 kilometres of 4-lane port connectivity highways,
- ✓ 4,553 kilometres of 4-lane inter-capital highways,
- ✓ 961 kilometres of 4-lane bypass and other national highways.

B. STATE HIGHWAYS

Indian democracy is a federal form of government. Power to enact and implement laws, such as those relating to infrastructure, are distributed between the central government and the state governments. State Governments, thus have the authority and responsibility to build road networks and state highways. Independent of the national highways and NHDP program described above, several state governments have been implementing a number of state highway projects since 2000. By 2010, state highway projects worth \$1.7 billion had been completed, and an additional \$11.4 billion worth of projects were under implementation.

The State Highways provide linkages with the National Highways, district headquarters, important towns, tourist centres and minor ports and carry the traffic along major centers within the state. These arterial routes provide connectivity to important towns and cities within the state with National Highways or State Highways of the neighbouring states. Their total length is about 137,712 km.

The Ministry of State for Surface Transport in India administers the national highway system, and state highways and other state roads are maintained by state public works departments. The central and state governments share responsibilities for road building and maintaining Indian roads.

a. RURAL AND URBAN ROADS

These are important roads within a district connecting areas of production with markets and connecting these with each other or with the State Highways & National Highways. It also connects Taluka headquarters and rural areas to District headquarters within the state. The rural roads in India form a substantial portion of the Indian road network. These roads are in poor shape, affecting the rural population's quality of life and Indian farmer's ability to transfer produce to market post-harvest. Over 30 percent of Indian farmer's harvest spoils post-harvest because of the poor infrastructure. Many rural roads are of poor quality, potholed, and unable to withstand the loads of heavy farm equipment. These roads are also far from all season, good quality 2-lane or 4-lane highways, making economic resource flow slow, and logistical costs between different parts of India one of the highest in the world.

For the development of these rural roads, Pradhan Mantri Gram Sadak Yojana (or "Prime Minister Rural Roads Scheme"), was launched in December 2000 by the Indian government to provide connectivity to unconnected rural habitations. The scheme envisions that these roads will be constructed and maintained by the village panchayats.

In some parts of India, where the government has attempted to manage it directly as a local social spending program, this program has produced limited results and no lasting change over 10 years, in either the quality or quantity of rural road network.

III. AREAS OF CONCERN

The main roads in India are under huge pressure and in great need of modernization in order to handle the increased requirements of the Indian economy. In addition to maintenance, the expansion of the network and widening of existing roads is becoming increasingly important. This would then enable the roads to handle increased traffic, and allow for a corresponding increase in the average movement speed on India's roads.

In 2009, lane capacity was low and only about 16% of India's roads were four lanes or above. A 2007 study found that the congestion on India's highways reduced average truck and bus speeds to 30-40 km/h (19-25 mph); road maintenance was under-funded, and some 40 percent of villages in India lacked access to all-weather roads. While the PMGSY rural road program mentioned above has, by 2011, connected 90 percent of villages identified in 2005 as without access, many remote villages in India were still without access to a single lane, paved road as of May 2011.

The World Health Organization compilation of road network safety data for major economies found India to have the highest number of road fatalities in the World, with 105,000 road-accident caused deaths in 2006. However, adjusted for India's larger population, the accident and fatalities rates are similar to major economies. Over 2004-2007, India had a road fatality rate of 132 deaths per million citizens, compared to 131 deaths per million citizens in the United States. Non-fatal accident rates reported on Indian roads were 429 accidents per million citizens, compared to 412 accidents per million citizens in China, and 1101 accidents per million citizens in the United States. The report notes that not all accidents in India and China are reported and recorded.

The low road densities per 1000 people have created significant congestion and slow speeds on existing roads inside cities. Because of the congestion, the fuel efficiency of the vehicles in India is very low. This increases the overall fuel consumption per equivalent kilometre travelled, besides resulting in heavy pollution since the engines run very inefficiently at such low speeds. Pollutants from poor road network and resultant poor fuel efficiencies include hydrocarbons, NO₂, SO₂, methane, carbon monoxide and carbon dioxide - all of which cause health problems, adverse climate effects and related environmental damage.

Due to rising prices of petroleum, a non-renewable resource, some have urged the Indian government to focus instead on improving public transport like the Indian Railways and rapid transit systems. Many cities have proposed, or are implementing metros and mass transit systems.

IV. NATIONAL HIGHWAYS AUTHORITY OF INDIA

The National Highways Authority of India (NHAI) is an autonomous agency of the Government of India, responsible for management of a network of over 60,000 km of National Highways in India. It is a nodal agency of the Ministry of Road Transport and Highways. Mr Rajinder Pal Singh is the chairperson of NHAI. The NHAI was created through the

promulgation of the National Highways Authority of India Act, 1988. In February 1995, the Authority was formally made an autonomous body. It is responsible for the development, maintenance, management and operation of National Highways, totalling over 71,772 km (44,597 mi) in length.

A. PROJECTS UNDERTAKEN BY NHAI

The NHAI has the mandate to implement the National Highway Development Project (NHDP). The NHDP is under implementation in Phases.

- ✓ Phase I: Approved in December 2000, at an estimated cost of INR 300 Billion, it included the Golden Quadrilateral (GQ), portions of the NS-EW Corridors, and connectivity of major ports to National Highways.
- ✓ Phase II: Approved in December 2003, at an estimated cost of INR 343 Billion, it included the completion of the NS-EW corridors and another 486 km (302 mi) of highways.
- ✓ Phase IIIA: This phase was approved in March 2005, at an estimated cost of INR 222 Billion, it includes an upgrade to 4-lanes of 4,035 km (2,507 mi) of National Highways.
- ✓ Phase IIIB: This was approved in April 2006, at an estimated cost of INR 543 Billion, it includes an upgrade to 4-lanes of 8,074 km (5,017 mi) of National Highways.
- ✓ Phase V: Approved in October 2006, it includes upgrades to 6-lanes for 6,500 km (4,000 mi), of which 5,700 km (3,500 mi) is on the GQ. This phase is entirely on a DBFO basis.
- ✓ Phase VI: This phase, approved in November 2006, will develop 1,000 km (620 mi) of expressways at an estimated cost of INR 167 Billion.
- ✓ Phase VII: This phase, approved in December 2007, will develop ring roads, bypasses and flyovers to avoid traffic bottlenecks on selected stretches at a cost of INR 167 Billion.

The progress of the NHDP can be tracked from the NHAI official website, which updates maps on regular basis.

NHAI helps in implementing Special Accelerated Road Development Programme for North Eastern Region (SARDP-NE); a project to upgrade National Highways connecting state capitals to 2 lane or 4 lane in north eastern region.

The National Highways Development Project (NHDP), the largest highway project ever undertaken by the country, is being implemented by the National Highway Authority of India (NHAI). NHDP Phase I & II envisage 4/6 laning of about 14,279 km of National Highways, at a total estimated cost of Rs.650 million (at 2004 prices). These two phases comprise of Golden Quadrilateral (GQ), North-South and East-West Corridors, Port Connectivity and other projects. The Golden Quadrilateral (GQ-5,846 km) connects the four major cities of Delhi, Mumbai, Chennai and Kolkata. The North-South and East-West Corridors (NS-EW-7,300 km) connect Srinagar in the North to Kanyakumari in the South, including spur from Salem to Kochi and Silchar in the East to Porbandar in the West. Constraints faced in the timely completion of NHDP include delays in land acquisition, removal of structures and shifting of utilities, law and order

problem in some States, and poor performance of some contractors.

V. CONCLUSION

It is evident that infrastructure plays an important role in the overall economic growth and development of a country. The economic development of India is impossible without a well-developed infrastructure. Roads are critical for any economy, especially a growing economy like India with a large population and different topographies. The road development programme is not merely a scheme to enhance connectivity but provides direct economic opportunities to elements of the population who have been traditionally economically marginalised. The impact is potentially most significant on two sectors: manufacturing and value-added agricultural production that has failed to take off thus far despite the considerable inherent advantages that India enjoys. This is in addition to the direct impact on sectors such as iron and steel, cement and other construction materials, which stand to benefit directly from increased government spending on infrastructure. Road construction has elicited considerable interest internationally despite the enormous complexity of India's bidding and regulatory processes and their internal variations. Despite the recent amendments to FDI legislation in India, whereby 100 per cent equity ownership by foreign firms was allowed, the most common mode of foreign investment is through joint ventures, perhaps driven by risk aversion, a desire to leverage the familiarity of the domestic partner with the prevailing regulatory and operating conditions or simply as a reflection of the involvement of many firms in India's road construction programme before the recent liberalisation policy was announced.

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