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INDUSTRY OUTLOOK

ROADS AND HIGHWAYS SECTOR OF INDIA: PROSPECTS AND CHALLENGES

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"It is not our wealth that built our roads, but it is our roads which built our wealth". - John F. Kennedy, Former US President

Introduction

Road transport is an important part of the infrastructure. It has a significant role in the economic development of any country. It provides most cost effective and convenient modes of transportation in India both for freight and passengers as it has high penetration level with door-to-door delivery. It ensures better connectivity, pace, structure, and pattern of development. The traffic either in terms of passenger handling or goods carrying capacity of road transport needs to be kept in pace with economic growth.

India with 63.72 lakh kilometre (km) has the second largest road network in the world. This comprises National Highways, Expressways, State Highways, Major District Roads, Other District Roads, and Village Roads. The National Highways (NHs) in India have a total length of 1,40,995 km, which in totality serve as the arterial network of the country. [1]

While the State Highways (SHs) have a total length of 1,71,039 km and other roads comprises a length of 60,59,813 km (See Table 1).

Table 1: Distribution of Roads in India

Road	Length (in km)
National Highways	140995
State Highways	171039
Other Roads	6059813
Total	6371847

Source: Ministry of Road Transport & Highways, Government of India

The Ministry of Road Transport & Highways added 49,650 km length of National Highways from 91,287 km in April 2014 to 1,40,937 km on December 15, 2021. The pace of constructing a highway was 37 km per day in 2021-22 in India.

Under the Ministry of Road Transport and Highways (MoRTH), the following agencies are responsible for implementing the policies and work on ground - National Highways Authority of India, State/Union Territories Public Works Departments, National Highway and Infrastructure Development Corporation Limited, Border Roads Organization, and Indian Academy of Highway Engineers (IAHE).

Budget Allocations and Expenditures

In 2022-23, the Ministry of Road Transport and Highways has been allocated nearly ₹68,000 crore more than the revised expenditure in 2021-22. In absolute terms, this is the highest increase (from revised estimates of 2021-22) among all ministries in FY2022-23. Nearly all this additional allocation has been earmarked for investment in the NHAI. After many years, the NHAI will not have any borrowings, and rely entirely on budgetary resources. As of November 2021, NHAI's total debt stood at ₹3.38 lakh crore.[2] This is nearly 150 per cent more than the allocation to the NHAI in 2022-23.[3]

In the Budget 2022-23, the announcement of PM GatiShakti Master Plan for expressways was made by the Union Finance Minister. The Plan will be formulated in 2022-23 to facilitate faster movement of people and goods. Another announcement was regarding the expansion of national highways by 25,000 km in FY2022-23. Also, the ₹20,000 crore will be mobilised through innovative ways of financing to complement public resources.

The total expenditure on the Ministry of Road Transport and Highways for FY2022-23 is estimated at ₹1,99,108 crore which is 52 per cent higher than the revised estimates for FY2021-22 (See Table 2).[4]

Table 2: Budget allocation for the Ministry of Road Transport & Highways (in Rs crore)

	2021-21 Actual	2021-22 RE	2022-23 BE	% Change (2022 BE over 2021 RE)
Revenue	9,964	9,898	11,364	15%
Capital	89,195	1,21,251	1,87,744	55%
Total	99,159	1,31,149	1,99,108	52%

Source: Union Budget, Ministry of Finance, Government of India

The Ministry has allocated ₹2,586 crore for the year 2022-23 which is 7 per cent lesser than the revised expenditure on maintenance in 2021-22 for the maintenance of roads and highways (including toll bridges). In both 2018-19 and 2019-20, the actual expenditure on maintenance was less than 60 per cent of the budget estimates.

In the past 10 to 11 years, the expenditure on roads and highways increased significantly. The compounded annual growth rate (CAGR) of the actual expenditure was 15 per cent between 2011-12 and 2016-17. For the period of 2016-17 to 2021-22, the CAGR stood at 20 per cent.

Expenditure on the NHAI includes funding towards the umbrella highway scheme, Bharatmala Pariyojana. This scheme seeks to optimise the efficiency of freight and passenger movement by bridging critical infrastructure gaps. It also aims to increase the number of districts with NH linkages from 300 to 550.4 Under Phase I of Bharatmala Pariyojana, 34,800 km of roads will be developed over a period of five years (2017-18 to 2021-22). Phase I will also subsume 10,000 km of balance roadworks under the National Highway Development Programme.

The estimated cost of Phase-I is ₹5,35,000 crore, spread over five years. As of December 2021, road projects with an aggregate length of 19,926 km, and costing Rs 5.98 lakh crore have been approved under Bharatmala Pariyojana Phase-I. Of this, road length of 6,976 km has already been completed.5 This corresponds to 35 per cent of the approved project length.[5]

As a part of the regulatory initiatives, the government has introduced the Hybrid Annuity Mode (HAM) to encourage and revive the private sector participation into the sector. Under this model, 40 per cent of the project cost is paid by the government/ executing agency as grant to the private developer. Further, the traffic risk is taken by the project executing agency.

Institutional Initiatives

The Government of India (GoI) with its comprehensive policy guidelines has attempted to boost the private sector participation in the development of road transport in the country. To attract more private investment and Foreign Direct Investment (FDI) in the sector, GoI is providing incentives to the private and overseas roads and highways construction companies. On the import of high capacity and modern road construction equipment, the government exempted the duty on the importers.

The Government has announced to construct 26 green expressways by 2024 with an aim to bring down travel time between key cities across the country. Other highways under construction are - Delhi to Dehradun, Haridwar and Jaipur, Delhi to Chandigarh, Delhi to Amritsar, and Delhi to Mumbai. The major objective of the government is to reduce the travel time to national capital from major cities of the country.

Also, the government is trying to introduce new technologies to replace toll plazas to reduce traffic snarls at such toll plazas. The government is looking at two new options for toll collection, first is a satellite-based system, through which GPS in a vehicle will help toll to be directly deducted from the vehicle owner's bank account. Second, through a new scheme of the number-plate attempts are being made to improve the situation. In terms of this system, the new numberplate with a new technology laced with a software-based computerised system would be used for collecting tolls.

Now the new technology-based system will register the point where a vehicle enters a toll highway, and thereafter register the point where it exits it; the toll will be deducted from the owner's account for the kilometres the car is driven on the highway.

The existing electronic toll collection system, i.e., FASTag introduced by the government has immensely contributed to bring efficiency in the toll collection system. Now, 5.56 crore FASTag devices have been issued till date by the government and the average daily toll collection through FASTag is ₹120 crore.[6] The data released by the Ministry of Road Transport and Highways revealed that FASTag penetration surged from nearly 16 per cent in 2017-18 to 96.3 per cent in 2021-22. The total toll collection during 2017-18 was ₹21,948 crore including ₹3532 crore collected through FASTag. However, in 2021-22, toll collection through FASTags increased sharply. While the total toll collection was ₹34,535 crore, toll collected through FASTag stood at ₹33,274 crore. [7]

In FY2021-22, the government provided several relief measures to enable the highway sector to overcome the debilitating impact of the second wave of COVID-19. During the year, the monitoring of ongoing projects was streamlined and subsequently critical interventions were made in this regard to resolve pending issues and bottlenecks. Also, to provide a major boost to infrastructure development and enable it to overcome the impact of the crippling COVID-19 outbreak, the government placed the highest ever target of 12,000 kms for award and 12,000 kms for construction for the year 2021-22.

The road projects exceeding 64,000 km in length, costing more than ₹11 lakh crore, are in progress. Out of this, work in respect of projects of more than 40,000 km length has been completed and in balance length of more than 24,000 km works are in progress. National Highways of 5,835 km length were constructed in the first nine months of FY 2021-22. The Ministry has sensitized its entire project implementing agencies to make extra efforts in view of the COVID-19 situation and maximize the achievement of the targets for 2021-22. [8]

The progress pertaining to First/Last mile Port Connectivity Road (PCR) project under Bharatmala Phase-I, the letter of agreement (LOA) was issued for 5 projects with a combined length of 105 km (approx.) while 5 more projects with a combined length of approximately 141 km were likely to be awarded by the end of FY 2021-23. The remaining projects are at DPR stage and bids for the same to be invited across FY2023 and FY2024. National Highways Logistics Management Limited (NHLML) an SPV of NHAI, (Formerly known as Cochin Port Road Company Limited) formed under the guidance of the MoRTH is responsible for the implementation of Multi-modal Logistics Parks (MMLPs), Port Connectivity Roads and other associated projects. Inclusion of 16 more first/last mile PCR projects under Bharatmala Pariyojna Phase II has been proposed by the NHLML which is under process for approval of Union Cabinet.

Industry Risks and Challenges

Delays in Projects

Delayed project completion has been a major issue in infrastructure development in India. Delayed project completion significantly hampers efficiencies in the system. Delay in projects make project unviable in terms of cost. In a written reply to a question asked in Rajya Sabha, the Minister of State under MoSPI, it was revealed that the Road transport and highways sector had the maximum number of delayed projects at 301 followed by the railway segment at 127 and the petroleum sector at 91. The major reasons cited in the reply were the problem of law and order, delay in land acquisition, environment and forest clearances, and funding constraints. As of December 2021, the cumulative cost overrun of projects in the road sector is estimated to be greater than ₹8,120 crore.

In financial year 2021, over three trillion Indian rupees of infrastructure investments went into the manufacturing sector across India. Another 2.2 trillion rupees were invested in the construction and maintenance of roads. It was found that there was a huge gap between award of projects and the completion of projects within the stipulated time.

The major issue facing both the private stakeholders and the government agencies relate to financing. In 2021-22 (as of February 2022), 6,895 km of road projects have been awarded, and 6,968 km of NHs were constructed. This accounted for 81 per cent of the award target and 63 per cent of the construction target, respectively.

Lesser contribution in National Income

The road transport in India handles the movement of more than 60 per cent of total goods and about 87 per cent of total passenger traffic. The National Highways comprise about 2 per cent of the road network but carry about 40 per cent of the total road traffic. During the fiscal year 2021, the gross value added by road transportation services in India was the highest at approximately over 3 trillion rupees. This marked a decrease from the previous fiscal year.

Low Budgetary Allocations and investments

The actual expenditure by the government was lower than the budget estimates between 2012-13 and 2017-18. As per the revised estimates of 2021-22, the MoRTH is expected to exceed its budgeted expenditure by 11 per cent. Before this, the MoRTH had exceeded its budgeted expenditure by 8 per cent in 2020-21 and 9 per cent in 2018-19. This was largely due to additional expenditure incurred on capital outlay towards roads and bridges.

The budgetary support also consistently declined from FY 2014-15 to FY 2020-21. The borrowing in the sector is, however, consistently rising. The share of borrowings in this investment has grown from 6 per cent in 2014-15 to 37 per cent in 2020-21. In 2019-20, 43 per cent of the investment in roads sector was sourced from borrowings. In a written reply in the parliament, the government has revealed that the NHAI's debt stands at ₹3.49 trillion. The total outstanding debts of state-owned NHAI stood at around ₹3.49 trillion as of March 31, 2022. The fund required by NHAI for debt servicing in 2022-23, 2023-24, and 2024-25 will be ₹31,282 crore, ₹31,909 core, and ₹30,552 crore, respectively. [9]

In 2021-22 the Ministry has allocated ₹2,680 crore towards the maintenance of roads and highways (including toll bridges). This is about 2 per cent of the ministry's budget. Maintenance of roads should be given top priority as it increases the life span of roads. NITI Aayog has suggested that 10 per cent of the Ministry's annual budget should be earmarked for road maintenance. [10]

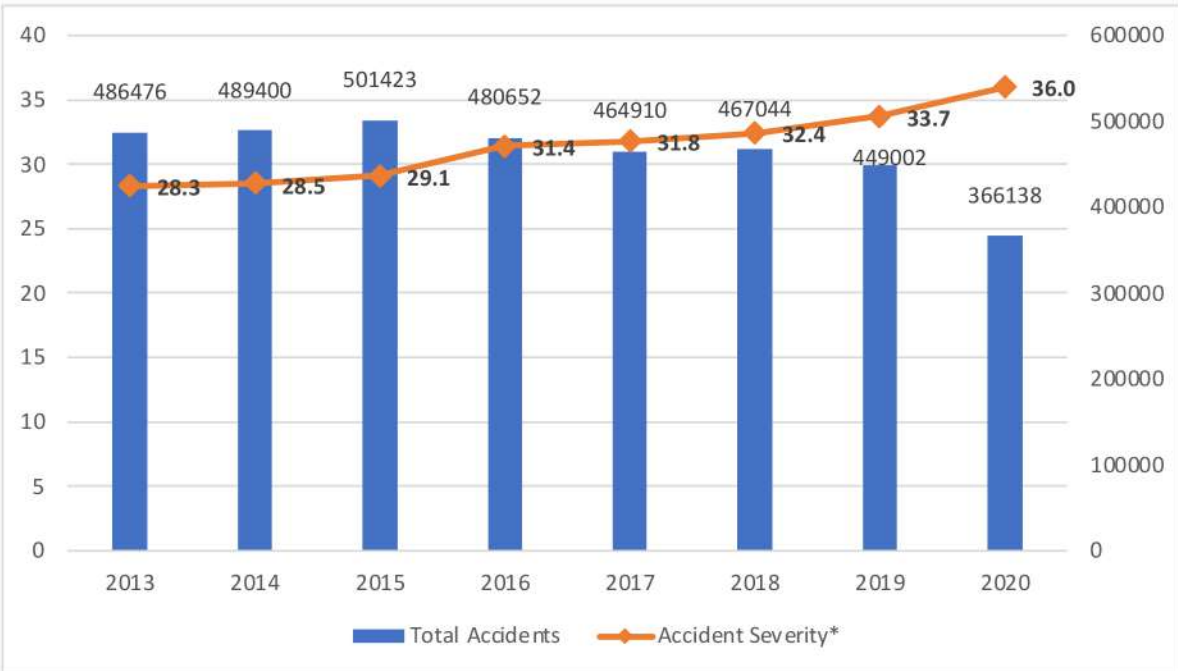
Slow Rate of Raising Fund under Asset Monetisation Plan

To fund the projects under the National Infrastructure Pipeline, MoRTH had expected to raise ₹86,182 crore up to 2024-25 by monetising its assets under the Toll-Operate-Transfer (TOT) model. But the Standing Committee on Transport (2020) found that raising fund by monetisation of assets under the TOT model falls below the target. In 2019-20, the Ministry managed to raise only ₹5,000 crore against the target of raising ₹10,000 crore. In 2020-21, it managed to raise only ₹7,262 crore (70 per cent) against the target of raising ₹10,250 crore. The Ministry has set the target of raising ₹20,000 crore in 2022-23. [11]

Road Accidents

As per the World Road Statistics, 2018, India ranks first in the number of road accident deaths (among 199 countries reported), followed by China and the US. As per the WHO Global Report on Road Safety 2018, about 11 per cent of the accident-related deaths in the world occur in India. A World Bank report further highlights that as high as 44 per cent of the households in rural areas reported at least one death after a road crash, compared to 11.6 per cent of the households in urban areas. In 2021-22, the Ministry had allocated ₹336 crore towards road transport and safety. The amount allocated towards road safety in 2021-22 is about 0.3 per cent of the Ministry's total budget. The Committee felt that one of the major reasons behind road accidents is the poor condition of roads. [12] Presence of potholes can prove to be fatal. A snapshot of the number of accidents and the severity of accidents is given in the figure below (Chart 1).

Chart 1: Road Accidents in India (Up to 2020)



Source: Road Accidents in India, 2020, Ministry of Road Transport and Highways, Government of India

However, in terms of the number, number of accidents have decreased from 5,01,423 in 2015 to 3,66,138 in 2020.[13] The accident severity is also decreasing.

The Road Ahead

The pace of constructing of road transport and national highways need to be up from the previous year's pace 37 km per day 68 km per day so that the target of expanding the NH network by 25,000 km announced in Budget 2022-23 can be achieved. The consistent rising of NHAI's debt and decreasing budgetary allocation to the sector is a big concern for the Ministry of Road Transport and Highways. Also, the private investment in the industry is declining e.g., the private investment in 2014-15 was 37 per cent, which declined to 7 per cent in 2020-21.

To maintain a sustained growth, the industry needs to have more private investment and the government should minimised the external pressure arising from the borrowing sources. The Ministry should also endorse the recommendations of the standing committee on borrowing in its policies so that the sector can revive from the debt obligations.

The government should look forward to en-cashing opportunities to mobilise funds from other sources and establish appropriate financial institutions and models to encourage the return of private investment to the road sector. In this regard, the MoRTH should explore the way out to reduce the debt servicing costs of NHAI by sourcing fund from insurance companies and pensions funds, both Indian and foreign. The lending under priority sector lending from the Reserve Bank of India can have option of funding if RBI allows MoRTH for the same.

Abrupt policy changes have also been a concern for the road sector because infrastructure projects span over a long period and, therefore, need consistency in policy and execution. Hence, the abrupt policy changes may discourage private investment into the sector when the chance of loss is greater in such situation. It is simultaneously important to protect the interest of the private stakeholders of the sector.

The pace of raising funds from the monetisation of its assets by the MoRTH should be increased. Other deficiencies on the part of NHAI, such as, the inability of realising toll due to delays in approval of projects, toll operations, and other procedural lapses driving inefficiencies into the system must be tackled on time.

It can be witnessed that the sub-par quality of road construction is taking place on NHs across the country. In order to check this issue, the Parliamentary Standing Committee on transport, tourism and culture made useful suggestions to the Ministry of Road Transport and Highways.[14] As the Committee recommende, the Ministry of Roads Transport and Highways should undertake a thorough review of the existing monitoring mechanism for road construction quality and devise ways to plug the gaps in the same to ensure higher quality NHs in the future.

Further, the Committee also recommended that the Ministry may enact provisions for imposing severe financial penalty on the individuals appointed as Authority's Engineer/Supervision Consultants in cases where gross negligence of the prescribed specifications and standards is observed in roads approved by them.

ENDNOTES

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