

Road Transport in India

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1 Introduction

Data visualization is the process of representing data or information in a graphical or pictorial format. It is a powerful tool for data analysis and communication that can help people turn data into insights and actions. The goal of information visualization is to help people understand data by making it easier to perceive patterns, trends and relationships.

This report provides comprehensive information on the total road network of India. Road Statistics of India contains information on various categories of roads at National, State and Local levels. Apart from this, the information on plan allocation and expenditure on roads and an international comparison of road networks are also provided.

2 Information on Road Statistics

India has a total road network of more than 5 million kilometres as of 2018, which includes state highways, national highways, and rural roads. The government has made investments in the road network in recent years with an emphasis on enhancing connectivity in rural regions. The majority of national highways are classified as either two-lane or four-lane roads by the National Highways Authority of India (NHAI) based on their road condition. India's rural roads continue to be of varying quality, with many being in disrepair and unable to sustain high traffic.

In India, the movement of people and products around the nation is handled by the road transport industry. Several major organisations also operate in the market, although small and medium-sized transportation businesses predominate the industry. The government has been implementing policies to encourage the expansion of the road transportation industry, including infrastructural investments, tax breaks, and regulatory changes. In terms of its effects on the environment, the road transport industry is a significant source of air pollution, particularly in metropolitan areas. The government has been taking steps to lessen the negative effects of road travel on the environment, such as promoting alternative fuels like electric and hybrid cars and enforcing tougher pollution regulations.

In India, roads play a significant role in transportation. They are a crucial component of any infrastructure that can carry a person from one location to another. In our nation, roads are the most often utilised form of transportation, particularly for short distances. Due to its many advantages over other modes of transportation, roads are regarded as the most significant medium of transportation. Compared to railroad lines, it is far less expensive to build roads. Road Transport is also affordable for many people and generally a more modest measure of merchandise over short distances. It provides door-to-door service. As a result, loading and unloading are substantially less expensive. And, more importantly, all other forms of transportation are connected through road transportation.

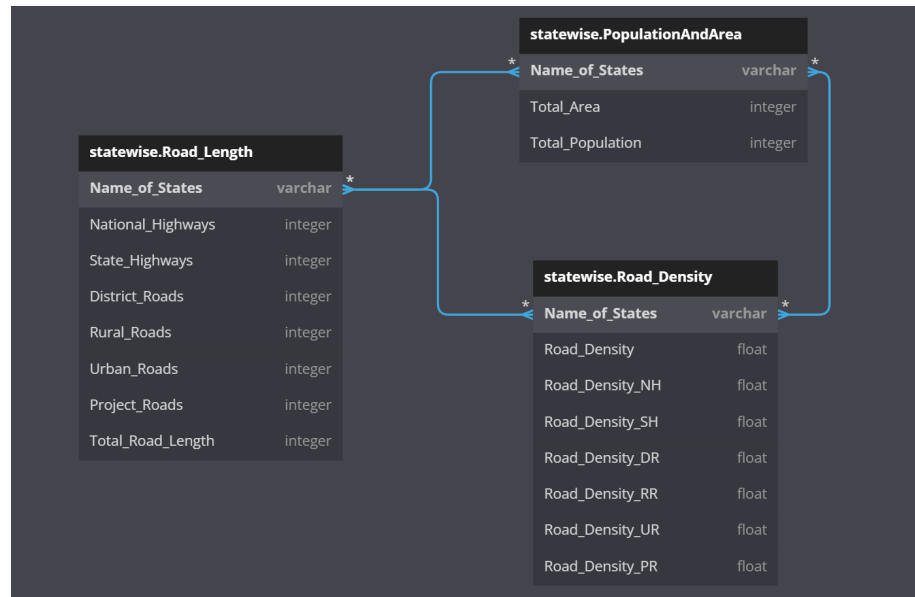
3 About the Dataset

The dataset is released under National Data Sharing and Accessibility Policy (NDSAP) and contributed by Ministry of Road Transport and Highways. This dataset consists of a single Excel file with three different sheets. They are:

- State-wise Road Length
- Population and Area
- Road Density

This dataset covers 35 States/Union Territories across India. The data is sourced from the official government website.

The schema of the dataset is as follows:



4 Use cases

Some of the Use cases are:

- **Transportation and Logistics:** Road statistics can be used by transportation and logistics companies to optimize their operations and improve efficiency. This can entail studying traffic trends, spotting bottlenecks, and creating routing plans.
- **Government and Policy Making:** Road statistics may be utilised by government agencies and policymakers to plan and implement transportation infrastructure projects. This might involve determining the need for new roads, renovating existing roads, and enhancing road safety.
- **Urban Planning:** Urban planners may utilise road data to better understand a city's transportation needs and build plans to increase mobility and accessibility. This can include analyzing traffic patterns, assessing the need for new roads, and improving public transportation systems.
- **Environmental Impact Assessment:** Road statistics may be used to measure the environmental effect of road transportation, such as air pollution, carbon emissions, and noise pollution. This data may be used to create rules and legislation to reduce the environmental effect of automobile travel.
- **Academic Research:** Researchers and academics can utilise road statistics to analyse the social, economic, and environmental implications of road traffic. This might involve investigating the link between road transportation and economic growth, as well as measuring the influence of road transportation on air quality.

5 Conclusion

The road network in India is one of the largest in the world and the road transport industry is crucial to the country's economic growth and offers essential services to both rural and urban regions. The sector has various obstacles, including congestion, safety, and environmental effect, but the government is working to address these issues and foster the sector's expansion. Demand for road transportation services is likely to increase in the next years, and the government is investing in new infrastructure as well as creating rules and regulations to assist the industry. The road transport industry has obstacles such as road safety and environmental effect, but the government is taking measures to solve these issues and support the sector's growth.

6 References

Dataset was taken from: data.gov.in.

Link of the dataset: [Click here](#).

Information was taken from:

- morth.nic.in
- nhai.gov.in
- cpcb.nic.in

Schema Diagram drawn using the tool: dbdiagram.io