

Indian Roads & the Story of Development: Case Study of Atal Tunnel, Rohtang

Rahul Chopda¹, Geeta Tyagi²

Student¹, Professor²

BMS College of Engineering, Karnataka

Corresponding Author's Email id: geeta1297@gmail.com^{2*}

Abstract

India is building more roads each day progressively. According to a government statement, the Ministry of Road Transport and Highway has constructed 8,169 kilometers of national highways from April 2020 to January 15, 2021, or about 28.16 km a day. The National Highways Authority of India handles nearly all the ministry's road projects. Sources site that the state-run road builder awarded 67 projects spanning more than 2.02 lakh kilometers with a capital cost of over Rs 79,200 crore in nine months ended December, according to an NHAI newsletter, with the Atal Tunnel costing about 3,300 crores.

Overall, contractual agreements on road projects more than doubled in 2020 over 2019. The Ministry of Road Transport and Highway has been reported to have awarded projects of "7,597 km from April 1, 2020, to January 15, 2021". (NHAI, 2021). All of this in the financial year 2020 proves a leap of the road constructors. Atal Tunnel, previously known as the Rohtang Tunnel, has been constructed on the route along Manali-Leh and was inaugurated by the Prime Minister in October 2020. This project is an enormously impactful one in various aspects including strategic relations, transportability and technology.

Keywords: - Atal Tunnel, Roads, Transportation, Construction

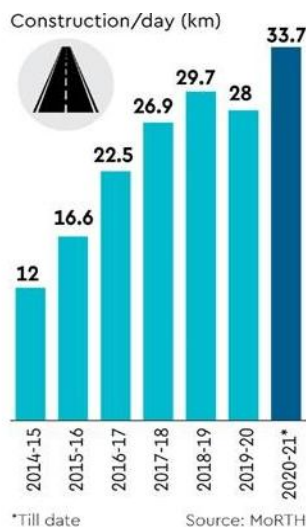
INTRODUCTION

Roads are a vital foreteller of a country's overall development. All significant

sectors spanning from transportation to supply chains and communications depend upon the quality and availability of road

infrastructure to a great extent. During the COVID-19 crisis, most sectors have been severely negatively affected. Global indexes show a downfall in trends across sectors while one particular area has, on the contrary, performed exceptionally, with higher outputs than the previous years.

This paper shall attempt to mark the Road Construction sector's performance by examining the factors responsible for such results. It is reported that between April 2020 and January 2021, a fully pandemic hit timeline, a total of 8,169 kilometers a day.



Source: MoRTH, 2020

Critical infrastructure-led projects boost productivity and commute, thereby promoting the reach of services & tourism. Delay in the building of roads and infrastructure has an enormous economic loss. Connectivity between locations is

directly relational to a country's development. Soft power and diplomatic relations are strengthened between countries due to specific infrastructural projects like building dams, tunnels, highways.

A better look at the Atal Tunnel shows the importance of building connecting infrastructure as well as proves the vitality of projects on such terrains. Forecasts indicate a positive impact on the surrounding areas due to increased connectivity, visibility and resources.

CASE STUDY: ATAL TUNNEL

Infrastructure projects that get delayed increase the costs manifold. It increases direct economic costs along with zero channels or narrow channels of productivity for the people and transport of commodities in and around the area.



Picture: ATAL TUNNEL, ROHTANG

Tunnels are an essential medium of connecting diverse & challenging

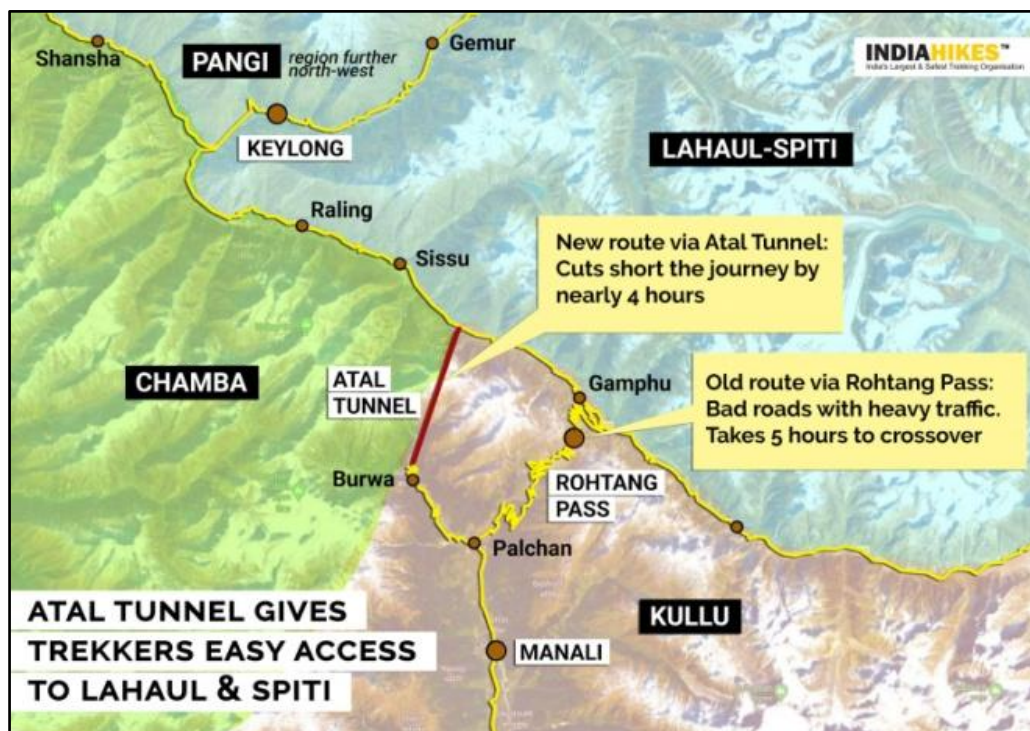
geographical areas. The newly opened Atal Tunnel, a remarkably efficient project, has cut short the travel time and overall distance between Manali and Keylong on the way to Leh, as per official reports.

The entire route's length has been cut down to 71kms of a tunneled path from a detailed route over the hills of 116kms. The new route takes about 2hrs of traveling time via the tunnel, thereby cutting out 3 to 4 hours of journey on the open cold terrain.

The tunnel bypasses most of the sites prone to road blockades, avalanches, and

traffic snarls, thus making the route shorter and giving a new life to Leh and Spiti areas during the wintertime. The route that used to be totally blocked earlier will now be the route for thousands of tourists traveling between the sites.

The tunnel has been made using state-of-the-art procedures coupled with the most effective technology. The tunnel has various checks in place, including sensors and air quality indicators. Fresh air is pumped in as per requirement, and heavy-duty fans are also deployed. The infra is built by the BRO, Border Roads Organization and had multiple difficulties during the building of the project.



Picture: MAP OF TUNNEL ROUTE

The tunnel is 9.02 kilometers long and has been built up by the BRO, and is recorded as the world's longest highway tunnel. It connects the very famous city of Manali to the Lahaul-Spiti Valley, both major tourist attractions in the country. The only drawback was the snow lodged roads in the area, a problem now resolved by the implementation of this new connecting tunnel.

The Lahaul valley and connecting would now be available for commute during the winters and the earlier issue of roads being shut for 4-6 months in the winter because of severe weather conditions and road blockage with snow & landslides.

TUNNELS & DEVELOPMENT

Underground spaces are a great way of advancing commute for a number of reasons. Stable temperatures protect the infrastructure against harsh climates,

among other benefits such as ease of maintenance, increased durability. The commute is made possible even in the months of October to January, which was earlier impossible due to snow blocked roads.

This accessibility of transport is predicted to boost trade and tourism significantly in the areas, making it an economically profitable project in the longer run. Connectivity for locals and human capital development are necessary byproducts of the project as well.

The project is also strategically innovative; it is said to be the world's longest high altitude tunnel, as per media houses. The 9.02-kilometer-long tunnel is built with ultra-modern specifications in the Himalayan Pir Panjal range at an altitude of 3,000 meters from the Mean Sea Level.



Atal Tunnel under construction

An interesting number of hydroelectric projects are expected to mushroom up. South Asia Network on Dams, Rivers and People (SANDRP) expects a chain of 17 more hydroelectric projects to function in the Chenab basin soon after construction of the Atal Tunnel. (Bodh, 2018). Researches reveal that the number of projects in and around the area shall increase to 49 as per predicted trajectory. (Thakur and Asher 2015).

The valley area with a modest population density of two persons per kilometer is seemingly in danger of losing well maintained ecology and tribal ways of life. On the other hand, these projects and infrastructural developments promise growth.

CONCLUSION

Indian development relies heavily on infrastructures that supports and promotes growth. Roads act as channels of communication that boost market connectivity and allow for urban growth along with essential services such as food and medical facilities. The paper has reiterated that such projects provide an upward push to development of secluded areas. Atal Tunnel is a fitting example of how these variables can be achieved.

Post building of the tunnel, prospects seem bright and the areas surrounding are expected to develop at a rapid pace. This ensures increased activity and communication in the otherwise cut off land. Sectors such as tourism and transport will trail blaze economic activity. Despite a global pandemic, the developmental strategy persists and continues to push forward. With such pace of roads building up, development is assured for the new India.

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