

## Rural Roads under PMGSY: A Trail towards Amelioration of Village Life

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### Abstract

Rural roads act as a lifeline for the rural development as it creates the most basic element needed for all the development activities i.e. accessibility. Therefore, this review article takes into consideration the utility of the rural roads for creating the better livelihood and standard of living for the rural population. This article describes the components of all the three phases of Pradhan Mantri Gram Sadak Yojana and in addition gives the overview of the rural roads in the country and its spatial variation. The study further focuses on the implications of rural road development in the country. It also gives concluding remarks and recommendations for making the rural road development a tool to ameliorate the rural population effectively.

**Keywords:** PMGSY, Rural Roads, Poverty, Pradhan Mantri Gram Sadak Yojana

Having a decent standard of living is a fundamental necessity for a human being irrespective of his place of residence. Accessibility is a basic aspect of determining the standard of life. However, rural areas in India still lack access to basic facilities and employment opportunities which make people in rural areas more vulnerable to poverty. In the way to improve standard of living in the countryside and reduce poverty, roads are one of the most basic elements. In the developing countries, the substandard quality of transportation infrastructure lead to depreciation in the access to markets, public services and varied employment opportunities. Roads are like veins which are intertwined together to develop complex network to provide accessibility for performing different functions. Rural roads are the roads which ensure the connectivity to the most interior parts of the country or the last mile connectivity. Construction and intensification of rural roads, when coupled with the other infrastructural developments and targeted interventions have proved to be a poverty alleviator in the rural areas.

### • Rural Road Network in India

#### *Rural Road Development under 'Pradhan Mantri Gram Sadak Yojana'*

For the nationwide coverage of rural road construction, to enhance the rural connectivity and to eradicate the poverty, the union government started the Pradhan Mantri Gram Sadak Yojana in 2000. It focused on ensuring the construction of all-weather roads to connect the inaccessible habitations of population exceeding 500 plus in plain areas and 250 plus in less inhabited areas like hilly states, north-eastern states, tribal and desert areas. Under this scheme, the construction of roads was fully done by the central government, while the maintenance cost was borne by respective state governments. The program connected

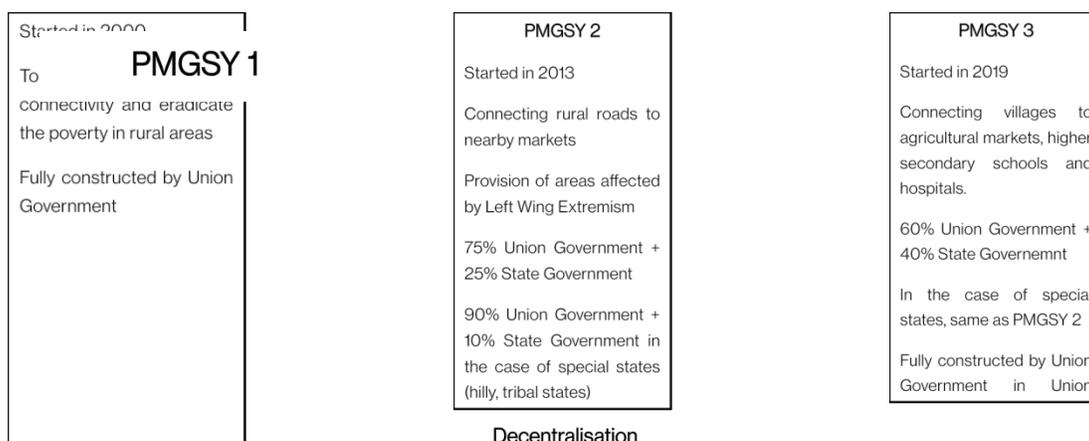
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inaccessible rural areas to a great extent however, due to poor maintenance, the roads soon were dilapidated.

Considering the existing needs, the second phase of PMGSY was launched in 2013 which targeted to refurbish the selected rural roads which connected habitations with the rural market centres to improve the access to market. Keeping in mind the importance of livelihood generation and employment opportunities, the roads were selected on the basis of their economic potential which can enhance the growth of markets. Another feature that was added in the second phase of PMGSY in 2016 was to ensure sustained connectivity to the areas affected by the Left Wing Extremists. It included a special provision to connect such areas which fall between population category of 100-249. Therefore to ensure this, a separate provision was added under PMGSY named as Rural Connectivity Projects for Left Wing Extremism Affected Areas (RCPLWEA). PMGSY II also revised the arrangement of cost of construction, which was divided between the central government and the state governments. It ensured the division of 75% and 25% cost between central and state governments respectively and in the special states category, it will be 90% and 10%.

After the 2<sup>nd</sup> and 3<sup>rd</sup> phase of the Pradhan Mantri Gramin Sadak Yojana, the rural roads connectivity was strengthened. In 2019, third phase of PMGSY was launched. It aims to increase the connectivity between villages and rural and agricultural markets which ensures effective movement of farm produce and perishable commodities. It also aims to connect villages to the higher secondary schools and hospitals to ensure the last mile connectivity to these fundamental facilities. It also revised the division of construction costs by ensuring 60% and 40% share for general states, 90% and 10% share for hilly and North Eastern states between central and state governments respectively. The cost for constructing rural roads in union territories has to be full borne by the union government.

**Figure 1: Salient Features of PMGSY**



Source: Compiled by Authors

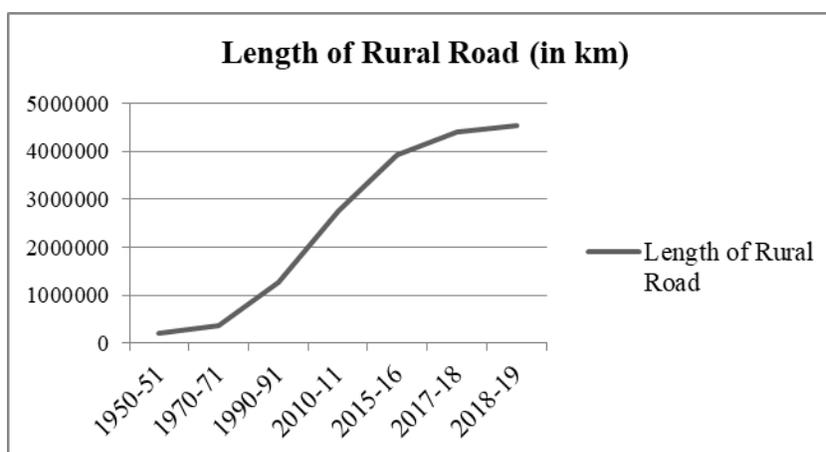
### *Present Scenario of Rural Road Network in India*

The road network in India is well developed which ranks 2<sup>nd</sup> in the world with 63,31,757 km of road, which is only next to the United States of America in 2018-19. Out of this, the major chunk is covered by rural roads as the network of rural roads consist of 45,22,228 km which is 71.4 per cent of the total road network of the country. Rural roads in India are constructed by Panchayati Raj Institutions i.e. Zila Parishad, Panchayat Samiti, Gram Panchayat, under Pradhan Mantri Gram Sadak Yojana (PMGSY), and by State PWD Rural Roads.

Similar with the other phenomenon, rural road network also have spatial variability within India as some states possess greater accessibility and connectivity in the heartlands of state than others. Maharashtra tops the rural roads network with 4,26,327 km of roads followed by Assam, Bihar, Uttar Pradesh and Madhya Pradesh. Together, these states account for 43 per cent of the network of rural roads in India. Rural road density has also increased over the years as it has increased from 886.61 per 1000 sq km in 2011-12 to 1458.1 sq km in 2018-19.

However, in terms of the quality of the rural roads, they account for 78.5 per cent of the total unsurfaced roads of the country. In terms of the percentage of surfaced rural roads, Punjab, Rajasthan and Uttar Pradesh are frontrunners as more than 90 per cent of the rural roads in these states are surfaced. Quality of roads in north eastern states is compromised because Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur etc. have the lowest percentage in surfaced rural roads. Despite Assam being a top performer in the length of rural roads, the quality of its roads is substandard. Only major state that is lagging behind in the condition of rural roads is Karnataka, as only 46.5 per cent of the total rural road network of the state is surfaced.

Figure 2: Temporal Development of Rural Road Network in India



Source: Basic Road Statistics of India, 2018-19

- **Implications of Improving Rural Road Network**

***Improved Accessibility***

By connecting the rural inhabitations together and with the roads of district level and further on, the accessibility of these villages have increased to a great extent. This improved accessibility further gets translated into greater integration of services and facilities which in turn benefits the standard of living of rural people.

***Livelihood Diversification***

By ensuring the last mile connectivity with the rural road network in India, rural to urban migration have been made efficient. This helps rural population to diversify their occupation. Coupled with the liberalisation of the Indian economy, rural people have continuously been shifting towards the non-farm activities (World Bank, 2019).

***Greater Market Access***

Roads are a complementary asset to the markets. In the absence of the proper roads, markets will not flourish as the demand and supply chain will be compromised. With the increased rural road construction in the country side areas, the local population gets access to the markets to sell their produce and buy the needed materials for their use. Rural roads also have attracted many complementary investments, mostly private, their sustenance and returns largely depend on the road conditions (ILO, 2015).

***Improved Agricultural Practices***

With the linkages of rural areas by roads, the agricultural practices have also gone through unprecedented changes. It resulted in changed cropping patterns and cultivation choices with reduction in traditional cereals production and increment in production of cash crops and perishable items (ILO, 2015, Shamdasani, 2021). It thus clearly aided in the commercialisation of agriculture. The construction of roads has also a significant impact on increased usage of agricultural inputs like fertilisers, pesticides and improved quality of seeds (ILO, 2015, Shamdasani, 2021). Another aspect of linking rural roads and agriculture is the improved access to agricultural markets (World Bank, 2019, 2021) which enables farmers to sell their produce to the bigger markets outside their habitation resulting into better prices. Roads also save their travelling time and efforts which keeps perishable items fresh (ILO, 2015). Farmers also tend to own more agricultural assets than before like tractors, power tillers etc. to increase the agricultural productivity (ILO, 2015). However, a report of World Bank (2019) suggests otherwise that there is no significant change in agricultural practices.

***Depeasantisation and Feminisation of Agriculture***

With the expansion of network of rural roads, the connectivity is hugely increased resulting into migration of rural population to urban centres to take up the better paying non-farm works. It has resulted into the gradual depeasantisation of the agricultural sector. The social norms affect and curtail the mobility of women and as a result they still remain in rural areas and work on farms which results in the feminization of agriculture. Men switched to non-farming occupations outside the village, and women took over farming opportunities close to home (World Bank, 2019, 2021).

***Way towards Poverty Eradication***

Better rural roads are a necessary but not sufficient condition for graduating from poverty (ADB, 2006). Rural roads under PMGSY were constructed with an aim to alleviate

poverty prevalent in the rural and inaccessible areas. With the construction of the rural roads, there have been evidences of increase in the income of the rural population in various activities like agriculture, poultry, livestock etc. Non-agricultural activities have also recorded an increase in the income for the people engaged in trading, shop keeping, driving etc. Increased income paves path for the poverty alleviation of a population. Therefore, it is evident that with the extending rural road network, poverty is expected to decline.

#### ***Improved Quality of Life***

Better maintained roads also cast an impact on the quality of life of the rural population positively. An ILO report suggests that roads have contributed to the increase of income for the rural population which resulted into improved socio-economic status and greater quality of life (2015).

#### ***Improvement in Health Care Facilities and Access***

Health is the most fundamental necessity for the humankind. In order to access the existing health care services or develop the new ones, roads are one of the most crucial links. Better connectivity by roads save time and can be life-saving as well. In the case of serious accidents, maternal emergencies or some other medical emergency, roads have reduced time to the hospital visit. Pre and post natal care, institutional deliveries (World Bank, 2019), child immunization and care have also recorded improvements after the construction of roads under PMGSY (ILO, 2015). The visits of doctors and health care workers have also increased in the villages where roads are better maintained (ILO, 2015).

#### ***Enhancement in Human Capital Formation***

Affordable and good quality education is a requirement which must be met at any cost to educate the children and aid in human capital formation. Government has been attempting to achieve this goal to educate the entire population of the nation, but the rural areas still lack in this aspect. One of the constraints in achieving this goal is the poor connectivity. The construction of rural roads have facilitated improvement in education aspects like building of schools after construction of roads, improved pupil-teacher ratio, time saved in travelling to schools etc (ILO, 2015). Middle and High school children had one more year of schooling (World Bank, 2021). Higher educational institutions in nearby towns also get more accessible due to better road connectivity. It has also increased the schooling enrolment (World Bank, 2021).

#### ***Improvement in Food Security***

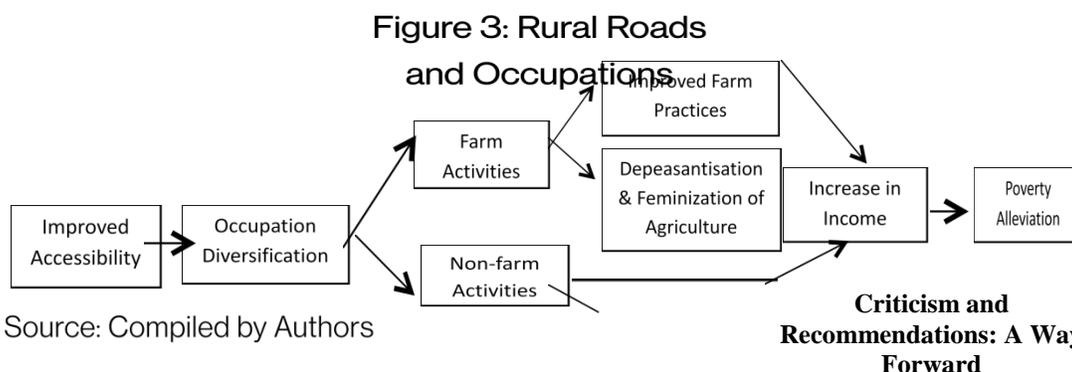
With the better accessibility due to expansion of road networks, the public distribution system (PDS) centres have increased and became accessible to the majority of population (ILO, 2015). PDS ensures the quality food at nominal prices or at no cost. Therefore, PDS helps in improving the food security of the households.

#### ***Improved Gender Relations***

Upgraded integration of rural road network into lives of rural population has resulted into modified mobility patterns for both males and females. With the improvement in road networks, men began to diversify into non-agricultural activities which enable women to come out of domestic seclusion and toil on farms (World Bank, 2021). Therefore, mobility pattern and negotiation between the genders got impacted. A World Bank Report (2019) suggests that with the improving schooling of children, there is no gender difference between

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the boys and girls with regard to enrolment. Lei et.al. (2019) opine that women's role in non-farm activities get expanded with the better road access by more non-farm opportunities, freeing up of women's time from family duties and changing gender norms and perceptions of family and employers.



Rural roads are the important links which connect the villages with one another and with the urban centres as well. They serve as feeders to the district roads. The fundamental function of the roads is to provide transportation facilities and accessibility. However in addition to these, rural roads also act as a way to alleviate poverty and enhance the quality of life of rural population. However, the condition of these rural roads is somewhat questionable as the majority shares of unsurfaced roads are rural roads out of the total roads of country. To enhance and sustain the impact generated by rural roads on rural population, these roads should be turned into surfaced roads. Surfaced roads are better in quality and can sustain through all the seasons.

Maintenance of already built roads under PMGSY is also a matter of concern. According to a report of ILO (2015), state governments were not able to follow up with the maintenance work of the roads built which led to deteriorated roads in many regions. It diminishes the well-being of the rural population greatly. Therefore, to avoid this maintenance work must be followed up rigorously.

Another important point is that rural roads definitely are a way to alleviate poverty however, they alone cannot do that. Thus, in order to eradicate poverty from the rural areas, rural roads must be coupled with other structural changes and welfare programmes.

The progress of rural roads under PMGSY has been phenomenal but there is an evident spatial difference in the density of rural roads in different parts of the country. North eastern states though have higher density, the quality of roads there is questionable as Assam despite being a top candidate in rural road share, ranks lowest in the surfaced road share. Thus, it is absolutely necessary to eradicate regional variations in terms of rural road building and maintenance.

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