

# Review of Literature on Rural Road Improvement

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**Abstract**— Rural roads are the tertiary road system in total road network which provides connectivity for the rural population to market and other facility centres. In India rural roads are being planned and programmed in the favour of overall rural development, and tried to provide all weather connectivity with some level of achievement. The investment of funds for road development provided policy guidelines and priorities for rural roads. Improvement of rural road is needed where satisfactory results are not obtained.

**Index Terms**— Rural Road, PMGSY, etc.

## I. INTRODUCTION

The Pradhan Mantri Gram Sadak Yojana (PMGSY) is a organized by Centrally Sponsored Scheme, which primarily aims to provide all-weather road connectivity to all eligible unconnected habitations in the rural areas with a population of 500 persons and above in plain areas and 250 persons and above in special category States (i.e. Arunachal Pradesh, Assam, etc.)

Better operation of rural road can give efficient result. Comptroller and auditor General of India reported some deficiencies in rural road. Hence improvement of rural roads are required to achieve all desired objectives from planning of rural road. This study gives review of literature for rural road improvement.

**Literature review:** Literature related to Rural Road Improvement are presented in this study

**Preeti Jain :** Reported the following impact of rural roads on different field.

**A. Economic Impact of PMGSY on Rural Economy of M.P.-** Some districts are selected in this study and it is tried to get effect of rural road on different parameter.

**1. Impact on agriculture-** PMGSY road connectivity leads to a better transport system during all seasons. Farmers mentioned that the problem of not being able to access the markets during monsoon has been solved by the construction of the roads. This impact has been greatly felt in the districts like Jabalpur, Bhopal, Katni, Narsinghpur, Datia etc. of Madhya Pradesh state. The PMGSY roads have made it easier to transport chemical fertilizers, seeds and pesticides. Considerable change in cropping pattern was observed in the various districts and villages of Madhya Pradesh state, with a switch from food crops to cash crops (such as ginger, sugarcane, sunflower and other vegetables).

## II. IMPACT ON EMPLOYMENT GENERATION

After the construction of PMGSY roads, an improvement in the employment situation in terms of more job opportunities was observed. A lot of housewives were mentioned that they

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have started small scale industries like making, pickle, papad, bidi, sivai, jhadu etc.

• On-farm employment opportunities have increased due to shift from grains to cash crops.

## III. IMPACT ON POVERTY ALLEVIATION

• Under PMGSY, rural roads have decreased the rapid growth rate of poverty and had increased the involvement of people into the growth process of the state, which is the main objective of inclusive growth of Madhya Pradesh.

• With the improvement in on-farm and nonfarm employment opportunities, beneficiaries in all the districts reported increase in their average household income.

## B. Social Impact of PMGSY on Rural Economy of M.P.

### 1 Impact on health

Positive impact was observed with regard to increase in accessibility to prevent health care facilities; better management of infectious diseases and attending emergencies due to faster access to health facilities and increase in frequency of visits by health workers especially in the Jabalpur, Bhopal, Katni and Narsinghpur districts.

• Pregnant women have easier access to prenatal and postnatal care, and can reach health centers outside the village in time for deliveries. Ambulance facilities have also been increased in maximum villages.

### 2. Impact on education

• Beneficiaries reported that the PMGSY road connectivity had led to an increase in the number of girls going to schools in the various villages (like Pondi, Gubra, Sahajpur, Shahpura, Khamaria, Chargawan, Maili, Lamheta, Bheeta, Belkheda etc.) in the state. Most parents mentioned that they are now more confident about sending their daughters to schools/colleges.

• Another noteworthy impact has been in terms of regular attendance of the teachers throughout the year. Teachers, living outside are also able to travel for work in rural schools.

### 3. Impact on Urbanization

Trend towards urbanization of an area as an immediate and direct impact of providing rural road connectivity was observed in course of the study. The study areas have seen some rapid changes from traditional to modern ways of life. For instance, the phenomenon of neon light attraction has drawn the villagers to the town entertainments; there has been increased use and ownership of televisions, computers, mobiles, cars, tractors and other electrical gadgets.

**Dr. Pradeepta Kumar Samanta:** Rural roads are the wealth of a nation, a tool for social inclusion, economic development and environmental sustainability. Rural roads link communities and their agricultural fields to the main transport system and markets. Improving rural roads reduces transport cost and stimulates marketing. This results in increased production and productivity, crop diversification and

increased profitability. A main bottleneck for local economic development is often a limited and poor quality rural road network. It is quite evident from the Plan documents that, private sector participation in road sector has been confined to development, maintenance and operation of specified highways (national and state), expressways, bridges and bypasses. Rural roads, particularly, those needed to link remote, hilly and backward settlements are hardly profitable to the private operator. Hence, without doing any major policy revamp on the development of rural road infrastructure, it is very difficult to expect private sector participation in this area and till that time Public investment must have to come in a big way and without any further delay. This crucial component of rural infrastructure, neglected during the reforms decade, need to be state financed in a time bound manner to prevent the rise in urban rural disparities in growth and development.

**Abash Parida:** Where already roads have been developed to varying degrees, the social impacts are not as massive as from opening a new road, but still significant. A recent study in India (where road connections and connectivity of some kind exist in most regions) showed that the socioeconomic development of areas, considering education, health, family planning, employment, income and other variables, were generally positively correlated with the type and condition of the roads. In other words, areas with poor accessibility were worse off compared to areas with better road access, the highest social and economic progress occurring in areas with established paved roads for a long time. When to measure social benefits: Researcher believe that since measuring social benefits is difficult, this needs to be done only if transport cost savings and time savings approach (the traditional methodology for transport projects) does not provide enough justification in terms of ERR (economic rate of return) estimates. Where such traditional ERR is high enough to satisfy the threshold, references can be made to the nature and extent of social benefits from the project, without measuring them. Efforts in measuring them may not be essential in such cases. If relevant case studies are available, and if norms or correction factors are already available and allowed by the funding agency, these can be applied as a correction to the basic estimate. However, for low volume roads, the standard ERR estimates will not be able to justify investments in most cases.

**Preeti Jain:** Rural roads provide connectivity in rural areas. Rural roads are not only important for movement of agricultural and allied products from rural to urban areas but it is equally important for inclusive growth of rural economy. After the construction of PMGSY roads, an improvement in the employment situation in terms of more job opportunities, more avenues for self-employment, etc. were observed. Positive impact was observed with regard to increase in accessibility to prevent health disease. Education facilities are also increased because of the PMGSY roads. Construction of the PMGSY roads has led to an increase in frequency of visits by Government officials to implement of various Government schemes and programs in rural areas.

**Report of the Comptroller and auditor General of India:** Rural road connectivity is a critical component in the socio-economic development of rural population by providing access to amenities like education, health, marketing, etc. It is also vital in ensuring sustainable poverty reduction which demands permanent rural connectivity,

encompassing a high level of quality of construction followed by continuous post-construction maintenance of the road asset and in fact of the entire network. The Pradhan Mantri Gram Sadak Yojana (PMGSY), a centrally sponsored flagship scheme of the Government of India, was introduced on 25 December 2000 to provide all-weather rural road connectivity and to access eligible unconnected habitations as a strategy for poverty alleviation and to overcome deficiencies in rural road planning, inadequacy and unpredictability of funds and lack of maintenance of rural roads. The Pradhan Mantri Gram Sadak Yojana (PMGSY) was reviewed between January 2005 and June 2005 covering the period April 2000 to March 2005; the audit findings were incorporated in the C & AG's Report No. 13 of 2006. Audit observed deficiencies in physical and financial planning, fund utilisation, implementation, tendering process, quality assurance, maintenance of roads, monitoring and efficacy of the online management and monitoring system (OMMS). Since then, expenditure on the programme has increased manifold. States had utilized ` 63,877.78 crore on implementation of the programme during performance audit period (2010-15). With a view to review the progress, it was decided to take up the performance audit of the programme. This performance audit covered the period from April 2010 to March 2015 covering 4,417 packages involving expenditure of ` 7,734.93 crore in 176 districts of 29 states. This audit indicated that there are some deficiencies in achieving the targets of PMGSY.

**Conclusion:** literature review indicated that rural roads are how much imported for economy of any country. Education, health and job are other important factor which affected by rural road. Comptroller and auditor General of India observed deficiencies in physical and financial planning, fund utilization, implementation, tendering process, quality assurance, and maintenance of these roads. Improvement of rural road is needed for getting best output. Developing countries has not always sufficient budget to improve rural road, so a methodology is also needed for prioritization of rural road network.

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