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### An analytical study on the impact of PMGSY in tribal areas: A case study of Hazaribag district in Jharkhand state

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#### Abstract

A program called the Pradhan Mantri Gram Sadak Yojana (PMGSY) aims to improve transportation and connectivity in rural India. In order to give India's disconnected villages unfettered access to roads in all weather conditions, the Pradhan Mantri Gram Sadak Yojana was introduced in December 2000. This government-sponsored program is a component of the government's efforts to reduce poverty. This article examines the impact on the people living in tribal areas of an Indian construction effort called PMGSY. Roughly a billion people live in rural locations around the country with no access to paved road networks. Local firms only see small increases in employment. The PMGSY aims to support the Government of India's objective of reducing poverty in rural areas by promoting economic growth and granting access to necessities that can enhance the standard of living for the impoverished in rural areas. Additionally, it enables the impoverished to gain from progress and engage more fully in the economy. Connecting rural communities to the city's central business district was the aim of PMGSY. This article aims to elucidate the ways in which improved rural road connectivity has led to a rise in agricultural output, the creation of more jobs, and the expansion of companies. In-depth discussion is also given to PMGSY's effects on a number of other areas, including urbanization, transportation, health, education, and poverty reduction.

**Keywords:** PMGSY, tribal areas, socio economic benefits, rural road connectivity, rural connection

#### Introduction

The State is in charge of rural roads. The Pradhan Mantri Gram Sadak Yojana (PMGSY-I) was introduced as a one-time special intervention to improve the socioeconomic status of the rural population by providing rural connectivity through a single all-weather road to eligible unconnected habitations of designated population size (500+ in plain areas and 250+ in North-Eastern States, Himalayan States, Himalayan Union Territories, and certain other specified areas as per 2001 census).

Following then, PMGSY's scope was expanded to encompass new interventions. The goal of PMGSY-II, which was introduced in 2013, is to upgrade 50,000 kilometres of the current rural road network. In order to build or upgrade roads in Left Wing Extremism Affected Areas (RCPLWEA), the Road Connectivity Project was established in 2016.

Birhor literally means the forest man. The word 'Birhor' is derived by combining two Mundari terms— 'Bir', meaning forest and 'Hor', meaning man. Birhors belong to one of the 75 Primitive Tribal Groups (PTG) Listed by the Government of India. They belong to the Proto-Australoid stock and, linguistically, they originate from the Austro-Asiatic group. The Birhors believe that they are the descendants of the Sun and that they are related to the Kharwar tribe that also descended from the Sun.

The fundamental components for the overall socioeconomic development of rural areas are provided by rural roads. Building and maintaining roads and road connections benefits rural communities on many socioeconomic levels and creates a solid foundation for the agro-based economy. Numerous strategy documents have emphasized the value of rural roads. All-weather road connections are to be made available to all villages with a population of 1500 or more, and to 50% of the villages with a population of 1000–1500 people, according to the present VIIth Five Year Plan.

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In order to complete this objective, building of about 1.30 lakh km of road at an estimated cost of Rs.3100 crores has been envisaged over the plan period (1985–1990). This will enable the construction of all-weather road connections to an extra 25,000 settlements that satisfy the previously outlined criteria. Furthermore, the importance of constructing rural roads cannot be emphasized in light of our social and economic goals. Numerous benefits, both direct and intangible as well as quantifiable and instantaneous, come from building rural roads.

### Statement of problem

In academic research, writing a problem statement can help you contextualize and understand the significance of your research problem. A problem statement looks different depending on whether you're dealing with a practical, real-world problem or a theoretical issue. Regardless, all problem statements follow a similar process. A research problem is, at the simplest level, the core issue that a study will try to solve or (at least) examine. In other words, it's an explicit declaration about the problem that your dissertation, thesis or research paper will address. This study aims to investigate social & economical impact of PMGSY in tribal areas of Hazaribag district. Road connectivity is an important component for the economic, social and political development of the rural population. Inadequate and poor road infrastructure can impede access to basic facilities; reduce agriculture productivity and in turn household incomes. Keeping in view the fact that India has a vast rural population with about 0.6 million villages, Prime Minister Gram Sadak Yojana (PMGSY) was introduced for improving accessibility with an overall objective of poverty alleviation. Rural Access Index (RAI), one of the indicators developed by International Development Association (IDA) has been used in this study to find accessibility at regional level.

### Impact and Benefits

#### 1. Break of Isolation

Roads are crucial in helping the villages break free from their isolation. It gives the villagers a much-needed chance to interact with different social groupings, which instills in them a sense of belonging to the country's mainstream in terms of its development and wealth. Administrative and welfare organizations can now easily visit previously unreachable places, especially during natural disasters and during relief efforts.

#### 2. Modifications to Travel Behavior

The traditional form of rural transportation—the bus, scooter, truck, etc.—is being supplanted by motorized vehicles with the availability of all-weather road connections and bullock carts. People's mobility is enhanced, and they are encouraged to travel to farther-off locations for leisure and social engagements. The construction of rural roads facilitates the faster flow of people and goods between the market and the production centre. It is convenient and less expensive to move the excess produce from the village. Additionally, it guarantees farmers fair rates for their produce and perishable goods like eggs, milk, and vegetables.

#### 3. Change in Living Patterns

As a result of building rural road links, people's awareness of contemporary living amenities such as cooking, clothing, and recreation is raised, which in turn modifies living

patterns. It introduces fresh perspectives on the most recent technological advancements in farming, agro-industries, healthcare, etc.

It also leads to a greater knowledge of one another's viewpoints, which changes attitudes. The construction of rural road connections opens up opportunities for idea sharing and transforms the way people live in rural areas.

#### 4. Education Level

As a result of the communities' link to the road system, more elementary and middle schools are sold, raising the educational attainment of the locals in rural areas. In addition to the fact that rural pupils find it simpler to get to school, these schools also draw competent and effective teaching personnel, raising student achievement and raising literacy rates.

#### 5. Health Care

Health Care: Building rural roads that link the villages to the highway and neighboring towns makes it possible to build more clinics and pharmacies, which will enable the personnel to work more efficiently and treat more patients by expanding their service area. Increased production and a greater respect for the family planning program result from these improved health standards. Because of the excellent road system, more competent and effective physicians are drawn to operate in rural areas.

#### 6. Increase in Agriculture

Because of the lower transportation costs to the village, the cultivators there will be able to produce more agricultural goods. They will also be able to market their produce at a lower cost of transportation and import fertilizer, manures, and seeds at a lower cost. As a result, agriculture, which dominates our economy, becomes more productive. All-weather road connections significantly shorten the time needed to transport perishable goods like milk, vegetables, chicken products, etc. and guarantee a consistent supply to consumers as well as a fair price for producers of these goods throughout the year.

#### 7. Commercial Benefit

The presence of transportation infrastructure gives business owners the chance to establish commercial enterprises, especially agro-industries that rely on locally sourced raw materials. It lowers the price of final product marketing and external raw material transportation. An entrepreneur can obtain a higher return on investment and production costs are decreased. A greater number of completed goods are produced and made available to consumers at a relatively lower cost. A reliable road network also enables businesses to obtain workers, capital, and other manufacturing inputs more quickly and at a lower cost.

#### 8. Increase in Access to Administrative Machinery

The public is also impacted by rural roads because they make it easier for the government to provide more effective public security by giving people access to welfare organizations, administrative machinery, and law enforcement.

#### 9. Employment Potential

Creating jobs is one of the main effects of rural roads. Road construction and maintenance are employment-focused industries in and of themselves. One result of this impact is that it creates jobs in its own sector, which is road and road transport. It also opens up new opportunities in rural areas by establishing more and new industrial units, as well as other infrastructure facilities like irrigation, electrification, and other utility services. Lastly, it reduces the pressure on

urban areas due to the decrease in rural population migration.

### 10. Cultural Change

As a result of the construction of roads, groups are brought together more regularly for communication, understanding, and idea sharing, which dissolves cultural barriers and promotes acculturation.

Other Benefits: These tend to be more spiritual in nature, such as a sense of security, improved perspective, altered mindsets, familiarity with emerging technologies, social networks, etc.

### Criteria for Assessing the Effects of Rural Roads

The following factors are thought to be crucial for assessing the impact of roads.

#### Production in Agriculture

- Greater area under cultivation.
- Higher yield of agricultural products.
- Lower production costs for both current and accrued surplus produce.
- Marketability of surplus produce: proportion of surplus taken to mandis or wholesale market.
- Lower transportation costs for surplus produce and
- Greater production of dairy products.
- An expansion of the area used for cash crops.

#### (ii). Manufacturing Industry

- Amount of industrial units.
- Produce value per investment unit.
- Reduction in the price of manufacturing.
- Industry size (average number of employees per unit).
- The employment rate of the rural population in the area.

#### (iii). Modifications to Travel Pattern:

Mobility level (portion of individuals traveling). Reason for travel (social, professional, educational, etc.). Changes in the modalities of transportation; percentage of trips made using mechanized means of transportation; percentage of journeys to locations outside the district; length and lead of trips; degree of vehicle ownership; expense of travel; and time saved on travel.

#### (iv). Education Development

- % of literacy;
- % of literacy among females;
- % of students per school or educational unit;
- % of school-age population travelling to a city for higher education;
- % of educational trips; % of teachers travelling from outside the school;
- % of population taking part in adult education programs;
- % of students attending the school from other locations or nearby villages, etc.

#### (v). Changes in the Living Patterns

- Rate of migration (reduction in the rate of migration to urban area)
- Percentage of workers commuting to towns for work/back home
- Percentage of travel to social visits
- Percentage of travel for recreation
- Percentage of households having electric connections

- Average electricity consumption/household
- Percentage of households using kerosene oil
- Average kerosene oil consumption/household
- Average number of earners/household
- Average income per house hold
- Number of families below poverty line
- Indebtness – number of families indebted

#### (vi). Health Care

Number of pharmacies and health centres per 1,000 people  
Number of dispensary visits; percentage of patients receiving treatment from outside the area; percentage of families using family planning; and percentage of medical personnel arriving at the health facilities from outside the area  
proportion of cases sent to non-hospital facilities.

#### (vii). Employment Generated

- Employment in construction and maintenance roads
- Employment in rural road transport
- Employment in allied work, road work etc.

### Objectives of the research

1. Increase in enrolment of children in schools in tribal areas.
2. Easy access to community hospital in tribal areas.
3. Promoting rural employment in tribal areas.
4. Hill farmers have easy access to the market for their produce.
5. Tourism got a boost in tribal areas.

### Research methodology

**[A] Source of data collection:** Our Research is based on primary data. Our paper is descriptive in nature.

#### **[B] Data analysis & interpretation**

According to the 1991 Census, the population of the Birhors in Jharkhand is 8,038 and they live mainly in Palamu, Garhwa, Singhbhum, Giridih, Lohardaga, Ranchi, Hazaribag and Gumla. Only 15 per cent of them are literate. Traditionally, they are a food gathering and hunting community and their economic activities have been closely linked with the forest. Rope making, by collecting the bauhinia creeper has been their major source of income. Their economic activities are, however, undergoing a change. Driven by survival strategies, they are pursuing whatever activities are immediately available. The degradation of forests has affected their traditional economy and has introduced a certain level of instability. The Birhors are nomads, who move from one jungle to the other, practising shifting cultivation; when the food supply of a particular forest is exhausted, they move to another forest. The Birhor settlement is known as a tanda, which comprises several huts. The huts are conical in shape and are erected with the help of leaves and branches. The houses of the more settled Birhors are made of mud walls, bamboo and wood, thatched with plus (grass and straw) or handmade tiles, which they have learnt to make from their neighbours.

### The Role of PGMSY in Indian Rural Perspectives

India's road network is one of the world's largest and densest. However, a substantial portion of the 2.7 million km rural road network was in poor shape, and over 30% of the country's population (roughly 300 million people) lacked access to all-weather roads until the year 2000. Because of India's immense diversity, each of the eight

project states has a different topography, population, and implementation capabilities, posing its own set of obstacles. The tough topography in the smaller highland states was exacerbated by the construction industries limited capacity, resulting in lower quality work and greater expenses. Furthermore, the hill states of Himachal Pradesh, Meghalaya, and Uttarakhand had unique road construction issues due to the remoteness of habitations and deep forest regions. A challenging security scenario, coupled with local capacity issues, faced substantial challenges in Jharkhand, one of India's poorest states.

#### Furthermore, Indians have other challenges

1. If the road is in poor shape, it will take time and damage the overall advancement of rural people in terms of health, education, and economy, among other things.
2. Inadequate monitoring and evaluation of work done following the adoption of OMMAS, resulting in project failure.
3. The system's execution has been irregular, resulting in inequity; and minorities are still not connected by the scheme, which may trigger social unrest.

#### Conclusion

Finally, Jharkhand's Hazaribagh district is a hidden treasure that presents a plethora of natural beauties, historical significance, cultural diversity, and contemporary advancements. Hazaribagh offers something for everyone, whether you're a history buff, a nature lover, or just looking for a quiet getaway. Visitors will undoubtedly develop a stronger bond with the spirit of this charming neighbourhood as they explore its hills, forests, and cultural treasures. According to the findings of this study, Prime Minister Gram Sadak Yojana has a beneficial impact on non-agricultural laborers' jobs and income changes. The number of days that workers are employed, their yearly income, their mode of transportation to work, their primary occupation changing, their ease of up-and-down mobility, and—above all—the development of rural roads under PMGSY all contribute to the nation's and its citizens' overall development. Nevertheless, it has been discovered that improper use of government monies has occurred. The funds allocated for enhancing rural infrastructure are used in phases. Consequently, the goal for the development of rural infrastructure has not yet been reached. As such, in order to achieve the goals and targets of the programs, appropriate action must be taken against those involved in the corruption process. Rural roads affect rural areas as well. The long-term and consistent improvement in rural residents' living standards is facilitated by improved rural connection. Access to more economic opportunities boosts income, which enables individuals to spend more and accumulate wealth. Access to health and educational resources is made easier by improved connectivity, which promotes the building of human capital. Improved rural connectivity has the potential to reduce poverty over the long run.

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