



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

CODEN: IJRSFP (USA)

*International Journal of Recent Scientific Research*  
Vol. 9, Issue, 2(C), pp. 23946-23952, February, 2018

**International Journal of  
Recent Scientific  
Research**

DOI: 10.24327/IJRSR

## Research Article

# RURAL ROAD SYSTEM AND ITS EFFECT ON FARMERS: A CASE STUDY ON KATWA SUB-DIVISION, DISTRICT: BURDWAN, WEST BENGAL

Sourama Saha\*

Department of Geography, Barasat Govt. College

DOI: <http://dx.doi.org/10.24327/ijrsr.2018.0902.1568>

### ARTICLE INFO

#### Article History:

Received 05<sup>th</sup> November, 2017  
Received in revised form 21<sup>st</sup>  
December, 2017  
Accepted 06<sup>th</sup> January, 2018  
Published online 28<sup>th</sup> February, 2018

#### Key Words:

Road, subdivision, blocks, road side, remote side, farm practices, transportation cost, equipments etc.

### ABSTRACT

The impact of the transport system at the village level in particular upon the well being of the farmers or the people based on agriculture is, no doubt, very important aspect today since about 60 percent of India's population is still dependent on agricultural activities, producing 20 percent of national income. In this paper, we like to estimate quantitatively the economic benefits of the farmers at Katwa sub-division derived from the improved road system. It is because of the fact that transport cost per unit of final goods and the means of production is inversely proportional to dilapidated road conditions or ever deteriorating road system. The magnitude of enhanced transport cost per unit because of the shortage of road coverage or worst road condition in this sub-division matters much in the new millennium. Per road facilities in this sub-division is estimated at 0.22 kilometer whereas in India 0.26 km, state of west Bengal is 0.10 km and Burdwan district is 0.17 km revealing serious bottleneck in providing public road facilities to the people of Katwa sub-division and hence government should come forward in constructing road infrastructure when private investors abstain to invest fund in this head. In the present study, we selected 60 villages purposively in five blocks at Katwa sub-division to estimate the benefits of the roads or the markets to the agricultural people to speak off road facilities. Our findings based on data reveal that farmers nearer to relatively better road system are economically able to enjoy agricultural equipments or machineries at a higher rate as compared to geographically backward villages. According to our data, farmers adjacent to better road facilities appropriate better market prices of all crops under study relative to backward villages if we do not consider the nature of the price-spread. Our data suggest that cost of transportation per quintal per unit of distance of different crops as well as means of production are close to double to remote farmers compared to road-side farmers. Epilogue suggests that expansion of public infrastructure like first class road communication benefits farmers by all means when communication could be taken as engine of the growth and development of a nation today.

**Copyright © Sourama Saha, 2018**, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

### INTRODUCTION

Rural roads are forming the basis for transformation and communication. They constitute the most critical infrastructure in the rural, and by extension national development drive. Contributions of rural roads to rural development include: accelerated delivery of farm inputs and evacuation of product and reduction in the cost of transportation. On the other hand lack of rural access roads has killed the dreams of those who may have chosen to live in the villages with their villages cut away from the city and potentials in the villages wasting away, these set of people have chosen to join the rest for urban life. Since majority of economic activities in our society depend in one way or the other on road infrastructure, the Government of India launched in December 2000, the programme of village

connectivity known as Pradhan Mantri Gram Sadak Yojana (PMGSY) with the objective of connecting all unconnected habitations having a population of 500 and above with all-weather roads. The study therefore revealed that the government efforts has increased socioeconomic activities in the state as people and goods now move freely from rural areas to the urban centres. The study further revealed that provision of rural roads has equally helped to reduce the cost of transportation in the state. Above all, it has reduced rural urban drift in the sub division. Rural Road connectivity is a key component of rural development, since it promotes access to economic and social services, thereby generating increased agricultural productivity, non-agriculture employment as well as non-agricultural productivity, which in turn expands rural growth opportunities and real income through which poverty

\*Corresponding author: **Sourama Saha**  
Department of Geography Barasat Govt. College

can be reduced. Since the economic development of any nation is dependent on how easy people and goods could move from one part of the country to another, road infrastructure is therefore vital to the growth of the state as well as the nation's economy.

India has a road network of over 4,320,000 kilometres (2,680,000 mi) in 2011, the third largest road network in the world. At 0.66 km of roads per square kilometer of land, the quantitative density of India's road network is similar to that of the United States (0.65) and far higher than that of China (0.16) or Brazil (0.20). However, qualitatively India's roads are a mix of modern highways and narrow, unpaved roads, and are undergoing drastic improvement. As of 2008, 49 percent - about 2.1 million kilometers - of Indian roads were paved. India added over 500,000 kilometers of paved single lane rural roads between 2005-2011. The rural roads in India form a substantial portion of the Indian road network. These roads are in poor shape, affecting the rural population's quality of life and Indian farmer's ability to transfer produce to market post-harvest. Over 30 percent of Indian farmer's harvest spoils post-harvest because of the poor infrastructure. Many rural roads are of poor quality, potholed, and unable to withstand the loads of heavy farm equipment. These roads are also far from all season, good quality 2-lane or 4-lane highways, making economic resource flow slow, and logistical costs between different parts of India one of the highest in the world. For the development of these rural roads, Pradhan Mantri Gram Sadak Yojana (or "Prime Minister Rural Roads Scheme"), was launched in December 2000 by the Indian government to provide connectivity to unconnected rural habitations. The scheme envisions that these roads will be constructed and maintained by the village panchayets. In some parts of India, where the government has attempted to manage it directly as a local social spending program, this program has produced limited results and no lasting change over 10 years, in either the quality or quantity of rural road network. In other parts of India, the Pradhan Mantri Gram Sadak Yojana and a sister program named Bharat Nirman (or Build India) have privatized the rural road construction projects and deployed contractors. This has produced results, which are presented in the table below.

**Table 1** Rural road network in India, trends over 10 years

Subject	KM in 2001	KM as of May 2011	KM under construction in 2011
Total rural roads	2.7 million	3.1 million	0.1 million
Paved, not maintained rural roads	0.5 million		
Unpaved rural roads	2.2 million	1.9 million	
Paved, maintained rural roads		728,871	53,634
New rural roads		322,900	82,743

Source: Rural Road Development Plan Vision: 2025 New Delhi

In a 2011 report, The Economist noted the rural road scheme and Mahatma Gandhi National Rural Employment Guarantee to be India's biggest single welfare project, costing over \$8 billion a year. Alone, it eats up over 3% of all public spending in India. The report claims Jairam Ramesh, the Minister in Charge of the Central Government department administering the program, criticizes uneven, patchy implementation of the scheme. He describes wasteful construction of items such as roads that quickly crumble away. A review published by the

Ministry in September 2011 found that skilled technicians were unavailable at almost every site. There were rules banning the use of machinery or contractors, labour is usually by shovel, resulting in patchy construction of roads, drains, ponds, dams and other assets that are of very poor quality. The government scheme has failed to improve India's awful rural infrastructure. These rural roads get washed away each monsoon, only to be rebuilt, badly, the following year.

**Study Area**

Katwa subdivision is a subdivision of the Bardhaman district in the state of West Bengal, India. This Katwa subdivision lies between 22° 11'6" N to 23° 15' 22" N latitudes and 88° 22' E to 89° 5'E longitudes approximately and encompasses an area of 1070.48 sq.km. It consists of Katwa municipality, Dainhat municipality and five community development blocks: Katwa-I, Katwa-II, Ketugram-I, Ketugram-II and Mongolkote. The five blocks contain 46 gram panchayets and one census town. The subdivision has its headquarters at Katwa. The area of the subdivision is a low alluvial plain, densely populated and often waterlogged and swampy.

**Table 2** Administrative Set up of Katwa Subdivision

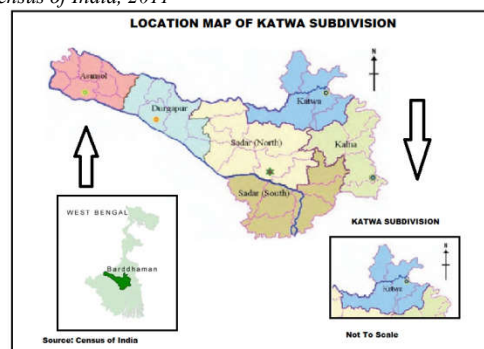
Sub-Div.	Police Station	CD Block / M.C. / Muni.	Panchayat		Mouza/ Ward	Inhabited villages	
			Samity Gram	Gram Samity			
Katwa	Mongolkote	Mongolkote	1	15	186	132	129
	Ketugram	Ketugram I	1	8	114	66	62
		Ketugram II	1	7	82	56	55
	Katwa	Katwa I	1	9	116	66	63
		Katwa II	1	7	100	68	62
		Katwa (M)	-	-	-	19	-
	Dainhat (M)	-	-	-	14	-	
Total	2	5/0/2	5	46	598	388/33	370

Source: Census of India, 2011

**Table 3** List of Gram Panchayets by Block under Katwa Subdivision

Sl no.	Block	No. of GP	Name of the Gram Panchayat
1	Katwa-I	9	Koshigram, Goai, Khajurdihi, Sudpur, Srikhanda, Alampur, Karajgram, Gidhgram, Sargram
2	Katwa-II	7	Karui, Agradwip, Gajipur, Jagadanandapur, Singi, Sribati, Palsona
3	Ketugram-I	8	Rajur, Palita, Pandugram, Gyandas Kandra, Berugram, Agardanga, Murgram
4	Ketugram-II	7	Goplapur, Ankhona, Niroi, Ketugram, Billeswar, Nabagram, Gangatikuri, Sitahati, Mougram
5	Mongalkote	15	Paligram, Chanak, Gotista, Lakhuria, Mangalkote, Jhilu I, Jhilu II, Shimulia I, Shimulia II, Majhigram, Bhalwagram, Kaichar I, Kaichar II, Nigan, Khirogram

Source: Census of India, 2011



**Figure No 1** Location Map of Katwa Subdivision

Katwa subdivision is the one of the oldest subdivision under Burdwan District. The subdivision lies mainly between the Ajoy and the Bhagirathi or Hooghly rivers. It is surrounded by Birbhum and Murshidabad on the north and Nadia districts on the east, on the South and West by Sadar and Kalna subdivision. It is bounded by river Bhagirathi in the north-eastern side and in the north side the town is outlined by river Ajoy. The subdivision has reasonably good accessible having SH-21 and SH-22 and Eastern railways which extend from Sealdah to Katwa and Howrah to Katwa. The Katwa railway station is well connected by eastern railway both by main and chord line covering Kalna and Katwa road with hinterland. Katwa town lies at distance of about 56 Km from Burdwan city, 52 km from Nabawip, 10 Km from Dainhat, 68 Km from Baharampur city, 78 km from Krishnanagar and 60 km from Bolpur. More so, capital city of Kolkata is only 158 km away from Katwa. The total area of the subdivision is 1070.48 sq. km and the total population is 853476 (2001) where percentage of population 12.38 to district population. The density of population Katwa subdivision is 797 persons per sq. km. The study area consists of 388 mouzas. Katwa Town is the pivotal town of the subdivision having administrative function and has almost all types of infrastructural facilities. Katwa is an agricultural based semi urban centre under Katwa sub-division under district of Burdwan. The town is situated within the boundary of Katwa-I C.D. Block. The town is unique with its varied characteristics both in agriculture and industry.

## REVIEW OF LITERATURE

Review of literature in a research work is essential to evolve an edifice of knowledge to ensure that the present study would be an addition to the topic and gives way to mend away the lacunae left in the process of exploration of the research study.

### *International Level*

- Oraboune, S. (2008) has dealt with a very country Lao PDR of South East Asia. In his study he has pointed out that rural roads in Lao PDR are connecting roads from village to main road, where these will lead them to market and access to other economic and social service facilities. However, due to mostly rural people accustomed with subsistence farming, connecting road seems less important for rural people as their main farming produce is for own consumption rather than markets. The paper aims to illustrate the significant of rural road as connecting road from village to markets or a market access approach of farm produces. It also demonstrates through which approach, rural farmers/people could improve their income earning, develop their farming system, living standard and reduce poverty.
- Davis and Njenga (2003) point out poverty reduction needs more than economic mechanisms to be effective. A first transmission channel of roads' impact is to facilitate provision of basic needs to the poor such as health and education.
- Mu and van de Walle (2007) rural roads rehabilitation in Vietnam improved primary school completion rates and enhanced the treatment of broken bones. First the construction and maintenance of a road is labor-intensive operations and can provide job opportunities to

people living around. However these projects are only occasional and cannot represent a long term strategy for reducing poverty. Second the provision of roads entails a greater and/or cheaper availability of labor markets. For example) show that road projects in Vietnam increased employment opportunities by 11% for unskilled labor. Smith, *et al* (2001) show that road rehabilitation projects in Uganda extended job opportunities in the service sector.

### *National Level*

- Pathak (1969) has pointed out that road and road transport system is the life-blood of civilization and constitutes an important item of infrastructure for economic growth. From his study, Pathak found that improved road and road transportation creates values, utility and also helps production of perishable commodities by carrying them to consumers in distant markets, like fishing, meat, poultry, dairy, sericulture and fruit farming, directly dependent to the rural transport.
- Jain, J.K. (1977) has pointed out the importance of roads and its impact on overall change in the community. He observed that road is fundamental institutions of mankind; it develops with the advancement of human civilization. Road inadequacies can create income disparities not only between rural and urban areas, but also within the groups of rural areas. The author also shows that the large number of visits made by officials to road side villages was mainly due to easy accessibility of villages throughout the year by all modes of road transport and relatively less time required reaching, and thereby, it will help rural people to develop their socio-economic conditions.
- Ramanandam, V.V. (1980) made a detailed attempt to study the rural transport system in India. He attempted an economic analysis of road transport operation and found that the road transport is a powerful agent of social transformation, breaks isolation of rural habitations and rural communities, brings new ideas and dispels their ignorance. He concludes that adequate and efficient road and road transport system is a vital national asset from the economic, cultural and social points of view.
- Manohar, L. (1989) studied the roads and their socio-economic impact on the rural community of Bihar. He found that the road development has bestowed a package of benefits on the village people. In agriculture sector, author, found that the development of road network has resulted in faster and more equitable distribution of inputs as also marketing of products. Allied agricultural and non-agricultural activities have also started growing with expanding road communication. Small trade and business establishments have come up in some of the villages linked with roads. The author also observed that the rural road network generated a better access to facilities for schooling, health, banking and postal services to the rural people. Thus, there was a clear indication that the development of rural roads has become a necessity to accelerate socio-economic transformation of rural society.

- Reddy, *et al* (1999) suggested an approach for integration of rural roads network with other transport networks in the region from an efficient transport system. They have indicated the quantitative impacts of rural roads on social economic factors.
- Mahapatra, *et al* (2007) have expressed that Rural Road connectivity is a key component of rural development, since it promotes access to economic and social services, thereby generating increased agricultural productivity, non-agriculture employment as well as non-agricultural productivity, which in turn expands rural growth opportunities and real income through which poverty can be reduced.

### Objectives

Present study will try to fulfill the following objectives:

1. To find out the brief history of rural- road system at Katwa sub-division
2. To demarcate or isolate the problems faced by the farmers due to lack of better rural road communication
3. To show the pattern transportation costs of both final goods and inputs per unit of distance
4. To estimate price-benefits to the farmers to the geographically backward and road-side farmers
5. To show the farmers economic condition.

### DATA SOURCES AND METHODOLOGY

The entire study is based on both Primary Survey and Secondary data. Randomized systematic stratified sampling technique was applied in the selection of communities adopted for the survey; sixty villages are selected from the five blocks, namely Mangolkote, Ketugram-I, Ketugram-II, Katwa-I and Katwa-II under Katwa Sub-division. Five sets of questionnaires were designed in gathering information for this study.

Primary Survey: To study the impact of rural-road facility on farmers, roads-system, road coverage and attribute of transport characteristics are taken under consideration. It requires data on the various aspects in different levels that are directly related to the rural mass. Some of them includes as follows:

1. Distances of the villages from the nearest market.
2. Distances of the villages from the nearest roads.
3. Time taken to reach the market.
4. Number of visits made by the government officers for developmental purpose.
5. Availability of modern agricultural equipments and machineries like tractors, paddy rotary weeder, hand tractor for ploughing, sprayer machines, duster/ fans to clean the rice, seed / fertilizer drill etc.
6. Availability of public mode transport and so on.

In the study sixty villages are selected from the five blocks, namely Mangolkote, Ketugram-I, Ketugram-II, Katwa-I and Katwa-II under Katwa Sub-division on the basis of the random sampling, out of which 30 belongs to road- side villages and 30 are described as remote-side villages. New techniques adopted in agricultural practices affecting crop yields are taken into account. The villages are classified under two broad classes- "Road-Side Villages" and "Remote Side Villages". By road-side villages mean villages situated very close to main road, remaining 30 villages are situated at a distance of more than 1

kilometer from any major roads like District Roads, State Highway etc. On the other hand, remote villages are those, which are situated at more than 2 kilometer away from the major road, and any village road does not connect even these villages. The primary data is collected in a survey relate in the year 2015.

### RESULTS AND DISCUSSION

The data are presented in Table-6 that indicates the population of the five blocks and of two municipalities in the subdivision and different types of activities as per 2011 census. Mongolkote is observed to be the large size Block in the group followed by Katwa I and Ketugram I. We also observe from the figure that the said blocks hold the same positions in the share of population, and different sectors' employment out of the total population of the subdivision. It is also evident from the figure that two pure rural blocks, viz, Mongolkote and Ketugram - I have their major share of population engaged in agricultural sector. It is, thus, pertinent now to address the issue of rural road structure and its effect upon the socio economic conditions of the farmers of all the concerned blocks.

**Table 6** Population and Labour of Katwa Sub-Division (2011)

Blocks	Population	Total Workers	Farmer	Agricultural labour
Mongolkote	233958	80568	22637	36103
Ketugram I	145859	44041	12688	19008
Ketugram II	107054	41538	12257	12760
Katwa I	152101	60341	14412	16423
Katwa II	120318	44216	12038	14180
Katwa Municipality	71589	22765	136	278
Dainhat Municipality	22597	7617	425	1421
Total	853476	301086	74593	100173

Source: Census of India, 2011

The length of different categories of roads maintained by different local bodies operating under the five blocks of Katwa Subdivision. It is observed that Gram Panchayet & Panchayet Samity maintains mainly the surfaced roads in all four blocks but for the Katwa II Block, the figure for unsurfaced roads is higher compared to that of the surfaced. Under the catchment of the roads maintained by the Zilla Parishad, the figures for unsurfaced is greater compared to the surfaced roads in most of the blocks except in Mongolkote. There are some roads constructed and maintained by the PWD and Pradhan Mantri Gram Sarak Yojona which have similar kind of relevance to the development of the subdivision.

The major part of total road infrastructure is maintained by the Gram Panchayet & Panchayet Samity which is over 1100 km in length followed by the Zilla Parishad and PWD. All in all there are about 1800 km road length within the periphery of the subdivision that is expected to some positive impacts upon the socio economy of the subdivision, particularly upon the agricultural households carrying their livelihoods for the entire day, month and year.

In the study conducted recently in 30 road- side villages and 30 Remote side villages, it was observed that in a year the Block Development Officers and other Govt. officers made on an average 13.06 trip to the road- side villages and only 3.10 visits to the remote villages.

**Table 7** Length of roads maintained by different agencies in the Blocks of Katwa Sub-Division in 2010-11 (in Km)

Name of the blocks	Gram Panchayet & Panchayet Samity		Zilla Parisad	PWD	Pradhan Mantri Gram Sarak Yojana	
	Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced	Surfaced
Mongolkote	156.00	77.00	47.00	46.00	62.30	16.70
Ketugram I	145.00	15.00	27.00	34.00	49.30	38.44
Ketugram II	176.00	94.00	18.00	81.00	28.70	14.15
Katwa I	126.09	77.50	21.0	44.00	88.30	12.48
Katwa II	74.01	187.50	22.02	26.00	57.00	6.70
Total	678.00	451.00	135.02	231.00	285.60	88.47

Source: i) Ex.Engg. (PWD), (Roads), ii) District Engg, Zila Parisad, iii) Gram Panchayet & Samity

Thus the visit of the officers per year to the road- side villages with good transport/ road facilities were 4.21 times the number of visits to remote villages. On the other hand it was a Herculean task to reach most of the remote villages, as one had to walk 3 to 5 Kms. from the road often crossing canals.

The fewer contacts of the villagers with the agricultural extension officers and other development officers are also reflected in the low level of adoption of the various new agricultural practices. Now I want to discuss some of these components, namely, popularity of farm equipment, adoption of improved farm practices like HYV seeds, fertilizers, plant protection etc, based on a study 30 randomly selected road-side and 30 remote villages as mentioned above in the Sub-Division of Katwa. Besides the cost of transportation, village and market prices of various agricultural commodities are also discussed. Popularity of Selected Improved Farm Equipment: The improved farm equipments were relatively less popular in the remote villages as compared to road- side villages and this is the evident from the following table

**Table 8** Popularity of selected equipments in the villages of the Katwa Sub-Division

Name of Equipments	Road-side villages		Remote-side villages	
	% of villages having equipment	Average no. of equipment per village	% of villages having equipment of	Average no. of equipment per village
Tractor	94%	2	70%	1.34
Paddy Rotary Weeder	100%	15	90%	10.00
Hand Tractor for ploughing & carrying light goods	100%	2.93	100%	1.93
Sprayer Machine	100%	3.96	100%	2.90
Duster/Fans	100%	7.00	100%	2.93
Seed cum Fertilizer Drill	33%	0.43	13.33%	0.16

Sources: Collected through Primary field survey.

The above table shows that 94% of the sample of road- side villages as compared to 70% of the remote villages had tractors, similarly 100% of the road side villages used paddy rotary weeder with an average of 15 weeders per village, as against 90% of the remote villages with an average of 10 weeders per village. The farmers in remote villages indicated that although they could afford to buy tractors, they were unwilling to do so because of bad roads and difficulty in operation and servicing them. This resulted in some lands of large farmers remaining under primitive method of cultivation. The villagers also indicated that the use of sprayer machines is decreasing day by day due to the health consciousness among the labourers.

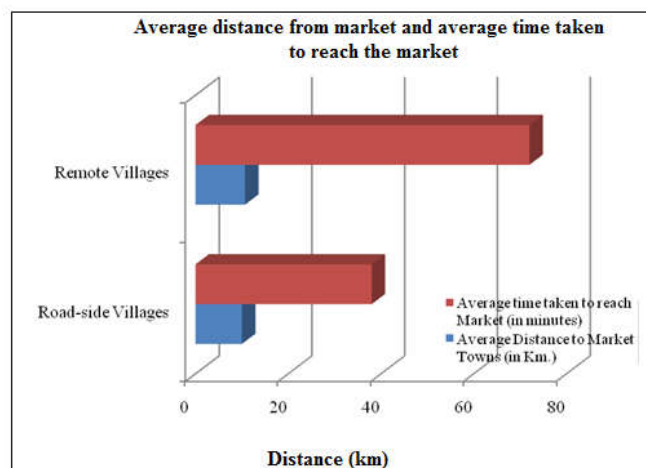
The use of Duster/Fan is proportionately less in remote villages because the villagers suffer a lot due to frequent power cuts and the technicians take long time to repair the electrical default due to the poor communication facilities in the remote isolated villages. Sometimes, it becomes impossible to carry the necessary equipments for repair work due to lack of proper road connectivity.

**Table 9** Average distance from market and average time taken to reach market

Items	Road-side Villages	Remote Villages
Average Distance to Market Towns (Km.)	10	10.67
Average time taken to reach Market (minutes)	38	72

Sources: Collected through Primary field survey.

The average time taken by the road side villagers is 38 minutes whereas it is 72 minutes for the remote villagers. That means, a small difference of distance between the road side and remote side villagers is to be covered in much higher times because of very poor road networks and conditions of the remote areas. It helps us to find out the differences in the socio economic conditions of these two different categories of villagers which are derived by the applications of improved farm practices that is further catalyzed by the road networks.



**Figure 3** Average distance from market and average time taken to reach the market

The study indicates that not only the percentage of farmers adopting these improved practices is low in remote villages, but also the level of adoption of these practices is considerably less. Moreover, it is interesting to note that the adoption of improved farm practices in the cultivation of paddy is higher than the cultivation of other crops in the case of both the road-side and remote villages.

**Table 10** Average Percentage of Farmers adopting improved Farm practices in Road-side and Remote side Villages

Particulars of improved Farm Practices	Paddy Road-side village	Paddy Remote side village	Potato & other Crops Road-side village	Potato & other Crops Remote side village
High Yielding Variety	97.93	94.63	93.33	87.30
Adoption of Fertilizers	52.16	41.30	51.03	34.86
Plant protection Measures	62.60	40.90	50.96	36.76

Sources: Computed by Author

**Adoption of Improved Farm Practices:** The adoption of improved farm practices namely, the use of HYV seeds, fertilizer application and plant protection for various crops are relatively more popular in road-side villages of both paddy and other crops as compared to remote villages. The benefits of quicker and efficient marketing of agricultural products and the products of rural industry, can bring back a lot of side development and it facilitates the introduction of modern inputs such as chemical fertilizers improved seed, use of pesticides and insecticides and better farm practices and the supply of extension services such as health, education, veterinary etc. and financial help.

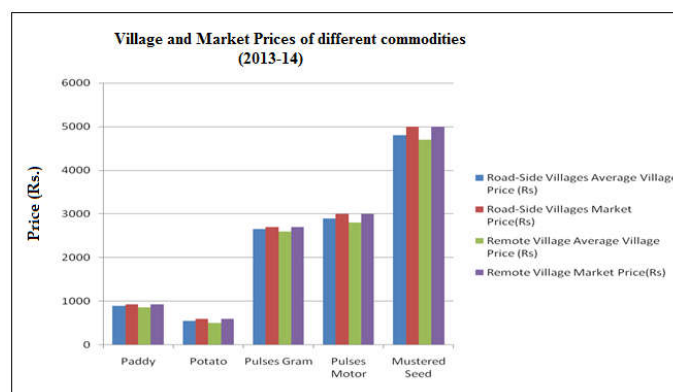
Transport facilities are needed not only to move the farm inputs such as fertilizers, pesticides, seed material and farm equipment from production points to the doors of millions of farmers located all over the state, but also to move the surplus agricultural commodities to market centres. Although the distance from the market centres to both remote and road-side villages are approximately the same, the cost of transportation per quintal per Km. of both inputs as well as various agricultural commodities is nearly double for remote villages as compared to road-side villages. In the case of remote villages farmers had to invariably use bullock-carts to transport their produce to the nearest road and then use trucks, tractors, motorized tri-cycles. This resulted in more time and cost for transporting their commodities to the market towns.

**Table 11** Average cost of transportation per quintal per Km. for different commodities (in Rs.)

Commodities	Road-side Villages	Remote Villages
Paddy	5.00	11.00
Potato	4.50	9.00
Pulses gram	6.00	11.50
Pulses motor	6.00	11.50
Mustard seed	5.75	10.80

Sources: Collected through Primary field survey

Owing to lack of adequate transport and communication facilities, the farmers in remote villages are denied of up-to-date price information and they have to depend upon either the itinerant merchant or neighbors who recently visited the market town for price information. Often price information obtained from the itinerant merchant is biased. Consequently, the farmers in the villages with poor transportation facilities are obliged to sell their produce at very unremunerative prices. Besides, the farmers have to take their produce to market towns at great risk of accidents and thefts. Consequently, the itinerant merchants capitalize the helplessness of the farmers in remote villages and offer low prices.



**Figure 9** Village and Market Prices of different commodities during the year 2013-14 (Rs/Quintal)

## CONCLUSIONS

After the detail study of impact on rural roads of the farmers of the remote village of Katwa Sub-Division are in disadvantageous position both in respect of procuring their input materials and disposing of their produce. It seen that the transportation cost of commodities in remote side villages is higher than the road-side village. Besides, the cost of production high in these villages due to high transport cost of inputs, but also the prices received by the farmers for their output is low, resulting low profit margin. These factors serve as serious constraints to the upliftment of the rural economy with transport bottlenecks and poor quality of rural roads.

In this study interviewing *Fifty* farmers of 30 road-side villages. They give their opinion in respect of benefits that are expected from the rural- road. They unanimously pointed out the following important benefits that are accruing:

1. Agricultural production can be transported quickly and economically to market centres, reducing wastage and spoilage and fetching better prices.
2. Easy procurement of diesel, fertilizers, seeds and other essential goods for cultivation and business.
3. Easy and quick access to nearby towns for medical services.
4. Enables officers of various departments to take any natural calamity like cyclone, earthquake, floods, etc. and prompt action can be taken by the authorities concerned.
5. Enable Panchayet staff to visit frequently so as to help the villagers to put forth their problems.

Fifty farmers of other 30 remote side villages were also interviewed to know about the impact of development of the road and road transport benefits they derive because of the road project. They identified the benefits were:

1. Easy procurement of agricultural implements and the expert personnel can visit the crops-field directly in some critical situation of preventing the crops from huge destruction by insects.
2. Possibility the selling of produce in the village itself, due to the frequent visits of traders.
3. Possibility of selling milk at higher prices in the village itself to the co-operative Milk Society, established after the construction of road.

4. Technical services are readily available on agricultural and veterinary matters.

In addition to the above mentioned impact of rural- roads, it is worth mentioning that assured of all weather access to his village, a farmer can plan value addition to his operations including:

- Land development
- Irrigation
- Multiple cropping
- Switch over to more remunerative crops like fruits and vegetables
- Improving breed of cattle.

The impact of the development of road and road transport can also be grouped as follows:

Road users are benefited by means of

- Savings in travel cost, time and energy
- Easy accessibility and better travel comfort.
- Customer's surplus
- Gain in productivity.
- Less cost of warehousing.
- Lower price goods

***These benefits cannot be determined in exact monetary values***

Vehicle Operators are also be benefited by means of

- Increase the life of vehicles
- Savings in vehicle operating cost
- Producer's surplus

These benefits can be measured in correct monetary values.

Third party not involved in the market process is

- Ground rent
- Lower priced consumer goods

Over 80% of the people in the survey admitted that roads benefit them mostly in the transportation of agricultural produce to the markets, to avail the health facilities and sending children to the schools and it does not require very high/ better type of road facilities.

After the study of the survey my views and suggestions for achieving the overall rural development are

1. Land reforms need special attention. Landless farmers must be allotted land and every facility must be given to them at the spot with minimum formalities, whatsoever.
2. Agricultural needs modernization, fertilizers, insecticides need not be applied. Compost manure and rice culture should be encouraged.
3. Hand crafts should be given to the special attention.
4. Education should lead a job.
5. Health, education and employment must be made available in the village itself.
6. Agricultural production can be transported quickly and economically to market centres, reducing wastage and spoilage and fetching better prices.

7. Easy procurement of diesel, fertilizers, seeds and other essential goods for cultivation and business.
8. Easy and quick access to nearby towns for medical services.
9. Transportation bottlenecks can be a major determinant to the progress of the region. Absence of good road and transport facilities creates two Worlds. In one a Brighter World with good transport and communication facilities and the other- a Darker World with ill-developed transport facilities resulting in poor accessibility and low mobility in these areas.

Finally our findings match the overall sentiments of the villagers in the remote side villages of the five blocks of the subdivision.

## References

- Census of India: 2001 and 2011
- Davis, A. and P. Njenga (2003), "Drawing the road map to rural poverty reduction", *Transport Reviews*, 23(2), 217-241.
- Jain, J.K. (1977). *Roads and Infra structural Change*, Kishore Publishing House, Kanpur, P-393.
- Khandker, S.R., Bakht, Z., Gayatri, B. and Koolwal, G.B. (April 2009). *The Poverty Impact of Rural Roads: Evidence from Bangladesh*, National Economic Research Associates, World Bank Policy Research Working Paper 3875.
- Lalitha, N. (2004). *Rural Road Development in India: Emerging Issues and Trends*, Dominant Publishers and Distributors, New Delhi, P- 329.
- Mahapatra, J.K. and Chandrasekhar, B.P. (2007). *India Infrastructure Report 2007, Rural Roads*.
- Manohar, L. (1989). *Rural Roads and Socio-Economic Development*, Amar Prakashan, New Delhi.
- Mathur, J.S. (1992). *Transport and Economic Development*, Chug Publication, Allahabad.
- Mu, R. and D. van de Walle (2007), "Rural Roads and Poor Area Development in Vietnam", *World Bank Policy Research Working Paper 4340*.
- Mukherjee, A. (2009), *Social Impact of Globalization Transport Service: The Case of India*, Indian Council on International Economic Relations, International Transport Forum Paper, Paris
- Oraboune S. (April 2008). *Infrastructure (Rural Road) Development and Poverty Alleviation in Lao PDR (Laos-South East Asia)*, Institute of Developing Economics Discussion Paper No. 151.
- Pathak, (1969). *Road and Road Transportation in Marathwada*, Ph.D Thesis, Social Sciences, Bombay University, P-3.
- Ramanandam, V. V. (1980). *Road Transport in India*, The Universe Publishers Ltd, Lucknow, P-130.
- Reddy, Singh and Gupta. (1999). *Rural Roads in India its achievement and Task Ahead*, Indian Road Congress.
- Rural Road Development Plan Vision: 2025* New Delhi, (2007). National Rural Roads Development Agency, Ministry Rural Development, Government of India.
- West Bengal State Rural Development Agency for the Asian Development Bank (2011), report

\*\*\*\*\*