Chapter 6
Summary and Conclusion

6.1. Summary of Observations

Impacts of variation in quality of road connectivity on socio-economic aspects and agricultural performances of farm households have been examined in details in the present dissertation. The analysis has primarily been made through a primary survey of the households across surveyed villages in East and West Khasi Hills* districts of Meghalaya. It has been observed that there are wide variations in accessibility to basic amenities in terms of sources of drinking water, types of electricity, cooking fuel used and toilet arrangement and their variations, apart from other socio-economic conditions are related with varying road conditions and thus opportunities across villages in the state. Also, connectivity is related to the pattern of ownership of consumer durable goods and vehicles. A sizeable proportion of households in the study area with poor connectivity are in economically disadvantageous conditions and poor. Besides, there is significant variation in educational qualifications of the respondents and their family members, occupational pattern, distribution of monthly income from different sources and agricultural earning with variations in quality of road infrastructure.

Various information with respect to road infrastructure across the districts, growth of net district domestic product and other socio-economic indices like basic amenities, sanitation, enrolment to different levels of education, educational qualification of households members, status of various health indicators, types of

* Blocks and villages falling previously under erstwhile West Khasi Hills District are now under the newly created district of South West Khasi Hills.
employment, sources of family income, agricultural earning and prices of major agricultural produce and spoilage have been collected from field survey and various published reports and government offices like PWD (Public Work Department), Government of Meghalaya, Directorate of Statistics and others. As mentioned earlier, primary data were collected from ten villages of the two districts selected by multistage sampling procedure.

Meghalaya is a land-locked state and has recorded a poor infrastructural development in terms of both social and physical. Road infrastructure is the only form of transportation in the state that connects with other states in the country and to different districts, towns and far flung villages within the state and other parts of North-Eastern region. The road density per 100 sq km in Meghalaya was 33.88 km on 1st April 2008, which was far below the national average of about 100 km per 100 sq km. The growth of total road length during 2002 to 2012 was only by 2538 km. Further, the percentage of total surfaced road in 2002 was 68.58 and declined to 65.44 in 2012. Thus, it indicated that almost one-third of total road length remained unsurfaced, inadequate, and inferior in quality with poor maintenance.

Provision of adequate and quality road network in the state is a pre-requisite for the development of the local economy, dissemination of vital information and services to remote districts and villages, speedy transportation and marketability of agricultural products, increasing economic opportunities and diversification of employment and income, and finally enhancing accessibility to medical and higher education facilities that are available at the block and district headquarters. It has been observed that connectivity and its quality vary significantly across the districts and villages in Meghalaya. Simultaneously, it has also been noted in this study that there is wide variations in socio-economic development across the villages in different
districts in terms of living conditions, occupational structure, earning from agricultural and non-farm activities, health and education, prices of the various agricultural products of the rural households. Most of these villages are identical in many respects, except the accessibility to various facilities through well-developed road networks.

The contribution of the present study lies in its comparative analysis of socio-economic indicators of sample households across villages in the study area on the basis of Road Development index (RDI), and details of construction and derivation of indices has been explained in preceding chapters. Adequate rural road infrastructure in the state is found to be of paramount importance so as to reduce the wide disparity of income, employment and socio-economic conditions across the districts.

Based on the Road Development Index (RDI), it has been observed that large proportion of the households in the villages with good road development is better off in terms of various socio-economic aspects. Whereas, most of the households across villages with poor road connectivity are extremely poor and have limited access to basic amenities and other assets and their living conditions are deplorable.

In regard to educational qualification, most of the family members in villages with poor road development are found to be literate but have very less in higher education, indicating that households in these villages have limited opportunity for higher studies available at local blocks and district headquarters due to poor road network and poverty. However, maximum educational qualification attained by any of the household members in villages with good road development is significantly more and the proportion increases at higher level as compared to that of poorly connected villages. It is because good connectivity provides them scope to move out to local blocks and district headquarters for higher studies.
Regarding occupational structure and road development it is noted that large proportion of respondents in villages with poor road development are farmers, with few respondents are engaged in non-farm activities. However, majority of them in villages with good road development, are engaged in various non-farm economic activities like daily wages, self-employed (business), private services (Private company) and public services (Government jobs). Further majority of the households in areas of poor road connectivity depend largely on farming as their primary source of income, whereas, households with good road development have diverse occupation ranging from daily wages to farming, self-employed, skilled and unskilled jobs in private company (Lafarge Company) and public services. Besides, the primary sources of income of most of these households are diverse and substantial.

It has been observed that allied activities like piggery, poultry and milking are closely linked to the development of road and as such these activities are mostly done by comparatively more households in villages having good connectivity. Adequate road network facilities help villagers to market these products to nearby semi-urban areas and market centres at local blocks and district headquarters. Diversification of employment is limited in villages with poor road development, as bad connectivity limits speedy mobility of villagers for viable employment opportunities and other potentialities in other villages and town.

A sizeable proportion of households with poor road have meagre income of less than Rs.5000 a month. However, most of the households in the study area with good connectivity have average monthly income of more than Rs 5000 and a significant proportion of them have earned income from diverse sources. However, proportion of earning from agriculture to total family earning is significantly lower in
areas of good connectivity. It is because of employment diversification in the good connectivity areas and thus rising earning from non-agricultural sources.

The transportation cost for transporting agricultural produce is less in surveyed villages with good road than in villages with poor road development. It is further noted that there is wide variation in agricultural prices, where households with good road network have received better prices for their agricultural produce and thus earned significantly more profit than those households with poor road development. Good connectivity enhances quick transportation and marketability of agricultural produce to local and far away main markets, where farmers procured better prices.

Another significant observation is the significant reduction in spoilage of agricultural produce by the households with good road network, where adequate road facilities provide different transport services and enhance marketability of agricultural produce to different market centres. Similarly, costs on transportation of inputs are comparatively less in villages with good road, as households in these villages have advantage of accessing different modes of transportation.

Regarding accessibility to various healthcare facilities with road development, it is observed that households in villages with good road connectivity have access to various healthcare centres like PHCs (public health centres), government hospital and private hospitals for birth delivery and other related post-natal cares. Whereas, most of the households in villages with poor connectivity have recorded significantly higher proportion of birth delivery at home, as bad connectivity prevents fast mobility for child bearing females to different health centres available at local block or district headquarter. It is also observed that transportation costs for accessing medical help during sickness is significantly less for the households in villages with good road as compared to their counterparts, since these households have better access to different
modes of transportation at lower prices. Further, transportation costs for accessing different health related programmes like immunization of (BCG, DPT, Polio, measles) natal care, post delivery care and female sterilization etc, at different health centres is comparatively less for households with good connectivity as compared to those households with poor road network.

Finally, most of the households with good road development are found to have access to various developmental schemes and programmes including MGNREGA and ICDS. Thus, it indicated that good road network enhanced mobility of households in outskirts and remote villages to access and avail various developmental schemes from local block and district headquarters.

Most of the findings of the dissertation validate the hypotheses that improvement of road connectivity has significant impact on the status of healthcare of rural villagers, where the regression coefficients and correlations between Road Development Index and healthcare facilities in terms of accessibility to various health centres for birth delivery, treatment for sickness and other related health programmes available in local blocks and district headquarters are significant. Also, correlations between RDI and accessibility to various amenities and developmental schemes are significant, which validate the hypotheses that provision of good road connectivity in rural areas has significant positive impact on the implementation or effectiveness of various developmental schemes and also the accessibility to various amenities in rural villages of the study area.

6.2. Conclusions

It can be concluded that provision of adequate and quality road connectivity in rural areas of Meghalaya is an urgent necessity. Predominantly, a larger section of the
population in the state reside in rural areas, and limited access to various economic and social facilities and services has adverse impact on the socio-economic conditions and quality of life of those rural people in the state, which is reflected in the living conditions of most of the households in surveyed villages who fall under below average and poor road category. Most of the households under poor road areas are gripped in acute poverty and deplorable economic conditions and are deprived of accessibility to basic amenities and economic opportunities.

Provision of adequate road network in the state will facilitate mobility of people; goods and services; enhance integration of local markets and expand rural economy. Majority of households in remote villages and districts of the state are predominantly farmers with poor connectivity, poverty and inaccessibility limit their mobility and potentialities to market their agricultural produce to local and main markets in the block headquarters or district headquarters, and thus their agricultural income and wages. Besides, high transportation costs have reduced the producers’ share and benefits. Further, poor road connectivity in most of villages has reduced the mobility of rural masses for other non-farm employment, reduces economic opportunities through diversification of income and employment, and thus most households in remote villages and districts depend solely on subsistence farming as their primary source of income.

Availability of good road in rural areas of Meghalaya would speed up movement of goods and services through different modes of transportation services and as such there will be reduction of wastage of perishable and semi perishable agricultural produce and reduce price variation across villages and districts. Besides, provision of good and quality rural roads in the state would enhance accessibility of rural people to basic healthcare services, health programmes, educational facilities and
cheap credit facilities in the local block headquarters or district headquarters at a lower transport costs and travel time, and finally improve the quality of life of rural masses and make them more productive.

Further, adequate and efficient rural roads in the state may help in reducing rural-urban disparity and geographical isolation of remote villages across the state; strengthen socio-economic and political fabrics of rural communities. Thus, improvement of rural roads constitute an intrinsic part of rural development strategies in the state, where adequate rural road investments have potential to facilitate economic opportunities and development in both farm and non-farm sectors, where various developmental programmes of the state and central governments can be channelled adequately and timely to remote areas and as such rural road improvements serve as a catalyst for overall rural development and poverty alleviation.

6.3. Policy Implications

Based on the above analysis and the information gathered from the survey, the following policy implications have been emerged:

(1) Adequate connectivity to all isolated villages and remote districts of Meghalaya by all weather roads is suggested to ensure smooth and uninterrupted flow of goods and services and to reduce the socio-economic disparity across the state.

(2) The government should divert a sizeable percentage of its budget on the development and maintenance of district and village roads across the state as these roads constitute the major backbone of transport system connecting remote and inaccessible villages to local blocks and district headquarters that would be helpful in the implementation of various health and educational programmes.
(3) Connectivity improvement helps in involving people’s participation at districts and village level through Local blocks, Dorbar Shnong and Syiem to identify and implement various developmental programmes pertaining to development and maintenance of other infrastructure and also of road.

(4) Public Works Department (PWD) of the state should be made accountable for road network development and management of road assets. It will be helpful for sustainable improvement in the quality and cost-effective construction and timely maintenance of road network, considering the topography and climatic conditions of the state.