CHAPTER- I

INTRODUCTION AND RESEARCH DESIGN

1.1   Introduction

Assam is predominantly a rural economy among other States and Union Territories of India. At the time of 2011 Census, the geographical area of rural Assam comprises 98.39 percent out of the total geographical area of the State. According to 2011 Census Report, almost 86 percent of the population of Assam lives in rural areas. The socio-economic status of the majority of population living in rural areas is very low and weak. This is mostly due to the acute poverty along with the persistence characteristics of a backward economy such as low income levels, poor quality of life and weak base of human development. According to the report of the Planning Commission, Government of India which was renamed as NITI (National Institution for Transforming India) Aayog in 2015, the poverty head count ratio in rural Assam has increased from 36.4 percent in 2004-05 to 39.9 percent in 2009-10. But this has again decreased to 33.89 percent in 2011-12 (Tendulkar Methodology). This high incidence of poverty distributes unevenly across the various districts of Assam. Further, education and health which are the main pillars of human development revealed very weak position in the State. This creates haphazard development in the State leading to inter-district disparities.

Assam has special characteristics of geographical variety. It is situated in the North-East corner of India which is almost an isolated land with the rest of India. The region is surrounded by difficult terrains like hills, rivers, wetlands and dense forests due to which cost of development project increases and leads mobilization of resources very difficult. Again, locational advantages are playing a very important role in determining the development strategy of a region. Assam is lacking such locational advantages and therefore development agendas can't be implemented properly. Along with these, economic overheads like transport and communication facilities, power,

technology, banking, insurance etc. which are very crucial for development of a particular region don't follow suit in the process of rural development of Assam.

Again, there exist developmental disparities in general and rural development in particular across the different rural regions as well as the cluster of regions of the State of Assam. There exists vast difference in different developmental indicators across the State of Assam. Mention may be of human developmental indicators such as education and health including the amenity differences ranging from roads, schools, buildings, sanitation and drinking water, electricity etc. The per capita incomes of different regions, agricultural and industrial development, infrastructural facilities, degrees of urbanization etc. are the indicators of regional disparities of Assam. The acute poverty along with variations in some basic amenities in the region addresses the problem of rural development across the State. Therefore, the message of the time is to investigate the extent of rural development among the different rural districts or cluster of districts.

The present study incorporates the analysis of status and extent of spatio-temporal variations in rural development of Assam with suitable rural developmental basic indicators such as rural literacy, rural health, rural agricultural productivity and rural employment by taking into account three post reform census years- 1991, 2001 and 2011. Besides, the study also explores to find out the factors responsible for inter-district disparities in rural development of the State. Again, the study wants to find out appropriate measures to reduce such rural developmental disparities and thus rural backwardness across the rural areas of Assam.

1.2   Location of the Study Area

The present study covers the entire State of Assam as per 1991, 2001 and 2011 Census. The State of Assam comprises an area of 78,438 square kilometres out of the country's total area 32,87,240 square kilometers (at the time of 2011 Census). It constitutes about 2.39 percent of the total land area of India. It is an important geographical location of North-East India which is situated between 89°5′ to 90°1′ East Longitude and 24°3′ to 27°58′ North Latitude. Assam is bordered in the North and East by the Kingdom of Bhutan and Arunachal Pradesh. Along the South lie Nagaland, Manipur and Mizoram. Meghalaya lies to her South-West and West Bengal and

Bangladesh lie to her West. Physiographically, the State of Assam has two main physical divisions as- Assam plains and hills. At the time of 2011 Census, Assam plains comprises 25 districts such as Dhemaji, Lakhimpur, Sonitpur, Dibrugarh, Jorhat, Golaghat, Sibsagar, Tinsukia, Nagaon, Morigaon, Darrang, Nalbari, Barpeta, Dhubri, Bongaigaon, Kokrajhar, Udalguri, Baksa, Chirang, Goalpara, Kamrup (Metro), Kamrup, Cachar, Karimganj and Hailakandi. The hill division comprises of two autonomous hill districts as Karbi-Anglong and Dima Hasao (included in Sixth Scheduled to the Constitution of India). The State again divides itself into two distinct natural regions viz. the Brahmaputra Valley (22 districts of plains and 2 hill districts with 71,582 square kilometers) and Barak Valley (comprising 3 districts with an area of 6,941 square kilometers). At present there are 27 districts and 56 sub-divisions with 26,395 villages in the State (at time of 2011 Census).

Thus, Physiographically Assam is characterized by diverse features such as folded hill ranges, old plateaus, plains and rivers. On the basis of topography, geology and physiographic characteristics, Assam is divided into some micro-zones such as- Upper North Bank Plains of Brahmaputra Valley, Upper South Bank Plains of Brahmaputra Valley, Central Brahmaputra Valley, Lower North Bank Plains of Brahmaputra Valley, Lower South Bank Plains of Brahmaputra Valley, Barak Valley and Hill Region[1]. The Upper North Bank Plains of Brahmaputra Valley comprises with three districts viz, Dhemaji, Lakhimpur and Sonitpur. The cluster of districts such as Dibrugarh, Jorhat, Golaghat, Sibsagar and Tinsukia, constitutes the Upper South Bank Plain of Brahmaputra Valley. Again, in the Central Brahmaputra Valley there are two districts as- Nagaon and Morigaon. The micro-zone Lower North Brahmaputra Valley is the region which comprises the districts like Darrang, Nalbari, Barpeta, Dhubri, Bongaigaon and the four districts of BTAD (Bodoland Territorial Autonomous Districts) such as Kokrajhar, Chirang, Baksa and Udalguri. Further, the districts such as Kamrup, Kamrup (Metro) and Goalpara comprises the micro-zone Lower South Brahmaputra Valley. In the Barak Valley there are three districts viz, Cachar, Karimganj and Hailakandi and the Hill Region constitutes with two districts like Karbi-Anglong and North Cachar Hills (presently Dima Hasao).

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[1] Bhattacharyya, N. N. (2005). *North East India- A Systematic Geography*. New Delhi, India: Rajesh Publications

1.3   Significance of the Study

The importance of the study in rural areas stems from the basic characteristics of Assam as a backward economy such as large size of population, acute poverty, underutilization of natural resources, unscientific agriculture, poor industrialization and urbanization, poor land reform, poor health, low level of literacy and education etc. The general deficiency of basic facilities such as roads, communication, power, education, health care, sanitation and drinking water which are the major hurdles for development creates low productivity, low employment and degrades quality of life. Therefore, the need of the hour is to address the problem of development of rural areas and the people living there. For an underdeveloped economy like Assam where there exist geographical and physiographical variations, the study of rural development and its variations across the regions bears special significance.

The present study is very much significant from the point of view of analyzing developmental disparities across the districts of Assam through different development groups like low development, medium development and high development. The study has the great significance in analyzing effect of factors responsible for disparities on rural development in different regions and at different period of times.

In a backward rural economy like Assam, the variations in rural development across the districts of Assam have great relevance in the present context. The findings of such study will help the policy makers or the government authorities to design policy prescriptions for rural development of the State and reduction of disparities across the regions.

1.4   Objectives

The study has been undertaken keeping in mind the following four objectives-

1. To find out the status and extent of spatio-temporal disparities in rural development across the rural regions of Assam.
2. To document a comparison of the disparities across the rural regions and in relative to the State in the post reform census years.

3. To understand the factors behind the spatio-temporal variations in rural development of Assam.

4. To define appropriate suggestions in order to reduce disparities and rural backwardness across the districts of Assam.

1.5   Research Questions

In view of the above objectives the study also pursues to explore the following research questions:

1. Whether the disparity in rural development has any relationship with the availability of resources in the different parts of the State in the different time periods?

2. Whether there is any correspondence between the disparity in rural development in the process of infrastructural development and urban and industrial growth?

1.6   Hypotheses

Hypotheses undertaken for the research study are:

1. The resource availability factor has no effect in spatio-temporal disparities in rural development of Assam and thus it has no significant impact in reducing disparities in rural development.

2. Urbanization and industrialization reduce disparities leading to more rural development across the regions by reducing pressure on land and also due to spread effects.

1.7   Data Collection and Methodology

1.7.1 Data Sources

The present study is carried out using secondary sources data. Data have been collected from different secondary sources like Census Report- 1991, 2001 and 2011 (Primary Census Abstract and Village Directory), various issues of Statistical Hand Book of Assam such as 2001, 2005, 2008, 2011 and 2014, Economic Survey of Assam-

2007-08, 2011-12 and 2013-14. Further, the researcher collected data from publications like District Human Development Profile, 2006-07, Assam (Human Development Resource and Coordination Unit of Planning and Development Department, SIRD, June, 2009), Assam Human Development Report, 2003 and 2014 (Department of Planning and Development Department, Government of Assam), Highlights of Different Agricultural Schemes of Assam, 2008-09 (Department of Agriculture, Assam and Department of Horticulture and Food Processing, Assam) and from Reports of Public Health and Engineering Department, Government of Assam. In addition to the above sources, data have been collected from government reports like Vital Statistics of India Based on Civil Registration System, 2013, Vital Statistics Division, Government of India, Agricultural Census, 2010-11, Department of Agriculture and Co-operation, Ministry of Agriculture, Government of India, Minor Agricultural Census, 2000-01 and 2006-07, Ministry of Water Resources, Government of India and Annual Health Survey, 2010-11, 2011-12 and 2012-13, Factsheet, Assam, Office of the Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India. This is an inter-district level study which is an attempt to assess the disparities in rural development of different districts of Assam in the last three post reform census years such as- 1991, 2001 and 2011.

1.7.2 Scheme of Data Collection

Data from the secondary sources that help to analyze the various socio-economic variables in the study for the rural development in Assam has been used in the research study. From various secondary sources the investigator has decided to collect informations such as the literate persons, rural child sex ratio, infant mortality rate, rural employment, agricultural productivity, rural infrastructure in the form of educational institutions, medical institutions, irrigation and rural paved roads, operational holding, amount of agricultural labourer, rural work force, government expenditure on rural development programme, urbanization and industrialization. Hence, keeping all in consideration, secondary data are collected in such a way that all relevant information is available for the research work.

In this research work attempt has been made to present the disparity in rural development with the help of various indicators. The various indicators which are adopted for this study to show disparities in rural development are: **(i)** rural educational level which is measured by rural literacy rate, **(ii)** rural health composed of rural child sex ratio and rural infant mortality rate, **(iii)** rural agricultural productivity as measured by contribution of agriculture to district domestic product to net sown area and **(iv)** rural employment which is computed as work force participation rate in the form of main workers as percentage of total population. Taking these four dimensions based on five indicators data have been collected and constructed separately for showing rural developmental disparities across the State of Assam.

Further, in the study various indicators that are used to show the factors responsible for spatio- temporal disparities in rural development among different regions of Assam are rural infrastructure composed of health infrastructure, education infrastructure, irrigation infrastructure and road infrastructure, resource availability composed of average size of operational holding and landlessness, urban and industrial growth and government expenditure on different rural development programmes.

1.7.3 Tabulation and Analysis

The relevant data so collected have been presented in the form of tables using Microsoft Excel Spread Sheet and SPSS. Apart from tabulation and use of descriptive statistics, the investigator used simple statistical, mathematical tools and the method of dimension index in construction of Human Development Index (HDI) used by the United Nations Development Programme (UNDP), 2006 to estimate various indices of rural developmental disparities across the State of Assam.

The study has used some indicators of rural development subject to the availability of data to depict spatio- temporal disparities among the districts or regions of Assam for the three census years as- 1991, 2001 and 2011. This is an inter district level study where total rural area of each district are known as rural region. The study covers all the 23 districts of Assam at the time of 1991 and 2001 Census and 27 districts at the time of 2011 Census. Further, the study is carried out to analyze disparities in the rural development of Assam among different sub-regions which are classified on the

basis of locations of different clusters of districts as stated earlier such as- Upper North Brahmaputra Valley, Upper South Brahmaputra Valley, Central Brahmaputra Valley, Lower North Brahmaputra Valley, Lower South Brahmaputra Valley, Barak Valley and Hill Zone.

To measure the status and extent of disparities in rural development in the different districts and cluster of districts of Assam secondary data relating to four broad indicators of rural development have been used. These indicators are as follows-

     a. Educational or knowledge indicator which is measured through rural literacy rate in the age group 7 years and above

     b. Health indicator measured through combined index of two indicators such as rural child sex ratio in the age group 0-6 years and infant mortality rate each of having equal weight

     c. Productivity indicator as measured through rural agricultural productivity and

     d. Rural employment as measured from main workers as percentage of total population

For each of these indicators an index has been constructed which will show the status of the region for that particular indicator of rural development. That is, whether a particular district or region is developed or backward depends upon the index so constructed for that particular indicator.

Here, for analyzing comparative disparities in rural development among the different rural regions of Assam each of the indicators has been transformed into a uniform index. In this regard, to calculate the standardized index for each of the indicator the study has used the general formula of dimension index introduced by United Nations Development Programme (UNDP) in construction of Human Development Index (HDI) in its Human development Report, 2006[2].

According to UNDP, 2006, the general formula used to show the dimension index is-

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[2] Human Development Report, 2006, UNDP, New York, Oxford University Press

$$\text{Value of the index} = \frac{\text{ActualValue} - \text{MinimumValue}}{\text{MaximumValue} - \text{MinimumValue}}$$

Where, the value of the index lies between 0 (zero) and 1(one)

In the symbolic form it can be written as-

$$I_{ij} = \frac{(X_{ij} - \underset{j}{\text{Minimum }} X_{ij})}{(\underset{j}{\text{Maximum }} X_{ij} - \underset{j}{\text{Minimum }} X_{ij})}$$

Where, I_{ij} is the value of the index for the jth region with respect to the ith indicator and X_{ij} indicates value of ith indicator with respect to j^{th} region.

Depending upon the value of the index the Human Development Index ranks all countries into three development groups- low human development (value lies between 0.0 to 0.499), medium human development (value lies between 0.500 to 0.799) and high human development (value lies between 0.800 to 1)[3].

Similar to the Human Development Index ranking, the highest value of a particular variable for a particular indicator among the various rural regions of Assam is assigned the value one and the lowest value is assigned the value zero.

Further, similar to the UNDP strategy of grouping the regions into three development groups the study also grouped rural regions into three rural development groups such as **high rural development**, **moderate rural development** and **low rural development**.

For high rural development (HRD) the value of the index will lie between 0.800 and 1, that is, 0.800≤HRD≤1. Again, the value of the index will lie between 0.5.00 and 0.799 for moderate rural development (MRD), that is, 0.500≤MRD≤0.799. Similarly, the value will lie between 0 and 0.499 for low rural development (LRD), i.e, 0.0≤LRD≤0.499.

The rural literacy rate is the percentage of total number of literate population to the total number of populations in the age group seven years and above. The rural

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[3] Todaro, M. P. & Smith, S. C. (2003). *Economic Development*. New Delhi, India: Pearson Education

literacy index (I_{RL}) computed from rural literacy rate has a direct relationship with rural development. So, higher the values of rural literacy index higher the status of development and vice versa. The region with highest rural literacy index has the highest development in educational attainment and the region or district with lowest value of the indices implies lowest educational attainment among the different rural regions.

As said earlier overall health is measured through two indicators viz, rural child sex ratio and rural infant mortality rate. The former is defined as the rural female child per thousand number of rural male child whereas the later is defined as the number of infants' death per thousand numbers of live births during a particular year of a rural region.

The overall health index (I_H) has been constructed by simple average of the two health indices viz, rural child sex ratio index (I_{CSR}) as computed from rural child sex ratio and rural infant mortality rate index (I_{IMR}) as computed from rural infant mortality rate. The health index has direct relationship with rural development. That is, higher value of the index follows higher rural development and lower value follows lower rural development. The composite index of health so constructed will help to observe the status and extent of disparities in rural health across the different districts of Assam. The composite index of health is directly related to the rural child sex ratio, i.e. higher the sex ratio higher will be the health development and lower the sex ratio lower will be the rural health. The calculation of infant mortality rate index is same to the earlier indices which has also effect on health development. But unlike to the rural child sex ratio the infant mortality rate has inverse relationship with that of health development. That is, higher the infant mortality rate of a region lower will be the health development and lower the infant mortality rate higher will be the health development. Therefore, for convenience and comparability of the study, the index for infant mortality rate has been calculated in such a way that higher infant mortality rate follows a lower index and lower infant mortality rate follows a higher index. This index has been calculated using a simple mathematical form as one less the value of the direct index.

The rural agricultural productivity is the contribution of agricultural sector to District Domestic Product (DDP) to 100 hectares of Net Sown Area through which rural agricultural productivity index (I_{RAP}) has been computed. Again, rural employment

index (I_{EMP}) has been constructed through workforce participation rate computed from main workers as percentage of total population.

Thus, depending upon the value of the indices the indicator wise status of rural development as well as ranking of the particular district or region has been made for all the three census years viz, 1991, 2001 and 2011. From these indices the comparability as well as the extent of the indicator across the state of rural Assam has been made.

The rural development indicators like rural literacy rate, rural health composed of rural child sex ratio and rural infant mortality rate, rural agricultural productivity and rural employment have been combined into one composite index for each of three census years mentioned earlier. The composite index of rural development is the simple average of the indices of the different indicators of rural development. The index so constructed will help to compare the spatio-temporal disparities in the rural development of Assam among different rural regions in different time periods.

Again, the overall index of rural development and its indices have been analyzed by standard deviation and co-efficient of variation for comparison among the different rural districts or cluster of districts in different times. Here, the coefficient of variation (CV) is defined as the product of 100 and ratio of standard deviation and mean. A higher value of coefficient of variation means existence of higher level of disparity among the regions and vice versa.

Further, to understand the factors responsible for spatio- temporal disparities in rural development across the State of Assam and its effect on economic development, the study has undertaken some indicators like availability of resources, urban and industrial growth, rural infrastructure and government expenditure on different rural development programmes. Here, the availability of resources can be measured through size of operational holding and access to land. Again, rural infrastructure is a composite measure of four indicators such as health, education, roads and irrigation infrastructure. Irrigaion infrastructure again measured through number of micro irrigation schemes per thousand hectares to the net sown area and percentage of irrigated area to net sown area.

In order to analyze the rural developmental disparities caused due to the above proposed factors and to find out the extent of disparities of the factors across the State of Assam the researcher has applied the same method of constructing indices as has been done in construction of rural developmental indicators which will bring uniformity of the data and thus comparable across regions.

Similar to the construction of the indices of the indicators of rural development, here also district wise data are converted into conformable indices using the dimension indices for each of the factors so that status and extent of the factors responsible for rural developmental disparities are comparable across the regions and in the three census periods viz, 1991, 2001 and 2011. Here, also the rural regions are classified into three development groups according to UNDP (United Nations Development Programme) classification of regions using HDI (Human Development Index) such as high development (HD), moderate development (MD) and low development (LD). The category wise ranges of the values of indices of the status of the factors have been kept as same to the status of rural developmental indicators as- $0.0 \leq LD \leq 0.499$, $0.500 \leq MD \leq 0.799$ and HD $0.800 \leq HD \leq 1$ for low development, moderate development and high development respectively.

In the study, number of primary health centres (PHC's) per lakh of rural population in the rural districts of Assam for the all three census years is taken as convenient measure of Health Infrastructure Index (I_{HIF}). The health index which is the primary component of rural infrastructure has a direct relationship with the number of PHC's. An improvement in health index means an improvement of health facilities and thus improvement of rural infrastructure.

Again, education infrastructure index (I_{EIF}) is computed from number of primary schools per lakh of rural population. Similarly, percentage of villages approach to pucca roads has been used to compute rural road infrastructure index (I_{RIF}). Both of these indices have direct impact on overall rural infrastructure.

In the study, irrigation infrastructure index (I_{IR}) has been analysed by two indices. The first component of irrigation index, that is, I_{IR1} has been constructed from the percentage of irrigated area (in hectare) to net sown area (in hectare). The second

component of irrigation index, that is, I_{IR2} has been calculated from number of micro irrigation schemes per 1000 hectares to the net sown area of the region. The composite index of irrigation has been calculated using the average of two indices. It has also direct impact on development of infrastructure.

Finally, the overall rural infrastructure index (I_{IF}) has been calculated as simple average of all the four components of infrastructure indices for each district. The higher the value of the index indicates a higher development of rural infrastructure and vice versa.

The second proposed factor responsible for disparities in rural development is resource availability. The resource availability index (I_{RA}) has two components- average size of operational holding index (I_{OH}) and landlessness index (I_L). The first index has been calculated directly from average size of operational holding. In contrast to this to calculate landlessness index, agricultural labourer index (I_{AL}) has been calculated using percentage of agricultural labourer to rural workforce which is a direct index. Due to inverse relationship between agricultural labourer and landholding, landlessness index has been computed as one less index of agricultural labourer so that comparability with index of other indicators made possible. Lastly, resource availability index (I_{RA}) can be directly computed as simple average of operational holding index (I_{OH}) and landlessness index (I_L) which has direct impact on development.

Secondary data have been collected for computation of Government Expenditure on Rural Development Programme Index (I_{GE}) which is measured from amount of government expenditure per lakh of rural population of the respective years. The amount of government expenditure from all the rural development programmes for the year concerned, i.e., 1991, 2001 and 2011 are added in order to find out government expenditure per lakh of rural population and the corresponding indices.

To analyze industrial and urban growth disparities across the rural regions of Assam, the study has constructed a composite index of industrialization and urbanization. For each of industrial and urban growth separate indices have been constructed through which composite index of industrialization and urbanization has been computed as simple average of the two components. In the study, the industrial

growth is measured by the contribution of industry (manufacturing, construction, electricity, gas and water supply) to the gross district domestic product (GDDP) through which industrial growth index (I_{IND}) has been constructed. Further, urban growth is measured in a simple way as the percentage of urban population to total population which is converted to a standardize index viz, urbanization index (I_{UR}) for the districts of Assam, in 1991, 2001 and 2011.

Finally, in order to find out the overall significance of the factors responsible for spatio- temporal diaparities in rural development, the study will fit a multiple linear regression model along with simple correlation coefficient with indices of the factors as dependent variable and rural development as independent variable. That is, the composite index of rural development has been analyzed by multiple regression model and simple correlation coefficient with indices of the factors such as rural infrastructure, rural employment, resource availability, urbanization and industrialization and government expenditure.

To identify which of the factors such as resource availability, urban and industrial growth, rural infrastructure and government expenditure on different rural development programmes are significantly account for spatio- temporal disparities in rural development among different districts or regions of Assam a multiple regression line using OLS (ordinary least square) method has been carried out for each of the census years separately.

The regression model used in the study is-

$$RD_t = \beta_0 + \beta_1 IF_t + \beta_2 RA_t + \beta_3 GP_t + \beta_4 UI_t + U_t \text{ -------------------- (1)}$$

Where, RD_t is rural development index of district t which implies dependent variable;

IF_t, RA_t, GP_t, and UI_t are rural infrastructure index, resource availability index, government expenditure on different rural development programme index and urban and industial growth index of district t respectively and are implying explanatory variables;

β_0, β_1, β_2, β_3 and β_4 are positive parameters and

U_t is Random Disturbance Term;

t = 1, 2, 3 ------------ 23 (for 23 districts of Assam in 1991 and 2001) and

t = 1, 2, 3 -------------27 (for 27 districts in 2011)

For further reconfirmation of which of the factors account for significant disparities in rural development of Assam the estimation of simple correlation coefficient of each of the explanatory variables with the dependent variable rural development also have been computed.

1.8   Limitations of the Study

The present study attempts to analyze the status and extent of spatio-temporal disparities in the rural development across Assam considering three post reform census years, viz, 1991, 2001 and 2011. Further, the study wants to analyze the factors responsible for spatio-temporal disparities in rural development and its impact on economic development of Assam. However, the study suffers from a number of limitations as-

1. The study is based entirely on the secondary sources data. Data collected from different published sources like Census Reports, Statistical Hanbooks, Vital Statistics Reports both from civil registration system and sample registration system, Human Development Reports and other government sources. The reliability and validity of the study will depend upon validity of such sources.

2. The second limitation is the variables both independent and dependent considered in the study. There are so many variables of rural developmental indicators one researcher can take. But, here for convenience of the study the research scholar has collected only informations such as number of literate persons, child sex ratio, infant mortality rate, agricultural productivity, rural employment, number of primary schools, number of primary health centres, irrigated area, minor irrigation schemes, paved roads, operational holding, access to land, government expenditure on rural development programme, urban and industrial growth for measuring rural development as well as factors affecting rural development.

3. The third important limitation is the methodology of the study. There are different methods to analyse disparities in development across regions. Here,

only one method has been used to depict the disparities in rural development across Assam. Further, in order to analyze factors affecting rural development of Assam the study has used multiple regression models taking rural development as dependent variable which has some econometric problems.

4. In some cases the data are not available for all the years. In that case subject to the availability of data the value may differ.

5. Here, from the point of view of the study only a limited number of measures have been analyzed to curb disparities in rural development as well as improvement of rural development. There are so many measures to reduce rural developmental disparities depending upon the degree of study as well as variables used.

1.9   Chapter Planning

The Research Study entitled "A Critical Study on Spatio-Temporal Disparities in Rural Development of Assam" is divided and organized into six chapters including the introductory chapter. The study consists of the following chapters-

Chapter- I: Introduction and Research Design

Chapter- II: Review of Literature

Chapter- III: Status and Extent of Disparities in Rural Development of Assam

Chapter- IV: Factors Responsible for Disparities in Rural Development of Assam and its Effects on Economic Development

Chapter- V: Findings and Measures to Reduce Spatio-Temporal Disparities in Rural Development of Assam

Chapter- VI: Conclusion and Policy Implications