CHAPTER – I

INTRODUCTION
CHAPTER I

Introduction

1.1 Statement of the problem:

It is very much in the nature of human beings to strive for equality. Equality has been emphasized not only on ethical grounds but also on social, political and economic grounds. The struggle of humankind for equality has been stretched to the extent treating it responsible for social and economic transformation. The problem of regional disparities in the level of economic development is almost universal (Dholakia, 1985). Societies with great extremes of wealth and income are difficult to organize and always liable to be seriously damaged, if not entirely disrupted, by sporadic outbursts of discount from to prove that economic equality was a necessary condition of social stability at any particular date, but it is difficult too to believe that greater equality is not a goal that human societies will continue to pursue (Gulati, 1999). 'Egalitarianism' has been advocated not only for social stability and to contend social tensions and frustration but also as one of the factors necessary for development in the long run (Mandal, 1987).

A perfect quality is, however, enforceable under any known system of government. The objective of the struggle for equality is then to bring the degree of inequality to a minimum as far as it is possible; it is the inequality above this minimum level which is a matter of real concern. And one of the main issues of
our time is the widening gap between the rich and the poor, between the advanced region and the lagging region in the process of development.

There are broadly two dimensions of equality, i.e. interpersonal equality and inter-regional equality. These two have very close relations. One cannot reach the fundamental goal of interpersonal equality unless equality is achieved (Koropeckyj, 1972).

Regional equality leads to optimum use of the potentialities and resources of a region giving its inhabitants the full benefit of possible economic progress in relation to overall economic growth. This brings the level of per capita real income as near as it is possible in different regions.

On the other hand, regional imbalances distort the rational allocation of resources and usually result in underutilization or misutilization of resources – natural or human. Consequently, there is low level of national income on the one hand, and rise in interpersonal inequalities on the other.

Regional imbalances are however, inherent in the very process of development. Economic development has not been uniformly distributed either over space or time. (Misra, 1970) Regional imbalances emerge due parting to differences in resource endowments of regions and party to the tendency to locate new investment in the easy areas which have got facilities for development. The widening gap between regions may generate tension sufficient to inhabit the very process of development.
There needs therefore a deliberate attempt to lesson it not remove, the degree of regional imbalances with development strategy suitable to potentials, needs and priorities of a region the degree of ‘created’ imbalances, i.e. imbalances which may be attributed to man made factors can well be lessened. Correction of ‘Created’ imbalances would also lesson the degree of natural imbalances.

No country development or undeveloped, is free from the problem of regional imbalances (Nath, 1970). The problem is however, more pronounced and there is more pressing need for its removal in developing countries. The glaring disparities often witnessed by developing countries have threatened the political and economic stability in many of such countries. Owing to regional disparities India too has witnessed social tension, summering or violence and even separatist movements in West Bengal, Tamil Nadu, Karnataka, North East, Punjab etc.

In view of slow rate of growth, low productivity, mounting unemployment, glaring disparities, object poverty, look of basic amenities, starvation, poor standard of living, malnutrition etc. which most of the developing countries suffer from (Sunil, 2000). These Countries have to increase the rate of economic growth in an equalizing rather than a dispersing manner.

These problems are vulnerable to generate discontent and disbelief and may endanger, if unsolved, the very integrity of the country. The more backward an economy the more the vulnerability of these problems. On the other hand a developing country with limited stock of resources can not afford less than
optimum utilization of resources which may not follow regional equality. There is thus added dimension to regional imbalances in developing economics. (Williamson, 1965)

A consideration of regional balance may then come into conflict with efficiency whereas consideration of equity or equality demands for flow of resources to backward or lagging regions but the same is opposed to the criterion of efficiency because in lagging regions resources dissipate in absence of facilities necessary for development. Thus there may appear antagonism between regional and national objectives and even between the objectives of two regions. To overcome this antagonism regional planning needs to be integrated with the national planning. Regional integration increases the inter-regional interdependence, strengthens inter-regional amity, checks undesired shift of resources and optimizes the use of resources. In view of limitation to the resources and the long term perspective in which a natural process of development converges integration of economic and other activities is a necessity especially in a developing economy.

The economy of Assam is predominantly an agricultural – based rural economy (Taher and Ahmed, 1998). Of the total population of the state 87.5 percent live in the villages and more than 70 percent are directly or indirectly dependent on agriculture for their livelihood. Despite the rich natural resources, mineral resources, fertile lands, and huge amounts of central investment, the economy of Assam is far behind the national average. It stands at the last rug of
the development ladder of states. It suffers from the serious problems like large proportion of the total population below poverty line, abject poverty, mounting unemployment, glaring disparities, low investment potentiality, very low productivity etc.

Planning in Assam has been centralized, schematic and macro based. No attempt has been made until recently to bring the process of planning to action and to needs, priorities and potentialities of an area (Banerjee and Kar, 2007). Planning has to be area-based if the giant problems of poverty, unemployment, inequality, etc. are to be tackled. The development strategy needs to be, future, integrated and coordinated in order to secure regional balance, optimize the use of resources and solve the various problems the economy of Assam suffers from.

There is a vast scope for regional integration in Assam. The lower Assam region has good soil for cultivation and there is also good harvest. There is verity few industries in the region which can draw raw materials from agriculture. If agriculture and industry are made inter dependent it will benefit both and overall rate of growth in the state will increase. There is a good scope for inter dependence of agriculture and industry in the region. Almost similar in the case in upper Assam region. The N.C. Hills region has attracted lots of state government investment at large scale but it has not achieved sufficient rate of growth to transform the economy of Assam as there could not develop ancillary and small scale industries in the region. There is also need to strike interdependence between agriculture development in lower Assam and upper Assam and the N.C. Hills
region. It will help modernize agriculture on the one hand, and create sufficient demand for rapid industrial growth in the state. The overall rate of growth will thus be stepped up. In the Brahmaputra Valley of Assam there exist like other parts of India and North East India problems relating to disparities in development. There are regional differences in the size of population, climate, topography etc. as also wide ranging disparities in power, banking and other development related sectors. Lack of basic amenities, difference in level of living and employment opportunities, misconceptions of economic exploitation, cultural difference etc. have encouraged separatist tendencies in the Brahmaputra Valley of Assam.

The economy of the Brahmaputra valley is predominantly and agricultural based rural economy. Of the total population of the valley 88 percent live in the villages and 80 percent are directly or indirectly dependent on agriculture for their livelihood (Census, 2001). Despite rich mineral resources, fertile lands and huge amount of central investment, the economy of Brahmaputra Valley lags behind the national average. It suffers from the serious problems like large proportion of the total population below poverty line, mounting unemployment, glaring disparities, low investment potentiality, very low productivity etc. As such the problem of inter district disparities and imbalances in the Brahmaputra Valley is an issue that warrants further analysis, and to a study of regional disparities and development patterns and to estimate whether regional disparities have been increasing over time.
Work on regional disparities with a focus on sustainable development in relation to the study area has not been carried out as yet. Therefore in the present study an attempt is made to study disparities in development along with the sustainability question. For the study of sustainable development suitable indicators such as agriculture, climate change, rates of urbanization and forest have been used.

1.2 Justification of the present study:

We live in a lopsided world for socio-economic development, as manifest by the spatial arrangement of human activities is always uneven, both in time and space. (Misra, 1970). The gap, widening itself between the rich and the poor between the advantaged and the disadvantaged, between the developed regions and the less developed regions is one of the main issues of our times. Both developed and under developed countries are gripped with this problem of regional imbalances and inequalities. The gravity of the problem of tiny islands of relative affluence in a sea of poverty is so pronounced in developing countries as to give rise to social tension, simmering or violence of the types witnessed in West Bengal, Andhra Pradesh, Kerala, Tamil Nadu, Assam, Punjab, etc. If the current development trends are going to continue, we will be creating a situation in which the past will be lost and the future will be bleak. For no planning and development is possible in the midst of social tension and civil disturbances. (Misra, 1970)

The problem regional disparity has been increasingly realized by economists, geographers, sociologists and political scientists in both developed
and underdeveloped countries. Whereas most of the developed countries experience substantial proportions of regional imbalances and inequalities, this problem has threatened the political and economic stability in many of the underdeveloped countries. Lack of basic amenities owing to slower rate of growth encourages separatist tendencies as may be observed in North Eastern parts of India. Divisive forces have also been found at work in the other extreme of regional imbalances i.e. in such region which have witnessed the maximum economic growth. This may be due to false sense that their region would be better off while remaining separate from the rest of the nation. A case of Punjab crisis may be mentioned in this respect. It is rightly observed that “no single country would be regarded as having a well integrated economy as long as glaring disparities persisted between the levels of development and standard of living in different areas within it” (Irwin, 1968) That is why a strong desire to ensure balanced regional development is incorporated as an important objective of planning in most of the countries. Promotion of balanced regional development is in the interest of national unity.

The serious problems of inequality, unemployment, poverty, malnutrition, etc. and their aggravation during the plan period cannot be attributed to inadequate investment. Rather they are more the outcome of defective planning and implementation techniques which in absence of spatial dimension failed to secure inter regional, inter sectoral and functional integration and people’s participation. That the heavy investment on setting up of the big industries failed to make any
dent on poverty and unemployment, etc. may be attributed to the absence of area-specific planning in the state. There is a need of the development strategy specific to an area and its potentialities, needs and priorities for proper and efficient use of resources and potentials, accelerating economic growth, securing regional balance and finding solutions to the problems the economy of Brahmaputra Valley suffers from. It seems therefore justified to examine the various aspects of regional imbalances prevalent in the economy of Brahmaputra Valley in order to evolve an area specific and integrated development strategy for Brahmaputra Valley balanced regional development.

Assam is a large developing state with nearly two-thirds of the population depending directly on the climate sensitive sectors such as agriculture, forest, etc. the climate change under various scenarios is likely to have implications on food production, water supply, biodiversity and livelihoods. Thus, Assam has a significant stake in scientific advancement as well as an international understanding to promote mitigation and adaptation. Therefore in our sustainable development chapter we have choose the indicator climate change, agriculture, forest and urbanization. This requires improved scientific understanding, capacity building, networking and broad consultation processes.

The first stage of the study of sustainable development involved the development of the agriculture, urbanization, climate change and forest of Brahmaputra Valley. Districts that are for agriculture, urbanization, climate change and forest were identified. Those are Kamrup, data collected from Dampur
and Ramdia under Hajo block, in Barpeta district, Gomafulbari area under Mundia block, in Jorhat district Malow pather under Dhekar Gorha block, in Nagaon district under Hojai block.

Data was gathered on agriculture (percentage of landless labourers in the agricultural workforce, literacy rates, use of fertilizers, commercial farming or traditional farming, is there any effect of use of fertilizers,), infrastructure development, (soil quality, groundwater availability, irrigation system), climate (rainfall patterns,), agriculture(crops, productivity), and transportation (distance from village). These were combined into sustainable development indicators.

In order to study the impacts of climate variability and economic changes on lives at the village level, the strategies used by the villagers in coping with these changes. At each site, surveys and interviews were conducted with farmers and local people. These surveys and interviews will help to identify the policies that influence the ability of farmers to adapt to climate variability and change. The results of the surveys will be analysed and integrated with the results of the sustainable development of agriculture, climate change, urbanization and forest. The study will result in better knowledge regarding the sustainable development areas in the Brahmaputra Valley, an exploration of how some villages have coped with these issues.
1.3. Objectives.


ii) To assess whether spatial pattern of development have remained uniform over time and space or whether they have accentuated/reduced.

iii) To examine the concept of sustainable development in the context of the study area.

1.4. The study area:

1.4.1 Physiography:

Assam has three physiographic divisions, viz – the Brahmaputra Valley, the Karbi Anglong and North Cachar plateau and the Barak Valley. The total geographical area of the state is 78,523 sq. km. which form 2.4 percent of the country’s landmass, giving the state the area-wise rank of twelfth among the political division. The Brahmaputra Valley comprises the whole of northern Assam with about 700 km. long stretch of land and an average width of 80 km (Taher and Ahmed, 1998). The river Brahmaputra carved its valley from the eastern to the western end of the state. The northern part of the plain comprises of the Bhabar zone, the tari region, the build up zone and the Brahmaputra flood plain while in the southern part such flood plain and build up zones etc. are absent. The altitude of the north is more than that of the south. The geographical area of the Brahmaputra Valley 56,339 km. (71.64% of the total area of Assam) which accounts for 19,109,302 person as per 2001 census or about 85.25% of the state
Locational Setting of The Brahmaputra Valley in India

Fig. 1.1 Locational Setting of the Brahmaputra Valley in India.
Fig. 1.2 Districts of Brahmaputra Valley
The density of population is 314 persons per sq. km. The Meghalaya and Karbi Anglong plateau is preventing the width of the valley from expanding southward in its middle-portion, and so the plain is wide in the eastern and western ends but narrow in the middle.

In the Upper Assam region the Brahmaputra Valley is monotonous flat except only two small hillock near Joypur but in the lower Assam the valley interspersed by many hills, hillocks and tills here and there which according to scholars, are nothing but the off-shoots of the Meghalaya plateau in the south. Two such hillocks are found even in the middle of the river Brahmaputra near Guwahati. These two are Umananda and Urbashi.

The Brahmaputra Valley is situated between 24° 44’ N 27° 54’ to N latitudes and 89° 46’ 5’ E to 96° E longitudes. From North-East to the west the valley is about 700 km. long and from the North to the south it is on the average 80 km wide (Das, 1970). The valley has rich resources of forest, minerals and power, which if properly developed and exploited can raise the standard of living of the people of the state to a great extent.

From the administrative viewpoint the Brahmaputra Valley has been divided into 18 districts. Each district is divided into a nos. of sub division and blocks.

1.4.2 Climate of the Brahmaputra Valley:

With tropical Monsoon Rain Forest Climate, the Brahmaputra Valley is in temperate region and experiences heavy rainfall and high humidity. The winter
season lasts from late October to late February. The minimum temperature is 6 to 8 °C degree Celsius. Nights and early mornings are foggy, and rainfall is scanty. Summer starts in mid May, accompanied by high humidity and heavy rainfall. The maximum temperature is 35 to 38 degree Celsius, but the frequent rain reduces this. The peak hour of the monsoons is during the month of June. Thunderstorms known as Bordoicila\(^1\) are frequent during the afternoon and evening hours in the rainy season. Spring and autumn with moderate temperature and modest rainfall are the most comfortable seasons.

Table 1.1: District wise average annual rainfall of Assam:

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<tr>
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<tbody>
<tr>
<td></td>
<td>W</td>
<td>S</td>
<td>M</td>
</tr>
<tr>
<td>Goalpara</td>
<td>38.4</td>
<td>517.0</td>
<td>1870.8</td>
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<tr>
<td>Dhubri</td>
<td>34.6</td>
<td>519.7</td>
<td>2063.4</td>
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<tr>
<td>Kokrajhar</td>
<td>29.9</td>
<td>733.7</td>
<td>3889.5</td>
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<tr>
<td>Bongaigaon</td>
<td>36.3</td>
<td>559.6</td>
<td>2081.1</td>
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<tr>
<td>Barpeta</td>
<td>95.4</td>
<td>991.0</td>
<td>2050.2</td>
</tr>
<tr>
<td>Nalbari</td>
<td>93.2</td>
<td>486.3</td>
<td>1554.7</td>
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<tr>
<td>Kamrup</td>
<td>38.3</td>
<td>433.0</td>
<td>1386.6</td>
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<td>Darrang</td>
<td>56.4</td>
<td>531.8</td>
<td>2077.3</td>
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<tr>
<td>Sonitpur</td>
<td>90.4</td>
<td>481.7</td>
<td>1283.6</td>
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<tr>
<td>Lakhimpur</td>
<td>81.5</td>
<td>527.0</td>
<td>1911.6</td>
</tr>
<tr>
<td>Dhemajij</td>
<td>93.7</td>
<td>463.4</td>
<td>2760.6</td>
</tr>
<tr>
<td>Dibrugarh</td>
<td>10.7</td>
<td>22.8</td>
<td>1533.6</td>
</tr>
<tr>
<td>Tinsukia</td>
<td>80.0</td>
<td>273.0</td>
<td>628.0</td>
</tr>
<tr>
<td>Jorhat</td>
<td>105.3</td>
<td>462.5</td>
<td>1778.2</td>
</tr>
<tr>
<td>Golaghat</td>
<td>96.0</td>
<td>471.8</td>
<td>1220.5</td>
</tr>
<tr>
<td>Sibsagar</td>
<td>102.1</td>
<td>306.6</td>
<td>1388.1</td>
</tr>
<tr>
<td>Nagaon</td>
<td>53.3</td>
<td>409.1</td>
<td>1120.6</td>
</tr>
<tr>
<td>Morigaon</td>
<td>129.4</td>
<td>247.8</td>
<td>1106.8</td>
</tr>
<tr>
<td>Cachar</td>
<td>435.3</td>
<td>750.2</td>
<td>2056.0</td>
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<tr>
<td>Karimganj</td>
<td>69.6</td>
<td>1066.0</td>
<td>2807.7</td>
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<tr>
<td>Hailakandi</td>
<td>56.1</td>
<td>697.7</td>
<td>2017.5</td>
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<tr>
<td>K. Anglong</td>
<td>41.2</td>
<td>219.0</td>
<td>618.7</td>
</tr>
<tr>
<td>N.C.Hills</td>
<td>298.9</td>
<td>2637.0</td>
<td>3589.6</td>
</tr>
<tr>
<td>Assam</td>
<td>91.2</td>
<td>617.3</td>
<td>1843.0</td>
</tr>
</tbody>
</table>

W: Winter, S: Summer, M: Monsoon, PM: Post Monsoon

Source: Directorate of Agriculture, Assam

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1 Bordoicila is the locally used term for periodic thunderstorms associated with heavy showers, which occur during mid-April i.e. at the time of ‘Bahag Bihu’ in the Brahmaputra Valley.
1.4.3 Drainage:

The whole of the plains region of Assam is traversed by two principal rivers system. Viz. – the Brahmaputra and its innumerable tributaries in the Brahmaputra Valley and the Barak river and its tributaries in the Barak Valley. The Brahmaputra is fed by many fast-flowing streams and rivers on both of its sides. The most important north bank tributaries are Subansiri, Pagladia, Jai Bharali, Jai, Dhansiri, Ranganadi, Manas, and Sankosh. (Sarmah, 1993)

The most important of the south bank tributaries are Buri-Dihing, Dhansiri, Kapili, Dudnai, Krishnai, Jinary among the other tributaries of the Brahmaputra south bank, Dikhou, Digaru and Jinjiram are important. An important feature of the Brahmaputra river system is that though all the rivers and fast flowing, the north bank tributaries are comparatively more turbulent rivers and frequently erode the banks and change their courses in the north bank. The Brahmaputra is also known for its wide bed and has created the world’s largest river island called Majuli with as much as 925 sq. km. area. Because of the slope of the valley and wide catchments areas with heavy rainfall, the flood during summer seasons is frequent and almost regular. In many years there have occurred a series of waves of flood, taking heavy toll of cattle and human lives and properties worth cores of rupees.

1.4.4 Forest.

Forest resources are one of the most valuable natural wealth of Assam. Today 37.33 percent of the area of the state is covered by forest and more than 6
percent of the forest resources of India are produced in Assam alone. The valuable
trees like sal, teak, Gamari, Sisso, Khair and many other kinds grow abundantly
in the western part of Assam. In the eastern hilly region and Cachar plains, there
are many verities of trees like bonsum, segun, ogoru, titachapa, simlu, etc. There
resources supply rare timber materials for housing and furniture. Many of such
trees supply materials for cosmetic and scented products. Boats are made of
timber from cham trees and match sticks from simlu tree. The existence of
abundant quantities of bamboo and cane is favourable to paper products and many
types of small scale handicraft industries. The river bank are rich with grasses like
reed and thatches. Many medicinal plants grow in the state’s forest. Another
important product is the raw ceiling wax which is produced by a type of worms in
a particular variety of trees which grow abundantly in Assam’s forest. But since
there are no manufacturing facilities for refining them these raw materials go
outside Assam for processing.

Assam is also very rich in fauna. The forests contain one horned rhinos, the
rarest of the kind in the world and elephants, tiger, deer, pythons and many verities
of rare birds. The ivory and the horn of rhino and the oily substance of some rare
birds and snakes available in Assam’s forest are of great medicinal value and have
conspicuous demand in the world market.
1.4.5. Soil:

Assam’s soil has been classified into the following three major types:

i) Alluvial Soil.

ii) Red Loamy or Hilly Red Soil.

iii) Laterite Soil.

The alluvial Soil both old and new are extensively distributed over the Brahmaputra plain and Barak plain and the alluvial soil are very fertile soil. The colour of alluvial soil is generally gray to molted gray. The alluvial soil is found in entire Lakhimpur, Darrang, Kamrup, Goalpara, Some parts of Garo hills Sibsagar, Nalbari, Barpeta, Sonitpur and Dehmaji districts in higher areas and in the foot hill zones old alluvium are found. Newer alluvial are to be seen in the river banks. Alluvial soils of the valley are of two types. a) old alluvial and b) newer alluvial. Generally the old alluvium region are used for the plantation cultivation especially for tea and the newer alluvium are used for the production of different cereals like rice, wheat etc.

The entire Mizo hills, parts of Cachar, Garo, Khasi-Jaintia hills and Sibsagar, Jorhat, Golaghat, Nagaon, Morigaon, Some parts of Kamrup, hills of Karbi Anglong and North Cachar district are capped by red loam soil.

The lateritic soils are extensively occurring in North Cachar Hills districts and in some parts of the southern Karbi plateau. These soils are dark and finely textured with heavy loams.
Fig. 1.3 Type of Soil

- Assam
- Nagaland
- Manipur
- Mizoram
- Meghalaya
- Bangladesh
- Tripura
- Bhutan

Index
- Laterite Soil
- Old Alluvial Soil
- Bhabar Soil
- Red Loamy Soil
- Red Sandy Soil
- Tarai Soil
- Young Alluvial Soil
1.5 Research Questions:

The present study puts forward the following hypotheses:

i) That inter-district imbalances has increased over time and that development planning has failed to effectively tackle the problem of disparities in development.

ii) Relatively developed districts are not necessarily ones that exhibit sustainable patterns of development and of resource utilization and districts that have experienced higher economic growth rates are inversely related with the concepts and measures of sustainable development.

1.6 Chapterization:

Pattern of Chapter Distribution:

Chapter I is the introductory chapter, which gives a brief account of the study highlighting the major aspects of the study. This chapter deals with statement of the problem, significance of the study, objectives, area of study, research questions.

Chapter II deals with the review of pertinent literature.

Chapter III deals the sources of statistical data, method of defining backward or advanced districts, method of measuring spatial disparities, choice of indicators i.e. agricultural activities, industrial activities, tertiary activities, and socio-cultural activities.
Chapter IV deals with the regional economy (1971-2001) where we have discuss about Agriculture, population and human resources, state income, industrial pattern and progresses, economic infrastructure, and lastly the characteristics of Assam as back ward economy.

In Chapter V, attempts have been made to investigate and highlight the levels of development a district level analysis, where we have included introduction, levels of agricultural development, level of infrastructural development, levels of industrial development and lately finding have been analyzed here where attempts have been made to investigate and highlight the underlying factors of overall development of the districts. The causes of inter-district disparities and the pattern of their change have also been examined by analyzing the measures that had been adopted by the Government during the period to reduce the disparities.

In Chapter VI, attempts have been made to examine about the development and the sustainable question in the Brahmaputra Valley of Assam. Where we have examined the sustainable development of Agriculture, Urbanization, Climate Change and Forest.

The study is concluded in the chapter VII, Indicating the limitations o the present study. It also includes a summary and the main conclusions o the study.

Besides these, appendices and bibliography are also included in the end.
References:


Anon. 2001, Census of India, Government of India.


