

Chapter One

INTRODUCTION

1.1 Statement of the Problem

Globalization has brought all countries together and led to rapid economic change around the world. Simultaneously, it has increased the risk¹ that affects “sustainable human development”² momentum. So, it necessitates world action for the “World We Want”³ that ensures “a life of dignity for all”⁴ encouraging to move “from Vulnerability to Resilience (V2R).”⁵

Economic growth or development both as an instrument (or prime-mover) and outcome is not the prime objective of policy-makers and policy-implementers of a nation. The real objective of development is not the expansion of goods and services that are “merely useful and for the sake of something else”⁶, technological progress and social modernization; but to enhance human freedom (Drèze & Sen, 2010:3) or increase people’s development choices (UNDP, 1991:13) that enable a person to mix with others without being “ashamed to appear in public” (Smith, 1776: 352). The objective of development, Amartya Sen argues, is to expand capabilities (opportunity freedoms) and to support people’s agency (process

¹ Risk is characterized by a known or unknown probability distribution of events. All individuals, households, communities or nations face multiple risks from different sources, whether they are natural (e.g., earthquakes, illness) or man-made (e.g., unemployment, environmental degradation, war) (Heitzmann, Canagarajah & Siegel, 2002:4). When a risk materializes, it becomes a shock. A shock refers to a risk that causes a “significant” negative welfare effect (e.g., major income loss, or major illness related costs)(Heitzmann, Canagarajah & Siegel, 2002:1).

² Based on the works of S. Anand and A. K. Sen, UNDP Human Development Report 2011 defines “sustainable human development” as “the expansion of the substantive freedoms of people today while making reasonable efforts to avoid seriously compromising those of future generations.” (UNDP, 2011:18). For details see Anand & Sen (1994); Anand and Sen (2000); Sen (2010c).

³ See details in “A Million Voices: The World We Want, A Sustainable Future with Dignity for All”, United Nations Development Group 2013, Report produced by the UNDG Millennium Development Goals Task Force.

⁴ This term is especially used in “A life of dignity for all: Accelerating progress towards the Millennium Development Goals and advancing the United Nations development agenda beyond 2015”, Report of the Secretary-General, A/68/202, United Nations, General Assembly, Sixty-Eighth Session, 26 July 2013

⁵ See particularly Ibrahim and Ward (2012).

⁶ Aristotle (1980:7) observes that “The life of money-making is one undertaken under compulsion, and wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else.”

freedom). Sen defines agency as “what the person is free to do and achieve in pursuit of whatever goals or values he or she regards as important” (Sen, 1985:203) and opportunity freedoms or capabilities as “the various combinations of functionings (beings and doings) that the person can achieve” (Sen, 1992: 40). Thus, freedoms are considered as means and ends of development (Drèze & Sen, 2010:3). That is, development is people-centered, because “People are the real wealth of a nation” (UNDP, 2010:1). Contrary to “human resource development” that identifies human beings merely as a means or inputs to a greater output of commodities and treats people as “human capital”; “human development” considers well-being of people as an ends of development (UNDP, 1996: 54). Sen (2008:209) rightly puts that “a misconceived theory can kill”. Thus, there is a paradigm shift from “economic development” to “human development” where latter is more holistic and distinct from growth-oriented development. There exists a two-way interrelationship and interdependence between Economic Growth (EG) and Human Development (HD) at both the conceptual and empirical levels. On one hand, EG provides the resources towards sustained improvements in HD, that is, the resources from national income are allocated to activities that contribute to HD. In other words, economic growth will enhance human development, as it increases choices and capabilities enjoyed by households and governments through increased incomes. On the other hand, human development has a positive effect on growth as it improves economic performance or increases income through greater freedom and capabilities. It is because only healthy, well-nourished and educated people can contribute to economic growth (Ramirez, Ranis & Stewart, 1997: 1-2; Ranis, 2004:1; Ranis, Stewart, & Ramirez, 2000).

Evidence reveals that growth is generally associated with the incidence of poverty (IPC, 2007:26). The growth must be pro-poor. The challenge for the public policy is to assure that the poor can participate fully in the opportunities unleashed, and thus contribute to that growth (Ravallion, n.d.:23).⁷ Since the 1980s, some

⁷ On this see Baulch and McCulloch (2000), Kakwani and Pernia (2000), and Ravallion and Chen (2003). The growth is said to be pro-poor if income (or consumption) of poor households increases

economists of the world favour economic reforms that lead to transition from *Plan* to *Market* and global integration. They believe that reforms would promote growth and thus improve the living standards of the poor.

There is a great poverty debate on *Growth* and *Poverty* between two groups. Amartya Sen and his collaborator Jean Drèze emphasize on the state-led redistribution. They argue that India should invest more in its social sector (such as, health, education etc) to improve human capabilities. It will remove inequality and thus lead to the growth. Jagdish Bhagwati and Arvind Panagariya duo argues that only growth can yield sufficient resources for investment in social sector. Initially, growth may raise inequality but sustained growth will ultimately provide adequate resources for the state for redistribution and lessen the effects of the initial inequality. Bhagwati argues that pro-growth reforms (i.e., globalization, privatization, and market reforms) must be treated as “complementary and indeed friendly to both the reduction of poverty and social agendas”. Growth must be treated as anti-poverty strategy or the principal means for poverty reduction, not an end in itself. Growth is an active, “pull-up” strategy for poverty reduction (i.e. the strategy where growth pulls up the poor from poverty creating productive employment) rather than a passive, “trickle-down” strategy. Bhagwati says that high growth pulls the poor into gainful employment and also leads to greater revenues. This conventional growth-enhancing reforms that are advocated by Bhagwati and Panagariya are called stage I reforms. The other form of reforms as propounded by Sen and Drèze is termed as stage II reforms⁸. Bhagwati says growth matters rather than social expenditure. Because, higher growth generates higher tax revenues and social expenditure cannot be continued without revenues. In contrast, Amartya Sen lays emphasis on social expenditure rather than growth (Bhagwati, 2011: xxii-198). To Jagdish Bhagwati, poverty and reforms are friends, not foes. However, we are to

proportionally more than that of the non-poor. In case of recession, growth is called pro-poor, if the income (or consumption) of poor households decrease less proportionally than that of the non-poor (IPC, 2007:3).

⁸ These two tracts or strategies are too some extents interdependent. Growth increases the volume of revenue to be spent on redistributive programmes (such as education, health etc) aimed at poor. It will create a skilled and healthier workforce that will help growth (Bhagwati & Panagariya, 2014:120).

go with both the economic reformers and anti-poverty campaigners for better future of India. It is noteworthy that Bhagawati and Panagariya argued for targeted (instead of universal) and unconditional cash (instead of kind) transfers for removal of poverty.

Since the 1990s, there is an increase in bipolarization and multidimensional polarization (dimensions such as caste, sectors, rural-urban, region, state etc.) in the growth process of India (Motiram & Sarma, 2011:1).⁹ The trickle-down process of growth¹⁰ becomes weak in India. It is because, growth is not located in sectors where labour is concentrated (for example, agriculture) and in states where poverty is concentrated. In the short run, the stability of growth in India depends on the efficacy of macroeconomic management (to maintain macroeconomic balances) and in the long run on both the maintenance of macroeconomic balances and location of effective demand (Radhakrishna & Chandrasekhar, 2008:18).

At the time of independence, the socio-economic condition of India was predominantly characterized by a rural economy with feudal structure (Bandyopadhyay, 2007:5). After independence and since the adoption of five years plan, economic policies in India have been formulated with the twin objectives of growth and justice¹¹. “Justice” may be either “economic” or “social”. Economic injustice denotes inequalities in distribution of income or wealth, while social injustice is linked with inequalities arising from social and cultural institutions (caste, class, religion, gender, etc.) (Bandyopadhyay, 2007: 106). So, the economic policies of Indian plan aims at inclusive growth with equity and equality.¹² We must focus on both intra-generational and intergenerational equity as the impact of inequity can persist generations by generations. In principle, inequitable development can never be sustainable human development (UNDP, 2011:18).

⁹Refers to Chakravarty (2009), Chakravarty and Majumdar (2001),and Esteban and Ray (1994).

¹⁰ Where some of the increased wealth trickles down from the rich to the poor.

¹¹ “Economic growth with social justice” or “growth with equity” is used alternatively in public policies of India.

¹² Equity equals quality. It refers to the qualities of fairness and impartiality. Equality equals quantity. It implies equal sharing and sameness.

In India, exclusion exists based on gender, caste, religion, region and ethnicity under different social, economic, and political systems. It entails socially inclusive policies. In context of unfair exclusion or unfair inclusion, it is found that both market and non-market-related discrimination leads to the denial of access to employment, education, health services, food and housing; unequal access to cultural, political and religious rights; and unequal participation in governance and policy making process. It results in high poverty and deprivation and low human development of excluded people. Social scientists and policy makers now-a-days recognize the linkages between social exclusion¹³ and poverty (or deprivation) (Sen 2000; Thorat & Sabharwa 2010).¹⁴ Amartya Sen associates idea of social exclusion to capability perspective of poverty: “First, we have good reason to value not being excluded from social relations, and in this sense, social exclusion may be directly a part of capability poverty. Second, being excluded from social relations can lead to other deprivations as well, thereby further limiting our living opportunities” (Sen, 2000:4). “While exclusion is one route to capability failure and poverty, what may be called ‘un-favourable inclusion’ can also be a considerable danger” (Sen, 2000: 28).

India as a democratic, multi-religious and multi-cultural country with mixed economy focuses on five years plans for all-round development of land and people of the nation. India is on growth turnpike¹⁵. Nature, promise and reach of economic planning with “reform-led growth” depend on, in principle, will and accountability

¹³ It refers to also unfavourable exclusion or unfavourable inclusion, or inclusion/access with differential treatment.

¹⁴ Social exclusion refers to “the process through which individuals or groups are wholly or partially excluded from full participation in the society within which they live” (Haan & Maxwel, 1998). Three basic characteristics of social exclusion are: a) denial of equal opportunity in multiple spheres. b) embedded in the social inter-relations i.e. the channel and processes through which individuals (or groups) are wholly or partially excluded from full participation in the society where they live. c) denial to equal opportunities or access that leads to deficiency of freedom, human poverty and general deprivation (Sen, 2000; Haan, 1999). Distinguishing between active and passive exclusion, Sen said “active exclusion” is the deliberate exclusion of people from opportunities through government policies or other means. In contrast, “passive exclusion” is when, however, the deprivation comes about through social processes in which there is no deliberate attempt to exclude, but nevertheless, may result in exclusion of people from a set of circumstances (Sen, 2000:15-16).

¹⁵ Refers to two definitive articles: Arvind Panagariya (2010). *India on the growth turnpike: No state left behind* (Working Paper No. 2010-1). Columbia: Columbia Program on Indian Economic Policies, Columbia University; Vijay Kelkar (2004, April). *India: On the growth turn pike* (Dr. K. R. Narayanan Oration). Australia: Australian National University.

of the political leaders, “people-public-private” relations, “democratic ideals, institutions and practice”¹⁶. Greater voice and participation of underprivileged groups in society and politics of India, is still a challenge like the problems of addressing demographic challenges and confronting environmental risks.

The problem of voiceless-ness of the disadvantaged sections can be overcome by self-assertion (of underprivileged people through social and political organization) and solidarity (with the underprivileged groups on the part of other groups who have similar interests and promises and “are often better placed to advance the cause of the disadvantaged by virtue of their own privileges”, such as, political connection, economic resources, access to media, education etc.) (Drèze & Sen, 2010:29).

To sum up, we are to adopt as Mahbub ul Haq noted, four principles: Equity (that is based on justice), Efficiency (i.e., the optimal use of existing resources), Participation (i.e., freedom and the processes in which people act as agents - individually and as groups) and Sustainability (i.e., durability of development over time) for overall human development (Deneulin & Shahani, 2009:29) in India as a whole and in Assam in particular.

South Asia and Other Regions of the World

In the UNDP Human Development Report 2014, all regions of the world are divided into six groups: Arab States, East Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, South Asia and Sub-Saharan Africa. Here, South-Asia constitutes nine countries: Afghanistan, Bangladesh, Bhutan, India, Islamic Republic of Iran, Maldives, Nepal, Pakistan and Sri Lanka (UNDP, 2014:224). Out of the 7,162.1 trillion of world total population, South-Asia comprises 1,749.0 million populations in 2013 (UNDP, 2014:219). If we analyze and compare the Human Development Index values and its components among these six groups of

¹⁶ Democratic ideals imply different aspects of idea on government “of the people, by the people and for the people”. Democratic institutions represent constitutional rights, parliaments, assemblies, panchayats, courts etc. “While democratic institutions provide opportunities for achieving democratic ideals, how these opportunities are realized is a matter of democratic practice.”(Drèze & Sen, 2010:347).

the nations, it will be clear that countries of South Asia region are lagging behind as compared to other nations of the world, except the countries of Sub-Saharan Africa.

As per UNDP Human Development report 2014, Human Development Index (HDI) value of the South Asia (0.588) was estimated at lower as compared to Arab States (0.682), East Asia and the Pacific (0.703), Europe and Central Asia (0.738), Latin America and the Caribbean (0.740) except Sub-Saharan Africa (0.502). Life expectancy at birth (years) of South Asia recorded at 67.2 years which was lower than the figure of all over world (70.8 years) and the Arab States (70.2), East Asia and the Pacific (74.0), Europe and Central Asia (71.3), Latin America and the Caribbean (74.9); and just higher than the Sub-Saharan Africa (56.8). Gross national income per capita (2011 PPP \$) of other regions [Arab States (15,817), East Asia and the Pacific (10,499), Europe and Central Asia(12,415), Latin America and the Caribbean (13,767)] except Sub-Saharan Africa (3,152) were two to three times higher than the South Asia (5,195). Similarly, mean years of schooling (years) and expected years of schooling (years) of South Asia came out at 4.7 years and 11.2 years respectively. These two figures were lower than the figure of the world (7.7 years and 12.2 years) and the corresponding figures of other regions of the world except Sub-Saharan Africa (UNDP, 2014:163 -171).

Adult mortality rate of female and male (2011) of South Asia was accounted for 153 and 228 per 1000 people respectively. Literacy rate (2005-12) among the adult (16 and above) and youth (16-24 age) was recorded at 62.9 per cent and 80.6 per cent respectively. Adult mortality rate and literacy rates of South-Asia were lower related these of other nations except the Sub-Saharan Africa. Interestingly, education expenditure (per cent of GDP) incurred in South-Asia constituted 3.4 per cent in 2005-12 which was almost equivalent to the corresponding figures of Arab States (3.4) and Europe and Central Asia (3.4)UNDP, 2014).

It is evident from the above statistical descriptive analysis that the South Asian countries as compared to other regions of the world are lagging behind in respect of human development in general and its components (or indicators), such as, education (e.g, literacy rate, education expenditure, mean years of schooling and

expected years of schooling), health (e.g., adult mortality rate and life expectancy at birth) and standard of living condition (i.e., gross national income per capita) except the Sub-Saharan African countries.

India and Other Countries of South-Asia

All over the world, in general, by the term “south Asia” we mean eight countries, such as, Sri Lanka, Maldives, India, Bhutan, Bangladesh, Nepal, Pakistan and Afghanistan. If we compare the socio-economic status and human development indicators of India to those of remaining seven nations of South Asia, picture becomes gloomy.

In 2013, population density of Bangladesh (1,203) and Maldives (1,150) was higher as compared to India (421), Pakistan (236) and Nepal (194); and lower in Afghanistan (47) and Bhutan (20) according to the World Bank (2013).

Let us first discuss the HDI and MPI values and their components of eight countries of South Asia. As per UNDP Human Development report 2014, India stood at 135th position (with HDI value 0.586) in all over world ranking of HDI. But, Sri Lanka (Rank 73 with HDI value 0.750), and Maldives (103 with HDI value 0.698) were leading ahead of India (135); whereas, the neighboring six nations, namely, Bhutan (136 with HDI value 0.584), Bangladesh (142 with HDI value 0.558), Nepal (145 with HDI value 0.540), Pakistan (146 with HDI value 0.537) and Afghanistan (169 with HDI value 0.468) were lagging behind the rank of India. Life expectancy at birth (years) of India came out at 66.4 years which was lower than those of Sri Lanka (74.3), Maldives (77.9), Bhutan (68.3), Bangladesh (70.7), Nepal (68.4) and Pakistan (66.6). Only, life expectancy at birth in Afghanistan (60.9) was lower than that of India. Mean years of schooling (years) of India (4.4 years) was estimated to be higher than three nations, namely, Bhutan (2.3), Nepal (3.2) and Afghanistan (3.2); and lower than the four nations, namely, Sri Lanka (10.8), Maldives (5.8), Bangladesh (5.1) and Pakistan (4.7). Gross national income per capita (2011 PPP \$) of Sri Lanka (9,250) and Maldives (10,074) was almost two times higher than that of India (5150). In contrast, the corresponding figures of

Bangladesh (2713), Nepal (2194) and Afghanistan (1904) were almost two times lower than that of India. Inside the South-Asia, the MPI value was highest in Afghanistan (0.353) with highest head-count 66.2 per cent followed by India (0.283) with head-count ratio 53.7 per cent. MPI value was lowest in Maldives (0.018) with lowest Head-count 05.2 per cent. Similarly, intensity of deprivation was highest in Pakistan (52.0 per cent) followed by India (51.1 per cent) (UNDP, 2014).

Quintile ratio, Palma ratio and Gini-coefficient that indicate income inequality of a nation were 5.0, 1.4 and 33.9 respectively in case of India during 2003-12. Compared to India, income inequality was higher in Sri Lanka (with Quintile ratio 5.8, Palma ratio 1.6 and Gini-coefficient 36.4), Maldives (where Quintile ratio was 6.8, and Gini-coefficient was 37.4) and Bhutan. In other nations, such as, Bangladesh (with Quintile ratio 4.7, Palma ratio 1.3 and Gini-coefficient 32.1), Nepal (with Quintile ratio 5.0, Palma ratio 1.3 and Gini-coefficient 32.8), Pakistan (with Quintile ratio 4.2, Palma ratio 1.2 and Gini-coefficient 30.0), and Afghanistan (where Quintile ratio was 4.0, Palma ratio was 1.0 and Gini-coefficient was 27.8), income inequality was lower as compared with India (UNDP, 2014:169-170).

It is apparent from the descriptive analysis of statistical data of South Asian countries that human development in India is higher compared to Bhutan, Bangladesh, Nepal, Pakistan and Afghanistan, but lower than Sri Lanka and Maldives. However, multi-dimensional poverty is higher in India among all the South Asian nations except Afghanistan. It is matter of concern that life expectancy at birth in India is lower among all the South Asian nations except Afghanistan. Similarly, income inequality in India is in the middle position among all the South Asian nations. Over all, it is found that India is still lagging behind the three state nations, namely, Sri Lanka, Maldives and Bhutan.

North East India in Context of Assam

The saying “southeast Asia begins where Northeast India ends” indicates the socio-cultural, genealogical, geographical and psychological bond/linkage of ethnic tribes

of “North East India” with “South East Asia”. The North east region of India consisting of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura occupies 7.98 per cent of India’s geographical area with 3.76 per cent of India’s total population. The Northeast India constitutes 34 per cent of the country’s water resources and 40per cent of India’s hydro power potential covering nearly 90 per cent India’s international boundaries (Government of India, 2011).

Density of population plays an important role while we make comparisons of socio-economic characteristics and growth parameters among the states of NE India. For example, per capita net state domestic product of Arunachal Pradesh was higher than that of Assam due to low population in the former. Such estimate doesn’t mean that standard of living in Arunachal Pradesh is higher than Assam.

Comparison of data¹⁷, especially among the North eastern states of India, in many cases, is very difficult due to the variation in certain variables, such as, geographical areas, population density, traditional ethnic customs and communication. Similarly, different states use different methodology in estimation. Simultaneously, there are variations of prices among the states.

As per census 2011, population density in Assam stood at 398 persons per sq. km. It is close to that of Tripura (350) and about three times higher than the density of Manipur (115), Meghalaya (132) and Nagaland (119). Density of population in Arunachal Pradesh (17) and Mizoram (52) was lower in Northeast India. It is noteworthy that Dibang valley district of Arunachal Pradesh has the lowest population (7,948) in the country. Some states of NE India (such as, Arunachal Pradesh, Mizoram, and Nagaland) are basically hilly areas with poor

¹⁷ There is discrepancy between the National Sample Survey (NSS) estimates (compiled by National Sample Survey Organization) of aggregate household consumer expenditure (HCE) by sectors (urban and rural) and by regions (states) and the National Accounts Statistics (NAS) estimates (compiled by Central Statistical Organisation) of private final consumption expenditure (PFCE) (Sundaram & Tendulkar, 2003a:376; Planning Commission, 2014:38). The former estimates are available separately for different states in rural and urban areas that can be aggregated to a national estimate, while the latter is available as a national estimate in macro level (Government of India, 2008:4).

transport and communication. There is low development also. For these reasons these states have low density of population (Government of India, 2011).

States of North East India are poor not in terms of traditional income or consumption, but also deprived in terms of indicators related to education, health and standard of living. Multi-dimensional Poverty Index (MPI) value of Assam was 0.316 with 60.1 per cent incidence (H), 52.6 per cent intensity (A) and 0.21 inequalities among the MPI poor. These figures are higher than the all India MPI value (0.283), incidence (H) (53.7 per cent), and intensity (A) (52.7 per cent). The MPI value of Assam was higher than all states of NE India, such as, Arunachal Pradesh (0.274), Manipur (0.191), Meghalaya (0.307), Mizoram (0.094), Nagaland (0.264), Sikkim (0.150), and Tripura (0.269) (OUPH, 2014:5). As per India Human Development report 2011, in 2007-08, HDI value of Assam that stood at 0.444 (with all India rank 16) was lower than that of Northeast region (0.573 with rank 6) and all India HDI value (0.467) (IHDR, 2011:24). In 2013, Infant mortality rate¹⁸ of Assam came out at 54 and it was higher than the all India rate (40), Arunachal Pradesh (32), Manipur (10), Meghalaya (47), Mizoram (35), Nagaland (18), Sikkim (22), and Tripura (26) (Planning Commission, 2013: 6). Sex ratio of Assam that recorded at 958 were just higher than the figures of three states [viz., Arunachal Pradesh (938) and Nagaland (931)] and all India level (940), higher as compared to Sikkim (890), and lower than the figures of four states, viz., Tripura (960), Manipur (992), Meghalaya (989) and Mizoram (976).

Education is a means to build one's capability, overcome constraints and enlarge choices for a sustained standard of living. Literacy rate in Arunachal Pradesh (65.38 per cent) was lower among the states of Northeast India. Literacy rate of Assam that accounted for 72.19 per cent was lower as compared to other six

¹⁸ Infant mortality rate is calculated as number of infant deaths during the year (D) between birth and one year, divided by the number of live births during the year (B), all multiplied by 1000. $IMR = (D/B) * 1000$. Infant mortality rate comprises of two parts viz. Neo-natal mortality rate and Post neo-natal mortality rate. The neo-natal mortality rate also comprises of two parts viz. early neo-natal mortality rate and late neo-natal mortality rate (Government of India, 2013: xvi). Here, infant mortality rates for smaller States and Union Territories are based on three-year period 2011-13.

states [i.e. Manipur (79.21), Meghalaya (74.43), Mizoram (91.33), Nagaland (79.55), Sikkim (81.42), and Tripura (87.22)] and all India level (74.04). Serchhip district in Mizoram recorded at highest literacy rate of 98.76 per cent among all India districts. Aizwal (Mizoram) was with highest literacy rate of 98.80 per cent among the Indian cities (Government of India, 2011). In 2011-12, Gross Enrollment Ratio (GER) of (6-13) years in Assam accounted for 75.7 that was lower as compared to all India level (97.4) and most of the states of India, such as, Bihar (87.8), Gujarat (98.1), Haryana (85.8), Himachal Pradesh (102.1), Karnataka (98.2), Kerala (90.9), Madhya Pradesh (113.7), Tamil Nadu (111.7), West Bengal (104.4) and so on (Economic Survey 2014-15:A129-A139).

The prime commodities that were imported by the states of Northeast India are cement, betel-nut, broken or crushed stones, dry fish, extra natural alcohol, miscellaneous food items, flavored drinks, food items, plastic furniture and plywood/ block board. In 2013-14, grand total of imported commodities by Northeast India estimated at Rs. 290.85 crores. Among these importables, highest imported commodity was cement (Rs 82.57 crore) followed by betel-nut (Rs 51.96 crore), broken or crushed stones (39.59), dry fish (18.69), extra natural alcohol (14.50), misc. food items (13.41), flavoured drinks (8.85), food items (4.76), plastic furniture (4.32), plywood/ block board (3.61) and others (48.61). The state that imported almost half of total imports was Tripura (Rs 183.41 crore) followed by Manipur (Rs 52.05 crore), Assam (40.11), Meghalaya (14.94) and Mizoram (0.3). On the other hand, the major exportables of Northeastern states constituted Coal, Tea, Limestone, Boulder stone, High speed diesel oil, Insulated-gate- bipolar-transistor, motor spirit, rice, wheat flour and stone boulder. The highest exported state of Northeast India was Meghalaya that exported Rs 1,381.16 crores in 2013-14 followed by Assam (Rs 927.99 crore) and Manipur (Rs 17.81 crore). The lion's share of the total export of Northeastern states (Rs 2,326.96 crore) was occupied by Meghalaya (59 per cent), whereas that of Assam was very low (39.88 per cent only) (FICCI, 2014:19; Office of the Commissioner of Customs, Shillong).

In spite of ample natural and human resources, Northeastern regions of India are lagging behind due to “Natural Resource Curse.”¹⁹ It is because of low infrastructure, slow growth of industries, lack of access to competitive markets, entrepreneurship under development etc. Whereas, Singapore and Japan with low level of natural resources make high level of economic growth.

If we observe the Average annual growth rate of Agriculture, Industry, Manufacturing and Services of Northeast India, it is evident that, the status of Assam is very poor as compared to other seven states of India. Average annual growth rate of Industry and Manufacturing over the period 2005-06 to 2011-12 in Assam (2.5 per cent and 1.8 per cent respectively) was lower among all states of Northeast India and average annual growth rate in agriculture of Assam (3.4 per cent) is lower than the figures of Arunachal Pradesh (8.3 per cent), Manipur (7.6 per cent), Mizoram (10.4 per cent), Sikkim (4.2 per cent) and Tripura (4.8 per cent). Average annual growth rate in services of Assam (8.9 per cent) was lower than the growth rates of Arunachal Pradesh (10.5 per cent), Mizoram (9.6 per cent) and Sikkim (9.4 per cent) (FICCI, 2014:7; Central Statistical Organisation).

According to Rangarajan Methodology for the poverty line based on Modified Mixed Reference Period (MMRP), percentage of population below poverty line during 2011-12 in Assam estimated at 40.9 which is high as compared to other states of Northeast India [such as, Arunachal Pradesh (37.4), Manipur, Meghalaya (24.4), Mizoram (27.4), Nagaland (14.0), Sikkim (17.8), and Tripura (24.9)] and all India level (29.5). Exception is only Manipur where incidence of poverty (46.7) was higher as compared to Assam (Planning Commission, 2014: 66).

Among the states of NER, the maximum average deprivation in the basic facilities, namely, drinking water, toilet facility and electricity was located in Meghalaya (0.60 per cent households) followed by Assam (0.54 per cent households). The average value of the facility deprivation index was least (0.35) in

¹⁹ The “Natural Resource Curse” (also known as the Paradox of Plenty) refers to the paradox where a countries or regions with an abundance of natural resources, specifically non-renewable resources, tend to have less economic growth and worse development outcomes than countries or regions with less natural resources.

Sikkim, which implied that the state had minimum deprivation in basic facilities (Bhattacharjee & Wang, 2011: 35-54).

Though Assam is with highest number of political participation in Indian parliament and has incurred huge amount of public expenditure of India's five year plan since 1951, Assam is still lagging behind as compared to all other states of Northeast region in certain indicators. These socio-economic and demographic indicators are percentage of rural and urban population, literacy rate (except Arunachal Pradesh); average annual growth rate of agriculture, industry and manufacturing; rural poverty (as per Rangarajan Methodology) and human development.

Assam

Assam, the gateway of Northeast India, is distinct from the mainland Indian sub-continent for its diverse cultures, customs, cuisines, languages and dialects of different ethnic tribes, multiple ethnic identities and competing ethnic aspirations. Geographical area of Assam is 78,438 sq. km which is about 2.39 per cent of all India total area (3,287,240 sq. km). Total population of Assam (31,205,576) constitutes 2.58 per cent of total population of India (1,210,193,422). Of the total population of Assam, around 85.90 percent live in rural areas (against the all India level 68.8 per cent) and 14.10 per cent in urban areas (against national average of 31.2 per cent) (Government of India, 2011a).

Contemporary Assam is facing three types of problems: i) From within: intra-ethnic identity crises and ethno-nationalistic aspirations, political sovereignty demands by various ethnic groups, its historicity and geographical peculiarity (floods); ii) From outside: illegal immigration of Bangladeshi; iii) From mainstream: massive use of natural resources, non- recognition of full regional autonomy (specially on land and water) and policies for political gain. These factors causes social and political unrest, breaks "unity in diversity", develops psychological alienation with the mainland, retarded economic development and foreign investment. Uprising of peasant movement is found throughout in Assam.

Low per capita income signifies the economic backwardness of a state. The most striking fact that per capita income (at constant 1980-81 prices) in Assam (Rs 1173.00) was 4 per cent above national average (Rs. 1127.00) in 1950-51(GoA,2001). In 2013-14, per capita income of Assam (Rs 46354.00 at current prices and Rs. 24533.00 at constant 2004-05 prices respectively) was 38.13 per cent below the national average at current prices (Rs 74920.00) and 38.61 per cent below the national average at constant (2004-05) prices (Rs. 39961.00)(Source: Directorate of Economics and Statistics, Assam; CSO, GoI).

Let us make a comparative macro-economic study of Assam with All India levels.

Life expectancy at birth ²⁰(2009-13) in total of Assam was 63.3. This figure was lower than the all India figure (67.5) and the figure of some major states of India, such as, Andhra Pradesh (67.9), Bihar (67.7), Gujarat (68.2), Haryana (68.2), Himachal Pradesh (71.0), Karnataka (68.5), Kerala (74.8), Madhya Pradesh (63.8), Maharashtra (71.3), Odisha (64.8), Punjab (71.1), Rajasthan (67.5), Tamil Nadu (70.2), Uttar Pradesh (63.8) and West Bengal (69.9) (Economic Survey 2014-15:A129-A139).

In 2011-12, average monthly per-capita consumption expenditure (based on MMRP) of rural Assam was being Rs 1219.00, which was lower than the all India level (Rs 1430.00) and the figures of some states, such as, Gujarat (Rs 1536.00), Haryana (2176), Himachal Pradesh (2034), Karnataka (1561), Kerala (2669), Maharashtra (1619),Punjab (2345), Rajasthan (1598), Tamil Nadu (1693) and so on (Economic Survey 2014-15:A129-A139). In 2013-14, Per-capita Net State Domestic Product at factor cost (at current prices)(Base 2004-05) in Assam was recorded at Rs. 46354.00, which was lower than many of the major states of India, such as, Andhra Pradesh (88876), Arunachal Pradesh (84869), Chhattisgarh (58297), Haryana (132089), Himachal Pradesh (92300), Jammu & Kashmir (58593), Karnataka (84709), Madhya Pradesh (54030), Maharashtra (114392), Meghalaya

²⁰ Life expectancy is defined as the average number of additional years a person could expect to live if current mortality trends were to continue for the rest of that person's life.

(58522), Nagaland(77529), Orissa (54241), Punjab (92638), Rajasthan (65098), (Sikkim (176491), Tamil Nadu (112664) [Central Statistics Office (CSO) website as on 01.08.2014. Note: Owing to differences in methodology of compilation, data for different States/Union Territories are not strictly comparable].

Infrastructure plays an important role in socio-economic development of a region. It is because infrastructure relates commodities to the markets, workers to the production and services and encourages the rural poor to the urban sectors. Infrastructure lowers costs, increases production and productivity, enlarges markets and expands trade, raises profitability, generates employment and income (CSO, 2014:28). As on 31st March,2012, rail density of Assam recorded at 31 per 1000 sq km which was higher than the all India level (20 per 1000 sq km); but too lower than some states, such as, Uttarakhand (165), Chandigarh (138) and Delhi (124). The share of broad gauge (as on 31st March,2012) of Assam was 60 per cent; whereas, this figure was 100 per cent in Andhra Pradesh, Goa, Jammu & Kashmir, Jharkhand, Karnataka, Orissa, Chandigarh, Delhi and Puducherry (Source: Railway Board, M/o Railways. Note: Andhra Pradesh includes the present state of Telangana). As on 31st March, 2012, the road density of Assam (3623.65 per 1000 sq km) was three times higher than the all India level (1206.29 per 1000 sq km). The figure of Assam superseded most of the states of India, except Delhi (20708.70), Chandigarh (16912.28), Lakshadweep (6312.50), Kerala (5543.52) and Puducherry (5396.66) (Source: Basic Road Statistics, Transport Research Wing, M/o Road Transport & Highways). In 2011-12, per capita consumption of electricity (kWh) of Assam was 249.82 kWh which was lower than that of some NE states [e.g. Arunachal Pradesh (683.13), Meghalaya (667.57), Mizoram (506.74), Sikkim (886.36), Nagaland (257.18), Tripura (253.82)] and most of the other states of India, such as, Andhra Pradesh (1156.52), Chhattisgarh (1319.56), Goa (2025.46), Gujarat (1663.23), Haryana (1628.31), Himachal Pradesh (1289.39), Jammu & Kashmir (1015.19) and so on (Source: All India Electricity Statistics, Central Electricity Authority, M/o Power. Note: Andhra Pradesh includes the present state of Telangana). Percentage of villages electrified (on 31-12-2014 as per 2011) of Assam (96.8) was higher than

the all India level (95.9) and five states of NE India [e.g., Arunachal Pradesh (70.2), Manipur (86.6), Meghalaya (80.0), Mizoram (91.1) and Nagaland (90.8)]; but lower than Sikkim (100.0) and Tripura (97.0)(Source: Central Electricity Authority, 2015). Percentage of gross irrigated area to gross cultivated area (2008-09) in Assam recorded at 3.77 which was alarmingly lowest as compared to all India level (45.32) and most of the states of India, such as, Andhra Pradesh (48.74), Bihar (60.95), Chhattisgarh (27.05), Gujarat (45.61), Haryana (85.26), Himachal Pradesh (19.66), Jammu & Kashmir (41.42), Punjab (97.62), Odisha (35.02), Tamil Nadu (58.26), UP(76.44) and so on (Source: DES, Ministry of Agriculture).

In overall India, the share of agriculture & allied sector, industry and services sector in GSDP (Gross State Domestic Product) at current prices (2011-12) was estimated at 17.2 per cent, 26.4 per cent and 56.4 per cent of GSDP respectively. The corresponding figures in Assam were 27.9 per cent, 23.3 per cent and 48.8 per cent respectively. It implies that equally one-fourth of GSDP comes from agriculture and industry sector; whereas, the remaining two-fourth of GSDP accrues from Services sector. In all states of NE India, services sector is the most potential sector as it contributes more to GSDP, except Arunachal Pradesh where share of services sector (33.8) was lower as compared to that of Industrial sector (34.6). For example in Mizoram, share of services sector to GSDP was 59.8 followed by Nagaland (56.0), Tripura (51.8), Sikkim (50.7), Meghalaya (48.6) and Manipur (45.6)(Source: Central Statistics Office, Ministry of Statistics & Programme Implementation).

In 2011-12, unemployment rate under usual status (adjusted) in Assam was 46 per 1000 (45 in rural and 56 in urban) which were higher than that of India with 22 per 1000 (17 in rural and 34 in urban) (Economic Survey 2014-15:A129-A139).

In reviewing the statistical data, we can come to conclusion that all most all aspects of economy, either uni-dimensional or multi-dimensional poverty or human development, Assam is in very bad position. Infrastructure that plays a pivot role in development of agricultural, industrial and services sector is very poor in Assam. Percentage of gross irrigated area to gross cultivated area and per capita

consumption of electricity in Assam are very low among all states of India. These factors result in low per-capita Net State Domestic Product in Assam as shown before. In Assam, the share of services sector in GSDP was lower as compared to agriculture and industrial sector among the NE states except Arunachal Pradesh and among the most of the states of India. Percentage of villages electrified, gross enrollment ratio and life expectancy at birth were lower in Assam among the most of the states of India.

Besides these socio-economic and demographic factors, there are prevailing certain burning problems that retarded economic development of Assam. These detrimental factors²¹ are perennial floods, terrorism, foreigner's illegal immigration, boarder's problem, corruption, ethnic identity, political hegemony of mainland etc. On the other hand, the quality, authenticity, relevance, timeliness and accessibility of data necessary for making policy and research remain persistent hurdles for good governance, human development and poverty reduction.

The Mishings

Assam is the hub of diverse ethnic tribes with different cultures and languages. Some of them are Boro-Kachari, Mishings, Rabha, Lalung (Tiwa), Deori, Dimasa-Kachari, Karbi etc. The Mishings are also called Misings or Miris.²² As per 2011 census, the total scheduled tribe population of Assam was recorded at 3,884,371. The Mishings are the second largest scheduled tribe of Assam state (17.51 per cent), first being the Boro-Borokachari (35.06 per cent)(GoI, 2013c: 157). Anthropologically the Mishings belong to the Tibeto-Burman family of the

²¹ Long-term and permanent solutions of these problems are: First, ensure constitutional, legislative and administrative safeguard and reservation of seats for endogenous people of Assam. Secondly, guarantee the right of citizenship and human dignity with constitutional security of life and livelihood for linguistic and religious minorities. Third, functional autonomy for scheduled-tribes. Fourth, promote, preserve and protect the cultural, social and linguistic identity of endogenous people. Last, regional autonomy or right on "Jal, Jungle and Jamin".

²² According to this tribe, the term Miri comes from the word "Miruri" that denotes the socio-religious functions prevalent among the Adis, Pasi Miyongs, Padams and Galongs of Abors hills. Others say that it is the simplified form of "Mieurieui" i.e. the persons belonging to the land of "Mieurieus" in the Abor hills. Similarly, to them, the term Mishing means the tribe living by the side of water or river ("Mi" means man and "Shing" means water or river).

Mongoloid group. The original habitat of this tribe was the Tibeto-Chinese border or the ranges of the Abor, Miri and Mishmi hills in the North East Frontier Agency (now, Arunachal Pradesh). They came down to the plains on or before the reign of the Ahom King (1215 AD-1826 AD) and began to settle in the riversides of the Brahmaputra and Subansiri rivers of Assam. The Mishings are primarily concentrated in the riverine areas of eight districts of Assam, namely, Dhemaji, Lakhimpur, Jorhat, Sonitpur, Golaghat, Sivasagar, Tinsukia and Dibrugarh. As per 2011 census, total 97.56 per cent of total Mishing population lives in rural area. The Mishings dwelt basically on the bank of rivers in natural environment. Because of which they have to face the natural calamities, such as, flood and erosion leading to displacement. Their houses, made of thatches and bamboos, are constructed on raised platforms about 5 feet above the earth to get rid of furies of floods. This colourful ethnic tribe, an indispensable part of the formation of the greater Assamese community, has been able to maintain their traditional socio-cultural-religious traits unimpaired in spite of the radical changes throughout Assamese life. The main occupation the tribe is agriculture. Though they are traditionally fond of community hunting and fishing; now, the former has already extinct and the latter is still done as with merriment. They grow some varieties of rice paddy, mustard seeds, black pulses, few vegetables etc., basically for their own consumptions. Among the live-stock, they commonly rear pig and fowl almost by every household. Due to globalization and other factors, changes are noticed in the socio-economic life this tribe. Similarly, due to adoption of *Vaisnavism* and *Christianity*, changes are prominent in their traditional beliefs, customs, religious practices and cultures. The Mishing tribe has been given regional autonomy under the name of *Mishing Autonomous Council* (MAC). The council was constituted after signing the MAC act 1995 between Mishing organisation and Government of Assam. The MAC includes 40 constituencies of eight upper Assam districts comprising of core areas and satellite areas. As per 2011 census, sex ratio among the Mishing tribe stood at 968 whereas child sex ratio was at 946. Literacy rate was recorded at 69.3 per cent where male were more literate (77.4 per cent) than the female (60.9 per cent). The

workforce participation rate turned out at 47.7 per cent with 60.8 per cent main worker and 39.2 per cent marginal workers (GoI, 2013c: 157).

1.2 Rationale of the Study

The study is also expected to be a useful addition to the growing literature and research on the problem of poverty. Especially it is necessary to research and study on poverty among the tribal people of North East India like the Mishing tribe due to its unique socio-economic peculiarities. We know that we cannot tackle the problem of poverty effectively, until and unless we understand and identify its causes and their effects on the objectives of development and anti-poverty programme. The study will examine the present status, the extent of poverty and inequality identifying the correlates and other socioeconomic characteristics among the Mishing tribe in the study area. Hence, the present study will provide means and ends to alleviate rural poverty and lead us to go from poverty to prosperity among tribal people like Mishing people. What is the poverty of progress? Where is the poverty of poverty measurement? How Assam can be moved from poverty to power crushing the spirits of inequality and human development? The proposed study will answer these questions.

Through the present study we try to measure poverty: to keep poor people on the agenda, to identify poor people to target appropriate interventions, to monitor and evaluate projects and to evaluate effectiveness of institutions concerned with the poor.

The present study is of paramount importance, as on the one hand, the national planning lays emphasis on poverty reduction and growth with equality and; on the other hand, the government prefers implementation of different programmes related to poverty reduction and human development. The study will provide solutions and picture regarding to what extent various schemes of the government have been implemented successfully in removal of poverty, inequality and to augment human development. From the study, the concerned departments will be aware of their managerial, administrative, wrong methodologies and funding

lacunas. The poor people will be aware of their ignorance about governmental programmes. The concerned government departments as well as policy makers and implementing authorities will be aware of their beneficiaries with feedback, causes behind the non-fulfillment of government programmes. Thus, those that are concerned with development and anti-development programme will find it a useful guide in alleviation of rural poverty.

Theoretically, the study provides a contribution to an understanding of poverty, inequality and human development from an academic standpoint, especially their multidimensional nature and the way of solution of the problems of poverty and human development. Practically, on the other hand, the study is expected to assist local officials to improve the way to understand of the concepts related to poverty, inequality and human development helping them to design effective strategies and responsive policies to reduce poverty, inequality and uplift human beings. As this study is primarily based at the grassroots level, it recommends a bottom-up and self-defined approach to poverty alleviation, inequality removal and human development in the research.

The significance of the study is to find out interdependency and interrelationship, if any, in the workings of the Voluntary Organisations (VOs), the Government departments and the public. Such study would help the funding agencies to analyse the effectiveness of public spending through the VOs especially in poverty elimination and human development programme.

This study will provide insights into the data problems associated with the construction of disaggregated Human Development Indices (HDIs). As no much empirical works have been taken place, the present study has practical significance. Similarly, application of the tools of HDIs to a particular ethnic group of a Assam, will provide useful insights into their strengths and weaknesses.

The findings of the study will be of immense use to the researchers and various academic disciplines for having its interdisciplinary relevance as multi-

disciplinary approach has been employed in the present study in understanding poverty that is a multi-faceted problem.

The Mishing tribe has been chosen for study: first, it is the second largest scheduled tribe (plains) of Assam; second, as compared to the other indigenous tribe, the Mishings have been able to maintain their traditional socio-cultural-religious traits unimpaired in spite of the radical changes throughout Assamese life. They basically live in the banks of river and do not like to live with non-Mishing populations.

Dhemaji and Sivasagar districts have been chosen on the ground that, Dhemaji is the highest flood-affected, rural and remote district with the highest Mishing population; whereas, Sivasagar is less flood-affected district with semi-urban character and the medium level of Mishing population. Main occupation in Dhemaji is agriculture and that in Sivasagar is diversified, that is, service, business, labourer in tea garden and brick-factory etc. other than agriculture and allied activities. Sivasagar is an industrial area of oil, tea and sericulture with urban character, whereas, Dhemaji is purely rural in character and newly developed cum urbanized district. Dhemaji is situated in northern bank of mighty Brahmaputra river and Sivasagar is in southern bank. There is infrastructural development and variability in socio-economic conditions in Sivasagar as compared to Dhemaji district.

1.3 Profile of the Study Area

The Dhemaji district is divided into 2 sub-divisions viz., Dhemaji and Jonai with five development blocks: Dhemaji, Machkhowa, Bordoloni, Sissiborgaon and Murkong Selek. Geographically situated between the 94°12' 18" E and 95°41' 32" E longitudes and 27°05' 27" N and 27°57' 16" N latitudes, the district covers an area of 3237 sq. km. It has elevation of 104 meters above the Mean Sea Level. It is located in upper Assam and in the north bank of Brahmaputra river. The river Brahmaputra flows from east to west in the southern part of the district. The prime tributaries viz, *Dihingia, Jiadhal, Moridhal, Telijan, Kaitongjan, Laipulia Nadi, Kapurduwa,*

Sissi, Gai, Tangani and Guttong originating from Arunachal Pradesh in the north, flow southwest carrying enormous amount of alluvium through the district before meeting the river Brahmaputra. It is a regular flood affected district causing lots of damages every year.

As per 2011 census, total population of Dhemaji district was accounted for 6.86 Lakh which constituted 2.20 per cent of total population of Assam. The decadal growth rate (2001-11) came out at 19.97 per cent that is alarmingly high as compared to that of India (17.7 per cent), Assam (17.07 per cent) and Sivasagar district (9.44 per cent). Density of Dhemaji district (177 persons per sq. km) was being very low as compared to all India (382), all Assam level (397) and that of Sivasagar district (431). Average literacy rate was 72.70 per cent. Literacy rate of male (79.84 per cent) were higher than that of female (65.21 per cent). Sex ratio (953 females per 1000 male) was higher than the figure of India (943); but close to all Assam level (954) and Sivasagar district (954). Child sex ratio (0-6) was recorded at 951. As high as 92.96 per cent of total populations live in rural area and only few (7.04) live in urban area.

Agriculture, the principal occupation of the district, is monsoon-based without sufficient irrigation facility. Three prime varieties of rice commonly grown in Dhemaji district are *Sali, Ahu* and *Boro*. *Bao* rice is also grown in the low lying alluvial areas. The pulses that are commonly grown in alluvial flat lands on the river banks, are Matimah (*Phaseolus mango*), Magumah (*Phaseolus aureus*), Arhar (*Cajanus cajan*), Masurmah (*Pisum sativum*). In some places, sugarcane and mustard are also grown. The common livestock reared by most families are pigs and goats. Commonly reared poultry or domestic fowls include chickens, geese and ducks raised for the production of meat and eggs. Rearing of *Muga* silk (*Antheraea assamensis*) and *Eri* Silk worm (*Samia cynthia ricini*) and production of silk yarn and fabric are wide spread throughout villages of Dhemaji district. The full potentiality of silk industry has not been fully exploited and commercially tapped due to lack of apathetic attitude of government, adequate infrastructure, investment and marketing facility. Fish drying is another practice carried out mainly by the

riverine people. Dhemaji district has neither a big industry nor significant amount of small-scale industries except some small-scale and cottage industries, such as, weaving, cane and bamboo industries.

The Sivasagar district was the capital city of *Tai-Ahoms* (a community) who originally came from *Mung Mao* (Northern side of old *Mung Mao* is, now, in China popularly known by the Chinese official name “*Ruili*” and southern side is in Myanmar). Kings of *Tai-Ahom* dynasty ruled Assam continuously for about six hundred years (1228 AD-1826AD) never found in world history. This district is situated between 26°45' and 27°15' north latitudes and 94°25' and 95°25' east longitudes. It has elevation of 86.6 meters above the mean sea level. The district occupies an area of 2,668 square kilometers. The average rainfall is about 230 cm. It is bounded by the Dibrugarh district in the East; Jorhat district in the west; Brahmaputra in the North; boundaries of Nagaland and Arunachal Pradesh in the south. Sivasagar district has three subdivisions, namely, Sivasagar, Nazira and Charaideo with nine development blocks, viz., Amguri, Demow, Gaurisagar, Hapakhati, Lakowa, Nazira, Sibsagar, Sonari and West-abhayapur. It is located in Upper Assam of Brahmaputra valley. The mighty Brahmaputra flows on the northern side of the district. The main rivers of the district are *Dichang*, *Dikhow* and *Jhanji*. It has many others small rivers, such as, *Suffry*, *Towkak*, *Tiok*, *Demow*, *Darika* etc. Sivasagar, a microcosm of composite culture of diverse ethnic and religious community, such as, *Tai-Ahoms*, *Tai-shyam*, Tea Garden Community, *Bodo*, *Mishing*, *Deuri*, *Nepali*, *Naga*, *Manipuri* and other Indian Communities. Sivasagar is famous for two industries: oil and tea. The Oil and Natural Gas Corporation Ltd. (ONGC), Assam Asset is at Nazira of Sivasagar. Sivasagar has 119 tea estates covering the area of 88008 hectares land, and 80 registered small tea growers and 4004 small tea growers covering the 5356 hectares of land. Sivasagar district bears goodwill in Sericulture. It contributes 22 per cent of the total *Muga* silk production in Assam. Sivasagar has total 14 gardens of Som trees (food plant of silkworms). As per official report, there are 13 *Muga* rearing farms and 10 yarning centres in Sivasagar district. In the district, the muga production was 13,500 kg and

Pat silk production was 590 kg during 2010-11. On the other hand, Assam is the largest producer of Eri silk contributing 63per cent of the total production followed by Meghalaya, Nagaland and Manipur. As per official report, the annual eri production in the Sivasagar district was 46,000 kg in 2010-11. Among the small-scale industries are cane and bamboo industry, handlooms, handicrafts, pottary, woodcrafts , readymade garment, bamboo, wooden furniture, weaving and embroidery, food processing and khadi & village industries viz khadi, cotton, silk, & eri weaving centres etc.

As per 2011 census, total population of Sivasagar district was estimated at 11.51 Lakh. It constituted 3.69 per cent of total population of Assam. The decadal growth rate (2001-11) of population of Sivasagar (9.44 per cent) was lower as compared to that of Assam (17.07 per cent) and India (17.7per cent). The average literacy rate of Sivasagar stood at 80.41 per cent where male literacy rate (85.84per cent) was higher than the female literacy rate (74.71per cent). Literacy rate of Sivasagar was higher than Assam (73.18 per cent) and all India 1 (73.18) levels. Density of population is 431 per square km. Rural and urban population was estimated as 90.44 per cent and 9.56 per cent respectively. Sex ratio in Sivasagar stood at 954 female per 1000 male compared to 2001 census figure of 928. The figure was higher than the average national sex ratio 940. Child sex ratio (0-6 Age) was 960 in 2011 compared to 968 in 2001. Children under 0-6 formed 12.11 percent as per 2011 census compared to 14.18 percent of 2001.

1.4 Theoretical and Conceptual Framework

1.4.1 Poverty

To live a life free from poverty and hunger is one of the human rights and fundamental freedoms²³. Reduction of poverty is still the top priority in development agenda throughout the world. For example, in 2000, the General Assembly of the United Nations adopted a set of “Millennium Development Goals.” The first of which was to “Eradicate Extreme Poverty and Hunger.” The themes of UNDP

²³General Assembly resolution 217 A (III) of 10 December 1948.

Human Development Reports 2006, 2003 and 1997 were “Beyond Scarcity: Power, Poverty and the Global Water Crisis”, “Millennium Development Goals: A Compact among Nations to End Human Poverty” and “Human Development to Eradicate Poverty” respectively.

The definition of poverty varies not only from society to society, but also varies within the same society at different points of time. Different terms are used to describe poverty. These are income or consumption poverty, human (under) development, social exclusion, ill-being, (lack of) capability and functioning, vulnerability, livelihood un-sustainability, lack of basic needs, relative deprivation (ODI, 1999), lack of hunger and malnutrition, illiteracy, homelessness and inadequate housing, unsafe environment, social discrimination (Joshi, 1997:3) etc.

Poverty has been defined by different researchers based on different criteria. Some have viewed the poor as that portion of the population that is unable to meet basic nutritional needs²⁴. Others defined poverty as a function of education and/or health.²⁵ Consumption expenditures are other criteria that are used to define poverty.²⁶ Poverty is defined as lack of command over commodities in conventional view²⁷ and lack of capability to function in a given society in broadest view.²⁸ “Basic needs”²⁹ and “entitlements”³⁰ are also used to identify poverty (Lackwood & Lynch, 1994:568). Others³¹ used the term “deprivation” to define poverty. Considering terms “deprivation” and “poverty” as the two sides of the same coin, Townsend argued that deprivation (outcome) is the result of poverty (cause) (Townsend, 1993:36). Now-a-days, human poverty is defined as “deprivation” in multiple dimensions, such as, education, health and standard of living instead of one dimension “income” or “consumption expenditure.”³²

²⁴ See for example, Ojha (1970); Reutlinger and Selowsky (1976)

²⁵ Refers to Singer, 1975

²⁶ See Musgrove and Ferber (1976).

²⁷ Refers to Watts (1968)

²⁸ Sen (1985b)

²⁹ See for example Streeten (1979).

³⁰ On this see Sen (1983).

³¹ See World Bank (2000:15); Townsend (1987:126); Townsend (1993:36); Sen (1983b: 153); Sen (2010b:15-32).

³² Read Alkire and Santos (2010:7); Alkire, Conconi and Seth (2014:16).

1.4.1.1 Poverty and Well-being: Basic Approaches

Poverty is a multi-dimensional and multivariate phenomenon. Instead of bearing an uniform face, it varies across space and time. According to the World Bank (2000:15), “poverty is pronounced deprivation in wellbeing.”³³ Following Ravallion (1994), the assessment of well-being for poverty analysis is characterized according to the following two main approaches:

The Welfarist Approach

The welfarist approach is intensely attached in classical micro-economics where it is postulated that individuals are rational, that is, they try to maximize utility and happiness. This approach makes comparisons of "economic wellbeing", that is, “standard of living” or “income” (Duclos & Araar, 2006:3). According to this approach, poverty is a lack of command over commodities. The poor are those who do not have enough income or consumption or resources to meet their needs. It views poverty in monetary terms (Haughton & Khandker, 2010:2-3). Indeed, economic theory does not clarify the use of consumption or income for interpersonal comparisons of well-being. The consumption and income proxies don’t fully analyse the role for well-being of public goods and non-market commodities, such as safety, liberty, peace, health. These commodities can be valued using reference or “shadow” prices (Duclos & Araar, 2006:5).

The Non-welfarist Approach

a) Basic Needs and Functionings

Basic needs are usually defined in terms of means or understood as physical inputs that are usually required for an individual to achieve the functionings, for example, “as living in the proximity of providers of health care services (but not necessarily

³³ The conventional view links well-being primarily to command over commodities or economic resources. It is measured by income or consumption in monetary terms. The broadest approach to well-being (and poverty) focuses on the “capability” of the individual to function in society. It is measured by lack of key capabilities, inadequate income or education or housing, poor health, insecurity, feeling of powerlessness, low self-confidence, lack of rights such as right to speech or political freedoms (Haughton & Khandker, 2010:2-3). In other words, “Poverty is the lack of, or the inability to achieve, a socially acceptable standard of living” (World Bank, 2001).

being in good health), as the number of years of achieved schooling (but not necessarily being literate), as living in a democracy (but not necessarily participating in the life of the community), and so on” (Duclos & Araar, 2006:6). Basic needs, as Hemmer and Wilhelm (2000:4) said, include both private goods/services and public goods/services.

b) Capabilities

A second non-welfarist approach is the capability approach developed by Amartya Sen. To Sen (1992:40) “the capability to function represents the various combinations of functionings (beings and doings) that the person can achieve.” It is the ability of an individual to function well in a society (Duclos & Araar, 2006:6). Well-being, as Sen (1987) argues, comes from a capability to function in society. The Poor have lack of these capabilities, for example, low income, inadequate education, poor health, feel powerless, lack of political freedoms (Haughton & Khander , 2010:2-3).

Of course, the measurements of capabilities have many problems. First, achievement of all basic functionings means non-deprivation in the space of all capabilities. But the failure to achieve all basic functionings does not mean the capability deprivation. Second, there are problems of comparison among the dimensions in non-welfarist approach. Third, it has more implementation difficulties than the welfarist approach due to its multidimensionality nature (Duclos & Araar, 2006:12).

1.4.1.2 Poverty Lines

A poverty line typically refers to the income or level of expenditure required by an individual to purchase a bundle of essential goods (Kamanou, 2005:30). In other words, it is the minimum expenditure required to fulfill his/ her basic food and nonfood needs (Haughton & Khander, 2010:41). Following Ravallion (1998), the poverty line for a household (z_i), specifies the minimum spending or consumption (or income, or other measure) required to achieve at least the minimum utility level

(u_z), given the level of prices (p) and the demographic characteristics of the household (x). Symbolically,

$$z_i = e(p, x, u_z)$$

In principle, u_z , or $e(\cdot)$ cannot be measured (Haughton & Khandor, 2010:41).

Poverty lines play two separate roles. First, to determine the minimum level of living before he/she is no longer deemed to be "poor". Second, to make inter-personal comparisons (Ravallion, 1998: ix).

Planning Commission of India defined the poverty line as a maximum level of household income at which a household is unable to meet its consumption expenses or expenses at which he/she is unable to save (Planning Commission, 2014:61). Households decide their consumptions levels within the limits of their budgets and their environment. "Minimum requirements vary across different environments and over time and seasons" (Planning Commission, 2014:72).

An absolute poverty line is fixed in any one of the spaces in assessment of well-being. Other hand, a relative poverty line depend on the distribution of well-being (such as, utilities, living standards, functionings, capabilities) in a society that vary across societies (Duclos & Araar, 2006:103). Thus, an absolute poverty line is "fixed in terms of the standards indicator being used and fixed over the entire domain of the poverty comparison" (Ravallion, 1992:25) while a "relative poverty line, by contrast, varies over that domain, and is higher the higher average standard of living".

1.4.1.3 Understanding the Determinants of Poverty

Where there is poverty, there are causes also. Once the causes of poverty identified, policies can be developed based on them (Alcock, 1997:36). But, to identify the exact causes of poverty is a difficult task. Because, it is the cause and effect of the development process. "Poverty is the result of endowment, production, exchange and consumption failures" (Sen 1981). A poverty profile is one that describes the pattern of poverty, not necessarily explain the causes of poverty.

The determinants or causes of poverty may be macro-economic and micro-economic as follows:

- Region level characteristics, such as geographical isolation, natural calamities (flood, draught), remoteness, public services, communications and infrastructure, quality of governance, environmental policy, market stability, mass participation; regional security, property rights etc.
- Community-level characteristics, such as the infrastructure (transport, communication, electricity etc.), services (health, education), vicinity to markets, social networks and institutions, social capital, human resource development, employment, social mobility, land distribution etc.
- Household and individual level characteristics are
 - Demographic, such as household size, age structure, sex ratio, dependency ratio, gender of household head
 - Economic, such as employment and income structure, structure of consumption expenditure, property and other assets owned (landholding, livestock population and physical assets)
 - Social, such as health (nutritional status, disease status, health care services), education, (level, and availability of education), shelter (housing, services, and the environment)(Haughton & Khander, 2010:147-151).

Weaknesses in any of these attributes may lead to poverty. Thus, these micro and macro-economic disadvantages are considered as causes of poverty (Perlman, 1976:152). Household and individual characteristics as determinants of poverty are discussed in details as follows:

Demographic Characteristics of Households

Only income or expenditure is not the prime determinant of poverty. As poverty is multidimensional, we are to consider the demographic indicators to characterize poverty along with its economic and social counterparts. Some of major

demographic characteristics of the households that influence poverty are given below:

1. Household Size and Structure

These two indicators show a possible correlation with the level of poverty. Household composition, that is, the size of the household and the characteristics of its members (such as age) differ from poor to non-poor households (Haughton & Khander, 2010:149).

2. Sex Ratio

In many societies of the world, the female members of the household don't go outside for work or don't participate in social and political activities due to the prevailing traditions, norms and customs of their own religion and society. In such type of societies, one hand, attitudes and outlook of the females towards the world are obsolete; on the other hand, male dominated societies try to exploit the females and their activities. In certain cases, sex ratio may be positively associated with the poverty.

3. Dependency Ratio

“The dependency ratio is the ratio of the number of family members not in the labor force (whether young or old) to those in the labor force in the household” (Haughton & Khander, 2010:149). That is it is the ratio of persons in the “dependent” ages (generally under age 15 and over age 64) to those in the “economically productive” or “working” ages (15-64 years) in the population. Given the size of the household, a large number of children and old age members would mean a smaller number of labour force or earners in the household. Dependency ratio may be positively associated with level of poverty.

4. Age and Gender of the Head

It is widely believed that the age and gender of the household head are significantly correlated with household poverty. They are also important determinants of attitudes towards work. It is observed throughout the world that poverty rates are higher

among the female-headed households than the male-headed counterparts. Similarly, age of the head of the household may influence the rural poverty.

Economic Characteristics of Households

Aside from demographic factors, certain social indicators plays important role in characterization of poverty and standard of living. Among them are:

1. Employment

There are several indicators that determine household employment. For these indicators, most economists emphasis on the rate of participation in the labour force, the real rate of unemployment, job changes, type of work, the hours of work, involvement in multiple jobs etc. Intensity of ill-health, asset levels, customs and religious beliefs may lower the participation in labour force. Labour force participation rate is defined as the percentage of the working-age population (ages 15–64) that actively engages in the labour market, by either working or actively looking for work.

2. Income Structure

Income structure, that is the level of income and its distribution among the household members, plays an important role in the characterization of poverty. In practice, this indicator has certain problems. First, households may make false declaration of their actual income. Second, income cannot be calculated in case of non-monetary activities. It is the fact that most rich countries use income as an indicator of poverty. Because, income is comparatively easy to measure and households of those countries generally keep record of their income properly; while expenditure is complex and hard to quantify. On the other hand, the poorest countries use expenditure as indicator of poverty. Because, income is hard to measure and households of these countries generally don't keep record of their income sources properly; while expenditure is more straightforward and hence easier to estimate.

3. Structure of Consumption Expenditure

The structure of consumption expenditure (food and non-food) can be used as determinant of poverty. Most of the time, this variable or characteristic is difficult to use as respondents do not provide exact amount of expenditure. In choosing between income and consumption for poverty measurement, consumption provides more detailed information than income, particularly in under-developed and developing countries.

4. Property and Other Assets Owned

The property of a household comprises both tangible goods and financial assets. By the tangible goods, we mean landholdings, livestock population, physical assets (agricultural equipments, such as tractor and household appliances, such as fan, TV etc.) and other durable goods. These indicators influence income flow of a household. It is observed that the households that are poor in income appear as wealthy in terms of property. In practice, valuation of property is difficult for many reasons. First, the problem of under-declaration. Second, certain elements of property, such as livestock etc. cannot be estimated accurately. Finally, it is difficult to estimate the depreciation of assets for two reasons: (a) variability of the life span of a given asset, and (b) the acquisition of the assets occurs at different moments in each household. Thus, use of property in the characterization of poverty is more difficult as compared to other elements (Haughton & Khander, 2010:150).

Social Characteristics of Households

Apart from demographic and economic indicators, some social indicators are associated with household poverty and well-being.

1. Health

Four indicators are normally used to characterize health in studying the poverty and well-being of a household. Firstly, nutritional status (such as weight for age, height as per age, and weight according to height). Secondly, disease status (viz., infant mortality rates, juvenile morbidity rates etc.). Thirdly, availability of health care services (for example, primary health care centers, maternity facilities, nurses, doctors) and medical service (vaccinations facility, access to medicines, medical

information etc.). Fourthly, the use of these above mentioned three services among the poor and the non-poor (Haughton & Khander, 2010:151).

It is found that drinking water and sanitation facilities affects the health indicator.

2. Education

Generally, three basic indicators are used to characterize education in study of poverty and well-being. They are the level of educational attainment (years of education completed), access to educational facilities (for example, primary schools) and the use of these facilities among the poor and the non-poor (per capita expenditure on education, enrollment and the dropout rate and reasons by age and gender). Education enhances skill and capability that help a household to move out of poverty (Haughton & Khander, 2010:151).

3. Shelter

Shelter refers to the overall framework of personal life of the household. It is evaluated according to three components. These include

- i) Housing, i.e., the type of building (size of building and type of materials used, such as mud and straw, bricks), access to housing (rented or owned), and household equipment.
- ii) Services [drinking water, transports, communications, energy sources (kerosene, cow dung cake, wood)] and
- iii) Environment [the level of sanitation, the degree of isolation (availability of roads and ways usable at all times, time length and transportation facility to reach the job place), and the degree of personal safety] (Haughton & Khander, 2010:151).

Generally, it is observed that households with unimproved drinking water and sanitation facilities cause poor health that leads to low productivity and poverty.

1.4.1.4 Concluding Remarks

Poverty is multi-dimensional. Conceptualization & measurement of poverty are very important for policy implications and effective targeting. Numbers of theories are

evolved to conceptualize poverty. Indeed, it is a very difficult task to recognize or deny the validity of either absolute poverty or relative poverty. Conceptualization of poverty in absolute vs. relative terms can be understood based on its space, such as commodities, incomes or capabilities. “An absolute approach in the space of capabilities translates into a relative approach in the space of commodities, resources and incomes” (Sen, 1983b:167-168). All concepts are not applicable to all settings. The concept of relative poverty suits the developed countries; but the absolute poverty is relevant to the under-developed countries. The different issues of poverty are to be studied to analyze the causes or determinants of poverty.

We are to answer to four questions in poverty analysis: How many are poor or how bad is the poverty problem? (measurement of poverty), who is poor? (poverty profile), why are they poor? (determinants of poverty) and what happens to poverty if...? (policy implications).

In between the two income recipient units (such as, the individual unit or the family unit) the family unit is typically viewed as the most appropriate unit to measure poverty because of the income sharing phenomena that occurs within families (Lackwood & Lynch, 1994:568).

1.4.2 Inequality

Inequality is a broader concept than poverty as it covers the entire population from poorest to richest (Haughton & Khandor, 2010:101). Inequality matters for society as a whole. It hinders social cohesion, obstructs social mobility, and stimulates social unrest and political instability (UNDP, 2014:39). Above all, it hampers the freedom of choices (UNDP, 2014:37).

There are two types of inequalities; i) Horizontal Inequalities (HIs), that is inequalities between groups and ii) Vertical Inequalities (VIs), that is, inequalities between individuals. The groups included in HIs are, for example, age, gender, national, racial, ethnic, and religious. Most of the analysis of inequality relates to vertical inequality, and confined to a few economic variables, viz. income, and consumption. For this purpose, Lorenz curves and the Gini coefficient are used. But,

in such cases, HIs should not be ignored (Stewart, Brown & Mancini, 2005:3). VIs is decomposed into two elements: between group inequality and within group inequality. As, HIs are a component of Vertical Inequality (VI), there for VIs is possible to be greater than HIs. It is an important issue to examine the correlation between HIs and VIs (Stewart, Brown & Mancini, 2005:5; Kolm, 1977; Atkinson & Bourguignon, 1982).

There are two different forms of inequality in the multidimensional context. The first form of inequality is called distribution sensitive inequality that is based on the single-dimensional inequality concerned with distribution, whereas the second is called association-sensitive inequality based on the existing correlation among the components of human development. Both these two forms are incorporated in the construction of the multidimensional poverty indices (Kolm, 1977; Atkinson & Bourguignon, 1982; Tsui 2002, Bourguignon & Chakravarty 2003) and inequality indices (Tsui 1995, 1999, Bourguignon, 1999; Decancq & Lugo 2008). The traditional HDI are not sensitive to these two forms of multidimensional inequality. Therefore, a class of modified human development indices has also been proposed to incorporate both forms of inequality (Seth, 2009:1-2).

1.4.2.1 Dimension of Inequality: Income and Non-income Inequality

Instead of incomes or consumption, Sen emphasize on use of extensive multidimensional space of capabilities to measure inequality. The selection of space depends on the matter of assessment. In many cases, income or consumption are very poor indicators as they do not incorporate access to public goods, distribution within the family, the ways of translating income into capabilities(Stewart, Brown and Mancini, 2005:7;Heshmati, 2004:7-12).

Income or consumption inequality is just one dimension of inequality. Other dimensions of inequality are inequality in skills, education, health, opportunities, happiness, life-spans, welfare, assets, social mobility etc. The interrelationship between income inequality and different non-income inequalities are briefly discussed below (Heshmati, 2004:7-12).

i. Relationship between Income Inequality and Education

Education has positively correlated with incomes. Unbalanced investment and quality in human capital with unfavorable redistributive policies may increase inequality. High attainment and equal distribution of education may lead to economic growth with equal distribution of income. Empirical researches have been carried out on the effects of inequality in education (Cornia & Kiiski, 2001), inequality in human capital (Castello & Domenech, 2002), inequality in skills (Devroye & Freeman, 2001; Aghion & Commander, 1999) and human capital accumulation (Eicher & Garcia-Penalosa, 2001) on inequality in income.

ii. Relationship between Income Inequality, (Un)employment and (Un)happiness

Unemployment is negatively associated with income, health and happiness. Thus, it increases income inequality. There are many investigations that shows the relationship between income inequality and unemployment (Winkelmann & Winkelmann, 1998), unemployment and unhappiness (Clark & Oswald, 1994), happiness (Alesina, DiTella & MacCulloch, 2001), health, wealth and happiness (Hartog & Oosterbeek (1998).

iii. Relationship between Income Inequality and (III) health

The relationship between health and income was first developed by Preston (1975) who with a curve, known as Preston curve shows the relationship between life-expectancy and income. In underdeveloped countries, as income increases life-expectancy also increases, but at a decreasing rate. But in developed countries, it is not found. Deaton (2001) also shows the relationship between income inequality and health based on both poor and non-poor countries. Here ill health is defined as the rate of mortality. But, he concluded that there is no direct link between income inequality and ill health. Deaton and Lubotsky (2002) contend that the relationship between mortality rates and income inequality in the US is affected by the racial composition. Pradhan, Sahn and Younger (2003) explore global inequality in health status.

iv. Relationship between Inequality in Wealth and Growth

Total wealth comprises human and non-human capital. It is recognized that the distribution of assets or wealth, rather than income, affects inequality in growth (Stiglitz and Weiss, 1981). Deininger and Squire (1998) show that initial inequality in asset distribution negatively related with long-term growth. For the poor, inequality reduces growth of income. Government redistributive policies and equitable distribution of income and assets are the determining factors that may affect the level of income inequality (Heshmati, 2004:7-12).

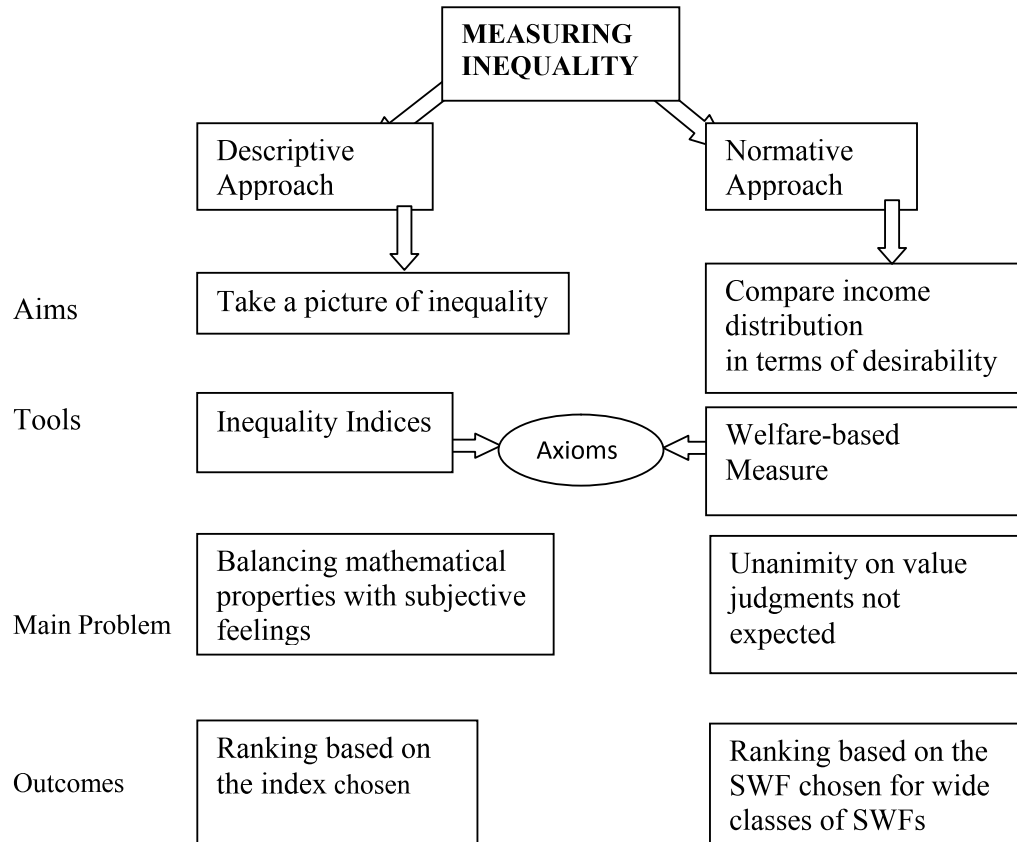
1.4.2.2 The Descriptive and Normative Approach to Inequality

In general, there are two main approaches related to the issue of income inequality: descriptive approach and normative approach. In the descriptive approach, Social Welfare Function (SWF) isn't specified, i.e. value judgments about the nature of inequality are not clear. The main features of the descriptive approach are as follows:

In this approach, one picturize the inequality in a state, say, state A and studies the changes in income distribution in different states, say, state B. But, doesn't describe whether state A is better than state B. Here usually mathematical formulas are used. The mathematical properties of these formulas drive the mechanics of the inequality index. The way the index actually behaves due to its mathematical properties and the way we would like it to behave as per our judgment, may not necessarily be the same.

There are numerous descriptive inequality indexes. To choose any one out of many descriptive inequality indexes, we are to specify the axioms. If we feel that income inequality can be reduced by transferring income and wealth from the rich to the poor, we are to choose an index which has the same mathematical property. As different inequality indexes have different mathematical properties; so, every index may represent one's personal feeling (Bellù & Liberati, 2006:2-3).

Figure 1: Basic Features of Descriptive and Normative Approaches to Inequality Measurement Differentiating Aims, Tools, Problems and Outcomes



In normative approach, on the other hand, one may compare income distributions based on value judgments. The normative approach specifies the SWF. This approach shows bad or good of inequality, gains or losses of inequality, and compares income distributions among individuals. “The inequality index to be used is driven by the way the SWF is specified.” The main problem of using a normative approach is that there might be as many SWFs reflecting different subjective judgments (Bellù & Liberati, 2006:2-3).

1.4.2.3 The Role of Axioms in Inequality Measurement

In inequality measurement, axioms are the desirable properties that define the way of inequality measures. Axioms help to choose the inequality indexes. Choice of an inequality index implies that inequality measurement has an axiomatic approach.

Generally, five main axioms are considered:

i. The Pigou-Dalton Principle of Transfers (PT)

“The Pigou-Dalton transfer principle requires that any transfer of income from a higher to a lower income earner must reduce the inequality measure” (Cowell & Kuga, 1981). In this axiom, the inequality indices require to be changed when income transfers among individuals. In particular:

- i. Inequality indexes should fall when income transfer from the rich to the poor.
- ii. Inequality indexes should rise when income transfer from poorer to richer individuals.

We are to know the distinction between the above two principles of transfers:

- a) Weak Principle of Transfers (WPT): It simply requires the inequality index to change when an income transfer occurs.
- b) Strong Principle of Transfers (SPT): It requires that the change in inequality due to an income transfers be dependent only on the distance between individual ranks, independent of their location in the income distribution (Atkinson, 1970:244-63;Dalton,1920:348-61;Pigou,2012).

Most of the inequality measures, such as, the Generalized Entropy class, the Atkinson class and the Gini coefficient, satisfy this principle. Exceptions are the logarithmic variance and the variance of logarithms (Cowell, 1995:135-51).

ii. Scale Invariance (SI)

It means that changes in income are distributionally neutral when they happen in the same proportion for all individuals in the income distribution. The inequality index is required “to be invariant to equi-proportional changes of the original incomes” (Bellù & Liberati, 2006:4-7).

iii. Translation Invariance (TI)

It means that changes in income are distributionally neutral when they happen in the same absolute amounts for all individuals in the income distribution. It “requires the inequality index to be invariant to uniform additions or subtractions to original incomes” (Bellù & Liberati, 2006:4-7).

iv. The Principle of Population (P)

“The principle of population axiom requires the inequality index to be invariant to replications of the original population” (Bellù & Liberati, 2006:4-7).

v. Decomposability (D)

Sometimes, inequality may occur among different groups or sectors of population. The decomposability axiom requires a consistent relation between overall inequality and its parts (Bellù & Liberati, 2006:4-7).

If an inequality index satisfies the first three axioms, the principle of transfers, scale invariance and the principle of population, it is termed as the class of relative inequality indexes (RII). The RII rank inequality in the same way as the Lorenz Curve ordering. However, there is a basic difference between the two. As the Lorenz criterion does not explain the intersection of Lorenz Curves, so the Lorenz Curve provides only a partial ordering. In contrast, the RII offers a complete ordering (Bellù & Liberati, 2006:4-7).

1.4.2.4 Concluding Remarks

Likeness to poverty, inequality is also of different dimensions. The non-income inequality dimensions, such as inequality in education, happiness, health, skills, and assets are conserved along with the income and consumption dimensions of inequality. Inequality become the focal issues at a global level since HDR 1990 and has been prominent in the themes of HDRs 1990, 1995, 1996, 1997 and 2005.

1.4.3 Human Development

The human development is not a new concept. It is attributed to the early political and economic thinkers. Aristotle (384 -322 B C) argued that aim of development is not the expansion of goods and services that are “merely useful and for the sake of something else” (Aristotle, 1980:7), but to see "the difference between a good political arrangement and a bad one" and to lead "flourishing lives". Economic development, as Adam Smith (1723-1790) opined, should enable a person to mix freely with others without being “ashamed to appear in public” (Smith, 1776: 352). Immanuel Kant (1785:47) focused on “humanity” taking as “an end” and “never as means only”. Such readings are found in literatures of William Petty, Gregory King, Francois Quesnay, Antoine Lavoisier and Joseph Lagrange, the pioneers of GDP and GNP. Adam Smith, David Ricardo, Robert Malthus, Karl Marx and John Stuart Mill are some leading political economist who thought in this line (UNDP, 1990:1). Only during the 20th century the social scientist focused on wealth rather than people, economy than the society, maximization of income rather than increase in opportunities (UNDP, 1994:14). Recently, attention changes towards people (UNDP, 1994:14).

1.4.3.1 Human Development: Holistic Concept

Human development has, now, directed towards the centre of the global development debate (UNDP, 1992:12). Human development, a broad and comprehensive concept, is guided by a simple idea: people always come first (UNDP, 1991:15; UNDP, 1992:13). Indeed, human development is not a fixed, static set of precepts, rather an evolving idea. Its analytical tools and concepts evolve as the world changes (UNDP, 2010:1). It is living, not calcified and varies with time, place and context (Alkire, 2010:37). It is not one size fits all rather flexible, responsive (Alkire, 2010:43), and open ended. It is relevant across years, ideologies, cultures and classes (UNDP, 2010:22). It clarifies the ends and means of development and crystallizes development objectives, processes and principles (Alkire, 2010:45).

The term *human development* signifies both the *process* of widening people's choices and the *level* of their achieved wellbeing. Human development consists of two sides: the formation of human capabilities (health, knowledge) and the use of acquired capabilities for productive purposes or being active in socio-cultural and political affairs (UNDP, 1990:10; UNDP, 1995:11). Thus, development must enable persons to enlarge their human capabilities in full and to put these capabilities to the best use in all economic, social, cultural and political fields (UNDP 1994:13).

“People are the real wealth of a nation” (UNDP, 2010:1) and the real objective of development is to enlarge people's development choices (UNDP, 1991:13). Development should increase people's choices with two caveats. First, enlargement of the choices of one individual or a section of society should not hamper the choices of another. That is equity in human development. Second, improvement in the lives of the present generation should not restrict the choices of future generation. That is sustainable development (UNDP, 1991:15).

The term “human development” has come to be accepted in the development economics literature as an expansion of human capabilities, a widening of choices, an enhancement of freedoms and a fulfillment of human rights (Fukuda-Parr and Kumar, 2011:xxi).

Based on definitions of UNDP Human development reports, we can conclude that “Human development” is enlarging (*expanding, widening*) people's (*human*) choices, *freedoms, capabilities, abilities, dignities and opportunities*.

1.4.3.2 Inequality and Human Development

Inequality hampers the human development process. Sometimes it stops the pace of human development completely. Inequality in health and education are more than inequality in income, especially in high and very high HDI countries (UNDP, 2013:29).

The effects of Inequality on human development can be better understood by the Inequality-adjusted Human Development Index (IHDI). It examines the average

level and distribution of human development among the dimensions of health, education and a decent standard of living. The IHDI equals the HDI in case of equality. The greater the difference, the greater the inequality (UNDP,2013:29). Inequality in the components of the HDI is measured by the Atkinson inequality index, which takes into account inequality in distribution within and across groups (UNDP, 2013:125). Decline in inequality in health and education reveals the government priorities and innovations in these two sectors. Education has its impact on health. For example, better education for women result in better health for themselves and for their next generations (UNDP, 2013:30-31).

1.4.3.3 Evolution of Human Development Indices

Human Development Index is a composite measure of three dimensions (with four indicators) of human development: A Long and Healthy Life, Knowledge, and A Decent Standard of Living. It is the geometric mean of normalized indices measuring achievements in each dimension. The index can take value between 0 and 1. Countries with an index over 0.800 are part of the High Human Development group. Between 0.500 and 0.800, countries are part of the Medium Human Development group and below 0.500 they are part of the Low Human Development group.

Since 1990, Human Development Reports (HDRs) have drawn attention to inequalities in different dimensions and sought to address them. The 2010 UNDP report introduces three new indices- Inequality adjusted HDI (IHDI), Gender Inequality Index (GII) and Multi-dimensional Poverty Index (MPI). Gender-related Development Index (GDI) and Gender Empowerment Index (GEM) that were introduced in 1995 have been replaced by Gender Inequality Index (GII) in 2010. The Human Poverty Index (HPI) that was introduced in 1997 has been replaced by Multi-dimensional Poverty Index (MPI) in 2010. IHDI adjusts the HDI for inequality in distribution of each dimension across the population. The Inequality-adjusted Human Development Index (IHDI) is a new measure of the level of human development in a society that accounts for inequality in all dimensions of the HDI. The IHDI is built around Atkinson's (1970) well-known concept of —equally

distributed equivalent (EDE) achievements. The IHDI will be equal to the HDI when there is hardly any inequality between people and will fall further below the HDI the more inequality there is. The IHDI reflects the actual level of human development, whereas the HDI can be viewed as an index of potential human development. GII reflects women's disadvantage in three dimensions- reproductive health, empowerment and the labour market- for as many countries as data of reasonable allow. MPI identifies multiple deprivations at individual level in health, education and standard of living.

1.4.3.4 UNDP and Planning Commission Methodology on Human Development Indicators

The National Human Development Report (NHDR) 2001, for the first time, is an attempt to map the state of human development in the country. A major objective of the NHDR was to develop a core set of indices that reflect, in some sense, the common concerns, social values and development priorities of all states. It would help in a meaningful comparison of the human development status across states. It was, therefore, felt necessary to have core indices that are functionally decomposable at state and sub-state levels. The other concern that had to be reflected, relates to the need to evolve a set of indices, which could adequately capture inter-temporal changes and policy sensitivity in various dimensions of human well being. Human well-being or deprivation was assessed for the following three dimensions:

- Longevity — the ability to live long and healthy life;
- Education — the ability to read, write and acquire knowledge; and
- Command over resources — the ability to enjoy a decent standard of living and have a socially meaningful life.

The formula for constructing HDI in the NHDR is as follows:

$$HDI_j = \frac{1}{3} \sum_{i=1}^3 X_i$$

Where

$$X_i = \frac{X_{ij} - X_i^*}{X_i^{**} - X_i^*}$$

Where, X_{ij} refers to attainment of the j^{th} state on the i^{th} indicator; X_i^{**} and X_i^* are the scaling maximum and minimum norms, such that:

X_1 : Inflation and inequality adjusted per capita consumption expenditure;

X_2 : Composite indicator on educational attainment;

X_3 : Composite indicator on health attainment.

X_2 (educational attainment) and X_3 (health attainment) are calculated as follows

$$X_2 = [(e_1 \cdot 0.35) + (e_2 \cdot 0.65)]$$

Where, e_1 is literacy rate for the age group 7 years and above, and e_2 is adjusted intensity of formal education.

$$X_3 = [(h_1 \cdot 0.65) + (h_2 \cdot 0.35)]$$

Where, h_1 is life expectancy at age one, and h_2 is infant mortality rate. In case of IMR the reciprocal of the indicator has been used.

The first human development report of India was published in 2001. If we compare the dimensions/indicators of human developments among the National Human Development Report (NHDR) 2001, India Human Development Report (India HDR) 2011 and UNDP HDR 2011, then certain observations will come up. Dimensions in NHDR 2001, India HDR 2011 and UNDP HDR 2011, but there is a little change in indicators. For the dimension “Long and healthy life”, the NHDR 2001 used two indicators, viz. Life expectancy at age 1 and Infant mortality rate; while, the India HDR 2011 and UN HDR 2011 used the similar indicator, that is, Life expectancy at birth. For the dimension “Knowledge”, the NHDR 2001 used two indicators, viz., Literacy rate (7 years and above) and Intensity of formal education. The India HDR 2011 also used two indicators. Change is that India HDR 2011 used the indicator “Adjusted mean years of schooling” in place of “Intensity of formal education.” The UNDP HDR 2011 used two different variables: Mean years of schooling and Expected years of schooling. For the third dimension “a decent

standard of living”, both the NHDR 2001 and India HDR 2011 used the same variable, that is, Inequality adjusted per capita real consumption expenditure. But, the UNDP HDR 2011 used “Gross National Income per capita (PPP \$).”

Table 1.4.1. Comparisons between Indicators in NHDR 2001, India HDR 2011 and UNDP HDR 2011

Dimensions	National Human Development Report (NHDR) 2001	India Human Development Report (India HDR) 2011	UNDP HDR 2011
Long and healthy life	Life expectancy at age 1	Life expectancy at birth	Life expectancy at birth
Knowledge	Infant mortality rate		
	Literacy rate (7 years and above)	Literacy rate (7 years and above)	Mean years of schooling
	Intensity of formal education	Adjusted mean years of schooling	Expected years of schooling
A decent standard of living	Inequality adjusted per capita real consumption expenditure	Inequality adjusted per capita real consumption expenditure	Gross National Income per capita (PPP \$)

Source: Planning Commission, 2002; India HDR, 2011:18; UNDP, 2011:167

There is no change in the indicators of Human Development Index (HDI) and Inequality -adjusted Human Development Index (IHDI) in UNDP Human Development Reports 2011, 2013 and 2014. For both HDI and IHDI, same indicators were used against the same dimensions.

Table 1.4.2. Dimensions and Indicators of Human Development Indices (HDI) in UNDP HDR 2011, 2013 and 2014

Dimensions	Long and healthy life	Knowledge		A decent standard of living
Indicators	Life expectancy at birth	Mean years of schooling	Expected years of schooling	GNI per capita (PPP\$)
Dimension index	Life expectancy index	Education index		GNI index
HDI				

Source: UNDP HDR 2011, “Technical notes, Human Development Report 2013”, Retrieved from hdr.undp.org/sites/default/files/hdr_2013_en_technotes.pdf dated 28th May 2015; “Technical notes, Human Development Report 2014”, Retrieved from hdr.undp.org/sites/default/files/hdr14_technical_notes.pdf dated 28th May 2015.

Table 1.4.3. Dimensions and Indicators of Inequality - adjusted Human Development Indices (IHDI) in UNDP HDR 2011, 2013 and 2014

Dimensions	Long and healthy life	Knowledge		A decent standard of living
Indicators	Life expectancy at birth	Mean years of schooling	Expected years of schooling	GNI per capita (PPP\$)
Dimension index	Life expectancy	Years of schooling		Income /consumption
Inequality - adjusted index	Inequality - adjusted expectancy index	Inequality -adjusted education index		Inequality - adjusted income index

IHDI

Source: UNDP, 2011, “Technical notes, Human Development Report 2013”, Retrieved from hdr.undp.org/sites/default/files/hdr_2013_en_technotes.pdf dated 28th May 2015; “Technical notes, Human Development Report 2014”, Retrieved from hdr.undp.org/sites/default/files/hdr14_technical_notes.pdf dated 28th May 2015

1.4.3.5 Criticism or Suggestions for Refinement of HDI

The HDI is still evolving. It necessitates constructive criticism and successive refinement to develop new measures. The criticisms and suggestions made in recent years are as follows:

- i) Very limited variables are included in the HDI so that measurement becomes understanding, easy and manageable. But, critics suggest to include more variables.
- ii) Use of composite index has been criticized. It is suggested to measure a series of separate indicators to reflect different aspects of socio-economic progress.
- iii) Different HDIs are used for different countries or different social groups. It is suggested to use a common index to give an equity-based result.
- iv) HDI estimates are based on weak and unreliable data.
- v) While allocating their funds, international donors began to consider the HDI (Haq, 2011:134-137).
- vi) HDI is to measure capabilities through their related functionings, but income is not a functioning.
- vii) HDI is mixture of stock variables (adult literacy, life expectancy) and flow variables (income, gross enrollment).
- viii) It doesn't explain the issues on distribution by gender, region, ethnicity, income and occupation.
- ix) New dimensions should be added to make the human development index a complete measure.
- x) Questions arises on validity, quality and comparability of the indicators used in HDI.
- xi) Principle of aggregation has been criticized.
- xii) Many criticized for high positive

correlation between the HDI and its components (Raworth & Stewart, 2011:168-172).

To sum up, the HDI is in the process of evolution. It is neither static nor complete measure. It needs continuous analysis, criticisms and refinements. Refinements have been made over the years in respect of methodological issues and statistical sophistication.

1.4.3.6 Concluding Remarks

Human development is multifaceted, heterogeneous and qualitative evolution that typically counterattacks simplification. Aggregated indices that are supposed to support an understanding presentation of such evolution may simultaneously mislead us and hence demand a careful interpretation. In practice, the HDI support researchers, policy analysts, governments and citizens to think scientifically about development and concerned public policies. Since 1992, numbers of national and regional Human Development Reports try to capture some missing variables in the global reports and address some criticisms of the HDI by the introduction of new dimensions and indicators. Recently, new methods are evolved to calculate the HDI at the household level. It will help to study the HDI by the subgroups and by household socioeconomic characteristics.

1.5 Objectives

Keeping broad theoretical and empirical perspectives in mind, the present study designed for the Mishing tribe residing in Dhemaji and Sivasagar districts has the following objectives –

1. To determine the extent of absolute and relative poverty.
2. To identify the determinants of poverty.
3. To examine economic inequality across occupations.
4. To measure human development at the household level adjusted for inequality.

1.6 Hypotheses

The following hypotheses are proposed to be tested through the empirical study:

1. Absolute and relative poverty levels vary across occupations.
2. The causes of poverty are beyond the control of poor households.
3. Human development is negatively associated with multi-dimensional poverty.

1.7 Scope and Limitations of the Study

The present study is limited to 12 (twelve) villages under the six blocks of Dhemaji and Sivasagar districts of Assam in Northeast region of India. Though the study area shares homogeneity in climate, culture and language; yet, certain variations are available in respect of socio-economic and demographic characteristics, perceptions, natural and human endowments, myth and reality of policy and development. The scope of the study is limited by resource and time constraints, for which we take into account only one year. From the sample design, it is clear that the study particularly focuses on Mishing dominated rural villages. The study obviously cannot examine the urban-rural contrast within Mishings which is also important to see. Due to scarcity of secondary data on socio-economic status of the Mishing tribe, the present study had been carried out basically on primary data.

The information about the urban Mishing tribe and Non-Mishing people would have better scope in comparative analysis of status of poverty and human development between rural Mishings and urban Mishings as well as between the Mishing tribe and the Non-Mishing tribe. The inclusion of additional indicators suitable to Assam's socio-economic conditions or construction of HDI could perhaps provide better results.

Due to illiteracy, insincerity and ignorance, some households did not keep proper record of income, expenditures and savings. Some respondents expressed their reluctance to provide the needed information on their income, expenditures and savings due to misconceptions regarding data collected and fearing that they may be deprived from government schemes and benefits, if shown higher figure. Sometimes, the socioeconomic conditions of one household do not differ very much to an immediate neighbor or nearest household.