CHAPTER II

REVIEW OF LITERATURE

Economic Growth has long been the central theme in economics, followed by human development. The issues related to economic growth and human development like spatial and inter-temporal growth, disparities and gender inequalities have attracted the attention of many and spawned a vast and diverse portfolio of research and economic thoughts. Literature relating to those issues have been fairly extensive. In fact, each and every theoretical development is built upon the earlier research findings, thereby serving as a base for new findings with the existing ones. The present section of the study, therefore, reflects upon other studies which give proper perspective of the problem under current study.

2.1: CONCEPT: Economic growth is the rate of annual production of goods and services in a country leading to a rise in national income. Earlier, the development of a country was measured only in terms of gross domestic product and subsequently per capita income became an important indicator. However, in the later part of the twentieth century, a new concept of development, viz human development has evolved in the history of economic literature. There has been a notable shift in the focus of development planning from mere economic growth to enhancement of human well-being. As the basic objective of development of a nation is to improve the welfare of the people, every nation strives hard not only to increase her wealth and productive resources but also to ensure better standard of living of her citizens by providing them with adequate food, clothing, house, medical facilities, education, etc. However, the uses of statistical aggregates to measure income and growth have at times obscured the fact that the primary objective of development is to benefit people. National income figures, though useful for many purposes, neither reveal its composition nor its real beneficiaries. “Development must, therefore, be more than just the expansion of income and wealth. Its focus must be people”.

Human development has been described as an ultimate goal of the development process, while Economic Growth (EG) as an imperfect proxy for more general welfare and as a means

towards enhancing Human Development (HD). Moris and Alpin (1982), Sen (1985) propagated development as the process of enhancing people’s capabilities and improving quality of life. Mere economic growth in per capita income may not necessarily lead to an improvement in human well-being, which is broadly conceived to include not only consumption of goods and services, but also the accessibility of people to the basic necessities required for leading a productive and socially meaningful life.

The concept of HD is not a new invention, the idea of social arrangement for “human good” dates back to the time of Aristotle. He argued that “wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else”. Immanuel Kant propagated that human beings are the real end of all human activities. Further, Adam Smith advocated free enterprise and private initiative and showed his concern that economic development should enable a person not to be “ashamed to appear in public”. Since their time, human being occupied the centre focus of the development. The most basic capacities for HD are to lead long and healthy lives, to be knowledgeable, to have access to resources needed for decent standard of living and to be able to participate in the life of the community. Without these, many choices are simply not available and many opportunities in life remain inaccessible.

Human development does not deny the importance of EG and wealth accumulation for the welfare of society, but, it claims that EG is not a sufficient condition for human well-being (UNDP 1990). Thirlwall (2003) asserted that development without growth is hardly conceivable, but growth is possible without development. UNDP (1994) stated that development means broad HD that includes health and education variables in a weighted welfare measure and not just higher income alone. Hence, HD is “a process of enlarging people’s choices”.

Therefore, HD can be defined as development of growth, social investment, people’s empowerment, provision of basic needs and social safety nets, political and cultural freedom and

all other aspects of people’s lives. In other words, HD is people-centred, formation and uses of capabilities, linking between ends and means, embraces society and recognises of both means and ends in development to create and enabling people to enlarge choices.

2.2: GROWTH AND DISPARITIES

The modern economic history is characterised by a tremendous development in human capabilities that plays an important part in long-term economic growth. Modern theories of economic development appeared principally after there has been a great destruction in the European countries caused by war. It was a mass infusion of capital into the European economies, mainly through American Marshal Plan, together with austerity reactivated the industrial base of these economies and brought them to a level of sustained economic growth.

The classical economic theories, particularly that of Ricardo’s two-sector model has mainly concentrated on growth and distribution within agriculture and industry. The models addressed the shares of rent and profit, where the growth process eventually approaching the steady state of zero growth due to diminishing returns in agriculture (Boyer, 1996). Karl Marx also believed that capitalist development would inherently result in an uneven distribution of wealth and that capitalist have an incentive for pushing wages to the subsistence level (Martin and Sunley, 1998).

Neo-Keynesian economists, such as Kalechi (1954), Kaldor (1955-56) and Passinitti (1981) have explained the inter-relationship between income distribution and economic growth. By and large, Neo-Keynesian growth models have concluded that reduction in concentration raises the real wages and provides a redistribution of income which leads to higher capacity utilization and higher rate of economic growth.

In the literature on regional growth and productivity in Indian economy, neo-classical growth paradigm has been extensively used in the recent years due to its theoretical underpinning to understand the inter-regional and inter-country growth and level differences in standard of

living (Dholakia, 1985\textsuperscript{83}, Mathur, 1983\textsuperscript{84}). One of the basic predictions of the neoclassical growth theory is that economies with lower capital-labour ratio tend to grow faster than the economies with higher capital-labour ratio. It predicts that if the economies are similar with respect to their technology, taste and preferences, then there is an inverse relationship between the initial levels of per capita income and its growth rate due to implications of diminishing returns to reproducible capital. Thus, the lower the initial level of PCI, the higher is the growth rate of PCI (Solow-Swan, 1956\textsuperscript{85} & \textsuperscript{86}).

The world economy has grown at an unprecedented rate of increase since mid 20\textsuperscript{th} century, which has increased by approximately fivefold during 1950-1993. Yet, the industrialised economies still dominate the world economy which has accounted for US$22.5 trillion, out of US$27.7 trillion global GDP in 1993. Yet, a remarkable trend since 1980s has been the burgeoning role played by developing countries, particularly the populous economies of East and South Asia (UNDP, 2005).\textsuperscript{87}

A major factor in the development progress in the post Second World War (WWII) has been steady and has integrated the global economies. World Bank (1996) has estimated that the world GDP since then have grown by approximately 25 times. Other measures of globalisation include the enormous expansion of international financial markets, the spread of new technologies that have revolutionised international communications and encouraged the development of transnational patterns of production and consumption. Also, foreign direct investment flowing to developing and transition economies was increased four-fold over the past decade (World Bank, 1996).\textsuperscript{88} The Human Development Report (HDR) of UNDP 1997 showed that in developing countries as a whole, balanced economic growth has enabled giant strides in key indicators of human development since 1960: infant mortality rates have reduced by one half and adult illiteracy rates have increased by nearly one half. Since 1975, the rate of underweight children under 5 years of age declined by almost one half.\textsuperscript{89}

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  \item \textsuperscript{83} Dholakia, Ravindra H (1985): \textit{Regional Disparities in Economic Growth in India}, Himalaya Publishing House, Bombay.
  \item \textsuperscript{86} Swan, Trevor W (1956): Economic Growth and Capital Accumulation”, \textit{Economic Record}, 32:33-44.
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In the midst of high growth rate of world economy, there existed wide variation among the countries. According to CIA World Factbook 2011, the world economy has increased by 3.7% in 2010-11. Among the countries, the highest growth rate was Qatar with 18.7%, while ten countries have exhibited negative growth, of which Greece has witnessed highest negative growth with -6%. Among the East Asian countries, Mongolia (world ranking - third) and China (world ranking - sixth) showed the highest growth rate with 11.5% and 9.5% respectively. In South Asia, the highest growth was Sri Lanka (world ranking - 8) with 8.3%, followed by Bhutan (world rank - 11) and India (world rank - 13) with 8.1% and 7.8% respectively.\(^90\)

Tang et al (2008) conducted a study on how foreign direct investment has helped the growth of China’s economy since the economic reforms in the country with time series data for 30 years since 1978. They have brought a conclusion that there has been tremendous economic growth since the country’s economic reforms. It has grown at a considerable rate as compared to the rest of world. The economic growth of China since 1978 has increased exponentially at an annual average rate of 9%.\(^91\)

Bhattacharya and Shikthivel (2004) in the study of regional growth and disparity in India have shown that the growth rate of GDP has accelerated since 1980s in the country. The average annual GDP growth rate in the first three decades (1950s to 1980s) was only 3.6%. Since then, the GDP growth rate accelerated to 5.6% during 1980s and after economic reforms in the 1990s, it has further accelerated to 6.0%. The reforms have led to a lot of structural changes in Indian economy, such as deregulation of investment - both domestic and foreign, liberalisation of trade, exchange rate, interest rate, capital flows and prices. The post reform period too witnessed a sharp deceleration of public investment due to fiscal constraint, which declined from 45% to 33% in 1980s and 2000s respectively.\(^92\) In a similar study, Kurian (2000) showed that the growth of India economy, which was 3.6% in the first three decades of independence, was quite impressive as compared to other Asian economies. Since 1980, the growth of India’s economy has been enormous during the sixth five year plan (1980-85) with 5.6%; in the seventh five year plan (1985-90), it was increased to 6%. But during two-year period 1990-92 in the wake of international payment crisis and the introduction of major economic reforms the growth was slashed down to 3.1% per annum. Since then, the growth has picked up at a faster rate that during


eight five year plan (1992-97), the growth was at 7.5%. During ninth, tenth and eleventh five year plans, the growth rate was increased at 5.35%, 7.7% and 7.9% respectively.

In general, when economy progressed, the share of primary sector declined and that of the secondary sector increased. After industry gathered momentum, the secondary sector became the dominant sector in the economy. It is only at a later stage when the economy attained a fairly high level of development. Typically when it became a middle-income country, the tertiary sector overtook the secondary sector. This was the general pattern of development, especially in the East Asia countries. In China, for instance, the secondary sector now contributes almost 50% of GDP. However, the India experience showed a different pattern of sectoral growth that both at the national and regional levels. The tertiary sector became the largest sector even before the secondary sector predominated the economy. Gujarat is the only exception in this respect, where the secondary sector has become the largest sector with more than 40% share in SDP in 1999-2000, for which the momentous was raised by 7.8% and 10.6% in 1980s and 1990s respectively (Bhattacharya and Mitra, 1990).

According to Economic Survey of India 2011-12, the Indian economy is estimated to grow by 6.9% in 2011-12. The same report showed that the share of India in global merchandise exports has increased from about 0.5 per cent in 1990 to 1.5 per cent in 2010. Among the sectors, the services sector continued to be a star performer as its share in GDP has climbed from 58% in 2010-11 to 59% in 2011-12 with a growth rate of 9.4%. Similarly, agriculture and allied sectors are estimated to achieve a growth rate of 2.5% in 2011-12, while the industrial sector has performed poorly, retreating to a 27% share of the GDP.

Studies have shown empirical evidence in India that fiscal policy has positive impact on growth of the economy. For instance, Adabar (2005) examined the issue of convergence and economic growth in India by focusing the PCI of 14 major India states. He found that every 1% increase in per capita investment woud increase the trend growth rate of per capita real income by 0.27%, while 1% increase in population growth rate would reduce the growth rate of PCI by 0.15%. Ram and Kaur (2011) has examined the impact of public spending on economic growth taking the data of 14 Indian States over the period 1990-91 to 2007-08. Using the generalised

estimating equations (GEE), the result has confirmed that government spending stimulates growth. Although impacts of public spending in the aggregate as well as of its components vary, their growth impacts remain positive and in a large number of cases highly robust and significant. The elasticity of public expenditure on infrastructure, agriculture and education are found to be 0.1609, 0.1326 and 0.1007 respectively. Also, in China, Paolino found that the Impact of foreign direct investment in China has raised its GDP by 13.58% per annum during 1977 to 2007, which has been significant at 10% level.98

Along side of fast economic growth, there has been accelerated improvement in various indicators of human development since early nineteen eighties whether it is in the case of demographic characteristics or social development indicators. For instance, in India, there have been major strides in the development of health and education sectors. The economy got diversified significantly and the share of the service sector in employment and incomes improved considerably. There is a broad consensus on the overall improvement of the economy and quality of life, but, there are significant differing perceptions about the distributional impacts of these gains.99

The Global HDR (1994) has pointed out that there has been an unfair and inequitable distribution of wealth around the world.100 Kochak (2005) made a comparative study between India and China taking the HDI components to examine the levels of disparity in two countries. She found that the situation of disparity was worse in China than in India. She pointed out that during 2002-03; the highest GDP per capita (at current prices) state of India Chandigarh was 8.8 times higher than that of the poorest state Bihar, whereas in China, the Shanghai’s GDP per capita was 13 times higher than that of its poorest province, Guizhou. The large and growing inter-personal inequalities, interregional inequalities and intergenerational inequalities are likely lead to social tensions which will stall the process of economic development; greater emphasis has to be placed on conservation on the environment and the redistribution of gains of growth to the general population and backward region through appropriate governmental policies.101

Aghion, Howitt and Mayer-Foulkes (2003) constructed the three club-model in which credit constraints caused a lower group of countries to stagnate and a middle group of countries to grow with constrained innovation and lower income, while advance group of countries

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continued to lead in growth. Szorfi (2007) has tested Williamson curve hypothesis in European Union and asserted that for countries at more advanced stages of economic development, higher factor costs and diseconomies of agglomeration, matched with knowledge spillovers led to spatial convergence.

Myrdal (1956) advocated that the forces of convergence and divergence can be neutralised through spread and backwash effects. Kaldor (1966) and Thrillwall (1983) examined this issue in the context of growth in mature capitalist economy and came to the conclusion that the growth of the industrial sector acted as the engine of growth in an economy.

However, literature on the issue for some countries showed contradictory results. For instance, Riskin (1988) observed that in China during 1950’s the regional disparities in growth was much more serious with the growth of industrialisation. The disparity was lesser in less industrialised areas and that the regional convergence took place in the country during the first five year plan 1953-57. Wei (1999) also studied the regional disparity in China and came to the conclusion that the policy for reduction of regional inequality must be one of the major components in industrialisation in China as the situation has become worse with the advancement of industrialisation in the country. Wan and Zhou (2005) pointed out that rural per capita income in Shanghai was 6,224 Yuan, whereas it was only 1490 Yuan in Guizhon provinces. Fan et.al (2008) confirmed from the study of “Regional Inequality in China” that the regional dimension of inequality between rural-urban and inland-coastal had been very prominent in China.

Fedorov (2002) studied the regional inequality and regional polarisation in Russia of 1990s. The result has shown that the transition period due to economic reform has been characterised by rapid growth of economic inequality among regions. Similarly, in Ghana,

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Vanderpnye-Orgle (2002) showed that during the period of stabilisation and structural adjustment programmes (1987-1999), the trend of regional disparities witnessed the corrugated shape. The regional disparities has decreased in the first stage of reform period (during late 1980s) and then declined in the early 1990s before rising up in the late 1990s.\(^{112}\)

Antonyrajan (2003) also attempted to study whether the regional growth is convergent or divergent between prosperous and the depressed regions after economic liberalisation (1977) period in Sri Lanka. He took 39 indicators, disaggregated into five sectors such as education, health, industrial, agriculture and infrastructure. He observed that during pre-liberalisation period (1960-1980), 21 indicators have exhibited convergence, while in post-liberalisation period (1980-2000), only 10 indicators converged in regional disparities. Hence, in general, the regional disparities in Sri Lanka have widened during post-liberalisation era.\(^{113}\)

In most of the countries, it is a common phenomenon that there is vast regional disparity within the country. For instance, Fukuda-Parr et. al. (2005) observed that there was significant disparity in Brazil. During 1970, they found that the South East’s HDI (0.619) was more than double to that of North East (0.245). Again in 1990, it was 0.799 for the South, while the same for the Northeast was only 0.474.\(^{114}\) Also, in Uganda (2007), the HDI value for the states like Wakiso (0.660) and Kampala (0.644) have more than 3 (three) times higher than the state Moroto (0.216) and more than 2 (two) times the states of Kabong, Abim and Kotido (0.292 each).\(^{115}\) Basu and Basu (2005) in their work of “Regional Disparities in Australia: Analysis of Gender Development Index” found that even one of the most successful countries in egalitarian growth and development around the globe Australia has variation in its HDI achievement. It is shown that the highest HDI district ACT had its value of 0.9756, while that of the lowest was 0.9176.\(^{116}\)

The UNDP have done an extensive study on disparities in its HDR 2005. It revealed that out of 73 countries, income inequality had increased in 53 countries (more than 80% of world population), while it reduced only in nine countries (4% of world population). In United States of America (USA) a baby boy from a family in the top rich 5% income distribution enjoyed a life span of 25% longer than a baby boy born in the bottom poor 5%. Death rate in Bolivia was nearly

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1.9 times higher among rural children than among urban children. In Pakistan, the rural-urban gap in school attendance was 27%, but the gap between rural girls and urban boys was 47%. In Vietnam, a single hospital visit charged 40% of the monthly income of people in the poorest 20% of the population. Further, the poorest 20% of the population in the United Kingdom had an income comparable to that of the poorest 20% in the Czech Republic, a far less wealthy country.\footnote{UNDP (2005): \textit{Human Development Report}, Oxford University Press New York: 55}

Bogumit (2009) observed in Poland that regional divergence was further aggravated due to inefficient functioning of traditional mechanisms of regional equalisation like labour mobility, wages and investment. The GDP per capita has reached 82% of the EU-27 (European Union-27) average in Mazowieckie region (including Warsaw), but in 5 (five) other regions namely Lubelskie, Podkarpackie, Swietokrzyskie and Warminsko-Mazurskie, the same was only about 40% of EU-27 average. Hence, Bogumit characterised the regional disparities in Poland into three dimensions: the gap between the western and eastern parts, the privileged position of the capital region and rising differences between rural and urban regions.\footnote{Bogumit, Piotr (2009): \textit{Regional Disparities in Poland}, ECFIN Country Focus Vol. VI (4), May 18.}

Young, Higgins and Levy (2004) studied the US income disparity for the period 1970 to 1998 covering over 3,000 cross-sectional county-levels and concluded that the conditional convergence as well as the absolute convergence did not hold true in the US.\footnote{Young, A T, M J Higgins and D Levy (2004): \textit{\textquotedblright Sigma-Convergence Versus Beta-Convergence. Evidence from US Country Level Data\textquotedblright}, Emory University of Atlanta, GA 30322, April 27.} On the contrary, Lau Chi-Keung, (2009) used the data of per capita personal income for the USA covering the period 1929-2005 confirmed that there was absolute convergence of per capita across the State.\footnote{Lau Chi-Keung, M (2009): \textit{New Evidence About Convergence Across State}, International Research Journal of Finance and Economic. ICCN, Issues 27: 1450-2887} In a similar attempt, Dincer et. al. (2008) studied regional disparities in Turkey based on Socio-Economic Development Index (SEDI). They divided the geographical region into seven regions taking 51 variables into consideration in order to rank the development achievement. They concluded that there existed a wide geographical disparity in the country. The Marmara region (Istanbul region) scored the highest SEDI value of 1.702 while the score of the East Anotolia region was negative with -1.162.\footnote{Dincer, B, M Ozaslan and H Ozgur (2008): \textit{Regional Disparities and Territorial Indicators in Turkey: Socio-Economic Development Index (SEDI)}, State Planning Organization, Pamukkale University, Turkey.} Krimi (2010) studied “Regional Development Disparities in Malaysia” in the areas like quality of life, economic growth and household income increased over
the period 2000-05. The evidence showed that the regional disparity have widened in all these indicators. Also, the disparities in household and per capita income remained prominent.\textsuperscript{122}

In India, one of the notable features of the development is increasing regional disparity as the disparity has widened over the years in the country.\textsuperscript{123} The growth pattern in India showed contradictory to Kuznet-Williamson inverted U-shape as the disparity in the initial period of development planning was narrowed down, but it has started to increase since mid sixties and continued to rise during plan era. For instance, Ganguli and Gupta (1976) constructed levels of living indices for 15 Indian States by taking into account three time periods; 1955, 1960 and 1965 using Proci pal Component Analysis method. The components used were nutritional intake, housing, medical care, education, clothing, leisure, security and environment. They found that the critical minimum distance declined during the period 1955-1965 with 6.04 to 5.61 in 1955 and 1960 respectively and further to 4.88 in 1965.\textsuperscript{124} Also, Rao (1977) in an attempt to identify the regional backwardness undertook 24 variables in sectors such as agriculture, industry, education and banking. He brought similar conclusion that coefficient of variation (CV) values for the composite index declined from 19.70\% to 13.72\% in 1956 and 1965 respectively.\textsuperscript{125}

However, in the study of regional development in India undertook by Nath (1970) by taking PCI of 14 Indian States showed that the regional disparity in India declined in the early sixties but risen up since late sixties in the country in the wake of Green Revolution.\textsuperscript{126} In the works of Krishnaji (1993)\textsuperscript{127} and Hashlim (1995)\textsuperscript{128}, the regional disparity in terms of PCI showed declining in 1960s, but since then, it rose up and has widened in the reform period in India. Noorbaksh (2003) has evidence that the disparity in per capita NSDP among the states has increased from 42.84\% to 46.08\% (CV) during 1980’s to 1990’s in the country. He pointed out

\textsuperscript{122}\textsuperscript{122} Krimi (2010): \textit{Regional Development Disparities in Malaysia}, Available at \url{http://www.jofamericanscience.org/journals/am-sci/am0603/10_2063_Regional_am0603_70_78.pdf}; Accessed on 23/03/2011
\textsuperscript{123}\textsuperscript{123} Banerjee, Anuratha and Ahluwalia Dupa (2003): “Regional Disparities in Demographic Economic and Social Development in India” in A C Mohapatra and C R Pathak (eds), \textit{Economic Liberalization and Regional Disparities in India}, Star Publishing House, Shillong.
\textsuperscript{128}\textsuperscript{128} Hashlim, S R (1995): \textit{“Regional Disparities in India”}, Planning Commission 1995,
that lack of infrastructure in backward states, which are caught in a vicious circle of deprivation, is the main cause behind regional disparities.\textsuperscript{129}

Mathur (2003) examined a few key facets of national and regional economic growth in India like growth of NSDP and PCI with special focus on the 1980s and 1990s. From the study, it emerged that the growth trend had been fluctuating indicating that declining growth momentum of the seventies was broken and that the pace of overall growth in the eighties was marginally improved, which continued till nineties. Among the states, Andhra Pradesh, Maharashtra and Gujarat emerged as the three fastest growing state. There were considerable sectoral growth rate disparities in case of developed state from the eighties to nineties. From the same study, it was found that the inter-temporal behaviour of coefficient of variation of states’ level PCI showed tendency towards decline till the mid sixties but, thereafter, there had been almost a continuous increase along a U-shaped curve of regional disparities among states in India.\textsuperscript{130}

The empirical evidence has shown by Kurian (2000) that the stabilisation and deregulation policies in new economic reforms 1991 have widened the regional disparities in per capita income. He further observed that the current disparity is diverging rather than converging.\textsuperscript{131} In the same line, Jha (2001) has analysed Real Per Capita NSDP among 15 Indian States and showed that the standard deviation has widened from 513.7 to 834.5 in 1980-81 to 1992-93 respectively.\textsuperscript{132} The Tenth Five Year Plan (2002-2007) Volume III has also pointed out that the statistical figure of standard deviation in HDI for 1981 was 0.083, which was further increased to 0.100 in 1991 among the States in the country.\textsuperscript{133} Thorat (2011) has studied the growth, inequality and poverty for the period 1983-2005 in India. He estimated the inequality in income distribution using Gini coefficient and resulted that its inequality has increased from 0.34 during 1983 to 0.35 in 2004-05. The increase has been gradual and similar during the two time period, increasing to 0.35 in 1993-94 and keeping constant in 2004-05.\textsuperscript{134}

The NCAER (1994) in a survey of the disparities in ‘Human Development Profile of Rural India’ concluded that the inter-state disparities in the levels of income persists, but the

inter-population disparities appear to narrow in certain human development parameters. The India’s HDR (1996) presented a study of disaggregated HDI for 16 Indian states showed that the inter-state disparity was significant, with Kerala at the top (0.597) and Uttar Pradesh at the bottom (0.310). Dubey and Srivastav (2003) examined regional disparities using NSSO data of normalised income for 32 States’ (including Union Territories). The study has concluded that there was no evidence of regional convergence among the Indian States. Many studies on convergence across the states in India like Nagaraj, Varoudakis and Venganzous (1998), Rao, Shand and Kalirajan (1999), Shand and Bhide (2000) and Ahluwalia (2000, 2002) made observation that regional disparities in India had widened especially during 1990s. The inter-state disparity in per capita SDP had significantly increased from 27.27% to 33.33% in 1981 to 1991 respectively.

Anuradha and Rao (1995) examined inter-states disparity in the levels of industrial development on the basis of ASI and CSO data for the period 1970-71 to 1985-86 in India. They have found that although there was inequality in absolute terms, the process of industrialisation was characterised by an inequality in its spatial distribution; relatively speaking there was tendency to decline. During 1971-85 industrial production has increased by more than 6 (six) times in terms of value added; employment has increased by only 42% and number of factories by 56%. Industrially developed states like Maharashtra, Gujarat and Tamil Nadu continued to grow. There was a decline in the growth of industrialisation in West Bengal, where its rank fell down from second in the 1970-71 to 5th rank in 1985-86. This has reduced the regional disparity to a great extent in India. However, Joshi (1997) observed from his work “Regional Disparities in Industrial Development in India” that despite adoption of a number of policy resolutions since 1956 for industrial development and its decentralisation, regional disparities continued to persist. During 1969-92-93, the pace of industrial development in the backward states was slow.

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compared to that of the developed states. The Government policy of industrial dispersal has not affected the industrially developed states like Maharashtra, Gujarat, Tamil Nadu, Andhra Pradesh, Punjab and Uttar Pradesh. On the other hand, industrially backward states like Himachal Pradesh, Jammu & Kashmir, Assam, Orrissa, Rajasthan, Haryana Kerala and Madhya Pradesh and other North Eastern states even though eligible for subsidy in investment, incentive and concessional schemes could not come up industrially.

Similar conclusions were arrived in the work of Dutta and Mukhopadhyay (1999) that the industrial diversification is closely associated with the higher level of industrial development. In the backward states industrial structure is dominated by a few capital intensive heavy industries. Hence, there was no tendency to converge in industrial development in India. Also, Pathak (2003) observed that during 1970-71 about 58% of registered factories were concentrated in Gujarat, Maharashtra, Tamil Nadu, West Bengal and Andhra Pradesh. These states continued to have the highest position, which increased to about 60% during 1992-93. Hence, it has concluded that the persistence of regional disparity in India has accounted for lack of industrial development in the backward States. The locations of few capital and technology intensive industries in the backward states failed to make a breakthrough in the structural backwardness of those areas.

The industrial disparities appear to be more serious when the North Eastern States are compared with the rest of the country. Buruah (2001) studied the industrial disparity in the indicators such as manufacturing outputs and its per capita, registered factory, contribution of industry and mining to NSDP, infrastructure (power, irrigation, transport and communication, education, health and banking) and registered small scale industry units for 24 states taking the period 1970-71 to 1990-91. He revealed that except Assam (ranked 16 in 1970, 18 in 1980s & 17 in 1991), all other states of North East Region (NER) were ranked behind 20. Hence, he concluded that while economic reforms were welcoming, widening disparity was a matter of concern in India.

Study showed that the financial investment by both foreign investors and all India financial institutions had bias in favour of more advanced western region (Goa, Gujarat and Maharashtra), making them “Vicious Circle of Prosperity”. In contrast, despite rich resource

based in NER, there was negligence by both foreign and domestic investors owing to lack of infrastructure, local entrepreneurs and congenial law and order. Thus, they failed to come out of the “Vicious Circle of Poverty”. Consequently, the disparity between the regions had widened especially in post reform period.¹⁴⁷

Dey (2003) made a comparative study in India between the NSDP between coastal states like Kerala, Maharashtra and Tamil Nadu and non-costal states like Arunachal Pradesh, Assam, Bihar, Manipur, Meghaleya, Nagaland, Orissa, Sikkim and West Bengal. He found that the costal states NSDP was 2.41 times higher than that of non-costal states.¹⁴⁸ Further, the World Bank (2006) observed that there was sharp differentiation across states since the early 1990s, which meant that there was acceleration of growth in some states but deceleration in others. The report also adds that more worryingly, growth failed to pick up in states such as Bihar, Orrissa and Uttar Pradesh that were initially poor to start with, as a result, the gap in performance between India’s rich and poor states widened dramatically during 1990s.¹⁴⁹

Bhattacharya and Sakthivel (2004) made a comparative study between pre and post reform decades in development disparities in 17 Indian states. They observed that the disparity in per capita SDP has widened from 22% during pre reform period (1980s) to 43% during post reform period (1990s). The backward states with higher population growth did not attract investment from both public and private investors due to various reasons like poor income, poor infrastructure and probably poor governance. Hence, with deregulation of private investment, there has been an increase in regional disparity in India.¹⁵⁰ Adabar (2005) in the study of “Economic Growth and Divergence” showed that economic growth in India for the period 1976-77 to 2000-01 has been absolutely divergent with 12% every five year.¹⁵¹

Dholakia (2003)¹⁵² and Gupta (2009)¹⁵³ observed that the per capita income does not show any significant trend in reducing regional disparity, but the overall indices of human

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¹⁴⁸ Dey, J (2003): “Geography and Economic Growth; South Coastal States and Eastern States of India” in Mohapatra and Pathak (eds), Economic Liberalization and Regional Disparities in India, Star Publishing House, Shillong.
development (HDI) showed the declining trend during 1981-2001 in India. The western states were better off in per capita income while the southern states were better in HD indicators. Singh and Nauriyal (2006) showed established regional disparities in India for 15 Indian states over the period 1983-2000 on cross sectional setting. The study revealed that the disparity in health sector has increased from 7.74% in 1991-95 to 25.94% in 1999-00. Also in per capita consumption expenditure, it has increased from 15.75% to 21.75% in 1983 to 1999-2000.\(^\text{154}\) Gaur (2010) has empirical evidence that inequality was much more prominent during the reform period (1991-2002) particularly in per capita income. He measured Gini coefficient for income distribution in India which showed that its value increased from 0.3152 to 0.3676 during 1993-94 to 2004-05 respectively, where the states such as Bihar, Orrisa and U.P failed to pick up with the richer states, while states like Gujarat, Haryana and Maharastra remained at the top.\(^\text{155}\)

Goswami (2001) stated in his book “Regional Disparities in India” that the regional disparities especially in input factors such as physical infrastructure led to the overall regional disparities in India.\(^\text{156}\) Nayak (2005) has observed that there existed wide spread disparity of socio-economic achievement across the states as well as within a state and from urban to rural areas particularly in economic growth in North East Region (NER) of India.\(^\text{157}\) Agarwala and Hazarika (2003) found that in Assam there existed vast inter-district disparities in the level of development, particularly in infrastructure, where the coefficient of variation was 28.87% with N.C. Hills and Kokrajhar as the most and least developed districts respectively in the year 2000.\(^\text{158}\) The Assam HDR (2003) also showed that the highest per capita income district Jorhat had more than 3 times higher than that of the lowest district Darrang.\(^\text{159}\) Thaker and Shiyani (2009) studied inter-district disparity in Gujarat taking 57 indicators for the period 1991-2007. They observed that there was convergence in EG indicator such as agriculture and industry. However, in human development indicators and infrastructural development, it widened during the reform period (1991-2001).\(^\text{160}\) In a case study of inequality in human development in


\(^{159}\) Assam Human Development Report (India) (2003).

Maharashtra conducted by Kamdar and Basak in 2005 found that the most backward district in terms of HDI Gadchiroli has its value of 0.21 only, while the most developed district Mumbai has attained its value of 1.00.\textsuperscript{161}

Tyagi (1994) in the study of agricultural development of Aligarh district using standard scores concluded that regional disparities at block levels needed special attention of the government on priority basis particularly in technological transformation.\textsuperscript{162} In Punjab, several studies showed that since Green Revolution (1966) in the country, there has been a high degree of inter-district variation in yielding (Kaur and Sethi 1995\textsuperscript{163}, Vema and Das, 1995\textsuperscript{164}). Similarly, Mohanty (1999) studied inter-districts disparity in agricultural development of Andhra Pradesh in 32 indicators using method of indexing at three points of time. He concluded that a strong regional cohesion-spread effect and government intervention benefited the advantaged districts in their development.\textsuperscript{165}

In Nagaland, according to NSHDR 2004, there was a vast inter-district disparity especially in PCI where the highest district Dimapur (Rs. 16,837) had about four times higher than that of the lowest district Mon (Rs. 4,500) in 2001.\textsuperscript{166} Similarly, the Arunachal Pradesh HDR 2005 stated that an inequality in the distribution of resources was limited before the reform period. However, in the post-reform period, it had widened. The same report showed that the IMR for Kurung Kumey (133) was more than double to that of Lower Dibang Valley (53). Also, the HDI for East Siang (0.660) district was almost double to that of East Kameng district (0.362).\textsuperscript{167} The Tripura HDR (2007)\textsuperscript{168} also revealed that there was considerable performance of growth rate in the State. But the variation in the growth rate varies from 6.1\% in Dhalai district against 7.9\% in North district. There has been a vast disparity of development particularly in per capita income and HDI among North Eastern States of India.\textsuperscript{169}

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\textsuperscript{161} Kamdar, S and A Basak (2005): “Beyond the Human Development Index, Preliminary Notes on Deprivation and Inequality”, Economic and Political weekly, Vol. No. 34, August 20: 3759-3765
\textsuperscript{165} Mahanty, G (1999): “Regional Development in Andhra Pradesh ‘A District Level Analysis”, Indian Journal of Regional Science, 31 (2)
\textsuperscript{166} Nagaland State Human Development Report (India) (2004)
\textsuperscript{167} Arunachal Pradesh Human Development Report (India) (2005)
\textsuperscript{168} Tripura Human Development Report (India) (2007)
\end{flushright}
Thus, it is observed that one of the most important concerns of India’s development progress is its remarkable regional disparity. The inter-state disparity in income, according to findings of another study, widened due to multitude of complex factors. Among them were quality and standard of governance, resource endowments, proximity to raw materials, absence of genuine land reforms, quality of human capital and infrastructure.

2:3: GENDER DISPARITIES

Women and men share many aspects of living together, collaborate with each other in complex and ubiquitous ways, yet, ended up often with very different reward and deprivations. The gender disparity and discrimination, although existed along with the development process, it has been lately realised in the literature of human history due to its theoretical limitations. UNDP in its HDR 1995 has turned up sharply against the gender discrimination. The same report introduced new measurement of development in regard to gender difference as Gender-related Development Index (GDI) and addresses the gender issues at large. In pursuance of rapid growth and development, there is need for fresh economic and social analyses as well as careful and probing empirical research. Lack of education, joint family system and stringent patriarchal ideologies particularly in the rural areas can be collectively held responsible for gender differences (NCEAR, 2001).

Paul (2006) sorted out two categories of work: work for payment and work for no payment. Due to the fact that many women’s works fall under the second category, it fails to recognise the work value of women for long time. A major reason for the under valuation of women’s work is that it does not enter into National Accounts System, which only considers market oriented productive activities.

Gender disparities are among the deepest and most pervasive of all the developmental inequalities. Shiva Kumar (1996), in his computation of gender disparities in India showed that the mortality rate among children ages 1-5 years was 50% higher in girls than that of boys. He showed that if India closed the gender gap in mortality in ages 1-5 years, it would save 130,000

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173 NCEAR (2001), South India HDR: 264,281.
lives reducing its overall child mortality rate by 5%. In the same work, he further pointed out that in Indonesia maternal mortality ratios were four times higher among women in the poorest 20% of the population than among women in the richest 20%.

In India, the reason which kept girls out of school was because of the commonly held belief that the more educated a girl, the greater the difficulty in finding a good match and higher the dowry. Besides, parents were reluctant to send their daughters to schools after puberty, especially if school was not in the proximity. These reasons increase gender discrimination in India (Somvanshi, 2006).

Dreze and Sen (1995) maintained that the low gender-ratio which created conditions for discrimination at various levels captured the extent of intra-household gender inequalities. According to NFHS-2, among the female respondents, 84.1% decide what items to cook, but when it comes to obtaining health care, only 32.1% participate in making decision with their husbands. The MHHDC (2002) estimated that the daily workload of a working class village woman in South Asia stretched from 12 to 16 hours. However, women were generally paid lower wages than men and denied of owning land. In Bangladesh, women were paid only 71% of what men earn, while that of Pakistan in rural areas was only 59%. In India, the gender-gap in work participation ranged between 41-48% across the states.

UNDP (1999) conducted an intensive study on gender disparity and pointed out that Austrian men spent an average of 70% of their time in paid labour and 30% in unpaid labour, whereas 70% women were engaged in unpaid labour and 98% women in part-time job. In Denmark, about 65% of men in the labour force worked 30-39 hours a week, 30% worked more than the given hours and 5% worked less than that. In case of women, 69% of women work 30-39 hours, whereas 11% worked more and 20% worked less than the aforementioned hours. In Italy, married women with children spent 7.5 hours a day in care work, while that of men was only 1.5 hours. In Netherlands, women spent twice as much time in unpaid work at home than men. Also, women in Spain spent 7 times as many hours doing domestic work than men.

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The UNDP (2010) in its HDR identified that women’s lack of power and voice as the main reasons behind gender inequality in South Asia. It has estimated that the global loss in economic growth due to gender inequality was 56%, mostly concentrated in South Asia, Sub-Saharan Africa and the Arab States. The lost in South Asia was estimated to be 74% as compared to 32% in developed OECD countries. Among the South Asian nations, the poorly performing countries on Gender Inequality Index\(^\text{181}\) (GII) were Afghanistan, Bangladesh, India and Nepal with 54% each and Sri Lanka 60%. It was estimated that the developed OECD and non-OECD countries came 0.317 and 0.376 respectively against the world level of 0.560.\(^\text{182}\)

In the midst of high gender inequality, it is relevant to present the statement of erstwhile Prime Minister, Jawaharlal Nehru that “to awaken the people it is the women who must be awakened, once she is on the move, the family moves, the village moves and the nation moves” .\(^\text{183}\)

2.4: LINKAGES BETWEEN ECONOMIC GROWTH AND HUMAN DEVELOPMENT

Many studies showed that economic growth provides resource to achieve improvement in human development, while an improvement in human development plays a significant role in achieving higher economic growth. Hence, there is a strong two-ways positive linkage between Economic Growth (EG) and Human Development (HD) depending upon various factors like the structure of an economy, the distribution of assets and policy choices.

There are empirical evidences that increase in income improves literacy rate and reduces infant mortality rate. Also, the expenditure of household as well as government on human development oriented items improves human development. On the other hand, the institutional heritage of the society affects the linkage between EG and HD, when people act together to promote their well-being, when public morality is high, when community monitors malfeasance and when it participates extensively in public life, ceteris paribus, the links would be stronger, i.e. HD achievement is likely to be positively associated with the strength of social capital.\(^\text{184}\)

Recent development experiences have underlined the need for paying a close attention the link between EG and HD because many fast growing developing countries having high GNP growth rates have failed to reduce the socio-economic deprivation of substantial sections of their population. Countries like Georgia, Indonesia and Jamaica having very low per capita GDP but

\(^{181}\): GII is a method for measuring Gender Disparity introduced in 2010.


achieve high levels of HD, whereas South Africa in spite of a very high per capita GDP could achieve a relatively low level of HD.185

2.4.1: Inducement of Economic Growth to Human Development

There are empirical evidences showing the linkage between EG and HD that operates through trickle down effects of EG on improvement in HD. Ranis et. al. (2005) have empirically examined that there is a strong inducement from economic growth and human development. In the study of EG and HD in 35 to 76 countries for the period 1960 to 1992, they have found that 1% increase in average growth rate of GDP is estimated to reduce life expectancy of shortfall by 3.25%. Also, one percentage increase in social expenditure reduces life expectancy by 1.75% significantly.186

Patel (1993) in the study of “Productivity of Human Factor” pointed out that Ragnar Nurkse’s explanation of ‘Vicious Circle of Poverty’ can be broken, once the investment decision is made effectively on human development oriented items. He also pointed out that in India; HD is directly related to the economic soundness of tribals and other backward castes.187 Other empirical evidence from the work of Chakraborty (2003) in “Public Expenditure and Human Development: An Empirical Investigation” also proved beyond doubt that the effect of per capita spending in social sector raises HD significantly.188

Ghosh (2006) examined the two way relationship between EG and HD of 15 major Indian states, taking the indicators of literacy rate, life expectancy at birth, PCI and HDI. He concluded that EG measured by per capita income has significant positive effects on all the HD indicators. The impact of PCI on HDI, literacy rate and life expectancy are significant at 1% levels. He has further empirically shown that the social sector expenditure is an important factor in achieving regional convergence in human development through its positive effects on literacy rate, life expectancy at birth and HDI.189

It is well envisaged that income as the facilitator has improved human development through trickle down effect. The China’s HDR 2005 claimed that the high income growth has attributed considerably to the advance in the ranking of HDI from medium level (0.755) during

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1980s by 20% since 1990. Similarly, in India, the Tamil Nadu HDR (2001), in its first report stated that the HDI (0.667) of the state which was above national average (0.472) was credited mainly to the higher level of income. In this line, Kerala (India) HDR (2005) asserted that her life expectancy and literacy rates were comparable to those of many developed countries. But they do not enjoy many of the benefits of citizens of such countries due to comparatively low level of per capita income. Office of the United Nations in the Republic of Belarus has claimed that economic constraint was preventing many people from realising the benefits of political and economic changes, which led to low level of HD in the country. Thus, higher income has indirectly facilitated the achievements of other crucial HD.

Hussain (1999) in the study of Human Geography showed that out of 174 selected countries, 98 ranked higher on HDI than on GDP per capita (ppp$). Thus, he concluded that these countries have converted economic prosperity into human capabilities effectively. Misra (2001) has drawn a similar conclusion from the work of ‘Human Development - Inter-State Dimensions’ that in order to promote human resource and to sustain economic growth in the long run, it is essential to pursue simultaneously the policies of economic expansion and greater provision by the state of merit goods and services to enhance basic human capabilities.

NCEAR (2001) confirmed that investment made in natural environment and awareness about cleanliness has contributed to the good health of the people of Madapura in Karnataka (India). Empirical evidence showed that the expenditure on human development-related items is strongly affected by the rate of increase in income. For example, income elasticity of demand for food in case of poor people in India is fairly high, revealing that if poor households receive extra income, they increase their food expenditure and calorie consumption significantly. Of the thirty-eight studies in different countries, one-third indicates that at least one-half of additional income is spent in this way (Strauss and Thomas, 1995).

Ishikawa (1997) in the study ‘Growth, Human Development and Economic Policies in Japan during 1955-1993’ revealed that the expenditure in educational sector did not hamper even during the war. It continued to be the biggest single item of government expenditure until the mid

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1960s. Also, during 1970s the expenditure on education again increased to the peak of 6.7% of GDP in Japan. This had an impact on increase in human resource in the country. Similarly, Nauriyal, Sahoo and Dixit (2009) provided empirical evidence that the impact of EG on enrolment in graduation and above in India had been significant.

There is an evidence that the developing countries which have sustained EG in the past three decades were generally the countries in which, the rate of agricultural growth exceeded population growth. MHHDC (2002) revealed that a 3% growth in the agricultural sector from 1980 to 2000 led to a 5% growth in the overall economy in South Asia, whereas the same 3% agricultural growth led to 7% GDP growth in East Asia and Pacific region. These growths have further enhanced HD.

Agricultural growth has also an indirect impact on growth in labor-intensive-non-farming activities like food and beverages industries. Sarris (2001) proved that improvement in farm production helps spur non-farm activities in rural areas and as such non-farm activities came to be seen as a very crucial element to insulate better human well-being. In Poland, Bogumit (2009) confirmed that the labour productivity is strongly and negatively correlated with the share of employment in agriculture (correlation coefficient is -0.86) while the labour productivity was strongly positively correlated with human resources in science and technology (correlation coefficient is 0.59) during 2001-2005.

In semi–logarithmic framework of regressing, proportionate shortfalls of life expectancy against per capita GDP showed that nearly half of the variations in the life expectancy could be attributed to differences in GNP per head (Anand and Ravallion, 1993). Filmer and Pritchett (1999) estimated that more than nine million children under the age of five died avoidable deaths in the world. They found that 95% of the variation in mortality across countries is explained by per capita income, inequality, female education and ethnic fractionalisation. Similarly, Cutter and Miller (2005) estimated that in poor countries, 30% of deaths were among children, as

compared to less than 1% in rich countries.\textsuperscript{204} In Japan, an increase of 1% in real public hygiene expenditure reduced 0.1% decrease in less than five mortality rate and 0.16% in infant mortality rate.\textsuperscript{205} Further, Balhotra (2007) confirmed that in India, health expenditure became a significant impact in reducing mortality rate. A 10% increase in health expenditure in period (t-3) resulted in a drop of infant mortality in period ‘t’ by 1.9%. But, the long run elasticity with respect to income was about 30% higher than that of nation’s health expenditure.\textsuperscript{206}

Hence, it is obvious that income growth is positively associated with improvement in well-being of the people. It is one of the main contributors that has directly enhance the capabilities of individuals and consequently the HD of a nation, as it encapsulates the economy’s command over resources (Anand and Sen, 2000).\textsuperscript{207} The occupied Palestinian territory HDR (oPt HDR 2009/2010) stated that until Palestinians take over the control of economic resources and environment, especially over macro-economic policy, HD would remain elusive, as the main key factor behind nation well-being is that of economic resource.\textsuperscript{208}

Thus, Haq (1995) pointed out four ways to create the desirable linkage between EG and HD. First, emphasise of investment in education, health and skills of the people would enable them to participate in the growth process as well as to share its benefits, principally through remunerative employment. Second, more equitable distribution of income and assets are found to be critical for creating a close link between EG and HD. Third, well-structured social expenditures by the government managed to improve HD significantly although low growth, and fourth, empowerment of people, particularly women was recognised as a sure way to link growth and HD.\textsuperscript{209}

2.4.2: Inducement of Human Development to Economic Growth

There are several evidences that human development in terms of education and health have positive impacts on economic growth. Vivekananda (1996) in his work “Analysis of Human Resource in Hyderabad-Karnataka” showed an evidence that HD was an important factor that a state can make use to stride out its economic development if deployed in gainful economic

\textsuperscript{208} UNDP (2009-10): Occupied Palestinian Territory (oPt) Human Development Report.
activity. In the similar connection, Streeten (2005) pointed out two important impacts of higher education in economic development; first, a more-educated and trained workforce raised the productivity of the cooperating factors as they were more likely to innovate and be more efficient in general and second, better education benefited others who could consequently earn more in addition to the educated person.

The Orissa HDR (2004) stated that people accessing more opportunities in social, political and economic participation enhances economic development. Fukuda and Shiva Kumar (2005) too asserted that economic development could take a major stride as and only when people were able to wrestle for their welfare and rights. This could be possible only when a person have acquired proper knowledge and confidence. Tambunan (2005) observed from the Indonesia experience that a rapid and steady economic growth is a necessary condition, especially in the short and medium term. However, in the long run, the nature of the growth, improvement in education and health, development of infrastructures and many other factors have direct effect in the well being of the people.

Ghosh (2006) found that there was two-way causality between EG and HD among the Indian states. He estimated that the impacts of LR, LEB and HDI on PCI are statistically significant at 1% levels, which gave rise to the possibilities of various cycles of development. Thus, he suggested that a state need not wait until it attained high level of EG before undertaking large investment for expansion of education and health services. The HD improvement programmes should be given priority by allocating more resources to social sectors in any economic reforms for achieving sustainable economic development. Singh and Nauriyal (2006) observed from the experiences of Kerala (India), Brazil, Bolivia and Peru in Latin America that policy reforms on education and health held the key for a tangible improvement in

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social and economic development. They concluded that the states which had taken programmes relating to HD in advance and had right monitoring mechanism had progress faster.216

Studies in rural Pakistan and in urban Kenya and Tanzania showed that education has positive impact on earning of an individual. It is empirically shown that additional earnings due to cognitive achievements were higher than those with simply to schooling (Bossier, Knight and Sabot, 1985217; Alderman, Berhman, Khan, Ross and Sabot, 1996b218). Also, Barro and Lee (1993) have shown that there exist positive effects of education on EG.219 Bourguignon and Morrison (1990) estimated from the work of “Income Distribution, Development and Foreign Trade: A Cross-Sectional Analysis” that 1% increase in the labour force with at least secondary education would increase income of the bottom 40 and 60 per cents by between 6% and 15% respectively.220 Psacharopolous et al (1992) proved that in Latin America, the returns of primary schooling tend to be greater than that of secondary and tertiary education.221 Psacharopolous (1994) further enriched their literature that education and health have strong indirect impact on EG through effective distribution of income.222

Wood (1994) argued that the role of education had substantial contribution in modern factory. He opined that even unskilled workers in a modern factory normally need literacy, numeracy and discipline acquired in primary and lower secondary school.223 Ishikawa (1997) gave evidence that in Japan the spread of secondary and even higher education provided trainable young workers who could adapt relatively easier to new technology, which in turn enhanced economic growth.224 Nauriyal, Sahoo and Dixit (2009) have examined the relationship between knowledge and EG in India since 1975. They concluded that the impact of primary education was significant at 1% level, while that of secondary and tertiary education were at 10% and 1% level

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respectively. Thus, it implied that the positive contribution of tertiary level of education is higher than secondary level of education in post liberalisation era. Jamison and Mock (1984) showed that in Nepal, the completion of at least seven years of schooling increased productivity in wheat by over a quarter, and in rice by 13%. A similar level of education was estimated to increase farm productivity by 10% or more in India and Pakistan (Azher, 1991; Butt 1984).

Deraniyagala (1995) showed that in Sri Lanka, the quality of private entrepreneurs, public policy makings and investment decisions were generally bound to be influenced by the education of both officials and managers. Moreover, the volume of both domestic and foreign investment and the rates of total factor productivity will undoubtedly be higher when a system’s human capital level is higher. Trivedi (2002) conducted a study on the nexus between education and income for 14 India states taking the period 1963-92. In his analysis, he confirmed that the stock of educational capital particularly in secondary enrolment had a significant positive impact on the steady level of per capita income in India.

Kochak (2005), in her comparative study of China and India in HD indicators, showed that the HDI rank for China was five above its GDP rank, while the HDI rank for India was ten below its GDP rank. This is an indicative of the different development strategies followed by the two countries. She claimed that because of its socialist background, the Communist Party of China gave greater priority to provision of basic social services like health and education to its people compared to India. This goes to prove that China produced more healthy and educated labour force and hence increased productivity and growth faster than India.

Further, the importance of public spending on human development oriented items for enhancing economic growth have been empirically proved. Zhu et al (2008) estimated the economic participation rate of education in China in the study of “A Better Estimate to the Contribution Rate of Education on Economic Growth in China from 1999 to 2003”. He divided 31 Chinese provinces into 3 groups. The first group included two advanced provinces of China,
in this group the elasticity of economic participation rate (public spending) of education was 11.6%. The second group included 11 developing provinces of China, the economic participation rate of education was 8.82% and in the third group, which included 18 undeveloped provinces, the rate was 1.49%. Hence, this research showed that there was positive relationship between human capital and economic growth.\(^{232}\)

Oluwatobi and Ogunrinola (2011) examined the impact of government recurrent and capital expenditures on education and health and their effect on economic growth in Nigeria. The study covered the period 1970 to 2008 using Solow’s growth model. It showed that 1% change in recurrent expenditure on education and health resulted in 0.15% change in the level of real output.\(^{233}\) In a similar study, Babalola (2011) carried out the study of Nigeria experience to examine the long-run relationship between investment in education and economic growth in Nigeria using annual data for the period 1977 to 2008. His analysis showed that there was positive correlation between increase in educational investment and the output level of GDP. He further estimated that in Nigeria during the aforementioned period, 1% increase in educational investment raises the level of GDP by 107.1% which is statistically significant at 1% level.\(^{234}\)

Ramirez et al. (1998) worked out the linkages between economic growth and human development taking the indicators like literacy rate, life expectancy and GDP for 35 to 76 countries. They estimated that 1% increase in adult literacy rate raised average real per capita GDP growth by 0.03%, while 1% increase in life expectancy had a positive impact on growth by 0.03% to 0.09%.\(^{235}\) A longitudinal study of children to prevent malnutrition would generate 6 to 8 times the cost of the intervention in terms of additional productivity (Selowsley and Taylor, 1973).\(^{236}\) A similar study in Cali (Colombia) found that a person acquired health and nutrition programme increases the lifetime earning from 2.5 to 8.9 times higher than those of an illiterate worker (Selowsley, 1981).\(^{237}\)

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Strauss and Thomas (1998) reviewed large literature on nutrition and development showed that improvement in health and nutrition improved productivity, which was observed to be associated with increase in calorie intake particularly in poor countries. Arora (2001) in the study of 62 health-related items in time series for nine advanced economies over the last 100-125 years concluded that in the co-integrated relation between health and income, innovations in health led to economic growth by 26 to 40 per cents. Weil (2001) arrived at a similar magnitude from the study of ‘Accounting for the effect of Health on Economic Growth’ that the contribution of health to economic growth has been enormous. Empirically, Kambiz et al (2011) examined the impact of health on economic growth of Organisation of Islamic Conference (OIC) member states, taking the time series data for the period 2001-2009 in the framework of a Semi log regression model. They found that life expectancy had a positive and significant impact on economic growth of OIC member states. Also, it was observed that life expectancy coefficient on economic growth was very large (193) as compared to that of real GDP and fertility rate of 76 and -19 respectively.

History and macroeconomics studies show that there are substantial effects of nutrition and health on income level in poorer countries, which lead to the divergence in the dynamic growth of intergeneration. Hence, weak HD traps EG slower. Mayer-Foulkes (2003) found that in Mexico, 90% of the population were unable to invest optimally in education, which resulted in slow growth of the economy. An experience of occupied Palestinian territory (oPt) showed that stagnation in human development like lack of educated graduates in macro policy formulation was a major hindrance to economic development (UNESCO, 2007) and oPt HDR (2009/10) stated that EG in Palestine was not adequately taking place because of excessive denial of HD factors such as proper food, health care, sanitation, education, etc. Thus, quality education was deprived, particularly in preparing graduates for the adequate future job market. Ranis, Stewart and Ramirez (2000) concluded that if good EG would not be accompanied by good HD, it would

be ultimately unsustainable. Human development could moreover exhibit household effects, in the sense that nations must attain a certain HD level before future EG would become sustainable.  

### 2.5: Female Education and Human Development

Education, especially female education, has led to many social benefits such as improvement in standards of hygiene, reduction in infant and child morality rates, and decline in population growth. M.K. Gandhi once stated that “You educate a man and you educate an individual; you educate a woman and you educate a family”. A study in urban India showed that child mortality rate was as low as 34/1000 with educated mothers, as compared to 82/1000 for uneducated mothers (MHHDC, 2002). Kingdom and Unni (2001) in the study ‘Education and Women’s Labour in Market Outcomes in India’ showed that higher the investment in elementary schooling and women’s education; higher the return of EG.

There is significant impact of female education on health due to the behavioral pattern of female income, knowledge, and control within the household. Moreover, when these variables are added, social expenditure becomes less significant on improvement in health as female education has greater impact on it. The study showed that female primary gross enrolment rate is estimated that 1% has reduced the life expectancy shortfall by 0.1%. Also, Kingdom and Theopold (2008) observed that the higher economic returns had a positive substitution effect for girls, while the negative income effect was stronger for boys in poorer households in India. The fact is that girl’s education was substituted by household work, while boys participated in economic activity and earned supplementary incomes for the household. Further, Unni (2009) empirically proved that the return to female education was found to be higher than male education in India.

The education of the female has undoubtedly played a significant role in improvement of HD. A case study in Brazil showed that an increased in the non-labour income of women increased

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247 Mahbub ul Haq Human Development Centre (2002): *Human Development In South Asia*, Oxford University Press, Karachi:15
the probability of child survival by 20 times higher than that of men (Thomas, 1990). In the same line, it was observed that female education tend to improve infant survival and nutrition (Schultz, 1993).

Greene and Merrick (2008) established evidence in Mexico that early child-bearing was associated with poor living conditions, lower monthly earnings and decrease in child nutrition. Also, Gupta (2009) confirmed that in India, the HDI was positively correlated with female education and negatively correlated with anemia women, spousal violence on women and Maternal Mortality Rate (MMR) at 1% levels of significant. Permanyer (2009) showed that an investment in women and girls education could be a vehicle to promote long-term prospects for EG and HD. Desai (2010) also showed that HD especially women’s education was instrumental for advancing EG and children’s health by fostering the capacity to absorb new information on health, nutrition and hygiene which were factors in stimulating and facilitating children’s learning.

Thus, in conclusion, there is a vast body of literature on growth and disparities at international and national levels. In much of the literature for Indian states, many studies took the data of Assam to represent for North Eastern Region including Nagaland, which is not relevant. As such, although, the development disparities within the state have been prominent in Nagaland, no systematic study has been done so far. Further, the research scholar is fully convinced that there is a strong linkage between EG and HD, for which there is vast literatures across the globe. However, no systematic study to this effect has been explored in Nagaland. Hence, the present study will fill the lacunae and enrich the existing literature.