

Chapter Two

Review of Literature

The very purpose of this review study is to get a comprehensive and broad knowledge of the study on inequality, women workforce participation and quality of life, which will certainly help to pave a solid foundation for the further construction of the chapters of the study. This chapter has four sections. In the first section of the chapter the relevant research works on inequality and inequality adjusted human development index are reviewed. The second section incorporates empirical works on determinants of women workforce participation. In the third section theoretical and empirical studies on quality of life are reviewed. In the fourth section, a thumbnail of literature gaps has been mentioned to provide a justification of the proposed research study.

2.1 Studies Conducted on Inequality

Over the years a huge amount of literature has accumulated on the topic of economic inequality and its measurement in developing countries. Some studies focus on the measurement methodology more than the applications. Other studies are dedicated to applications. Moreover some studies are conducted on secondary data (at macro levels or even at international levels) while others rely on richer grass-root level information on the basis of primary data.

For instance Thomas, Wang and Fan (2000) conducted this study to find out educational gaps between various groups for 85 countries from 1960-1990. Education plays the primary role in improving the well-being of the people. The authors used an education Gini index to measure inequality in educational attainment. They revealed four important findings- i) During the study period, though a few exceptions have been found, the overall education inequality has been declining, ii) Education Gini is negatively associated with the mean years of schooling. This indicates that countries with a higher education attainment level are more likely to achieve better education equality than those with lower attainment levels iii) Gender-gaps are clearly related to the education inequality, and over the passage of time, the impact of gender-gaps on inequality has become stronger and iv) Per capita GDP (PPP) increments are

negatively associated with education inequality and they are positively related to the mean years of schooling of the labour force, after controlling the initial income levels.

Bhattacharya and Chikwama (2012) conducted a study to measure the degree of inequality in child mortality rates across districts in India, using census data of 1981, 1991 and 2001. The results show that child mortality is more concentrated in less developed districts in all three census years. The study also revealed a rising tendency of child mortality in less developed districts during the period. The best part is that inequality in female child mortality rates seems to have declined between 1991 and 2001, while although at a slower rate, but male child mortality rates have increased. In the decomposition analysis, it is found that while a more equitable distribution of medical facilities and safe drinking water across districts did contribute towards reducing inequality in child mortality between 1981 and 1991, different levels of structural change among districts were responsible for a very large part of the inequality in child mortality to the advantage of the more developed districts in all three census years. The study also found that infrastructure development, female literacy, and a social group status variable have also played an important role in increasing inequality.

Islam and Khan (2001) have used the data from 1963-64 to 1976-77 to study the pattern of income distribution and poverty in Bangladesh, and it also compares the socioeconomic status of the country in mid-1970s with other developing countries of Asia, Africa and Latin America. The study found a drastic deterioration in inequality and poverty, and due to these factors. Bangladesh occupied the lowest position in the Third World in terms of a composite social index. The authors suggested that the state should pay more attention to the social sectors while allocating funds for the country's future development.

Pal, Aneja and Nagpal (2015) have made an attempt to study inequality in housing conditions of India for two time periods 2008-09 and 2012. The health status largely depends upon the quality of housing of a household. This paper examined the distribution of basic amenities of housing such as drinking water, toilets and electricity, across regions and over time. The study also focused on the determination of determinants of access to all these basic amenities. The findings revealed the unequal distribution of housing basic amenities with rich

households having higher access to better housing and basic facilities. Under the Millennium Development Goals, the Indian government has worked towards improving access to safe drinking water and sanitation. But, the results of multivariate analysis of this study show that only the rich and socio-economically better households have accessed to basic services even in the year 2012.

Cheng (2009) presented a review of contemporary literature about the basic issue of educational inequality in China. The study revealed that over the last three decades, China has achieved a significant economic success, but this success of economic development has even failed to provide an equal and equitable distribution of social and educational opportunity across the nation. The study suggested that more concentration should be given on empirical research of educational inequality such as urban-rural, regional, and gender inequality. The study recommended to do more study in this direction.

Saggar and Pan (1994) have used inequality and poverty measures to consumption expenditure data for SCs and STs and other households in four Eastern states viz: Assam, Bihar, Orissa and West Bengal. The study is focused to examine inequality and poverty differences among SCs and STs and other households, and also rural-urban disparities and inter-state variations. The findings of this study concluded that the eastern region suffers from economic backwardness which is evident from the low marginal per capita consumption expenditure with ranks below the all India levels. This is particularly seen for the SCs and STs. The incidence of poverty is considerably higher than the all India figure. On the other hand, rural-urban disparities have been found in the study. Furthermore the study showed the higher poverty incidence and lower consumption standards of SCs and STs than non-SC/ST households. The study suggested the importance of economic development in eastern India through direct measures particularly those for employment generation and poverty eradication. While, inequalities are found low, poverty rate is high. This makes a strong case for targeted intervention for SCs and STs which may supplement the programmes targeted for SCs and STs.

Haughton and Khander (2010) made an attempt to give a conceptual framework and tools to measure different issues related to poverty and inequality, description of poverty profile, de-

terminants of poverty, analysis of poverty overtime, poverty comparison, monitoring and evaluation of micro and macro projects of poverty.

Salverda, Nolan and Smeeding (2011) conducted this study to examine the current status of research regarding overview, conceptual framework, measurement, dynamics such as focusing demographic changes over time, movement of people and jobs, lifetime mobility etc, dimension such as emphasizing on happiness, health, education etc, and also about the extent of economic inequality. The authors have looked forward to the global perspectives of future study in this area. The nature and extent of intervention by the state plays a critical role in removing inequality.

Sen (2008) relates the theory of welfare economics to the study of economic inequality. He has given a systematic treatment of the conceptual framework and the practical problems of different approaches to measure inequality. This path-breaking work is a must read for economists, philosophers, and social scientists. In a substantial new annexe, Amartya Sen, jointly with James Foster, critically surveys the literature that followed the publication of this book, and also evaluates the main analytical issues in the appraisal of economic inequality and poverty.

Sen (2010) makes a clear elucidation on the issue of inequality and touches the important concepts in thinking about inequality. Basically, he examines the main issues such as equality of what, freedom, ability, income, opportunity etc. Sen analysed inequality in the framework of capability, functioning, agency, gender and class. He argues for concentrating more on the capability and freedom to achieve valuable functionings. Thus, the book has an important discussion of justice in policy.

Idrees (2006) has made an attempt to analyze the problem and extent of inequality in Pakistan. In this study, the author elucidates the historical background, comparison of different measures of inequality, the income and consumption inequalities, and also earning inequalities among the earners and their decomposition. This study revealed that inequality calculated on the basis of consumption is lesser than the inequality calculated on the basis of income.

But compared to rural area, the level of both consumption and income inequalities are found high in urban area. The study finally concluded that among all inequality measures Gini coefficient, Generalised entropy indices, Atkinson index and Ebert's index are the best measures of inequality.

Deaton and Dreze (2002) conducted a study for presenting the estimates of poverty and inequality of Indian states for 1987-88, 1993-94 and 1999-2000. It was found that in terms of the head count ratio, the ratio of poverty is declining continuingly in the nineties, though it is argued for alternative poverty indexes like the poverty-gap index. In the 1990s, India experienced economic growth along with regional disparities, when the southern and western regions were going ahead of the northern and eastern regions of India. During 90s, disparities within urban areas and between urban and rural areas and also slow increase in real wages of agricultural labourers etc. in most states, increased economic inequality in India. Though the study revealed increased rural-urban disparities of consumption expenditure in the 90s, only a small gap in selected social indicators like, school participation and life expectancy rate has been observed. The authors recommended further detailed studies in this area in order to find out the causal relations of poverty and inequality in the nineties.

After 1991's economic reforms, the data revealed that the problem of poverty and inequality has spatially and vertically increased. Pal and Ghosh (2007) found that health and education related indicators had made some progress, but such progresses were unsatisfactory compared to other developing countries. The study revealed the wide inter-state disparities in health and education related indicators throughout the country. The authors pointed out a number of reform policies such as privatization and disinvestment of PSUs, failure of employment generation in both rural and urban areas, declining employment elasticity in several sectors, focus on reducing the fiscal deficit, regressive tax design, reduction of expenditure on food subsidies and social welfare, reduction of institutional credit to agriculturalists and small-medium producers, closure of loss making PSUs, liberalized financial, trade and investment policies etc. The study concluded with the suggestions to give more concentration on rise in public

expenditure in productive investments, in infrastructure and also ensuring access to food, cloth and shelter.

Pandey (2013) has made an attempt to focus on the inequality decomposition based on regression analysis in Uttar Pradesh developed by Morduch and Sicular (2002), Fields (2003) and Fiorio and Jenkins (2007) for the year 2005-06, 2006-07 and 2007-08. The study was based on consumption expenditure unit level data collected by National Sample Survey Organisation. The variables used for the decomposition based on regression for AMPCE are age of the head of household, gender of the head of household, marital status of the head of household and education level of the head of household, household size, household type, religion, social group, land possessed dwelling unit type of structure, primary source of energy for cooking and primary source of energy for lighting. The findings indicate that education level of the head of household is contributing as the main factor for inequality followed by the size of household, social groups and energy for lighting in Uttar Pradesh for the years 2005, 2006 and 2007. The author suggested that there is an urgent need for the enhancement in government expenditure on education particularly in technical and higher level of education in the state. The results also reveal the fact that in rural areas job opportunities are not yet sufficient and or of low level for the period under study.

Hisnanick and Rogers (2002) conducted this study to measure the economic well-being with income which has the most common used because of its affect on both the quantity and quality of the goods and services a household can afford to buy. This study has discussed several common measures of inequality using household income data from the American Community Survey (ACS) for the years 2000 through 2005. The inequality measures presented here were the Gini Coefficient (G), the Mean Logarithmic Deviation of Income (MLogD), the Theil index (T), and the Atkinson index (A).

Neckerman and Torche (2007) analyse the patterns, causes and consequences of economic inequality both in the United States and, more recently, globally. The study is conducted to find out the extent of inequality of earnings, wealth, and opportunity. The study also tried to explore the socio- political consequences of inequality, particularly in the areas of health, ed-

education, crime, social capital, and political power. The paper suggested that sociologists could advance research on inequality by bringing discipline-based expertise to bear on the organization and political economy of firms and labor markets, the pathways through which inequality has an effect, and the social, political, and cultural contingencies that might modify this effect.

Daimari and Mishra (2005) made an attempt to determine the extent of poverty and income inequality in Darrang district of Assam. The study is based on primary data collected randomly from 182 households of seven sample villages in the Udalguri subdivision. The selection of sample villages have been made on the basis of variability in location, distance from the nearest urban area and available facility of infrastructure, variability in community type of habitants and sources of livelihood. With the help of Gini Coefficient, the inequality in income distribution is measured and also graphically presented with the help of Lorenz curve. The results indicated that the income inequality is more disturbing in Assam because inequality in the villages of Assam is more widespread than in India. The authors recommended that the policy makers and the state should concentrate more on the development of the manufacturing sector, creation of infrastructural facilities and enhancement of agricultural productivity in order to remove poverty from the society.

Linden, Yang, Yan and He (2010) made an attempt to study the relationship between the income inequality and economic growth in China. This study examines core questions whether economic growth reduces inequality, how does the income inequality affect economic growth in China, is the gap between urban-rural incomes the main contribution to the overall inequality, what are the main causes of income inequality in China. This study used the data from 1985 to 2002 in China. The study found that the income inequality has increased with the growth of economy in China and income inequality has negative effect on economic growth. The findings also revealed that the contributions of each group to overall income inequality and the income gap within urban residents has become the most important contributor to overall inequality. The major causes of income inequality in China were land reform, different levels of education and migration of labour from rural to urban areas.

Checchi (2003) investigated the issue of inequality in incomes and access to education using 108 countries data for the period 1960-95. The author calculated Gini index in this study. His findings revealed the robust negative correlation between income inequality and secondary education enrolment. This effect was found even stronger when female's access to any level of education was considered. These results supported the view that poor families were prevented from accessing school by their low incomes. The paper concluded that greater income inequality reduced access to school.

Pauw (2003) has conducted this study for neither to discuss the results of poverty and inequality measures in any detail nor to draw any conclusions. The main purpose of this paper was to discuss various measures of poverty and inequality found in different literature. The inequality measures discussed in this paper were the range, the variance, the coefficient of variation, the standard deviation of logarithms, the Gini coefficient, Theil's Entropy measure and Atkinson's inequality measure. Of these, the mean log deviation, the Theil index and the coefficient of variation are known as the Generalised Entropy class of inequality measures. The measures of poverty discussed in this paper were Foster-Greer-Thorbecke and a class of generalised decomposable poverty measures.

Using Atkinson's inequality measure Alkire and Foster (2010) conducted this study to propose a method for adjusting the HDI to evaluate the distribution of human development across the population and dimensions. The authors explained extensively both theoretical and practical application of the proposed indices. They also focused on selection of variables and their scales used for the proposed indices. The implementation issues are then analysed when applied to real data with reference to constructing variables and estimating inequalities.

Anand and Sen (1994) conducted this study to evaluate the concepts, methodology and measurement of human development. The Human Development report 1990 made a significant contribution for the means and ends of development. They made a comprehensive study about aggregative indicators and intra-population inequality. The study reviewed the construction of the human development index and provides the supplementary criteria for measuring human development in developed countries. The authors have given a note on income

distribution and poverty, life expectancy and inequality. They also highlighted on the measurement of human development over time, disaggregation of the HDI by population sub-groups and by gender.

Sakiko Fukuda-Parr and A K Shiva Kumar (2011) highlighted on theory and practice of human development. By publishing the Human Development report every year since 1990, the concept of human development has been popularized by United Nations Development Programme (UNDP). Human being is the centre of development. The prime objective of development is the expansion of people's choices and enhancement of their capabilities. The addition, omission and modification of the method, measure and indices of the human development have been continuously going on since its inception. Many new issues, such as, inequality, deprivation, gender, social justice, environmental sustainability, human rights etc came under the human development framework. The role of democracy and multiculturalism in human development and global strategies has been discussed to tackle human poverty.

Human development is an old thought. The concept of human development attributed to the early economic and political thinkers. Economic growth focuses only on income, whereas human development focuses on all choices, such as, economic, social, cultural and political. Haq (1995) explores the holistic concept of human development. Haq gives importance on investment on health and education to make people capable to take part in growth process. In this study, he gives the facts behind the Human Development Reports and also the impacts of these reports. All underdeveloped and developing countries now unable to take own human development strategies to achieve high human development. It paves the way for the 'global search for new development paradigms'.

Nayak (Ed.) (2010) has made an attempt to analyse the issues associated with concept and measurement of human development. The study focused on issues, status and perspective of human development both at all India and North Eastern Region. The author recommended to think again about the choice of indicators, methods and measurement of constructing indices. The findings indicated that the North Eastern Region has been experiencing promising human development without satisfactory economic growth. To achieve high human development, the

necessity of transparency in governance, accountability and participatory must be observed. The author suggested to take steps to improve the reproductive health care of married women and children so that they can play their role in human development.

Gumede (2010) analyses poverty, inequality and human development in a post-apartheid South Africa based on the National Income Dynamics Study (NIDS) dataset. The findings indicate that the highest percentage of South Africans (47%) live below the poverty line where blacks are poorer (56%) compared to whites (2%). Economic inequality that is significantly high in South Africa with high value of Gini Coefficient (0.69) differs from that of many African countries. The rich non-white groups have benefitted more from high income. The trend of the Human Development Index (HDI) for South Africa (SA) has generally been rising in 1980 (0.65), 2007 (0.68) and 2008 (0.69). The black has the lowest HDI (0.63), compared to that of whites (0.91). Human Poverty Index (HPI) is considerably high (31.2) for the black. The human development and human poverty differs significantly by location with low HDI and higher HPI values in rural provinces. So it is suggested that the govt must take initiative to tackle these challenges, (such as, racial redress, gender redress, spatial redress, skewed income distribution and high human poverty) and further restructuring the economy of South Africa.

Suryanarayana, Agrawal, and Prabhu (2011) conducted a study to highlight on the methodology and data sources utilized for estimation of Inequality-Adjusted Human Development Index (IHDI), outlines the IHDI estimates for India's states and stressing key areas for further research and policy interventions. The study shows that the rank of Kerala in 99th position (between Philippines and the Republic of Moldova) and Orissa in 133rd (between Myanmar and Yemen). Madhya Pradesh suffers the greatest loss of HDI due to inequality with 35.74 per cent among all states of India. The study compares India's inter-state variations with global averages in IHDI. The results indicate that loss of HDI due to inequality is more prominent in India compared to others. Dimension wise loss due to inequality is the highest in education (43 per cent), followed by health (34 per cent) and income. Loss resulting from ine-

quality in education and health is much higher in India than the global averages (28 per cent and 21 per cent respectively).

2.2 Studies Conducted on Women Work Participation

Women work participation is a vital aspect influencing standards of living and quality of life very rapidly in developing and emerging economies. A few selected influential studies are reported and reviewed here. Magidu (2010) estimated socio-economic determinants of labour force participation for the economically active population between 15-65 years in Uganda. The data for this study has been taken from the Uganda National Service Delivery Survey (UNDS), 2008. A multinomial regression model is used to determine the important determinants of labour force participation where sex, education level, residence, marital status, region, distance, household size and age are taken as the independent variables. The *t*-statistic was used to assess the significance of association between each of the socioeconomic characteristics and labour force participation. The results show a significant and strong negative effect on participation in the formal sector for older people (55-65 years), but a significant and strong positive effect on participation in work and higher participation rates for relatively medium aged workers (45-54 years). Compared to male, female individuals face a lower relative probability to participate in formal sector. It is also found that unmarried female individuals have a tendency to be engaged in formal than informal sector activities. Lower education and age are found to be associated with individuals who are in informal sector and vice versa. It is also evident from the study that an individual from urban center has a high relative probability to participate in the formal sector and it reduces as an individual moves to rural. The policy implication is that government should focus on addressing the gender relations as well as strengthening the linkage between informal and formal sector. The supply side policies are undoubtedly required to redress some of the other barriers that individuals, and again usually women, face in entering formal employment. In conclusion, the researcher clearly highlights the importance of women education and gender issues as priority for achieving economic growth and ensuring that individuals, and especially women, enter the labour market. The study suggests that policies must have gender specific issues, such as the provision of suitable childcare arrangements, which would make it easier for females to enter the labour markets

such as the provision of suitable childcare arrangements, which would make it easier for females to enter the labour markets.

Sunghee (1991) has conducted this study to investigate the determinants of female labour force participation (FLFP) in Seoul, South Korea. The main relationships that are tested under (1) the human capital and modernization hypothesis and (2) the world system hypothesis. The study is based on data drawn from the 1970 and 1980 Korean population censuses. The results suggest that women having education upto middle school or above are more economically active than those who have no education. Higher is the level of education of women, more the opportunity to participate by them in labour market. The rapidly expanding Korean economy demanded a workforce with higher education and so educated women have more opportunity to participate in labour market. It supports human capital and modernization hypothesis. But women with lower economic backgrounds are almost two to three times more likely to be employed than those in high economic status controlling for age, number of children under 6, marital status. But the same is not found among women from the blue collar wage working families. The results only partially support the world system hypothesis.

Fadayomi and Ogunrinola (2005) have conducted a study to examine the influence of household structure on labor market participation in Nigeria. The study is based on data collected by the 1990 National Population Commission's enumeration areas (EAs). Out of 209501 EAs in the country, 1130 EAs were randomly selected. From selected EAs, 11281 households were covered. In total, 57,547 individuals made up of 52% of males and 48% of females were covered in the survey exercise. The study has used the binary logit model to access the determinants of labour market participation. The heads of households participate more in the labor market in order to meet up with the household financial responsibilities. This came out true for both male and female heads of households. Between male and female heads of households, participation rate increases for male heads and it declines for the female heads. The size of the household has been found as the important factor for rise in participation in labour market by male heads compared to its female counterparts. Another important finding is that married male heads compared to other male heads, and the separated and divorced fe-

male heads compared to other female heads, have the highest participation rates. The implication is that while male heads and husbands in the Nigerian households are able to take major financial responsibilities of the family by participating in economic activities, female heads facing similar responsibilities and the need to participate more in the labor force are likely to be disadvantaged as a result of familial roles as mothers and care-givers. The study suggests a gender-friendly policy to address the problems facing women's work and fuller participation in the economy.

Faridi and Basit (2011) conducted this study is to determine the determinants of rural labour market participation. The researchers collected primary data through field survey, using simple random sampling technique. Almost three hundred and twenty six rural workers both male and female in the age of 15-64 are interviewed for the present study. Binary Logit model is used to estimate the determinants of rural labour supply model. The researchers have also developed social capital index (SCI) and Economic Capital Index (ECI) to find out the effect of social and economic over head on rural labour supply. From the findings it can be said that education, Economic Capital Index, and Social Capital Index have discernible impact on rural labour supply. Number of live stock and size of land holdings have negative and significant impact on rural labour force participation. The study has suggested that rural infrastructure should be developed and educational facilities should be improved. The coefficients of ECI and SCI are positive and statistically significant. The significant result indicates that the presence of market center, village bank, animal health centre and agricultural counseling centre raise more employment opportunities in rural areas. The study also shows that rural workers are more likely to participate in the labour market belonging to joint family system but have insignificant impact on rural market participation. The study concludes that marital status, number of dependents and social overhead capital positively affect the supply of labour in rural areas. But number of livestock, size of land holdings and spouse's participation in economic activities significantly reduce the off farm labour force participation. Based on findings, the study recommended that the basic and higher educational institutions should be opened in rural areas especially agricultural education. Government must provide improved rural infrastructure such as electricity, health care facilities and road infrastructure etc. The

study concluded that to expand the rural business activities, markets and business centers should be developed in rural areas.

Azid et al (2001) conducted this study to find out the important determinants of women work's pattern in the sector of embroidery in Multan. The results were obtained using the ordinary least squares (OLS). The estimated coefficient of the poverty variable is strong and statistically significant. This shows that these workers play a great role in pulling the households out of poverty. The coefficient of age-squared variable is insignificant suggesting a linear relationship between women's labour hours and age. Workers living in far off areas work fewer hours than their other counterparts. The study suggested that cottage industry has to be improved on the priority basis for the economic and social development of rural sector and as well as for the enhancement of the foreign exchange.

Baridam (1996) has conducted this study to find out the determinants of female labour force participation and family size. Data were collected from 300 female staff working with Shell, University of Port Harcourt and those in Port Harcourt metropolis. The questionnaire consisted of a series of 25 questions sectioned into three - personal, family size and occupation. The questions in the sections were designed to collect information on socio-economic characteristics of respondents, their family size, number of children, their ages, the number of dependants and house helps, impact of working on family size and vice versa and finally the domestic problems respondents experienced as workers. The findings indicate economic participation is to earn income and the love for children. The study also reveals that the size of the family has no effect on women participation in economically gainful activities.

Mazumdar and Guruswamy (2009) conducted a study to examine the trends and patterns of female workforce participation across Kerala, during 1991 and 2001, which emerge from the census. The paper also tried to identify the different determinants of low level women's work participation in Kerala in spite of advancement in social status. The results indicated that variables such as migration, reduction in paddy cultivation, growth in per capita income (mainly due to remittances), male workforce participation, sex ratio, and female literacy rate have significant correlation with female workforce participation rate. It revealed that even though

Kerala has attained ranks high on different indicators of demographic progress and social development, the state has been unable to make the transition in the quality of the women workforce and also the overall occupational transformation. This study also provided important and policy-relevant information to address the unemployment problem among women in the rural areas.

Chaudhuri (1991) has conducted this study to estimate the participation rate of rural women in labour force based on 1981 census data. The study is divided into two parts where the dependent variable is (a) total participation rate and (b) age-specific participation rates. Under each case, the study has used step-wise regression on (1) demand side variables, (2) supply side variables, and on (3) all variables (demand and supply) affecting women's labour force participation rate (LFPR). The study clearly shows that the determinants of LFPR's for rural women are not same for all age groups. It also shows that supply side variables to be more important in determining LFPR's of rural women in age groups 10-14 and 45-59 years. The prior perception however holds for the more active age group women, i.e., 15-44 years. Spread of irrigation and coverage under road appear to be more important among demand side variables. The participation of 10-14 age group in workforce is under distressed condition which is quite evident from the finding of significant positive coefficient with landlessness. The regression results for age group 0-14 years obtained however highlight on the existing trade-offs between schooling, rearing children and cattle at home, and participating in labour force for income generation. Spread of secondary level schooling also depends on whether the children (of 10-14 years) may be released from their current involvement in babysitting and rearing the cattle. While spread of irrigation may partly reduce the demand on cattle rearing, some form of institutional arrangement for collective childcare needs to be actively considered. Or alternatively, the formalities associated with schooling may be relaxed to accommodate babysitting along with attendance in class rooms. For the more active age group of rural women (15-44 years) who are more likely to be settled in families, the demand factors are more important in determining their LFPR's. It is usually argued that women of this age-group do not participate in the labour force because of the constraints on the supply side. The result however shows that if work is made available, the supply side factors are no

longer a constraint. Two aspects may be derived in this regard. First, estimated LFPR is relatively low among these groups of women. Secondly, irrigation, that significantly increases women LFPR, generally engages women of age 15-29 years in activities that remain confined within the bounds of homestead. Given that married women of the latter age group have to take care of their children at home, engagement in home based activities may be the desirable path. Women of age 30-44 years are usually less restricted by purdah and hence development of roads and infrastructure induces more women of this age group to engage in activities outside the homestead.

Faridi, Chaudhry and Basit (2009) have made an effort to identify the socio-economic and demographic factors which determine the women work participation. The study is based on the cross-section data collected through field survey in the 2007-08. A sample of 164 female workers in the age cohorts of 15-64 years is selected randomly from urban as well as rural areas of Bahawalpur district. The logistic regression technique is used to estimate the determinants of female labour force participation. They found that educational attainment levels turn out to be very significant determinant. Presence of children in early age groups reduces the female labour force participation. They concluded that female education is necessary for better employment opportunities.

Lahoti and Swaminathan (2013) conducted a study to find out the relation between economic growth and women's economic activity in India. This study has taken state-level employment data spanning the last twenty five years, 1983-84 to 2009-10. In order to analyse the relation between economic growth and women's economic activity in India, the authors used dynamic panel models. They found insignificant relation between level of economic development and women's participation rates in the labour force. Special policies should be designed to improve women's labour force participation rate so that India can take full advantage of its upcoming demographic dividend. It was found that economic growth is not sufficient to increase women's economic activity, but the dynamics of growth matter.

Shaheen, Sial and Awan (2011) have conducted this study to find out the determinants of female labor force participation. The study has used Multiple Indicator Cluster Survey 2007-

08 data of Punjab. Results of Logit model depicts that education level of the head of household is negatively related, while variables such as female belong to urban area, married, higher education, and family size have strong positive relation on decision of female labour force participation. The authors estimated the earning function by using ordinary Least Square Method. Coefficient of age shows a substantial increase in the wages with each additional year spent. They also found that females earn more if they are employee, employer or self employed than labourer (a reference category); while females earn less if they belonged to agricultural sector or other sectors than labourer.

Kalyani et.all (2011) has conducted this study to ascertain work participation rate, contribution to family income and role performance of tribal women. For ascertaining the said objectives, 100 tribal farm women of East Godavari district, Andhra Pradesh were selected. Work participation rate and performance in agriculture of tribal women was higher than their male counterparts. A startling revelation was that lower the economic status of the family, higher was the contribution of the women to family income.

Chauhan (2011) has been made an attempt to find out the participation of tribal farm women in agriculture, animal husbandry and also involvement in decision making at home, crop and animal husbandry. All together 120 respondents from 6 tribal dominated villages from Navsari district of Gujarat were randomly selected. The study found that there is positive relation between age, land holding, family size, number of children and the respondent's participation in cultivation. Negative relationship was found between occupation, family type and age at marriage. The findings indicated that farm management was the domain of the men and decisions on animal husbandry were taken by the women.

Shimray (2004) has made an attempt to find out household work, workforce participation, division of labour and women's position in Naga society with special reference to the Tangkhul Nagas of Manipur state. The study has used qualitative approach to examine the average time spent on housework and agricultural activities by men, women and children and the gendered division of labour. Women in Naga society has enjoyed considerable freedom and plays an important role in family and community life. The authors highlighted responsi-

bilities taken by Naga women which range from domestic work (within and outside the homestead) to various agricultural activities and bear a greater work burden as well. The study found that women's responsibility for household activities is much more compared to men.

Singh and Rajyalakshmi (1993) conducted a study to examine the status of tribal women on the basis of their demography, health, education and employment. Despite protection and assurances given by Indian constitution, their status is found to be lower than not only that of women in the general population and the Scheduled Caste women but is also lower than the status of tribal men. The findings indicated factors such as over-work, illiteracy, poor physical living conditions, high fertility, and high malnutrition and poor health care facilities were responsible lower status of tribal women. The authors suggested immediate effective measures for the tribal girl so that their condition can be improved in future.

Singh and Singh (2009) in his book enclosed the status of women in different parts of the country. With the help of statistics taken from Human Development Index, the socio-economic conditions of working women were highlighted in this study. The authors concluded the study with the suggestions for adoption of adequate policies and programmes for the development of women including all measures provided to women by Indian Constitution.

2.3 Studies Conducted on Quality of Life

Sen (1985) is dedicated to investigate some important issues in welfare economics and their relevance to development policy and international ethics. The author analyzed the use of conventions and norms in the perception of deprivation and poverty, and in social behaviour involving divisions within the family, and sex bias in general. The book also presents an original view of the relationship between goods and well being. It examines the welfare basis of real income comparisons, the social roots of hunger, and the nature of economic development.

Oluwoye (1990) has conducted this study to investigate rural women's perception of 'quality of life'. The main purpose of this study was to determine the extent of understanding of the term 'quality of life' by rural women and the components of a good quality of rural life in

Nigeria. The study was based on a sample of 308 rural women in eleven villages in Oyo State of Nigeria. The survey questionnaire was designed to gather the socio-economic, demographic information, and the women's perceptions as to components of a good quality of rural life. They found that availability of electricity and potable water supply, better quality clothing, improved roads, access to education and better health care and facilities, wealth and good personality were highly perceived as measures of essential components of quality of life in rural areas.

Liu (1980) made an attempt to construct a composite Quality of Life (QOL) indicator model of five major components social, economic, energy and environmental, health and education, and national vitality and security. The study was based on cross-national data of 1975, 32 developed countries and China (Taiwan) was ranked according to their component and overall QOL measures. The influence of income and other variables on QOL was analyzed; it was found that the income variable is not as significantly related to the composite QOL indexes as are other variables and China (Taiwan's) QOL rankings far exceed its per capita income ranking in the international comparison. The study indicated that QOL may vary directly with the level of income initially, but additional income beyond a certain level or a relative threshold will not necessarily enrich one's QOL.

Diener and Suh (1980) have discussed that the concept of good life and the essentials of a good society have occupied the mind of the thinkers throughout the history. They have reviewed Economic indicators, Objective or Social indicators and Subjective well-being measures of measuring quality of life. They have also reviewed the strengths and the weaknesses of all these alternative approaches. The study argued that both objective indicators and subjective well-being measures are necessary to evaluate the quality of life of a society. They concluded that objective indicators, subjective well-being measures, and economic indices are indispensable in unison to know human quality of life, and to make informed policy decisions.

Alkire (2002) examines the dimensions of human development showing its usefulness and limitations in context of capability approach of Amartya Sen and in general. The dimensions that are dependent on resources are followed by the individuals and cultures in their ways. In

this study she focuses on key “lists” of dimensions based on human capabilities, well-being, quality of life, universal human values, universal psychological needs, and basic human needs.

Narayana (2009) conducted this study to make a focused analysis on measurement of indicators and variables in the construction of education index in India's national and sub national Human Development Reports. The study has given more stress on both frequency and availability of data needed to construct the methodology of estimation of education variables. This study revealed the non-comparability of measurement of the education indicators and variables. This also indicated that vertical and horizontal comparability of HDI may not be reasonable for India. The study highlighted the importance for measurement of quality of life indices with special reference to physical quality of life index. The study suggested to make policy for future measurement of education index for India in particular, and other developing countries in general. The same framework could also be extended to health and income indicators and variables in global, national and sub-national HDRs and its linkages between human development and QOL indices.

Liu (1977) has conducted this study to make quantitative assessment of the urban economic and non-economic quality of life of U.S. metropolitan areas. The study used both flow and stock variables such as income and wealth, industrial productivity, economic diversity and income distribution to measure economic quality of life. The non-economic quality of life was measured through various social, political, and environmental factors. The study was based on both primary and secondary data. The findings in this study indicated that the major disparities in quality of life are neither in the economic nor in the political component, rather they are in health and education and in social, and to a lesser degree, in environmental concerns. The geo-graphic differentials and apparent concentrations of adverse quality of life conditions present special problems which warrant targeted policies and actions.

Verkerk, Busschbach and Karssing (2001) have discussed about the use of capability approach to health-related quality of life. This study provides an analysis about the ideas of Sen for the researchers who wish to go beyond the traditional framework of measuring health-related quality of life. The study viewed that Sen's capability approach have given little at-

tention to health-related quality of life. Sen's notion of functionings and capabilities could be applied to health related quality of life. In order to measure health-related quality of life, the issue of determination of representative functions has the most important question and that should be the focus of the research. Here, the study pointed out that standardised health-related quality of life questionnaires should be used to measure the outcome in the evaluation of health care interventions. This study concluded that the capability approach of Sen could provide a possible solution within a well-described theoretical framework. This framework may allow quality of life research to develop further beyond the limits of its present operationalisation.

Lee and Liu (1988) conducted a study to present a modified conceptual framework for measuring and adjusting impacts of socio-economic and environmental factors when income or consumption expenditure is used solely as a quality of life indicator. Such measurements and adjustments are made for differences in public needs and in the process of satisfying these needs. The authors focused on the necessity of identification of the representative set of resources of a socioeconomic variable which will make possible to evaluate its effects on quality of life.

Ross and Willigen (1997) conducted a study to examine the impact of education on subjective quality of life. The study assessed the relationship between education and a variety of subjective indicators of quality of life i.e. depression, anxiety, anger, aches and pains, malaise, and dissatisfaction which are based on two representative national samples collected in 1990 and 1995. The findings revealed that the well-educated have lower levels of emotional distress such as depression, anxiety, and anger and physical distress such as aches and pains and malaise, but they have also lower levels of dissatisfaction. Through education one can get paid regular work and economic resources, which are associated with high personal control. This helps to reduce the distress of people. This study concluded that education is the primary cause of individual well-being as it opens the people's opportunities for employment, the nature and kind of work they do, their earning and economic hardship, their social psychological resources, and also their distress.

Developed societies have tended to equate standard of living with quality of life because increased wealth allowed people to buy greater well-being. The equation of more with better (prosperity with happiness) in explaining progress of a society has challenged and so also GDP as a measure of national progress have also critically challenged. Eckersley (2000) has made an attempt to examine and differentiate between subjective measures of personal and social quality of life. The study was mainly based on data drawn from Australia and the US and international studies. The author thinks about the redefinition of national progress taking social, economic and environmental issues in new global context. The study concluded that indicators of progress must have both objective and subjective elements of quality of life

Slotj (1991) conducted this study to construct some aggregate indexes of the quality of life and to demonstrate how relative rankings of well-being across countries will vary, contingent on how relative information about well-being, from individual quality of life indicators, is aggregated and weighed. The objective of this paper is to measure and compare the quality of life as comprehensively as possible with available data for as many countries as possible. The author followed Sen's concept that besides gross domestic product and mortality rates, other factors should be incorporated into any quality of life analysis. This study has examined a total of twenty attributes of the quality of life for 126 countries. The authors have constructed a number of summary indexes of the quality of life across countries based on simple rankings, principal component and hedonic weighing techniques. The study concluded that as the quality of life is the improved measures of the well-being indicators, the choice of the weighing technique will become more crucial in defining an overall measure of the quality of life within and across countries.

Bunge (1974) has made an explanatory analysis about the concepts of indicator, social indicator, and life quality indicator. The study defined that an indicator is characterized as an observable variable assumed to estimate some other (usually unobservable) variable. An indicator's indicated relation can be functional or it can consist in statistical correlation. The study also defined a social indicator as an indicator belonging to some sociological context. The quality of life indicator should be able to assess degrees of well-being of the people. The

study suggested that a better understanding and assessment of the quality of life required more intense theoretical and methodological work rather than an increase in the amount of social and environmental statistics. The study concluded the importance of more theoretical (if possible mathematical) models and more methodological studies to have better indicator to assess quality of life of the people.

Roy (1985) has been made an attempt to consider some special data on resources and literacy in population independently and tested some issues to examine the gaps in the contemporary situation of India's development. The author used the technique of 'Physical Quality of Life Index' (PQLI) as propagated by Morris (1977) to measure development through scores or indices on certain specific indicators. It is essential that this research may be viewed critically by all concerned to further investigate on the issues for application on other sets of data and regions.

McCall (1975) begins with the note that the phrase 'Quality of Life' seems to date back to 1964, but no all agreed definition has been found. It then tried to define the meaning of 'Quality' and 'Life'. The author viewed that QOL is something that pertains to a society or region. Though QOL is different from happiness, it is in some way causally connected with it. This ensures that in at least some respects high-QOL societies are societies characterized by justice. This paper defined quality of life which is consisted in the satisfaction of the general happiness requirements. If the general happiness requirements are met in a given society or region, the QOL is high in that society or region. If the general happiness requirements are not met, QOL is low.

Sundari (2003) has made an attempt to examine the quality of life of the migrant households in slums of Coimbatore City, Tirupur Town and Chennai City in terms of select parameters. Health status is a key indicator of human well being. Environmental pollution affects human health in many ways and contributes to a wide variety of diseases. The developing country requires the scientific method for the assessment and management of environment to reduce the impact of pollution on human health. The findings indicated that migrant households live in the most unhygienic and congested places. The study also found that slum people are de-

prived of the minimum basic amenities like housing, water supply, drainage and sanitation. Women and children are the worst victims. Physically, mentally and emotionally they are affected. The rehabilitation programme of the Tamil Nadu Slum Clearance Board isn't found at all satisfactory in relation to the mushroom growth of slums. In order to handle the situation, the author suggested to frame a methodology to address the problems of slums to improve the quality of life of slum population.

Robeyns (2005) has made an attempt to argue about use of the capability approach advocated by great thinker, Amartya Sen. The author argued that Sen has not specified which capabilities should be selected as the relevant ones. Sen's capability approach has broader and less specified theoretical pretensions; it is only a framework, not a theory. As it is a general framework, it can guide us in our evaluative exercises but that remains underspecified. On the contrary, Nussbaum's capabilities approach is a philosophical theory of justice, rather than a framework of evaluation. This study has introduced certain general criteria should be applied in the selection of capabilities to measure quality of life. The author suggested four general criteria i.e. i) explicit explanation, ii) methodological justification, iii) different levels of generality and iv) exhaustion and non-reduction, which are proposed to avoid biases in the selection of capabilities.

Wani and Khairkar (2011) have made an attempt to examine the relation between socio-economic conditions and Quality of Life, Srinagar City of Kashmir Valley. The study was based on primary data collected from 1045 households of Srinagar City belonging to different income groups were personally interviewed through Questionnaire. The findings indicated that the socioeconomic and quality of life of very higher income group is far better than the low and middle income group. The very high income group has enjoyed almost all basic amenities of an improved quality of life. This group has good sanitation and housing conditions, holding valuable assets like vehicles with good educational status. In contrast, the low income groups which are deprived from minimum basic amenities and so they stay with poor housing and sanitation conditions, less hygienic environment, less possession of assets etc. The study revealed that the most of the differences are related to income conditions which

ultimately affect their water supply conditions, state and quality of water, type of latrine facility, place of disposal of waste water, place of disposal of household waste etc. The study also found wide variety of differences and inequalities of illiteracy. The author suggested that the state should provide sufficient amenities and facilities for socio-economic development and improvement so that their quality of life can improve.

Sen (2008) has explained how in a world of unprecedented increase in overall opulence, a large number of people in this world are still un-free. Though they are not technically slaves, but they are deprived from elementary freedom and so remained in one way or another by poverty, social deprivation, political tyranny or cultural authoritarianism. He argues that only freedom can help to realize general welfare which is the ultimate goal of social and economic arrangements. Social institutions like political parties, legislatures, the judiciary, the media etc. have to play their role to enhance the individual freedom. In an analytical framework, Sen links institutions, development, values etc. which are closely related to one another. Sen investigates the relation between our collective economic wealth and individual's ability to live in the society. In this book, he included his most recent thinking on economic development, social justice, and human rights to have a better world.

Kruger et. al (2006) conducted this study to assess socio-economic indicators, nutritional status and living conditions of farm workers and their families to find out their nutritional status and quality of life. The study was based on primary data collected from three farm schools in two districts of the North-West Province and farming communities. The findings revealed that electricity, water and sanitation, monthly food rations and subsidies vary and depend on farm owners. The educational attainments of adults have been found to be below or up to grade four, while farm schools provide only up to grade seven. Distance to farm schools and intra-household issues affect children's attendance and performance at school. Due to lack of financial resources and infrastructure, household food security is also compromised. This has significant impacts especially on children, with half of them being underweight, undersized or wasted. Again employment is usually linked to men, while most women have access to casual jobs only. This study highlights impoverished living conditions of farm worker fami-

lies. Apart from structural and financial constraints, paternalistic structures of the past might also be the cause of poor living conditions. Based on these findings, follow-up research projects and in-depth investigations into underlying social issues with regard to nutrition insecurity and livelihoods of farm workers were initiated

Ganguli and Gupta (1976) conducted a study to measure inter-state differentials in the levels of living in India. This study would help to understand the extent of the problems of poverty and the differences in the way of livings of the people of our country.

Mazumdar (2001) has made an attempt to assess the quality of life in the 22 Indian cities. Quality of life has multi-dimensions and each of these dimensions is measured in different units. Taking into account such difficulties, the composite quality of life index is constructed in order to get an understanding about the overall quality of life of the people. Many studies have suggested about the utility of using different methods to reduce the dimensionality problems. In this study, the author takes 26 variables for 5 domains of quality of life, namely, i) urban economy ii) physical infrastructure, iii) social infrastructure iv) environment and v) political system.

Fakruddin (1991) tried to find out the quality of urban life in Lucknow city. The author investigated about the patterns of inequalities in the basic amenities and other resources and also showed the impact of these inequalities in the quality of living. In this study, 31 variables of 5 broad groups are used for determining the quality of life of the people. These broad groups were material and housing condition, territorial stress, amenities and infrastructure, education and recreation. The matrix of residential structure consisted of 28 variables of 4 major groups, namely, socio-economic status, family status, housing status and ethnic status. The book has given a good thought for the researchers to go further in this area.

Liu (1974) has made an attempt to develop a systematic methodology for assessing a group of Social, Economic, Political and Environmental Indicators to reflect overall health and well-being of the citizens of the nation. The study has taken nine indicators such as individual status, individual equality, living conditions, agriculture, technology, economic status, education, health and welfare, state and local governments for more than 100 variables for 50

states and the District of Columbia. On the basis of 1970 data, quality of life index was prepared and the states ranked. A composite index of Quality of Life (QOL) known as Socio-Economic-Political-Environmental (SEPE) index was prepared and regressed on the nine indicators. The study concluded that for achieving minimum acceptable QOL, minimum economic wellbeing is required. But beyond this point, high quality of life does not necessarily require a higher level of personal income.

Beck and Mishra (2010) have discussed some aspects of Quality of Life of Oraon, Sambalpur town of Orissa. Oraon is one of the most primitive tribe of Eastern India. The study was based on primary data collected purposely from 120 households comprising 552 individuals of Sambalpur District, Orissa. The data were collected through the help of a pre-tested structured schedule to get relevant information on socio-economic and various indicators of quality of life. The findings revealed that the socio-economic and overall quality of life is far from satisfactory. The people are very poor as they have low per capita income and so also they have very poor educational status, poor sanitary and housing facilities, less possession of asset and vehicle, deficient food intake, poor fuel and energy availability. The author suggested the urgent adequate income generating, educational and health awareness programmes as well as to make them aware and help them to grab the opportunities provided by the government and non government organisations to improve the status of the tribals.

Basu (2000) has conducted a study on dimensions of tribal health in India. The problems of widespread poverty, illiteracy, malnutrition, absence of safe drinking water and sanitary living conditions, poor maternal and child health services and ineffective coverage of national health and nutritional services have been traced out in several studies as possible contributing factors to dismal health conditions prevailing among the tribal population in India. In this study, the author focused on certain interacting factors like the infant mortality rate, life expectancy, genetic disorders, sexually transmitted diseases, nutritional status, forest ecology, child health and health care practices which are generally responsible for determining the health status and health behaviour of tribal communities.

Rodgers and Converse (1975) tried to assess quality of life, using both objective and subjective indicators. The study was based on a National Study of the perceived quality of life, and the data were collected through personal interview of 2164 American adults in 1971-72. Respondents were asked to assess their level of satisfaction with each of a set of 15 domains of their lives. Questions were asked to describe their lives as a whole, using differential types of scales. The author used canonical correlation analysis to find the domain-specific and global items with the highest correlation. The two indices i.e. the index of well-being and the index of domain satisfactions have been examined in relation to a variety of demographic and situational variables, such as, age, socio-economic indicator, employment status, size of community, etc. The author suggested that much work in this line has to be done before getting fully convinced about the true meaning of these measures.

Morris and McAlpin (1982) presented a simply constructed Index with which one can measure and monitor the impact of development programmes on mass welfare, in terms of longevity, infant mortality and literacy. GNP had failed to determine the well-being of the people of a country. The Physical Quality of Life Index (PQLI) furnishes a supplement to the GNP to determine the well-being of the community. With the help of use of PQLI, one is enabled to make international, inter-state, inter-regional, male-female, rural-urban comparisons in terms of enjoyment of the fruits of civilization.

Panda and Misra (2001) have made an attempt to define quality of life and also describe how it is influenced by population dynamics. They assert that among different factors that affect quality of life, population dynamics is the quality of life are the functions of this factor. The study indicated that population dynamics causes chain reaction in the society, which, if left unchecked, would adversely affect quality of life of the community. In this study, 25 indicators of quality of life were considered. The study was done on seven Northeast states, based on NEC data of population dynamics for the period of 1971 to 1991. The findings of the study revealed the lower standard of living as well as lower quality of life in the North East states as compared with other regions of India.

2.4 Literature Gap

From the works reviewed above, it is apparent that no systematic studies are reported in literature that examines inequality and quality of life in the north eastern region among the selected tribal people. Furthermore the studies reported in literature do not provide any parallel comparative study on inequality and quality of life a given area in the selected districts and blocks. Similarly, most of the studies have tended to be either generalized or limited in geographical coverage. The present study will bridge these gaps.

Although quite a few statistically systematic studies on determinants of women workforce participation have been made at the national level, similar studies in case of tribal people of Assam are rare. From different literature reviewed above, we can conclude that the analysis about the quality of life is rare in North Eastern India. Similarly, examination of economic inequality across the different occupations and measurement of human development at the household level adjusted for inequality are rare in Assam among the Tiwa tribe.

In sum, focused economic studies only on the Tiwas of Assam are rare. In particular, no systematic research is reported in literature on a) poverty and inequality, b) standards of living and quality of life, or c) on human development among the Tiwa tribal group of Assam. Furthermore, women work participation and its determinants among Tiwas has not been studied till date. The present study analyses work participation by Tiwa women in the workforce. Thus from the women workforce participation point of view also, this study is extremely necessary.