Interlinkages between Human Development Indicators and Economic Growth in India: A Study with Reference to Kerala and Uttar Pradesh

ABSTRACT

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INTRODUCTION

Human development is an end and economic growth is a means towards development.

In the world of globalization and technological evolution, economies seek new ways to maintain competitive advantage. This competency by the economies depends in large part on people and the way they express their freedom. Nation's real wealth are its people. Providing a long and healthy life with decent standard of living is the main objective of every economy. Policies are framed in accordance with this objective. Now the most important question lies in the fact that what should be the ultimate concern of an economy? Should it be investment in productive infrastructure or in human resources?

Prior to 20th century, the term development was rarely used in the economic literature. Economic growth was the main objective of the policy makers, even the early development theories focused on attaining sustained economic growth (Harrod, 1939 and 1948, and Domar, 1946). Hence, this era saw the growth of an economy in terms of material output of goods and services. Gross National Income [1]in the traditional approach used to be the best measure of welfare. It was believed by the economist that growth has a trickle-down effect [2]and would result in sustained development in the long run. During this period, performance of each economy was assessed by the means of growth and output. But in 1970s and 1980s the economy of Europe experienced the great destruction in terms of productive infrastructure. The reason behind this was the war that broke down during this time. It was seen that though the income of the people were increasing unemployment also witnessed a surge. Experience of such industrialized countries revealed that economic growth can take place even in the presence of social ills, such as inequality in the distribution of income, poverty, unemployment. It was the time when economies were facing the problem of development. They were growing only in terms of quantity and not quality. The trickle- down concept of growth was questioned by the economies. (HDR 1990)

This destruction led to the emergence of new paradigm in terms of quality and welfare of people as a whole. Focusing on welfare in terms of people's choice and values was the main objective of

[1] Gross National Income more widely known GDP is an estimate of the total value of all goods and services produced within a nation for a set period usually a year.
[2] Trickle-down effect states that tax cuts for all the sections of society spur economic growth.

this new paradigm. Now the concept of economic growth was identified as a means of development but not as an end component of development.

Quality aspect of development was the new concept which came to be known as human development. It was first time bought into notice by UNDP in its first report in 1990. The report shifted the focus from income to choices and freedom. It presented us with the comprehensive framework which would benefit the economies to develop in actual sense. In continuation with this National Human Development Report (2001) considered development as a process whose impact can be assessed on quality of life and human well-beings. Development process includes both the concept i.e. growth and human development. Long term development can only be attained if both these concepts show a bi-directional relationship between them. Increase in income and attainment of decent standard of living are necessary for the purpose of attaining development. The evidences from the academic literature show that though human development is a necessary condition but it's not a sufficient condition of development. Hence the concept of growth cannot be discarded at all. Since then, the link mechanism between human development and economic growth started gaining importance.

Link mechanisms between Human Development and Economic Growth occupy two important strands. These are

- Washington consensus neo- liberal approach [3]is the first strand which regards economic growth as a precondition for human development. According to them human development can be postponed till the time economies have sufficient amount of productive resources. This approach defines the concept of well-being in terms of utility maximization.
- The Gustav, Ranis view of link mechanisms between human development and economic growth. According to them strong link mechanism between human development and economic growth helps economies to reach development early as compared to economic growth lopsided or human development lopsided.

The two strands occupy a central position in the literature of link mechanisms. Adam Smith in his capability approach said that human being should have a freedom of choice. Their needs and

[3] It refers to set of ideas broadly consisting of free economic market generally supported by international organizations such as IMF, World Bank and EU.

choices form the basic in the development of every economy. Human capital is both quantitative as well as qualitative. The theories related to human capital focus on the factors that help in shaping economic development. The initial idea of investment in human capital started with Theodore W. Schultz's in December 1960. According to him human capital can be simply defined as the "body of knowledge which is possessed by the people and the way in which people use this knowledge effectively (T.W. Schultz, 1961)". Human capital formation means the policy which would enrich the skills, education and experience amongst the population. This enrichment is very necessary for any economy for its social and economic development (Harbinson, 1962). Economists like Simon Kuznets (1966), Woodhall (1985), Becker (1964) Dennison (1967), Morris and Morris (1970) have given a growing recognition to human capital as a central force of development policy. Endogenous growth theories like that of Arrow (1962), Lucas (1988) and Romer (1986) focussed on the impact of investing in human capital components like that of education and health. According to them this investment will lead to innovation of new ideas and will also bring advancement in research and development which in turn will help economies to grow. Human capital forms a dichotomous relationship between its components and economic development. This relation can be explained through many channels. The result of investing in human capital would just not create a productive labour force but also will help in improving the quality of life of the people's as well as of society. However, after a while human capital concept due to some of its limitations in 80s was changed to human development concept which has a much broader perception than human capital. Human Development began to receive crucial importance in development literature. It was not a new concept but it started gaining importance when UNDP started publishing human development report which carry all the dimensions. The human development approach emphasizes investment in education, health, nutrition and income.

Interlinkage between Economic Growth and Human Development

Two theoretical strands which explains the concept are often regarded in this context. According to the Washington consensus economic growth should be encouraged and human development should be postponed till the time it is not possible to expand resources affordably (Williamson, 1993; World Bank, 1995; Ravallion, 1997). The first strand focuses on improving economic growth for the purpose of development. Neoliberalism defines wellbeing in terms of utility

maximization. They often regarded development in terms of growth. The other strand, was explored by Ramirez et al. (1998), White (1999), Ranis et al. (2000), Boozer et al. (2003) and advanced by Ranis and Stewart (2005) and Mabsout (2006). Their study explores the relationship between the economic growth and human development. They viewed that virtuous cycle can be achieved only when there is a consistent strategy which would promote both objectives simultaneously. The study also focuses on strengthening the relationship between the two concepts.

This linkage was first explored by Ranis, Stewart and Ramirez (1998). They define the relationship in terms of chain concept. Empirical evidences of the existence of this relationship were found with the help of data collected from cross-country statistics. This framework was further advanced by Ranis and Stewart (2000) and Boozer et al. (2003). Their study includes data that is collected from 69 developing countries. There are two strands to define this relationship, one is the chain leading from economic growth to human development, second is the chain leading from human development to economic growth. Human development is all about people and their welfare by the means of improvement in social sectors such as life expectancy, infant mortality rate, and education or says adult literacy, poverty, government spending priorities of the economies. While economic growth is all about improvement in material growth and the way the resources can be utilized effectively. As the basic objective of development of a nation is to improve the welfare of the people, every nation strives hard to increase its wealth and productive resources. With this objective it also ensures better standard of living of its citizens by providing them with adequate food, clothing, house, medical facilities, education, etc.

Chain A: Economic Growth to Human Development

Gross National Product (GNP) is the main component that contributes to HD in form of household and government activity. Income component of growth also include community organizations and Non-Governmental Organizations (NGOs). Economic growth is effective in a way as it provides material resources to improve human development. One question that comes into mind after reviewing literature is how the economies with same level of GNP can lead to very different HD performances in human development index. These performances are based on the allocation of GNP to various groups and to distribution within each category. Chain A is all about the propensity of households, the manner in which they spend their income which lead to

improvement in human development indicators. Spending on those items which would help them to improve their standard of living will only lead to human development. But the level of spending also depends on who controls the allocation of expenditure within households. It is usually seen in general that as the incomes of the poor rise, they tend to spend more proportion of income on human development (Behrman, 1993, 1996). The casual analysis depends on the aggregate levels which further depend on the income of households which they spend on human development. Secondly, the impact of public policy on the distribution of income and the way it improves the societal poverty by the way of generating employment sensitive techniques will ultimately determine the level of human development. Thus, Chain A determines impact of economic growth on human development.

Chain B: Human Development to Economic Growth

Human development in a simple way can be defined as the one that is designed to include all measures of development whether it is social or economic aspect of development. Literature suggests that higher levels of human development will improve economy's condition by enhancing people's capacities. It involves all those aspects of development that would enhance the creativity and productivity of the people. According to Barro and Lee (2000), the foremost factor necessary for economic progress in any economy is education which is a major component of human capital. The greater the level of education the greater the number of skilled and productive worker. Improvement in this sector will increase the economic output of goods and services in the economy as well as help in the effective utilization of advanced technology. This will lead to an improvement in social sector and bring about equality in income distribution. It suggests that as healthier, nourished and well-educated people contribute more to economic growth through higher labour productivity, improved technology, attracting more foreign capital, and higher exports. According to Mehta (1976) human capital formation is as much important as physical capital formation in the process of development and it is now a universally accepted phenomenon. Schultz in his paper suggested that if statistical measures of growth can be explained by the way of changes in the quantity of factors of production. But over the period of time, residual growth [4]cannot just be explained by the changes in quantity of factors rather it is

[4] Relates to Solow's growth theory which state that the portion of economy's output cannot be attributed to the accumulation of output and labour productivity

changes in the quality of labour force which is necessary. For this, development of human capital resources is prerequisite. Even if we look at the importance of human resource development for overall growth, human development approach is used clearly in East Asia, one of the newly developed countries. Examples can be traced from developing countries like Sri Lanka that have started spreading education among labour force and have been able to manage a long and sustained economic development. Hence, both the components are necessary for the purpose of attaining economic development.

Linkage in context of Indian Economy

In the context of Indian economy, the two-way relationship works quite effectively. Indian Economy as a whole has shown a quite remarkable growth in the last two decades, with average national per capita income growing as rapidly as ever before. The past figures about growth in Indian economy have seen a rising trend. Not only has this developing economy shown improvement in growth there has been worthy improvements in human development components like that of life expectancy, literacy rate, and other measures of well-being. But one thing that draws the attention of every economist towards analyzing the economy of India is the extreme heterogeneous character of the Indian society. The failures and success of Indian economy are very difficult to understand. The reason being the vast diversifying area. The internal diversities in India offer a great opportunity to learn from each other (Dreze and Sen,2001). If the inner conditions of economy are seen, then we will find that – the state is being divided into four sets of division. The four type of cycles which Gustav, Ranis and Ramirez have explored are best described in Indian States. One group of Indian states has been at the forefront of national growth. Their economies are growing at much faster rate than that of national average. These states are not performing well only in economic indicators but also in terms of non-economic indicators. But if the other side of economy is looked upon then the results are quite disappointing. These states are backward not only in terms of economic growth but also in terms of human development. The reason being the presence of social evils such as increasing population, unemployment, poverty, low standard of living etc. As a result, they are being continually left behind, and moving further away economically from the former group of forward states in the country.

With such wide diversification, it is very essential that proper public policies should be implemented. As said by Fukuda- Parr (2003) in his article that for the purpose of achieving growth and development economies have to improve the role of human agents that can help to define public policy. According to Dreze and Sen (2001), what is needed first is the radical changes that would help the economy to achieve its goals that were unambiguously outlined at the times of Independence. For long-term sustainable development of a nation it is arguably important that all regions should grow at a reasonably similar speed.

Present study

Present study explores the relationship between human development indicators, physical infrastructure and economic growth in Indian states as well as UP and Kerala districts. The study is confined to the major states of the Indian economy with special emphasis on the linkages among the variable in Uttar Pradesh and Kerala districts. Education and Health are considered to be the two most important indicators for the development of any economy. Uttar Pradesh, remains one of the most backward states in India, in spite of the fact that the state has a large manpower population. Now the question is why Uttar Pradesh has not been able to succeed well and why it has failed badly in terms of human development indicators. The study also focusses on answering this question by establishing a link mechanism between human development and economic growth. What can be learnt from Kerala model and what are the apt policy measures that are need to be taken to uplift Uttar Pradesh economy.

Objectives of the study

1. To examine the theoretical perspective of inter- linkages between human development and economic growth
2. To examine the trends in expenditure on social sectors such as health and education and differences in the priorities given by different states to human development
3. To explore the inter - linkages between human development and economic growth with special reference to Indian states
4. To analyse the relation between Human Development indicators and Economic Growth indicators in Uttar Pradesh and Kerala.

5. To suggest different policies measures which will strengthen the linkages between economic growth and human development indicators so as to accelerate economic development

Hypotheses

1. There exists a regional variation in public expenditure on social sector across Indian states
2. There exists a positive and significant relationship between human development indicators and economic growth across Indian states.
3. There is insignificant impact of state policies on economic growth and human development indicators in UP.

Methodology

A research design is prepared according to observation made and data assembled. It provides the empirical as well as the theoretical basis for drawing conclusions and finding the solution to research questions. The study is entirely based on secondary data. Both time series and cross section data has been used. The study is confined to 22 states of India. The study also tries to explore the relationship between Human Development and Economic Growth in districts of Uttar Pradesh and Kerala. Sources of secondary data includes: Census of India, Central Statistical Organization (CSO), Ministry of Human Resources Development (MHRD), Planning Commission of India, Registrar General of India and RBI Handbook of Statistics, Statistical Abstract UP, District wise Indicators UP, Statistical Abstract Kerala and Infrastructure Volume Statistics. The relationship between economic growth and human development indicators has been examined statistically using state and district level data on per capita income, indicators of human development and physical infrastructure. Composite index has been generated for the variables with the use of multivariate analysis. Principal component analysis has been applied to construct composite index. Addendum variables have been used for the construction of education index, health index, physical infrastructure index. Spearman ranking correlation technique has been applied. Simple regression and multiple regression analysis have been used to examine the relationship between these components. Step wise regression model has been used to further explore the relationship among other components.

Composite indexes for education, health and infrastructure have been constructed by using Multivariate Analysis which includes Principle Component Analysis [5]for the generation of weights. PCA technique helps in finding weights to each of the concerned dimensions. These weights help in maximizing the sum of the squares of correlation of the dimension through the outcome of composite index.

Suppose that y1 is a principal component of x1, x2, x3, . . ., xp, such that: y1 = a11x1 + a12x2 + . . . + a1pxp. After this the variance of y1 principal component is maximized with the assumption that the sum of the squared weights of x1, x2, x3, . . . xp is equal to one. Once the variance has been maximized PCA determines the weight vector (a11, a12, . . . a1p) by choosing higher weights for those series which vary a lot and comparatively have more influence on the composite index.

As soon as the weights are selected, the first principle component would designate the leading pattern of variance in the indicators. Then after the first component designate the weights second principal component (y2) likewise finds out a weight vector for second variable (a21, a22, . . . a2p). Second principal component designate the weight when the variance is maximized with the assumption that it is uncorrelated with the first principal component. The second principal component signifies that y2 has the next largest sum of squared correlations with the original variables. Though the variances of the subsequent principal components would be smaller. PCA produces an outcome where an estimate of how much variance in the x's is explained by each principal component.

Though there is limitation in using PCA as it involves indexing and deciding about the number of components to retain. Though in the literature review it can be noticed that researchers use first principal component and that has remained the standard practice in recent times. Though for capturing the variability of the original variables of the total system, we could use all the components. Though the dominant component in the underlying variable will be the one in which the first components account for a large proportion of the variability (around 70-80%).

[5] The technique helps to reduce the dimensionality of a data set consisting of many variables correlated with each other.

In the present analysis we use the first principal component since it explains about 90% of the variance in the data in most cases. Pair of Eigen-value [6]and Eigen-vector [7]describe principal component in which each Eigen-value explains the amount of variance through each principal component and the factor-loadings generated are the coordinates of the eigenvector. Factor loadings[8] which coordinates Eigen vector measure the significance of each dimension which account for the variability in the particular principal component. Weights are provided by the Eigen-vectors for computing the uncorrelated principal components. Afterwards the linear combinations of normalized original variables of principal component scores are worked out as linear combinations of normalized original variables. Then weights are assigned as factor loadings (NUEPA, 2009)

Steps of composite index

- First step includes converting the raw values into normalized values. First the Best and Worst values in an indicator are identified. The BEST and the WORST values will depend upon the nature of a particular indicator. In case of a positive indicator, the HIGHEST value will be treated as the BEST value and the LOWEST, will be considered as the WORST value. Similarly, if the indicator is NEGATIVE in nature, then the LOWEST value will be considered as the BEST value and the HIGHEST, the WORST value Once the Best and Worst values are identified, the normalize values should be obtained in case of all the variables used in EDI computation. Normalized Values always lies between 0 and 1. The normalized values are calculated by using the formula (Best values – Observed values / Best values – Minimum value). The normalized values for the respective indicators are shown in the Appendix.
- Once the Normalized Values are obtained for all the indicators across States have been calculated, the next step relates to assigning FACTOR LOADINGS and WEIGHTS to each variable. Best technique to assign weights is using Principal Component Analysis (PCA).

[6] Determine the magnitude of the principal components
[7] Represent the core components of PCA that determine the directions of new feature space
[8] They are the part of the outcome of factor analysis which serve as a data reduction method while explaining the correlation between observed variables

- The objective behind applying PCA is to reduce the dimensionality (number of indicators) of the data set but retain most of the original variability in the data. It accounts for as much of the variability in the data as possible, and each succeeding component accounts for as much of the remaining variability as possible

The normalized values and the PCA Eigen vectors for the respective indicators are shown in appendix. After the construction of the composite index ranks are assigned to each state according to their composite scores for each respective indicator. The index has been generated for three consecutive years viz. 2004- 05, 2011-12, and 2015-16. One more exercise is performed after the ranking of the states. States have been classified as highly developed, developed, moderately developed and backward states from the scores computed. The methodology for classification of the states has been specified in the latter part of the chapter.

To examine the interlinkage between human development, physical development and economic growth spearman's ranking correlation has been calculated for each year separately. For examining the chain link simple regression analysis has been used to study the impact of each indicator on economic growth through Chain A and Chain B concept by Ranis & Stewart (2001).

Significance of the study

With regards to Indian economy's development pattern certain unavoidable questions need to be answered. This study presents a development pattern where achievements of the states in terms of economic growth and human development are documented empirically. The study aims to measure the disparities between Indian states and districts of Uttar Pradesh and Kerala both quantitatively as well as qualitatively. The study is undertaken with one more objective of exploring the dynamic link between the two components. This study would be helpful not only to explore the national and state-wise failures in translating the achieved economic prosperity into parallel expansion of HD but also would be helpful in prioritizing the policies to achieve a balanced level of sustainable development. Further, the study of dynamic links between them across the states would motivate the policymakers to draw long-term strategy to strengthen development effects. The study will examine the link mechanisms between human development and economic growth of the 22 states of India and districts of Uttar Pradesh and Kerala. The states having higher economic growth as well as higher human development will be termed as

'virtuous cycle', while the states having low economic growth and low human development will be termed as 'vicious cycle'. The policy needed to be implemented for the purpose of improving the economic condition of the states. The study focuses on different policy measures to accelerate the process of economic growth and development in states like Uttar Pradesh.

Outline of the study

Chapter *one* of the study titled "**Introduction**" basically tries to highlight the importance of the relationship between Human Development Indicators and Economic growth. The linkage between the means and end component of development is of utmost importance for any economy to achieve the objective of development. The chapter studies the basis of the study and the conceptual framework related to two strands of development.

Chapter *two* titled "**Role of Human Capital and Human Development in Economic Growth: A Theoretical Perspective**" is set to analyze the importance of human capital and human development indicators on economic growth. Theories related to human capital and how human capital impacts growth have been briefly reviewed. An elaborative review of literature has been done in this chapter and it suggests that human capital and human development have implication upon the economic growth of the economy.

Chapter three titled **"Trends in social sector expenditure: A State Wise Analysis"** presents the scenario of the expenditure trends incurred by the states on social sector as a whole as well as on education and health indicator of human development.

In the constitutional division of responsibilities between Centre and States, social sector planning and development are primarily the responsibility of State Governments. It is true that the States have been earmarking sizeable proportion of their resources for social development, though supplemented by the Centre. But the accomplishment appears to be widely at variance across the States. This raises a number of issues. Are the States allocating adequate resources for social development? What is the structural composition of social sector allocation of resources? What is the degree of interstate discrepancy in apportionment? What is the advancement in the level of social sector development across the States? Are they comparable with the State's efforts? If not, what are the reasons for variations across States? This study attempted to focus on these issues

Chapter *four* titled ***"Interlinkage between Human Development Indicators and economic growth: An Interstate analysis".***

The chapter tries to explore the relationship between human development indicators and economic growth in Indian states as per UNDP methodology. UNDP in 1991 made an attempt to assess the status of human development through various indicators for the developed as well as developing nations. A prescribed methodology has been adapted by UNDP to assess this status for all the countries of world. The study tends to assess the same status on sub- national basis. Adapting to the same methodology as prescribed by UNDP Human Development Index has been computed for the states for two years i.e. 2001 and 2011.

Chapter *five* titled "***Interlinkage between Human Development, Physical Infrastructure Indicators and economic growth: a Multivariate Approach"***

Given the limitations of UNDP methodology study tries to explore the linkages between human development and economic growth through the inclusion of other quality and quantity variables which will the further strengthen the linkages. Keeping the indicators same as that of UNDP there is addition in the sub indicators within the variables. Education index has been computed using variables like that of literacy rate, gross enrolment rate at primary as well as higher education levels and pupil teacher ratio at primary as well as higher education level. Health index has been computed using variables like that of life expectancy, infant mortality rate, PHC'S & CHC'S per lakh population, institutional deliveries and number of doctors per lakh population. Physical infrastructure index has been computed using variables like that of rail density, road density, water facilities, toilet facilities, power, government hospitals, number of institutions, net irrigated area, storage facilities, and energy. Composite index has been calculated through the use of Principal component analysis. Weights have been generated through the PCA methodology and accordingly the scores and ranks are calculated for the states for three years i.e. 2004-05, 2011-12 and 2015-16.

Chapter ***sixth*** titled ***"Interlinkage between Human Development, Physical Infrastructure Indicators and economic growth: a study analysis of UP and Kerala***

The chapter explores the relationship between human development and physical infrastructure indicators and economic growth among the UP and Kerala districts. Analysis of correlation

technique for UP districts portrays that there exists hardly any relationship between human development indicators and economic growth. A profound relationship is being observed among Physical infrastructure and growth indicator of development. Poor ranking of UP state in terms of human development indicators is due to the negligence of the human development indicator. Education and physical infrastructure indicator have a strong relationship with growth indicator of development for the year 2015-16. Health indicator observes some improvement as positive relationship can be observed though it is not significant. Analysis of Step wise regression technique shows that education and infrastructure have a positive relationship with growth indicator while for health indicator a weak association among the variables is observed. For the year 2015-16 reverse results were observed. Infrastructure indicator was found to be substantial with growth indicator. Human development indicators do not witness a positive relation with growth indicator.

For Kerala districts have shown a positive and significant relationship between Human Development indicators and economic growth. The backwardness of UP economy can be related to the negligence of human development indicators. Investment in physical infrastructure alone would not lead to the development of the districts. Hence, the foremost objective for UP economy should be on focusing upon human development indicators.

Conclusion

Human development and economic growth are two facets of one coin called development. The study tends to explore the linkage between these two facets of development. Findings of the study observe that both human development and economic growth presupposes each other. Investment in human capital indicators lead to good growth numbers and hence development. A strong association among human development indicators, physical infrastructure indicators and economic growth is very much necessary.

For Indian economy it is observed that human development transformation to Economic growth is more profound than Economic growth transformation. Hence for backward states it becomes very important to invest in human development indicators. Negligence towards human development indicators will only lead towards increasing disparities and development.

Indian states backwardness in various development indexes is due to the increasing interstate discrepancies. For a nation to be development both developed and underdeveloped states show grow together there should be an equal apportionment of resources. Hence, focus should be on investing in quality indicators of human development which can lead to sustainable growth. Planning Commission (2006) correctly prioritizes the national strategies by setting the target of *Bridging Divides: Including the Excluded*.

A consistent strategy of promoting both objectives simultaneously, and supporting key issues such as social justice, female literacy, equity in income distribution and investment in education and heath sectors should be much focused upon. A deliberate initiative is needed to improve both aspects of development i.e. human well-being and sustainable growth. Study observes that there is an utmost need to channelize further strengthens the linkage of both chains of transformation especially in case of educational aspect of human development. Educational policies in the country should focus more upon the investment in improving quality indicators of education which can have a profound impact between economic choices and educational achievements. Bihar, Orissa, Uttar Pradesh, Assam, Madhya Pradesh and Rajasthan are chronically placed in backward category for successive decades. A planned initiative will be needed for uplifting the development status of these states. An inclusive central policy for uplifting these states will be needed. Policy makers of backward as well as moderately states should examine the fact that their places in global scale are not only uninspiring but it also relate a story of long journey of tough commitments.

Suggestions

1. For achieving the goal of sustainable and inclusive development investment in the indicators like higher education and pupil- teacher ratio and various other indicators already been specified in the study should be focused upon.

2. All regions of the country should have similar expansions in economic attainment and human capability hence, an equitable distribution of resources specially among the backward regions of the nation should be the foremost objective of policy makers. An extraordinary effort is needed to halve the alarming level of regional discrepancies in both income and non-income dimensions of human development.

3. Educational policies in the country need to be redesigned on the quality basis so that a responsive effect between economic choices and educational achievements can be restored. Same is the case for health indicator; government policies should focus more on emphasing the role of public sector which is more affordable by the poor people.

Development cannot be attained without the bi- directional relationship between these two concepts hence both the indicators are necessary for attaining the goal of development.