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“POVERTY AND HEALTH IN INDIA: A COMPARATIVE STUDY ABOUT PRE-REFORM AND POST-REFORM PERIODS”

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Abstract : In India, Economic Reforms has been explicitly started in 1991. Even with some controversy in the initial period now it intruded in almost all the sectors. At present days economic reforms is mingled with every sphere of economic activities. But the effects of economic reforms are highly debatable. Development of social sector reveals the standard of living of people as well as the volume and potential of human resource in a country. Hence the analysis of economic reforms and its impact on social sector is imperative. This paper analysis poverty and health status during pre-reforms and post-reforms periods and compare them to find out that during which period the decrease in poverty and the increase in health status are better. For the analysis of poverty, people living below poverty line and for health status analysis life expectancy at birth and infant mortality are used in this study.

Key words: Economic Reforms, Social Sector, Poverty, Health, Below Poverty Line, Life Expectancy at Birth, Infant Mortality Rate.

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I.INTRODUCTION

In India, Economic Reforms has been explicitly started in 1991. Even with some controversy in the initial period now it intruded in almost all the sectors. At present days economic reforms is mingled with every sphere of economic activities. But the effects of economic reforms are highly debatable.

Even though during Rajiv Gandhi regime economic reforms had started, it has full fledged initiation in India since 1991 onwards. In the name of economic reforms in India, the license raj is being eliminated, FDI’S are being invited, State monopoly is being abolished, budget deficits are being controlled and GDP increase is being fuelled. It is the process of integrating Indian economy with global economy with the help of Liberalisation, Privatisation and Globalisation policies. Many argue that economic reforms would benefit the opulent people and bypass the poor people. To contain this argument during the Ninth Plan Period an objective was initiated- “Growth with social justice and equity”. By thus a trial had been carried to give human face for the economic reforms.

Economic reforms have considerable impact on India’s GDP, BoP and many more economic sectors and after the introduction of economic reforms in Indian economy the GDP is revolving around 6 percent in most of the years. Trillionaires, Billionaires, and Millionaires in number increased considerably. Our opulent rich person are being occupied most of the top ten ranks in the world’s richest person’s list. But there is a

question, that is, whether the fruits of the economic reforms have reached the poor or not?

Social sector is an important ingredient for over all development of a country. Development of social sector reveals the standard of living of people as well as the volume and potential of human resource in a country. Hence the analysis of economic reforms and its impact on social sector are imperative.

II.METHODOLOGY

The aim of this analysis is to compare the performance of Indian social sector during pre-reforms period with the performance of post-reforms period and to find out during which period the decrease in poverty and the increase in health status were better. For that, two social areas have been chosen for the analysis, one is poverty reduction and another one is health status improvement. For poverty reduction analysis the percentage of population living below poverty line (BPL) has taken and to quantify the health status improvement analysis, life expectancy at birth (LEB) and infant mortality rate indicators have been chosen.

II a. PERIOD OF STUDY AND SOURCES OF DATA

For pre-reforms period the data from the year 1977-78 to the year 1990-91 have been analysed and for post-reforms period the data from 1991-92 to 2004-05 have been used. For poverty line, data from Planning Commission, Government of India and for infant mortality and life expectancy at birth, data from the Registrar General, Sample Registration System, Government of India have been used in this study.

II b. STATISTICAL TOOLS

Mean, percentage analysis, correlation and regression statistical tools have used in this analysis. To find out year wise data interpolation and extrapolation tools have also used in this study.

III.ANALYSIS

III a. ECONOMIC REFORMS

The public sectors which reserved for Government were opened for private sectors. The Indian Government removed many restrictions and paves the easy ways for obtaining the license and to start an industry by private. The Government freed the private houses to undertake investment without any ceiling being prescribed by the Monopoly Restrictions Trade and Practices Commission. Foreign direct investment up to 51 per cent allowed in high priority areas also. Greater autonomy was given to public sector units for the improvement and the economy was opened to world for exports and imports.

As a consequence of economic reforms, India's share in world export of goods and services improved from 0.53 per cent in 1990 to 1.7 per cent in 2005. The FDI rose from $129 million in 1991-92 to $6130 million in 2001-02. India's average growth rate was above 6 per cent after the introduction of reforms.

III b. POVERTY

Poverty is defined as the lack of what is necessary for material well-being - especially, food, health, education, shelter, land and other assets. Poverty is a state of deprivation. In absolute terms it reflects the inability of an individual to satisfy certain

basic minimum needs for a sustained healthy and a reasonably productive living. The proportion of population not able to attain the specified level of expenditure is then segregated as poor (GoI NHDR 200l). According to World Bank, “poverty is hunger, poverty is lack of shelter. Poverty is being sick and not being able to see a doctor. Poverty is not being able to go to school, not knowing how to read, and not being able to speak properly. Poverty is not having a job, it is fear for the future, and it is living from hand to mouth. Poverty is losing a child to illness brought about by unclean water. Poverty is powerlessness, lack of freedom”.

Poverty line may be defined as an income level that is just sufficient to meet the defined calorie norm. However households having a per capita income less than the poverty line are identified as poor. It is expressed in terms of an income level which is deemed to be necessary for enabling a person to sustain a minimum level of consumption In India, headcount index is being a key measure for poverty analysis, that is, the percentage of the population living in households where per capita consumption is below the poverty line. India’s Planning Commission defines poverty line based on the per capita monthly expenditure which is officially linked to a nutritional baseline measured in calories. A daily intake of 2400 calories per person in rural areas and 2100 in urban areas marked as a cut-off point for poverty line. Who do not meet these calorie norms falls below poverty line.

Poverty reduction was at a relatively decreasing rate in the post-liberalization period, there is unanimity among economists about a rise in inequality or relative deprivation. The growth rate of GDP has been estimated to be higher in 1990s than that in the 1980s. The paradox of higher growth of GDP and lower rate of poverty reduction

is the direct results of the unequal distribution of income between the rich and the marginalized sections of the population (Datt and Sundaram 2009). India has widely heralded as a success story for globalization. Over the past two decades the country has moved into premier league of world economic growth; highly-technology exports are booming and India's emerging middle class consumers have become a magnet for foreign investors. But overall the evidence suggests that the pick-up in growth has not translated into a commensurate decline in poverty. More worrying, improvements in child and mortality are slowing and India is now off track for these MDG targets (HDR 2005).

III c. HEALTH

Health is considered as an important asset and it is also one of the resources needed for human well- being. The concept of health is a broad one, embracing heath status, nutritional status, morbidity, fertility management, disability and mortality. It embraces not just the health of young children but also the health of older children and adults. It also embraces reproductive health the health of woman during and after pregnancy, and unwanted pregnancies (PRSP Source Book 2002).

The importance of health in measuring poverty is growing in importance. This is because of the crucial role that plays in the economic development and poverty reduction aspects. How does health relate to development? The first point to note is that the enhancement of health is a constitute part of development. Second, given other things, good health and economic prosperity tend to support each other (Amarty K. Sen 2000).

Poverty and ill health are linked in a vicious cycle, in which poverty leads to ill health and ill health further contributes to poverty. This is a two way relationship; ill health prevents people from working, or affects their productivity by thus lowering their

income. The loss of earnings associated with ill health rapidly impoverished households.

It is widely accepted that socio-economic factors, including poverty, are key in determining health status. Poor people become sick more often and die younger than those who are better off. Since poverty is one of the major determinants of poor health status, poor health is mostly the cause of the poverty and it is also a good indicator to measure poverty. Poverty has an obvious impact on health. Income provides means of obtaining the prerequisites for health, such as shelter, food, and access to health services. Low income leads to poverty which ultimately results in poor nutrition, overcrowding, inadequate housing, increased risk of infections and inability to maintain standards of health and hygiene conditions. WHO defines health as a state of complete physical, mental and social well being and not merely the absence of disease or infirmity. Later, economic and political well beings are also included in this well-being definition.

III d. HEALTH AND DEVELOPMENT

Health is an important ingredient of development. Health supports development process. It spurs economic growth and a good measure of human well-being. Enhancement of health of the people is one of the major objectives of the process of development. Health improves the productivity and skills of the people and reduces absenteeism from work. By thus it increases income of poor people. Health directly improves the socio-economic conditions of people in many ways. Improving health status of people is one of the basic goals of development. Health is not only an end product but it is also a major contributor for economic development.

Today, there is general agreement that health is an essential constituent of the human resource which plays such a crucial role in development". Health is normally viewed as an end product of growth process. People with higher incomes have a greater command over the goods and services that promote health, such as better nutrition, access to safe water, sanitation and good quality health services" (David E. Bloom1999).

Health gives capability and brings the capacity for personal development, with economic well-being; health is a critical input for poverty reduction and economic development. It is a component of capability and human resource. Improving health conditions not only improves well-being but also increases income earning capacity. Health acts as a means to enhance one's capability to work and earn more. Income, health, and education acts together and improves individual capability and induces overall development of a country. "Health is more than the well being of an individual. The health of an individual or group affects the well-being of communities and nations through economic productivity, school attendance and performance by children and long-term prospects for the development of a country's human resources" (WHO 2003). Better health is central to human happiness and well-being. It also makes an importance contribution to economic progress, as healthy people live longer, are more productive and save more.

Health improves growth in the human capital. Healthy people have more resources to save and these savings in turn provide investments. Health education and healthy behaviour lower fertility, mortality and morbidity. "Good health and prosperity tend to support each other. Healthy people can more easily earn an income, and people with a higher income can more easily seek medical care, have better nutrition, and have

the freedom to lead healthier lives" (Amartya K Sen. A. 2000). Health gain increases life expectancy and quality of life, reduces morbidity, mortality and fertility. These are the signs of development of a nation. "Improvements in health are important in their own right, but better health is also prerequisite and a major contributor to economic growth and social cohesion. Conversely, an improvement in people's access to health technology is a good indicator of the success of other development processes" (WHO Report 2003).

Improving health of people is one of the major objectives in today's development agenda. Health and development of a country is interlinked. Like all other asset health is also an asset. It is a basic prerequisite for human resource development and overall economic growth. The importance of health in measuring poverty is growing in importance. This is because of the crucial role that health plays in the economic development and poverty reduction aspects.

III e. MEASURING HEALTH

To monitor the health status of a country, a region or an area, various mortality, morbidity, life expectancy, death rate, birth rate, fertility rate, nutritional status, availability of and access to health services and medical and paramedical professional, water and sanitation facility indicators are being used.

Among them, the prominent are,

a. infant mortality rate

b. under – five mortality rate

c. maternal mortality rate

d. life expectancy at birth

e. HIV/AIDS prevalence

f. TB prevalence

g. Malaria prevalence

h. Diarrhea prevalence

i. Acute respiratory infection rate

j. Availability of doctors and nurses

k. Births attended by medical personnel

l. Immunization coverage

m. Adoption of contraceptive methods

n. Anaemia among children, adolescent girls and mothers

o. Body mass Index

p. Death rate and

q. Fertility rate

Among these life expectancy at birth, under-five mortality, infant mortality rate are being mostly used by international agencies to assess the health and ill health conditions of the people. The data of these are the more sensitive, reliable and easily available.

III .f. CORRELATION AND REGRESSION ANALYSIS

Table No: 1. BPL, LEB & IMR in India

Sl.No	Year	BPL	LEB	IMR	Year	BPL	LEB	IMR
1	1977-78	51.3	51.9	130	1991-92	37.2	59.3	80
2	1978-79	50.1	52.5	127	1992-93	36.8	59.8	79
3	1979-80	49.0	53.1	120	1993-94	36.0	60.3	74.0
4	1980-81	47.9	53.7	114	1994-95	35.2	60.6	74.0
5	1981-82	46.8	54.3	110	1995-96	34.5	60.9	74.0
6	1982-83	45.6	54.8	105	1996-97	33.7	61.2	72.0
7	1983-84	44.5	55.4	105	1997-98	32.9	61.5	71.0
8	1984-85	43.1	55.9	104	1998-99	32.2	61.8	72.0
9	1985-86	41.7	56.4	97	1999-00	31.4	62.0	70.0
10	1986-87	40.3	56.9	96	2000-01	30.6	62.3	68.0
11	1987-88	38.9	57.4	95	2001-02	29.9	62.6	66.0
12	1988-89	38.5	57.9	94	2002-03	29.1	62.9	63.0
13	1989-90	38.1	58.3	91	2003-04	28.3	63.2	60.0
14	1990-91	37.7	58.8	80	2004-05	27.5	63.5	58.0

Source: 1. BPL- Planning Commission, Govt of India,
2. LEB & IMR – Registrar General, SRS, Govt of India.

RESULTS OF CORRELATION ANALYSIS

Correlation between BPL and IMR during pre-reforms period was 0.965.
Correlation between BPL and IMR during post-reforms period was 0.9678.
Correlation between BPL and LEB during pre-reforms period was -0.995.
Correlation between BPL and LEB during pre-reforms period was -0.996

The above results show that there was a positive correlation between poverty line and infant mortality rate, that is, if poverty reduced then there will be a decrease in infant

mortality. But there was a negative correlation among poverty and life expectancy; we can observe that if poverty decreased then that will lead to an increase in life expectancy.

RESULTS OF REGRESSION ANALYSIS

If we keep BPL as an independent variable and Life Expectancy as a dependent variable then the regression equations were

During pre-reforms period y = 161.8 + (-2.126) x
During post-reforms period y = 184.3 + (-2.465) x

From the above results it is understood that there was a inverse relationship between poverty reduction and increase in life expectancy at birth. It means that if there was a reduction in poverty then there was an increase in life expectancy. A unit decrease in poverty caused 2.126 unit increases in life expectancy during pre-reforms period and a unit decrease in poverty caused 2.465 unit increases in life expectancy during post-reforms period.

If we keep BPL as an independent variable and Infant Mortality as a dependent variable then the regression equations were

During pre-reforms period y = 10.12 + (0.3214) x
During post-reforms period y = -0.6337 + (0.4372) x

But there was a positive relationship between poverty reduction and infant mortality decline. A unit reduction in poverty caused 0.3214 unit reduction in infant mortality during pre-reforms and 0.4372 unit reduction during post-reforms. From the above analysis it is found that there was a close relationship between poverty reduction

and health status improvement. This relationship has become more integrated during post-reforms period.

III g. POVERTY REDUCTION ANALYSIS

Tab No: 2. Percentage of decrease of BPL

Sl.No	Year	BPL	Decrease % over previous year	Year	BPL	Decrease % over previous year
1	1977-78	51.3		1991-92	37.2	
2	1978-79	50.1	-1.20	1992-93	36.8	-0.41
3	1979-80	49.0	-1.07	1993-94	36.0	-0.83
4	1980-81	47.9	-1.13	1994-95	35.2	-0.77
5	1981-82	46.8	-1.13	1995-96	34.5	-0.77
6	1982-83	45.6	-1.13	1996-97	33.7	-0.77
7	1983-84	44.5	-1.13	1997-98	32.9	-0.77
8	1984-85	43.1	-1.40	1998-99	32.2	-0.77
9	1985-86	41.7	-1.40	1999-00	31.4	-0.77
10	1986-87	40.3	-1.40	2000-01	30.6	-0.77
11	1987-88	38.9	-1.40	2001-02	29.9	-0.77
12	1988-89	38.5	-0.41	2002-03	29.1	-0.78
13	1989-90	38.1	-0.41	2003-04	28.3	-0.77
14	1990-91	37.7	-0.41	2004-05	27.5	-0.80
Percentage of decrease			-26.56			-26.16
Average			-1.05			-0.75
In Absolute Unit			-13.6			-9.7

The above table reveals that poverty reduction was better during pre-reforms period than post-reforms period. During pre-reforms period, the reduction was 26.59 in percentage and during post-reforms, it was 26.16 percentage reductions. Even though it looks like equal in reduction, the average reduction during pre-reforms was 1.05 but it was 0.75 during post-reforms period. Whereas, it was 13.6 reductions in absolute unit during pre-reforms and it was 9.7 unit reductions after the introduction of reforms.

III h. INCREASE IN LIFE EXPECTANCY AT BIRTH ANALYSIS

Tab No: 3. Increase in Life Expectancy

Sl.No	Year	LEB	Increase in % over previous year	Year	LEB	Increase in % over previous year
1	1977-78	51.9		1991-92	59.3	
2	1978-79	52.5	0.6	1992-93	59.8	0.49
3	1979-80	53.1	0.62	1993-94	60.3	0.49
4	1980-81	53.7	0.57	1994-95	60.6	0.29
5	1981-82	54.3	0.57	1995-96	60.9	0.29
6	1982-83	54.8	0.57	1996-97	61.2	0.29
7	1983-84	55.4	0.57	1997-98	61.5	0.29
8	1984-85	55.9	0.49	1998-99	61.8	0.29
9	1985-86	56.4	0.49	1999-00	62.0	0.29
10	1986-87	56.9	0.49	2000-01	62.3	0.29
11	1987-88	57.4	0.49	2001-02	62.6	0.29
12	1988-89	57.9	0.49	2002-03	62.9	0.29
13	1989-90	58.3	0.49	2003-04	63.2	0.29
14	1990-91	58.8	0.49	2004-05	63.5	0.3
Percentage of Increase			13.35			7.05
Average			0.53			0.32
Increase in Years			6.9			4.2

It is observed from the above table that the increase in life expectancy was 6.9 years during pre-reforms period and 4.2 years after the introduction of reforms. In per cent, the improvement was 13.35 during pre-reforms and 7.05 during post-reforms period. The average increase was 0.53 during pre-reforms and 0.32 during post-reforms. Hence it is known that the increase in life expectancy was more during pre-reforms period.

III i. DECREASE IN INFANT MORTALITY ANALYSIS

Tab No: 4: Decrease in Infant Mortality

Sl.NO	Year	IMR	Decrease in % over previous year	Year	IMR	Decrease in % over previous year
1	1977-78	130		1991-92	80	
2	1978-79	127	-3	1992-93	79	-1
3	1979-80	120	-7	1993-94	74.0	-5
4	1980-81	114	-6	1994-95	74.0	0
5	1981-82	110	-4	1995-96	74.0	0
6	1982-83	105	-5	1996-97	72.0	-2
7	1983-84	105	0	1997-98	71.0	-1
8	1984-85	104	-1	1998-99	72.0	1
9	1985-86	97	-7	1999-00	70.0	-2
10	1986-87	96	-1	2000-01	68.0	-2
11	1987-88	95	-1	2001-02	66.0	-2
12	1988-89	94	-1	2002-03	63.0	-3
13	1989-90	91	-3	2003-04	60.0	-3
14	1990-91	80	-11	2004-05	58.0	-2
Percentage of decrease			-38.46			-27.50
Average			-3.85			-1.69
In Absolute Unit			-50			-22

Infant mortality reduction was also better during pre-reforms than post-reforms period. In absolute unit, it was 50 before the introduction of economic reforms and 22 after the introduction of reforms, in per cent, it was 38.46 during pre-reforms and 27.50 during post-reforms period. The average rate of reduction, during pre-reforms it was 3.85 and during post-reforms it was 1.69.

IV. FINDINGS

There was almost a perfect positive correlation between poverty reduction and infant mortality reduction and also there was perfect negative correlation between poverty reduction and life expectancy at birth. Regarding regression analysis, there was an inverse effect by poverty reduction on life expectancy and positive effect by poverty on infant mortality, that means, that resulted in a unit change in poverty reduction lead to more than two unit increase in life expectancy at birth and more than three unit reduction in infant mortality rate before the introduction of economic reforms and more than four unit reductions in infant mortality after the introduction of economic reforms.

Poverty reduction was almost equal during pre-reforms and post-reforms periods in percent where as the average poverty reduction was more during pre-reforms period while comparing the post-reforms period.

The increase in life expectancy at birth was better during pre-reforms period than post-reforms period. The infant mortality reduction was also better during pre-reforms period than post-reforms period.

Hence, from the above analysis we can make the observation that the social sector performance, especially, poverty reduction and health status improvement were better during pre-reforms period than the post-reforms period.

V. CONCLUSION

A country needs social sector development for its overall development. Economic reforms, which has been implementing through Liberalisation, Privatisation and Globalisation policies in India, have many critiques, the most controversial one is, economic reforms induces inequality, which is one of the main economical distribution problem that is faced by India. There is no doubt about that the economic reforms has induced growth in India and India's consistent GDP growth is the effect of the economic reforms but it yet to act as a cause for social development. The gap between have's and have not's have widened after the introduction of economic reforms. To fill up this gap and to give a human face for economic reforms perpetuated implementation of the social welfare schemes like National Rural Employment Guarantee Programme, National Rural Health Mission and Sarva Shiksha Abiyan are the need of the hour.

The fruits of economic reforms yet to reach poor people in India. Economic reforms is meaningful if it is benefited the society as a whole. Unless this wouldn't have done in the future then economic reforms would be resulted in Growth without Equality. Translating economic growth into social sector development needs Government policies that are aimed at broadening the distribution of benefits of economic growth, increased public investment in rural areas and social services.

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