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“Regional Disparities in Poverty and Education in India”

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I. Introduction

India is a witness of regional disparities in many sphere of socio- economic development. On one side, world’s majority of new billionaires are in India and on the another side, India has majority of poor people. Like that, in development, the States like Kerala, Tamil Nadu, Punjab, and Gujrat are in the forefront and BIMURAO (Bihar, Madhya Pradesh, Uttar Pradesh, Rajasthan and Orissa) States are far behind in many aspects. The main objective of the Eleventh Plan was faster and inclusive growth and it is going to emphasis in the forthcoming Twelfth Plan also. As the approach paper of the Twelfth Plan said that expanding educational facilities and improving quality of education are key instruments and reducing poverty is a key element for achieving faster and inclusive growth.

Poverty by any means is a problem. The worst aspects of poverty are hunger, poor health, illiteracy, malnutrition, poor housing condition etc. Education develops a country more swiftly. It is the key determinant of nation’s income and growth. It gives more productive work force to the society. Science and technology require educated people. Education is one of the most powerful instrument that societies have for reducing deprivation and vulnerability, it increases earning potential, expands labour mobility, promotes the health of parents and children, reduces fertility and child mortality. Eradicating illiteracy is being one of the primary objectives of development goal. Educating all the persons spurs development process. The relationship between education and poverty reduction is thus quite straight and linear. Education enables the person to participate in the development process (WHO 2002).

II. Objective and Methodology

Various studies proved that there is a strong correlation between poverty and education and many more international studies revealed that improvement in education reducing poverty resulted in regional balanced development. This paper aims to analyze the regional disparities in reducing poverty and increase in literacy (education) in India with the emphasis on State wise analysis. The elasticity concept has used to study the relationship between poverty reduction and educational advancement in the name of “education elasticity of poverty”. Education elasticity of poverty is the change in poverty due to the change in education. There are various indicators available for measuring poverty and education but among those the most sensitive indicators poverty ratio (Headcount Ratio) and literacy rate have chosen for this analysis. The equation for education elasticity of poverty model is

$$\frac{\Delta Pov}{Pov} \times \frac{ed}{\Delta ed}$$

Where ΔPov is change in poverty ratio,

Pov is poverty ratio

Δed is change in education (Literacy rate) and

ed is education (Literacy rate)

This study covers the period from 1973-'74 to 2004-'05. The study primarily focuses 15 Major states and all India. This study is based on poverty data form the Planning Commission, Government of India, and the data from census of India and data form the various documents of economic survey have used for literacy rate. Education elasticity of poverty model, interpolation and extrapolation, regression coefficient, percentage tools and ranking has been used in the study.

III. Poverty, Education and Regional Disparities

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 2001). People are said to be living in poverty if their income and resources are so inadequate to live a decent life. Poverty line is defined in terms of either income or consumption expenditure as an indicator of welfare. Poverty line represents the level of income or consumption necessary to meet the minimum needs which are necessary to live a decent standard of living. The most straight forward way to measure poverty is to calculate the percentage of the population with income or consumption levels below the poverty line. This “head count” measure is by far the most commonly calculated measure of poverty (WDR 2000/01). The most common international definition of poverty is people whose income is less than \$1 a day are considered as living below poverty line. In India, the poverty line is defined as the aggregate per capita monthly expenditure of that group whose per capita, per diem ‘calorie’ intake (obtained from the expenditure on food items) conforms to certain specified norms. The calorie norms were fixed at 2435Kcal per capital per diem for rural areas and “2095 Kcal” for urban areas (rounded off to 2400 and 2100 Kcal respectively). The percentage of population living below this poverty line is known as poverty ratio or head count ratio.

Education is a light for life especially for poor. Education improves knowledge and skill and helps poor people to pull them out of poverty. For poor, education is the very much needed asset than other asset. Educational attainment is an important indicator to monitor the development of a nation. Improving education, literacy, and knowledge not only improves well-being but it also leads to better health outcomes and to higher income. "Inadequate education is

one of the most powerful determinants of poverty, and unequal access to education opportunity is a strong correlate of income inequality. Basic education or literacy training, of adequate quality is crucial to equipping disadvantaged individuals with the means to contribute and to benefit from economic growth. Education is one of the most powerful instruments societies have for reducing deprivation and vulnerability: it helps lift earning potential, expands labour mobility, promotes the health of parents and children, reduces fertility and child mortality, and affords the disadvantaged a voice in society and the political system" (PRSP Source Book 2002).

Development is a multi-dimensional phenomenon. Some of its major dimensions include: the level of economic growth, level of education, level of health services, degree of modernization, status of women, level of nutrition, quality of housing, distribution of goods and services, and access to communication. In India, the progress of socio-economic development among major states is not uniform (Abhiman Das 1999). The regional disparity in India is now a matter of serious concern. It is well known that in a large economy, different regions with different resources bases and endowments would have a dissimilar growth path over time. One of the reasons why centralized planning was advocated earlier was that it could restrain the regional disparity (B.B. Bhattacharya and Sakhivel 2004). To tackle the regional disparity problem inclusive growth is proposed. Inclusiveness is a multi-dimensional concept. Inclusive growth should result in lower incidence of poverty, broad-based and significant improvement in health outcomes, universal access for children to school, increased access to higher education and improved standards of education, including skill development (Planning Commission 2006).

IV. Analysis and Discussions

Table No: 1. India and Major States- Poverty Ratio and Literacy Rate and Education Elasticity of Poverty											
Sl.NO	States	Poverty Ratio		Literacy Rate		∂pov	∂ed	$\partial\text{pov}/\text{pov}$	$\text{ed}/\partial\text{ed}$	Education Elasticity of Poverty	Rank in Education Elasticity of Poverty
		1973-74	2004-05	1973-74	2004-05						
1	Kerala	59.74	11.40	71.54	92.15	48.34	-20.61	0.809	-3.471	-2.809	1
2	Tamil Nadu	56.51	17.80	47.20	75.40	38.71	-28.20	0.685	-1.674	-1.147	2
3	Gujrat	47.21	12.50	43.45	71.72	34.71	-28.27	0.735	-1.537	-1.130	3
4	Punjab	28.08	5.20	38.99	71.77	22.88	-32.78	0.815	-1.189	-0.969	4
5	West Bengal	63.69	20.60	40.35	71.55	43.09	-31.19	0.677	-1.294	-0.875	5
6	Karnataka	54.34	17.40	38.25	69.73	36.94	-31.48	0.680	-1.215	-0.826	6
7	Maharastra	52.94	25.20	47.33	78.48	27.74	-31.14	0.524	-1.520	-0.796	7
8	Assam	51.23	15.00	34.27	67.09	36.23	-32.82	0.707	-1.044	-0.738	8
9	Andra Pradesh	49.25	11.10	29.63	62.25	38.15	-32.62	0.775	-0.908	-0.704	9
10	Haryana	35.24	9.90	34.30	70.84	25.34	-36.54	0.719	-0.939	-0.675	10
11	Uttar Pradesh	56.98	25.50	26.63	61.25	31.48	-34.62	0.552	-0.769	-0.425	11
12	Orissa	66.24	39.90	34.22	66.52	26.34	-32.30	0.398	-1.059	-0.421	12
13	Bihar	61.78	32.50	24.73	53.50	29.28	-28.77	0.474	-0.860	-0.407	13
14	Rajasthan	46.30	17.50	23.73	61.34	28.80	-37.61	0.622	-0.631	-0.393	14
15	Madhya Pradesh	61.90	32.40	27.97	64.87	29.50	-36.91	0.477	-0.758	-0.361	15
	ALL INDIA	54.88	21.80	35.85	67.80	33.08	-31.95	0.603	-1.122	-0.676	

Source: 1. Poverty Rate- Planning Commission of India.

2. Literacy Rate- Computed on the basis of Census of India and Various Economic Survey Documents.

Table No.2. India- Poverty Headcount Ratio

Sl.NO	States	1973-74	1978-79	1983-84	1987-88	1993-94	1999-00	2004-05	Average Poverty Ratio (from 1973-74 to 2004-05)	Rank (from largest to smallest)	% of change (from 1973-74 to 2004-05)	Per year change
1	Andra Pradesh	49.25	39.31	30.44	27.20	22.19	15.77	11.10	27.89	3	-77.46	-2.50
2	Assam	51.23	57.15	41.58	36.84	40.86	36.09	15.00	39.82	8	-70.72	-2.28
3	Bihar	61.78	61.55	60.76	53.37	54.96	42.60	32.50	52.50	14	-47.39	-1.53
4	Gujrat	47.21	41.23	43.04	32.33	24.21	14.07	12.50	30.66	5	-73.52	-2.37
5	Haryana	35.24	29.55	21.69	16.63	25.05	8.74	9.90	20.97	2	-71.91	-2.32
6	Karnataka	54.34	48.78	45.11	38.14	33.16	20.04	17.40	36.71	7	-67.98	-2.19
7	Kerala	59.74	52.22	38.82	32.08	25.43	12.72	11.40	33.20	6	-80.92	-2.61
8	Madhya Pradesh	61.90	61.78	41.78	43.40	42.52	37.43	32.40	45.89	13	-47.66	-1.54
9	Maharastra	52.94	55.88	46.45	40.10	36.86	25.02	25.20	40.35	10	-52.40	-1.69
10	Orissa	66.24	70.07	55.16	55.61	48.56	47.15	39.90	54.67	15	-39.76	-1.28
11	Punjab	28.08	19.27	19.35	12.70	11.77	6.16	5.20	14.65	1	-81.48	-2.63
12	Rajasthan	46.30	37.42	33.58	34.60	24.41	15.28	17.50	29.87	4	-62.20	-2.01
13	Tamil Nadu	56.51	54.79	51.63	45.13	35.03	21.12	17.80	40.29	9	-68.50	-2.21
14	Uttar Pradesh	56.98	49.05	41.48	41.99	40.85	31.15	25.50	41.00	11	-55.25	-1.78
15	West Bengal	63.69	60.52	54.37	43.99	35.66	27.02	20.60	43.69	12	-67.66	-2.18
	ALL INDIA	54.88	51.32	44.48	39.34	35.97	26.10	21.80	39.13		-60.28	-1.94

Table No: 3. India- Major States- Rank in Poverty, Literacy, Regression Coefficient and Education Elasticity of Poverty

Sl.NO	States	Poverty Ratio		Literacy Rate		Education Elasticity of Poverty		Regression Coefficient		Average Rank Index	Rank (according to Average Rank Index)
		Average (from 1973-74 to 2004-05)	Rank	Average (from 1973-74 to 2004-05)	Rank	Value	Rank	Value	Rank		
1	Kerala	33.20	6	83.86	1	-2.809	1	-2.290	1	2.25	1
2	Gujrat	30.66	5	57.04	4	-1.130	3	-1.347	4	4.00	2
3	Tamil Nadu	40.29	9	60.83	3	-1.147	2	-1.525	2	4.00	3
4	Karnataka	36.71	7	52.91	7	-0.826	6	-1.184	5	6.25	4
5	West Bengal	43.69	12	54.95	5	-0.875	5	-1.424	3	6.25	5
6	Maharastra	40.35	10	62.20	2	-0.796	7	-1.022	7	6.50	6
7	Punjab	14.65	1	53.42	6	-0.969	4	-0.564	15	6.50	7
8	Andra Pradesh	27.89	3	43.67	12	-0.704	9	-0.998	8	8.00	8
9	Haryana	20.97	2	52.46	8	-0.675	10	-0.658	14	8.50	9
10	Assam	39.82	8	47.69	10	-0.738	8	-0.820	10	9.00	10
11	Rajasthan	29.87	4	39.45	14	-0.393	14	-0.731	12	11.00	11
12	Orissa	54.67	15	50.70	9	-0.421	12	-0.911	9	11.25	12
13	Uttar Pradesh	41.00	11	41.05	13	-0.425	11	-0.769	11	11.50	13
14	Bihar	52.50	14	36.04	15	-0.407	13	-1.073	6	12.00	14
15	Madhya Pradesh	45.89	13	44.24	11	-0.361	15	-0.707	13	13.00	15
	ALL INDIA	39.13		50.27		-0.676		-1.021			

Source: Computed by the author from Government of India's various documents

From the above tables we can find that at all India level the poverty ratio decreased from 54.88% in 1973 -74 to 21.8% in 2004 – 05 and literacy rate increased from 35.85% in 1973 – 74 to 67.80% in 2004 – 05 (average poverty ratio and literacy rate were 39.13% and 50.27%). The education elasticity of poverty was -0.676 and regression coefficient was -1.021.

Kerala was at the first place in the average rank index. In this State the poverty ratio decreased from 59.74% in 1973-'74 to 11.4% in 2004-'05 and literacy rate increased from 71.54% in 1973-'74 to 92.15% in 2004-'05 (average poverty ratio and literacy rate were 33.20% and 83.36%). The education elasticity of poverty was -2.80 and regression coefficient was -2.290.

In Gujrat the poverty ratio decreased from 47.21% in 1973-74 to 12.5% in 2004-05 and literacy rate increased from 43.45% in 1973-74 to 71.72% in 2004-05 (average poverty ratio and literacy rate were 30.66% and 57.04%). In the average rank index this State was at the 2nd place and the education elasticity of poverty was -1.130 and regression coefficient was -1.347.

Tamil Nadu, one of the good performers in social aspects was at the 3rd place in the average rank index. In this State the poverty ratio decreased from 56.51% in 1973-'74 to 17.8% in 2004-'05 and literacy rate increased from 47.20% in 1973-'74 to 75.40% in 2004-'05 (average poverty ratio and literacy rate were 40.29% and 60.83%). The education elasticity of poverty was -1.147 and regression coefficient was -1.525.

In Karnataka the poverty ratio decreased from 54.34% in 1973-74 to 17.4% in 2004 – 05 and literacy rate for that period increased from 38.25% to 69.73 % (average poverty ratio and literacy rate were 36.71% and 52.91%). The education elasticity of poverty was -0.826 and regression coefficient was -1.184. This State was at 4th place in the average rank index.

In West Bengal the poverty ratio decreased from 63.69% in 1973-'74 to 20.6% in 2004-'05 and literacy rate increased from 40.35% in 1973-'74 to 71.55% in 2004-'05 (average poverty ratio and literacy rate were 43.69% and 54.95%). The education elasticity of poverty was -0.875 and regression coefficient was -1.424. This State was at 5th position in the average rank index.

The poverty ratio decreased from 52.94% in 1973-'74 to 25.2% in 2004-'05 and literacy rate for that period increased 47.33% to 78.48% (average poverty ratio and literacy rate were 40.35% and 62.20%) in Maharashtra. The education elasticity of poverty was - 0.796 and regression coefficient was -1.022 and that was 6th position in the average rank index.

Punjab was the best performer in poverty reduction, that was at 7th position in the average rank index, in this State, the poverty ratio decreased from 28.08% in 1973-'74 to 5.2% in 2004-'05 and literacy rate increased from 38.99% in 1973-'74 to 71.77% in 2004-'05 (average poverty ratio and literacy rate were 14.65% and 53.42%). The education elasticity of poverty was -0.969 and regression coefficient was -0.564.

In Andhra Pradesh the poverty ratio decreased from 49.25% in 1973-74 to 11.1% in 2004-05 and literacy rate increased from 29.63% in 1973-74 to 62.25% (average poverty ratio and literacy rate were 27.89% and 43.67%) in 2004-05. The education elasticity of poverty was - 0.704 and regression coefficient was -0.998 and that was at 8th position in the average rank index.

The poverty ratio decreased from 35.24% in 1973-74 to 9.9% in 2004-05 and literacy rate increased from 34.30% to 70.84% (average poverty ratio and literacy rate were 20.97% and 52.46%) for the same period in Haryana. The education elasticity of poverty was -0.675 and regression coefficient was -0.658 and that was the 9th place in the average rank index.

In Assam the poverty ratio decreased from 51.23% in 1973-74 to 15% in 2004-05 and literacy rate increased from 34.27% in 1973-74 to 67.09% (average poverty ratio and literacy rate were 39.82% and 47.69%) in 2004-05. The education elasticity of poverty was -0.738 and regression coefficient was -0.820 and this State was at 10th position the average rank index.

The poverty ratio decreased from 46.3% in 1973-'74 to 17.5% in 2004-'05 and literacy rate increased from 23.73% to 61.34% for that period (average poverty ratio and literacy rate were 29.87% and 39.45%) in Rajasthan. The education elasticity of poverty was -0.393 and regression coefficient was -0.731. This State was at 11th place in the average rank index.

In Orissa the poverty ratio decreased from 66.24 % in 1973-'74 to 39.9% in 2004-'05 and literacy rate increased from 34.22% to 66.52% for the same period (average poverty ratio and literacy rate were 54.67% and 50.70%). The education elasticity of poverty was -0.421 and regression coefficient was -0.911. This State was at 12th place in the average rank index.

In Uttar Pradesh the poverty ratio decreased from 56.98% in 1973-'74 to 25.5% in 2004-'05 and literacy rate for that period increased from 26.63% to 61.25% (average poverty ratio and literacy rate were 41.00% and 41.05%). The education elasticity of poverty was – 0.425 and regression coefficient was -0.769 and this was the 13th position in the average rank index.

Bihar was the one of the least performer in the development, in this State the poverty ratio decreased from 61.78% in 1973-74 to 32.5% in 2004-05 and literacy rate increased from 24.73% in 1973-74 to 53.50% in 2004-05 (average poverty ratio and literacy rate were 52.50% and 36.04%). The education elasticity of poverty was -0.407 and regression coefficient was -1.073 and that was at 14th position in the average rank index.

Madhya Pradesh was the least achiever in the average rank index, its position was 15th. In this State the poverty ratio decreased from 61.9% in 1973-'74 to 32.4% in 2004-'05 and literacy

rate increased from 27.97% to 64.87% for that period (average poverty ratio and literacy rate were 45.89% and 44.24%). The education elasticity of poverty was -0.361 and regression coefficient was -0.707.

This analysis reveals that in the overall performance in poverty reduction and education development, there were regional disparities in India. Kerala, Gujrat, Tamil Nadu, Karnataka and West Bengal were in the top position in overall ranking whereas Madhya Pradesh, Rajasthan, Bihar, Orissa and Uttar Pradesh (BIMURAO States) were shared lowest positions as usual.

V. Concluding Remarks

This analysis reveals that there are disparities in poverty reduction and education development in India. BIMURAO States are lagging in these aspects also but the ironical fact is these States are having very rich natural resources. To attain over all development, India has to alleviate these disparities and should ensure the inclusive growth. More and better education improves a poor country's economic growth and there by generates economics opportunities and incomes. Education brings social benefits that improve the situation of the poor, such as lower fertility, improved health care of children, and greater participation in the labour market.

There is substantial evidence that education can reduce poverty. This connection between education and poverty work through three mechanisms firstly, more educated people earn more; secondly, more education improves economic growth and thereby economic opportunities and incomes; and thirdly, education brings social benefits that improves economic development. Poverty reduction and education development are the prerequisite for inclusive growth which is being emphasized by the Planning Commission.

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