



EDUCATION AND ITS ASSOCIATION WITH SOCIO-ECONOMIC INDICATORS IN INDIAN STATES

Shiddalingaswami V. Hanagodimath

Introduction:

Education plays an important role in the overall development of a nation. Healthy and educated people are the real wealth of the nation. After the revolution of human capital theory (in 1960 and 1970) vast amount of research have taken place on evaluation of investment on education and impact of education on socio-economic development world over. Most of the economists have recognized and confirmed the existence of positive association between education and economic development. They have also emphasised the significance of higher level of education in all the aspects of human life. Among the studies very important studies are Schultz (1961), Nelson and Phelps (1966), Schultz (1975), Lucas (1988), Psacharopoulos (1973), Psacharopoulos (1989), Psacharopoulos (1994), Cohn and Geske (1990), Denison (1985), Mulligan and Sala-i-Martin (1992), Mankiew, Romer, and Weil (1992), Becker, Murphy, and Tomura (1990), Romer, (1990), Barro (1991), Romer (1986). Hence, most of the governments have made serious attempts to improve the education level of their citizens with public investment on education through various policies and programmes. Indian is also not lagging behind in this regards, even though education is the state subject in the Indian constitution, both central and state governments have spent huge amount of money on educational development

In India also there are number of studies who have looked into education for the development in Indian context among them very important are V.K.R.V Rao (1964, 1970),

Panchamukhi (1965), Tilak (1987), Roy, Kamaiah and Rao (2000), Malhotra and Shweta (2006), Kaushik, Klein and Arbenser (2006), Yadav and Srivastava (2005), Tilak (2006).

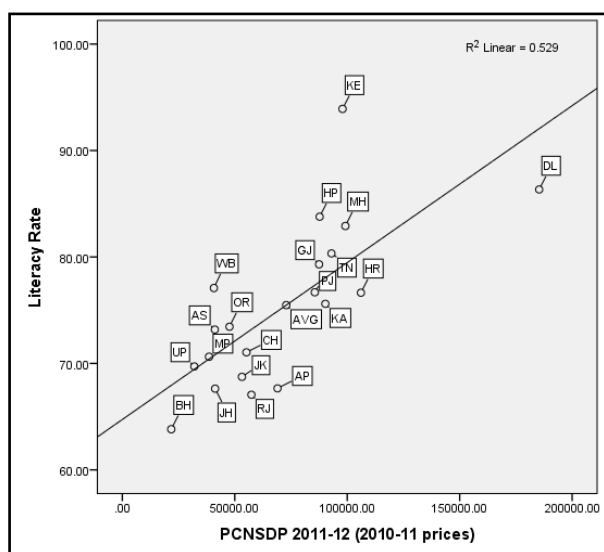
However, studies taking into consideration of different states and linking their education status with different socio-economic developmental indicators are very less in Indian context in the recent years. Hence, an attempt has been made to fulfil this research gap.

Association of Education with socio-economic Indicators:

In this section an attempt has been made to analyze the education with some of the selected socio-economic indicators. Initially we have linked the literacy rate with socio-economic indicators. Further, it is thought that in the recent years more or less most of the Indian states have higher literacy rate. Hence enrolment ratio in higher education has also been considered to see the association with some socio-economic indicators.

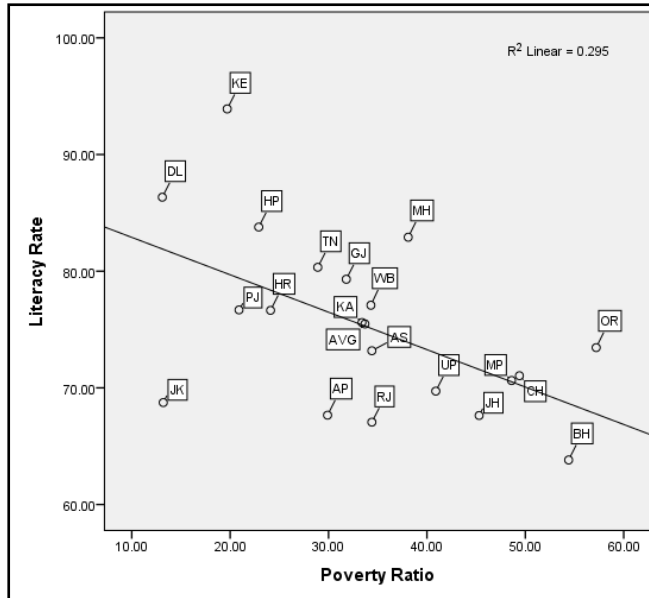
Associations are also made with some indices like female empower index, child development index, social progress index. Source and methodological information about these indices are discussed in the fifth chapter of this report.

Figure 1: Scatter diagram of Literacy rate and per capita income of Indian states



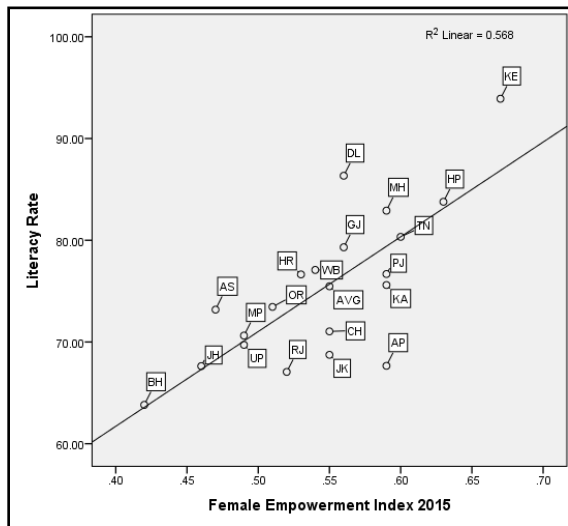
Theoretically, education has positive association with per capita income and negative association with poverty ratio. This theory has been tested in figures 1 and 2 for per capita income and poverty ratios respectively. Literacy level and per capita income of Indian states have strong positive association. Correlation coefficient between them is 0.771 (99 per cent significance).

Figure 2: Scatter diagram of Literacy rate and Poverty ratio of Indian states



Similarly, poverty ratio and literacy rates have negative association with correlation coefficient of -0.543 (95 per cent level significance). Thus, with the empirical data of Indian states, this test strengthens the argument of human capita theory. It means higher the level of education higher will be the per capita income and lower will be the poverty ratio.

Figure 3: Scatter diagram of Literacy rate and Female Empowerment Index

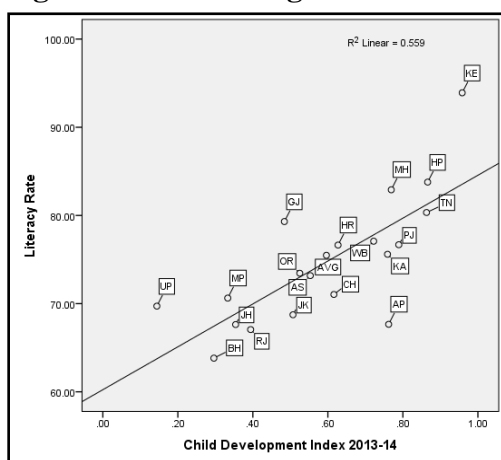


In figure 3 literacy rate and female empowerment index have put into a scatter diagram to see the association between them. It is found from the figure that there is a strong positive association exists between literacy rate and female empowerment index.

It means, literacy rate has the positive impact on gender empowerment, it lowers amount of

gender discrimination.

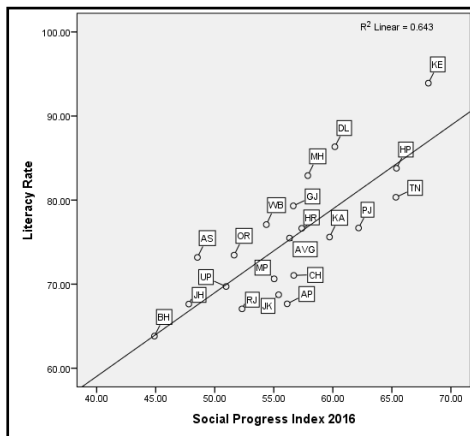
Figure 4: Scatter diagram of Literacy rate and Child Development Index



If the people have good education then they can take care of their children more effectively. To see the association of literacy rate and child development index a scatter diagram has been prepared and presented in figure 4. It is found from the figure that child development index and literacy rates have positive associations. It means, higher the literacy

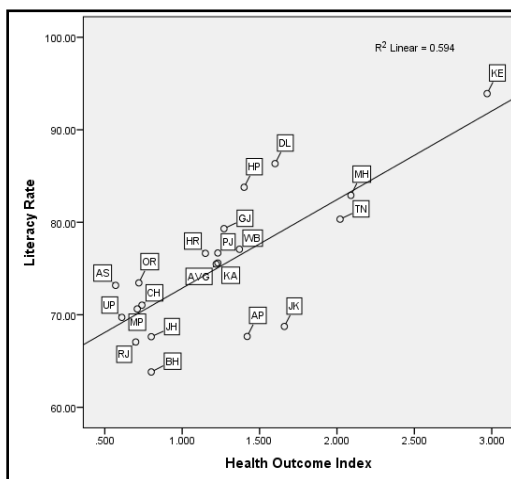
rate higher will be the value of child development index.

Figure 5: Scatter diagram of Literacy rate and Social Progress Index



In figure 5 literacy rate and social progress index have put into a scatter diagram to see the association between them. It is found from the figure that there is a strong positive association exists between literacy rate and social progress index. It means literacy has the positive impact on overall social development.

Figure 6: Scatter diagram of Literacy Rate and Health outcome index



Another important observation is found with respect to education is that the strong positive association between health outcome index and literacy rate. It strengthens the argument that educated people take more care about their health. It means higher the education; higher will be the health status.

Conclusion:

Form the foregoing analysis it is clear that education plays very important role overall development of any region. It is found-Higher the level of education, higher will be the per capita income and lower will be the poverty ratio. This finding strengthens the argument of Human Capital Theory. Further, literacy has positive impact on female empowerment (FEI), child development (CDI) and overall social progress (SPI). Totally, education will build a healthy society.

Expenditure on education should be fixed on the basis of per student expenditure for different level of education. With respect to under developed states (like Bihar, Uttar Pradesh, Odisha, West Bengal, Madhya Pradesh), higher allocation should be made for a stipulated period. Up to that period only, additional allocation or more allocation should be provided, backward states should correct their under development within the stipulated time period. After that period, incentive based allocation should be provided. That means, which state performs well in achieving the targeted educational goal that state should be provided more allocation. Thus, healthy competitive educational development can be achieved.

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Appendix Table 1: Selected Socio-economic Indicators in India

States	Literacy Rate	Per capita Income	Poverty Ratio	Female Empowerment Index 2015	Child Development Index 2013-14	Social Progress Index 2016	Health Outcome Index
Andhra Pradesh	67.66	69000	29.90	0.59	0.76	56.13	1.42
Assam	73.18	41142	34.40	0.47	0.55	48.53	0.57
Bihar	63.82	21750	54.40	0.42	0.30	44.89	0.80
Chhattisgarh	71.04	55177	49.40	0.55	0.62	56.69	0.74
Delhi	86.34	185343	13.10	0.56	NA	60.17	1.60
Gujarat	79.31	87481	31.80	0.56	0.48	56.65	1.27
Haryana	76.64	106085	24.10	0.53	0.63	57.37	1.15
Himachal Pradesh	83.78	87721	22.90	0.63	0.87	65.39	1.40
Jammu & Kashmir	68.74	53173	13.20	0.55	0.51	55.41	1.66
Jharkhand	67.63	41254	45.30	0.46	0.35	47.80	0.80
Karnataka	75.60	90263	33.40	0.59	0.76	59.72	1.23
Kerala	93.91	97912	19.70	0.67	0.96	68.09	2.97
Madhya Pradesh	70.63	38550	48.60	0.49	0.33	55.03	0.71
Maharashtra	82.91	99173	38.10	0.59	0.77	57.88	2.09
Orissa	73.45	47632	57.20	0.51	0.53	51.64	0.72
Punjab	76.68	85577	20.90	0.59	0.79	62.18	1.23
Rajasthan	67.06	57391	34.40	0.52	0.39	52.31	0.70
Tamil Nadu	80.33	92984	28.90	0.60	0.86	65.34	2.02
Uttar Pradesh	69.72	32002	40.90	0.49	0.14	50.96	0.61
West Bengal	77.08	40708	34.30	0.54	0.72	54.37	1.37
Average	75.48	72887	33.70	0.55	0.60	56.33	1.22

Sources: Literacy Rate (%): Census, PCNSDP 2011-12 (2010-11 prices): CSO, Poverty Ratio: NSSO, Foundations of wellbeing Index 2016: IFC (2017), Child Development Index 2013-14: Reetika Khera, Jean Dreze (2015), Social Progress Index 2016: IFC (2017), Health Outcome Index: Sinha, Sahay and Koul (2016)