

Extended Abstract

Socio-economic pattern of School-life expectancy over the past decade: Evidence from India

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Background

Education has been a long known important factor for human development, contributes in well-being of individuals significantly by ameliorating income and standard of living through raising capabilities and individual self-determinations. Therefore, improving the education is important for achieving Sustainable Development Goals (SDGs). School-life expectancy (SLE) describes the average number of years that a child is likely to spend in the educational system of his or her country. School life expectancy is the average number of school years remaining at specified ages for all persons alive at the exact age “x”, and not just those who are enrolled in the school (Stockwell and Nam, 1963).

This indicator has been reported in international reports, such as OECD’s Education at a glance, and in UNESCO’s World education report and EFA global monitoring report. Also it is the important indicator to measure the education index. Apart from this, as a new measure of human development index (HDI), expected years of schooling is one the important parameter of HDI rankings. Higher the EYS, help to raise the HDI raking of any country. The school-life expectancy (SLE) indicator captures the volume of educational provision based on current rates of participation across the system. It provides an estimate of the number of years of education that a child can expect to receive upon entering schooling. It can be used to assess the overall level of development and performance of an education system, in terms of the average duration of participation in education. Although school life expectancy does not directly forecast the educational attainment of the population, when adjusted for rates of repetition and dropout, it provides a perspective on potential educational attainment of the adult population in the near future. This study tried to calculate school-life expectancy for total population from primary to higher secondary level i.e., for 10+2 (12 years of schooling) level of education across India and its states. In India, the access to education is still very problematic as there is great variation between and within states, and large differences in participation between distinguishable sub-populations e.g. Scheduled Castes and Tribes (SCs and STs), girls, and some Muslim populations (Lewin, 2011). Therefore, Right to Education bill aims to provide universal access for 6-14 years olds which covers all of elementary education up to the threshold for secondary school. This bill is enacted on December 2002, as Indian parliament passed the Constitution 86th Amendment Act, and also inserted Article 21A in the list of fundamental rights which states that “the State shall provide free and compulsory education to all the children aged 6-14 years in such a manner as the State may, by law, determine” (Mehrotra, 2012). Keeping in view of the pace of progress achieved till 2000, several programmes have been articulated and implemented through the collaborative efforts of Government of India and the State/UT Governments. Government of India (GoI) has committed itself to a nationwide programme to universalise access to elementary education. But there is still need to improvement in some of the states.

Data and methods

For fulfilling the objective of present study, secondary data has been used which is obtained from three round of National Sample Survey Organization (NSSO) viz. 64th round (July 2007-

June 2008), 71st round (January-June 2014) and 75th round (July 2017-June 2018). This survey covered both qualitative and quantitative aspects related to educational attainment of the household members and educational services used by them. A stratified multi-stage design was adopted for the survey.

Variable descriptions

Dependent variable

Expected years of schooling

$$SLE_a^t = \frac{\sum_{i=a}^n E_i^t}{P_i^t}$$

Whereas,

E_i^t = Enrolment of the population of age i ($i=a, a+1, \dots, n$)

P_i^t = Population of age i in school-year t

Explanatory variables

It includes sex (Male = 0 vs. female = 1), Social groups (Scheduled tribes/Scheduled castes = 0; other backward classes = 1; other = 2), Religion (Hindu = 0; Muslim = 1; Other = 2), Place of residence (Rural = 0 vs. Urban = 1) and Monthly per capita expenditure (MPCE) quintile (Lowest = 0; Middle = 1; High = 2). MPCE were calculated as total Monthly per capita expenditure (MPCE) is the household consumer expenditure over a period of 30 days divided by household size.

The above mentioned indicator were analysed at state and national level for all the three rounds. Further, they will be cross-classified by sex, social groups, religion, place of residence and MPCE quintile. It also presented by 3 levels of education i.e. primary (I to V), secondary (VI to VIII), and high (IX to X). The data has been analysed in STATA and figures at the state level has been presented in maps using ArcGIS 10 software.

Findings

As per the graph school life expectancy were increasing from 2007 to 2018 by in India (Figure 1). During 2007-08, EYS was 9.7 years, whereas in 2017-18 it increased by 1 year. In year 2007-008, East (9 years) and Central (9.4 years) region had the lowest EYS in 2007-08 as compared to other regions. Whereas, the Southern region (10.4 years) had the highest EYS highest followed by the North-eastern (10.2 years), Northern and Western regions with 10 years of EYS. The enormous changes in EYS were found in the Eastern region with 1.7 years, followed by the Western and Southern region. The North-eastern (11 years), Northern (10.9 years), and Central (10.1 years) region were increased by less than 1 year from 2007 to 2018.

Figure 2 illustrates the changes in expected year of schooling across states throughout a decade. In 2007-08, few states had less than 9 years of EYS in India. Most of the states were found EYS in between 9 to 10 years. A very less number of states had more than 11 years of school life expectancy. After 6 years (in 2014), there were no states who had less than 9 years of SLE. Most of the states were improving and reached the level of 10 to 11 years of SLE. In 2017-18, many states had more than 11 years of EYS. However, Uttar Pradesh had still less than 10 years of EYS.

In the year 2007-08, the overall EYS were higher among male (9.96 years) than female (9.35 years) (Table 3). Similarly in the year 2014 and 2017-18 female (10.34 years and 10.63 years respectively) were lower EYS than male (10.54 years and 10.83 years). In the year 2007-08, female belonging to Bihar had lowest SLE (7.88 years), followed by Rajasthan (8.56 years), Odisha (8.62 years), Gujarat (8.71 years) and Uttar Pradesh (8.92 years). Similarly Bihar (9.05 years) had also lowest EYS among male, followed by Odisha (9.31 years), West Bengal (9.48 years), Uttar Pradesh (9.56 years), Jharkhand (9.76 years), Madhya Pradesh (9.86), Punjab (9.90 years) and Gujarat (9.91 years). In the year 2014, it was slightly accelerated and no one states had less than 9 years of EYS among female but only Uttar Pradesh had found less than 10 EYS among male. Few states had almost 12 years of EYS such as Tripura (11.67 years vs. 11.60 years), Goa (11.76 years vs. 12 years) and Kerala (11.87 years vs. 11.76 years) which were considered as a good performing states regarding EYS. Some of the states had declined the EYS in both male as well as female. Meghalaya's female had slightly decline EYS by 0.09 years while male belonging to Himachal Pradesh, Haryana, Delhi, Nagaland, and Chhattisgarh.

However, in the year 2017-18, all the states were reached at least 10 years of EYS among male and female except Uttar Pradesh which was still 9.71 years of EYS among female. The improvement of EYS among female and male had highest in Bihar with 2.57 years and 1.62 years respectively from 2007 to 2018. However, female's EYS had declined in only in Nagaland by 0.3 years while male's EYS had diminished in Nagaland and Meghalaya by 0.35 years and 0.08 years respectively.

Table 4 illustrates the rural-urban changes regarding SLE across Indian states. In the year 2007-08, the EYS were higher in urban areas (10.27 years) as compared to rural areas (9.49 years). It was continuously increasing and in the year 2017-18, the EYS were about 11 years in urban (11.22 years) as well as rural areas (10.57 years). Considering urban areas, Goa, Kerala and Telangana were the significantly more EYS than other states in the year 2017-18. While lowest in Uttar Pradesh (10.27 years) and Madhya Pradesh (11.37 years). However in rural areas, the lowest performer states were Uttar Pradesh which followed by Madhya Pradesh, Rajasthan, Nagaland and Gujarat during the same year.

Table 5 represents the EYS by MPCE quintile. In year 2007-08, the overall EYS in children who belong to low quintile, middle quintile and high quintile of MPCE were found 8.69 years 9.65 years and 10.17 years respectively. It was improved by increased year and quintile. Nearly 11 years of EYS had found in low MPCE (10.94 years) and slightly more than 11 years of EYS were found in middle (11.51 years) and high (11.46 years) MPCE in year 2017-18. It was also vary across states. In year 2007-08, Punjab had lowest SLE in low (6.9 years) and middle (8.4 years) quintile of MPCE. However in year 2017-18, Gujarat (10.13 years) and Delhi (11.08 years) were lowest SLE in same quintile. Kerala was always more than 11 years of EYS in each quintile as well as year. The highest raise of EYS in low quintile of MPCE were found in Punjab (4.1 years) followed by Odisha (3.07 year) and Bihar (3.04 year) from 2007 to 2018. While in high quintile, Delhi were improved much more than other states. In year 2007-08, The EYS were highly increased by 3.79 years in Punjab followed by Bihar (2.8 years), Sikkim (2.52 years) and Uttarakhand (2.04 years) from low to high quintile. While lowest in Jammu & Kashmir (0.17 years), Meghalaya (0.19 years), Himachal Pradesh (0.42 years) and Arunachal Pradesh (0.48 years). Bihar and Assam had almost equally increased in from low to high quintile in year 2017-18.

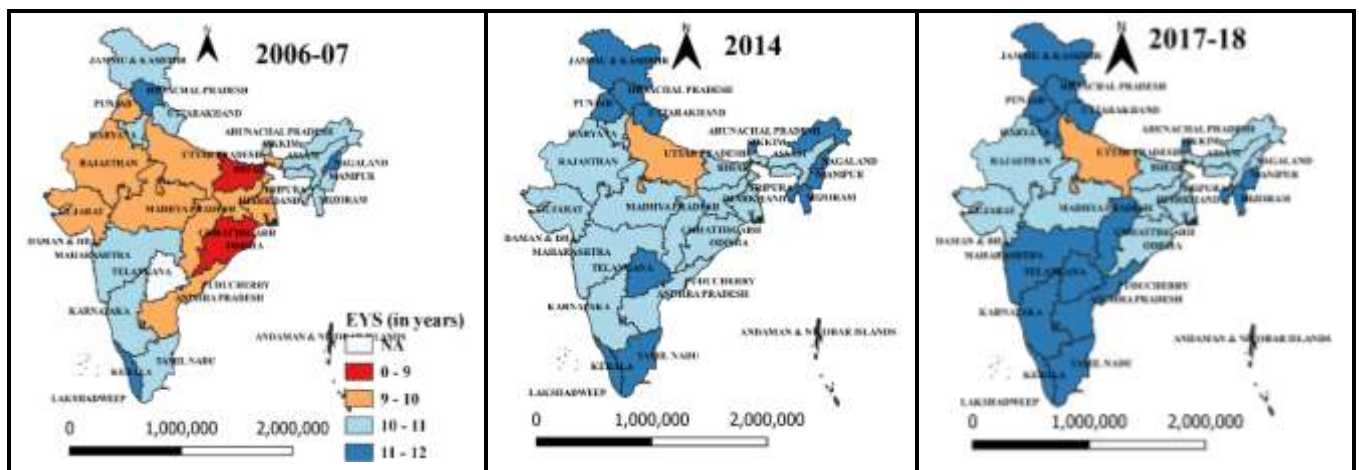
Figure 3 shows the gender disparity in EYS by MPCE and residence. Both male and female children were lower EYS in lower MPCE and it was increased with increasing quintile of MPCE. Also the gap between male and female were reduced by increasing quintile of MPCE. In the year 2007-08, children belonging to lowest quintile of MPCE had 8.7 years and 8.1 years

of EYS among male and female respectively which was increased with 10.1 years and 9.8 years in the year 2017-18. In other hand, children belonging to highest quintile had more EYS (male 10.9 years vs. female 10.7 years) in 2007-08 than 2018 (male 11.6 years vs. female 11.5 years). Considering place of residence, rural male and female were found less likely of EYS as compared to urban male and female. In rural areas the gap of EYS between male and female were reduced from year 2007 (0.7 years) to 2018 (0.3 years) but in urban areas, the EYS was almost same in both male and female in the same year.

References

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Scenario of school-life expectancy (in years) in India from 2007 to 2018.



Average school-life expectancy in years in male and female by MPCE and place of residence, 2007 and 2018

