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Bridging the Gap: Education Inequality and Economic Impact in India

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ABSTRACT

This paper examines the disparities in school enrollment and dropout rates across various Indian states and their correlation with economic conditions. The paper uncovers states with higher government and private enrollments and dives deeper into steps taken by government and its impact. Despite government initiatives like Sarva Shiksha Abhiyan, significant inequalities persist, particularly affecting marginalized communities and girls. The study utilizes secondary data from ASER and MOSPI, analyzing trends from 2009 to 2018. Findings reveal that states like Tripura and West Bengal have high government school enrollments, while Manipur leads in private school enrollments. Dropout rates are notably high in states like Uttar Pradesh, possibly due to less government initiatives, whereas Kerala and Tamil Nadu show low rates due to robust educational policies. The regression analysis indicates that higher per capita NSDP correlates with lower dropout rates and increased private school enrollments, suggesting economic factors significantly influence educational trends. Conversely, government school enrollments decrease with better economic conditions, highlighting the need for improved public education quality. The paper underscores the importance of targeted policies and social awareness in specific states to address these disparities and promote inclusive education.

KEYWORDS: *Enrollment rate, Educational inequality, State wise disparities, Indian economics, Government policies*

1. INTRODUCTION

India is a nation of so many contradictions that get waylaid by the complicated tapestry of education. It has different educational landscapes across its diverse states, from well-established institutions for critical thinking to areas where difficulties persist making learning less effective. The paper will compare all the major states of India like Kerala, known for educational excellence to places like Bihar which still faces challenges, and establish a relationship between education quality and its employment outcomes. States with higher enrollment rates tend to have better socioeconomic conditions, whereas states with higher dropout rates generally have low employment rates. The paper uncovers this in objectives

In a multi-ethnic country like India, regional inequality is a common phenomenon. Such inequalities left an impact on different aspects of the socioeconomic parameters like- productivity, health condition, nutrition, education etc. Since independence school enrollment and literacy rate has increased over the period. Still, a major section of people is being deprived of basic formal education. The educational scenario of the entire country is very disappointing as only a mere percentage of GDP is spent over the educational sector.

1.1 Trends in Government School Enrolment

The educational scenario of India is very disappointing as only a mere percentage of GDP is spent over educational sector. Government has adopted various schemes like the Non-formal Education Program (1979-90), Operation Blackboard for small rural schools (1986), Total Literacy Campaigns (1988), Sarba Sikhsha Abhiyan to develop the condition to develop the education sector. Though there is a provision of free basic education of all children up to the age of 14 irrespective of caste, gender and economic status in the directive principle of state policy, still the inequality in school enrollment and literacy rate kept growing on. This enrollment rate varies among different societies, caste and gender in the different regions of the country. Over the years 2009-2018, there was much variation in government school enrolment rates across different Indian states. Tripura always had high enrolments at public schools as it maintains a strong public education system. This can be seen from the fact that about 85.2% of all children attending school were enrolled in government schools in 2018.

However, states like Manipur have had low enrolments among their learners in public schools. In Manipur, only around 28% of kids went to public schools in 2018 indicating the problems being faced by the state's public education system.

1.2 Trends in private school enrollment

At the same time, the figures for private schools also varied significantly from one state to another. In West Bengal, private school enrollment remained relatively low in 2018 at around 8%, showing strong faith in public education. The same was witnessed in Tamil Nadu with a similar trend of private school enrolment standing around 12%. However, by contrast, states such as Meghalaya and Haryana have seen the emergence of several private learning centers. In Meghalaya, about six out of every ten children were enrolled in private schools in 2018 indicating that many parents preferred their children be taught privately rather than put them under the state sector which they perceived to be inadequate in terms of educational provision. Haryana also had higher rates of admission into private schools as compared to other states, approximately 55%.

1.3 State-wise Dropout Rates

The difference between the dropout rate observed at the secondary level across Indian states is quite evident and it speaks volumes regarding the inequality present within India's educational system. According to ASER reports from 2009 up until now (2018), Uttar Pradesh has consistently been on top with a dropout rate that hit high peaks of 8.4% by the end of 2018. Such a high dropout rate points to the challenges faced by students when accessing and completing their studies. On the other hand, places like Kerala and Tamil Nadu have made remarkable strides in reducing dropout rates. In 2018, Kerala has consistently shown a low dropout rate due to its strong education policies and support systems. Similarly, Tamil Nadu witnessed some improvements with a dropout rate almost closing in on Kerala's 0.3% rate by reaching a 0.6% dropout rate in 2018. Such states indicate how targeted interventions, and supportive educational environments can improve retention and completion.

2. LITERATURE REVIEW

Ramachandran (2003) showed in his paper that a bigger proportion of children, especially from backward backgrounds and especially girls, either drop out of primary schools or even if they retain, learn very little. Moreover, the author pointed out that, these learning achievements have a wide gap between government schools and private/aided schools. Besides the access to education there are certain demand and supply issues which have an influence on why a child chooses to attend school regularly. Vaid (2004) highlighted the cause of the inequality in educational transitions in India. It was mentioned by the author that not only were the girls lagging, but also other certain backward communities were doing worse than others. The first aim of the author was to highlight the factors responsible for the inequality of both boys and girls from socially deprived origins and the second aim was to point out the inequality faced by girls at each educational transition stage. Ramachandran (2004) mentioned in his paper that travelling across the country for doing research on elementary education, anybody can notice a change in its pattern in rural India, as the demand for quality education has increased over the years even among the poorest sections of our society. Still vast numbers of people such as the poor, girls in rural areas and backward castes remain out of its reach. Chandrasekhar and Mukhopadhyay (2006) have mentioned about the 86th amendment of the Indian Constitution which made free and compulsory education a fundamental right for all the children in the age group of 6-14 years. They have identified some direct and indirect costs that are responsible for keeping a child from going to school. It was thus concluded by the authors that making primary education completely free will not increase the attendance rate to 100 percent. Moreover, they suggested that the government should incur an additional minimum expenditure of Rs 2,900 every year so that the attendance percentage rises. Khasnabis and Chatterjee (2007) wrote that India is yet to achieve the goal of universalization in elementary education. They pointed out that despite the government's initiative to achieve the above-mentioned goal through Sarva Shiksha Abhiyan, which specially focuses on girl children and children belonging to disadvantaged families, still many children do not attend classes regularly.

3. RESEARCH METHODOLOGY

The research is based mainly on secondary data. To meet the objectives the secondary data has been collected from the official websites of Annual Status of Education Report (ASER) and from Ministry of Statistics and Programmed Implementation (MOSPI). Also, information has been gathered from related published articles and journals and official reports.

The following tools have been used during analysis. The first objective focuses on analyzing disparities in school enrollment and dropout rates across different states within the country. A comparative status of the states has been calculated on the basis of the dispersion from the mean value for the year 2009-10 till 2018-19 and to represent those values bar diagrams have been used for the first objective. For the second objective, the paper has explored the relation between the per capita Net State Domestic Product (NSDP) in each state and school enrollment and dropout rates. Panel Regression has been run for all the states of India for a time period of 2006-2007 till 2018-2019 to estimate the relationship between per capita net state domestic product and enrollment in government school, in private school and the relation between per capita net state domestic product and the dropout rates. For each variable a single regression has been run, therefore there are three different regression equations. The study period is short for the non-availability of data. STATA tool has been used for panel regression.

4. RESULT AND ANALYSIS

Findings

4.1 Enrollment and dropout

The study focuses on enrollment in public and private schools, as well as the dropout rates, in order to achieve this goal. States with greater enrollment rates typically have better socioeconomic circumstances. Dropout rates are correlated with infrastructure, school quality, and poverty. The study includes data from 2009 to 2018 from all of India's main states.

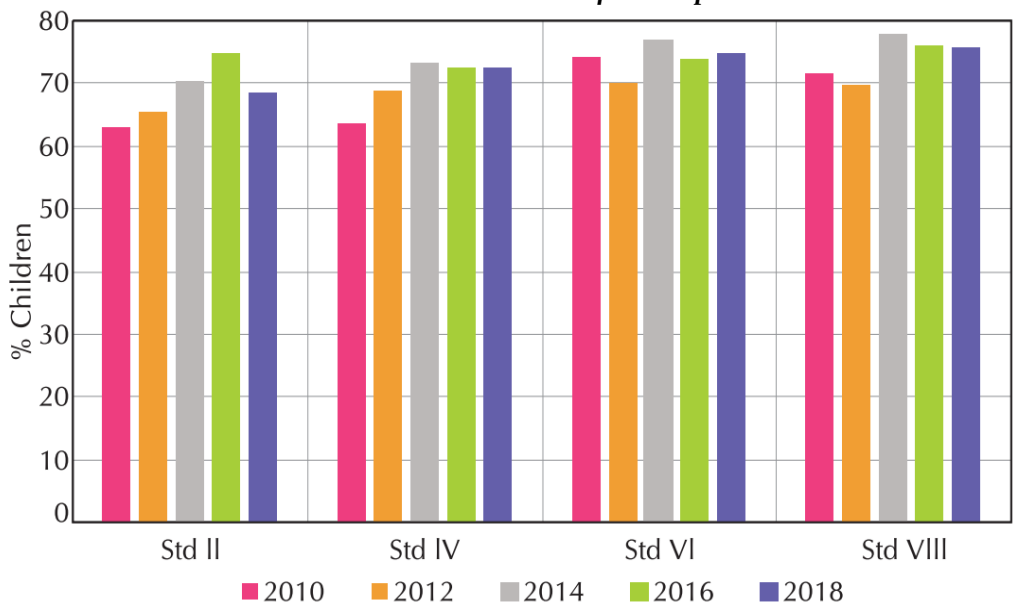
4.1.1 Enrollment in government schools

Tripura has the highest enrollment rate from 2009 to 2017, with a peak of 95.2% in 2012 and a low of 87% in 2017. It has fluctuated a lot throughout the years, but in 2018, West Bengal achieved 86.9%, little over 1% more than Tripura.
Odisha, Mizoram, Bihar, and other states have consistently demonstrated high percentages. Manipur has consistently ranked last on the list, with states like Kerala and Goa exhibiting similarly low percentages.

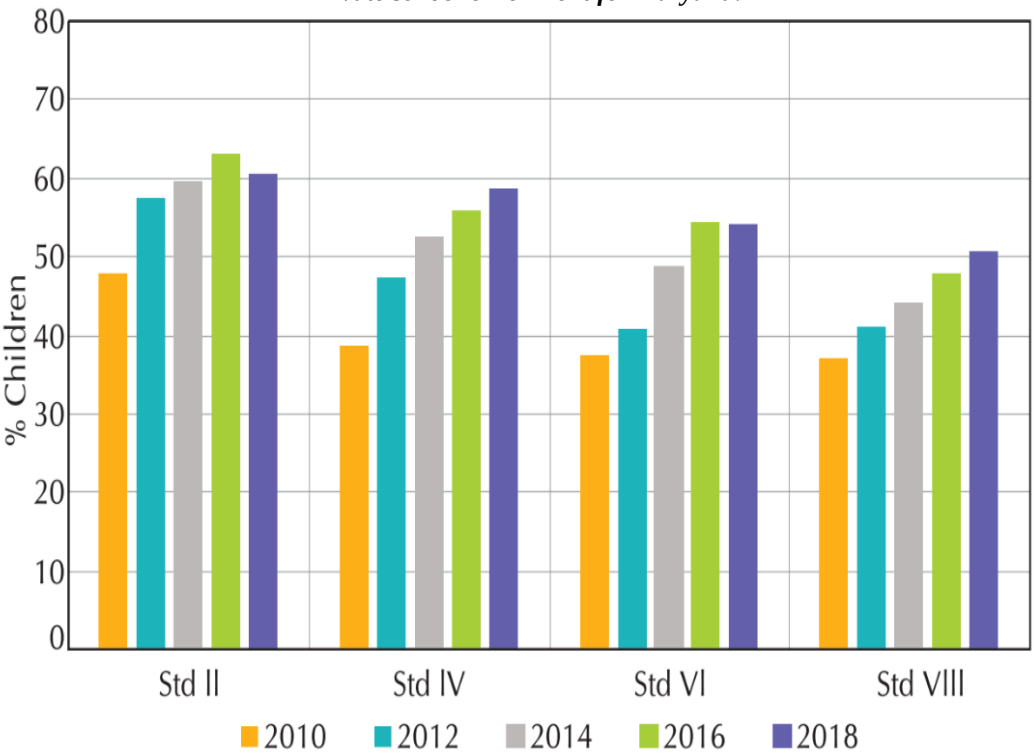
4.1.2 Enrollment in private schools

Manipur has consistently had the greatest percentage of students enrolled in private schools, but Punjab, Kerala, and Meghalaya have also had high enrollment rates. Manipur's percentages peaked in 2014 at 73.2% and decreased to 66.9% in 2012. West Bengal and other states with more government enrollment have lower private enrollment; places like Haryana, on the other hand, have nearly equal enrollment in both sectors.

Private school enrollment for Manipur:



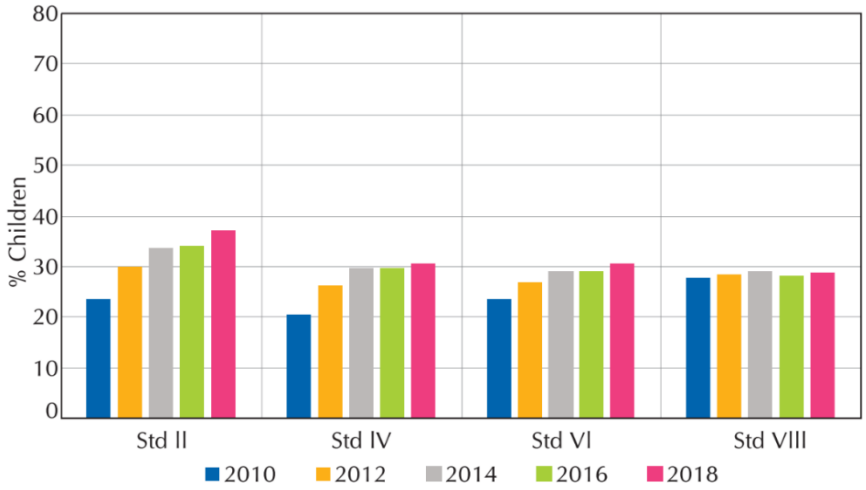
Private school enrollment for Haryana:



4.1.3 Dropout rates

Lower rates are preferable in this context. States with high government enrollment rates, such as West Bengal and Assam, have demonstrated significant dropout rates over time, whereas the states with the lowest dropout rates over time are Goa, Kerala, and Himachal Pradesh. Additionally, Rajasthan, Odisha, and Uttar Pradesh have demonstrated significant dropout rates, with occasional fluctuations.

Grade wise enrollment in Private schools:



4.2 Impact on NSDP

In this objective the effect of per capita NSDP at constant price on the school enrollment and dropout rate has been shown. It has been described through panel regression using STATA.

The model is given as below:

Total observation (N) = 224(State wise 8 year's panel data)

No. of explanatory variables (k) in the equation is 3

Equation:

$$y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it}$$

***i* = 1, 2, 3, ……., 28**

***t* = 1, 2, …….., 8**

Y_{it} **= Per capita NSDP at constant price**

α **= slope coefficient**

β **= Coefficient of variable**

X_{1it} **= Dropout rate**

X_{2it} **= Enrollment in the *private* school**

X_{3it} **= Enrollment in the *government* school**

ε_{it} **= Residual**

xtreg NSDP DROPOUT PRIVATE GOVT, fe

Fixed-effects (within) regression Number of obs = 224
Group variable: CODES Number of groups = 29

R-squared: Obs per group:
Within = 0.1372 min = 1
Between = 0.1784 avg = 7.7
Overall = 0.1564 max = 8

F(3,192) = 10.18
corr(u_i, Xb) = -0.1965 Prob > F = 0.0000

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NSDP | Coefficient Std. err. t P>|t| [95% conf. interval]
-------------+--
DROPOUT | -643731.1 230857.1 -2.79 0.006 -1099073 -188389.3
PRIVATE | 73983.97 31266.73 2.37 0.019 12313.57 135654.4
GOVT | -81387.24 24916.71 -3.27 0.001 -130532.9 -32241.61
_cons | 146602.4 17099.83 8.57 0.000 112874.8 180330
-------------+--
sigma_u | 46350.55
sigma_e | 37132.874
rho | .6090834 (fraction of variance due to u_i)
--
F test that all u_i=0: F(28, 192) = 8.04 Prob > F = 0.0000

Here a panel regression has been run for 8 years (2009-2018) for 28 states of India leaving behind the union territories & Telangana. The per capita net state domestic product (NSDP at constant price) is taken as the dependent variable and Enrollment of students in government school, private schools and dropout rates are taken as the independent variables. From the results it is found that dropout

rate has a significant negative impact (p-value = 0.006) on the per capita net state domestic product. It indicates that when dropout rates are falling, the NSDP is increasing which is a normal scenario. Result also shows that, enrolment in private schools have a Significant positive effect on NSDP (p-value = 0.019). It may be the case that as the income of the people is rising, the mind set of most of the people is changing, so they want their child to get enrolled in a private school rather than in a government school. It's good to see that nowadays people are eagerly spending time on their child's education and bright future. The scenario is a bit disappointing for the case of enrolment in Government schools. Enrolment in government schools have a Significant negative effect on NSDP (p-value = 0.001). It is a matter of concern. Government needs to take several steps to improve the quality of the education to make it more effective.

5. CONCLUSION

The analysis by paper reveals significant disparities in school enrollment and dropout rates across states. The data shows that states like Tripura and West Bengal have high enrollment rates in government schools, while Manipur has the highest enrollment in private schools. Dropout rates vary, with states like Goa and Kerala showing lower rates compared to others. These findings highlight the need for targeted policies to improve access to education and reduce dropout rates in affected states.

The regression analysis indicates that higher per capita NSDP is associated with lower dropout rates and higher private school enrollment. Conversely, government school enrollment decreases with better economic conditions. These results underscore the importance of economic factors in shaping educational trends and the need for balanced policy interventions.

To attain overall development, the government first must be proactive in eliminating these disparities. Social awareness should also be generated among people. This may lead to a reduction in gender bias against girl children and may highlight the need for education.

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