

# Factors Affecting Secondary School Enrollment in India: An empirical analysis across the regions

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## 1. Introduction

While the Gross Enrollment Ratio (GER) in primary schools in India is recorded at 95, the ratio falls to 62.5 in secondary schools.<sup>1</sup> Over 47 million youths drop out of schools before they reach the age of 16.

There is widespread literature showing a strong relationship between attendance and enrollment.<sup>2</sup> Most existing literature on Indian education has tried to understand this relationship by studying differences between private and public schools or through studies of rural and urban areas. Even though most schools adapt the state curriculum, there is limited research on studying the differences across the states.

This study aims to understand the relationship between attendance and secondary school enrollment in India by studying the differences across the Indian states.

## 2. Method: Test 1

There were two tests conducted to study the relationship between attendance and secondary school enrollment.

In the first test, I tried to estimate the impact of Net Attendance Ratio (NAR) on GER in secondary schools by doing a cross-sectional study across all 29 states and the capital city, New Delhi.

Along with NAR, six other factors that were likely to impact enrollment were considered. Census studies report learning crisis, infrastructure and socio-economic status as the primary reasons behind students dropping out of schools.<sup>3</sup> The following six variables were included.

1. GER in primary schools
2. Proportion of qualified teachers
3. % of teacher availability
4. % of schools with pupil-teacher ratio <30
5. State's expenditure on schools
6. Net State Domestic Product per capita

## 3. Method: Test 2

For the second test, I tried to study the differences across the states by analyzing the variance in their means. This test was useful in indicating the relationship between secondary school enrollment levels and our seven factors, NAR and the six variables.

## 4. Results: Test 1

The results of our first test were as expected.

All our seven factors had a positive relationship with secondary school enrollment with Net Attendance Ratio being statistically significant.

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-1.473e+02	3.851e+01	-3.824	0.00115 **
GER_P	2.163e-01	1.415e-01	1.529	0.14285
NAR	1.786e+00	4.761e-01	3.750	0.00136 **
qualified_teachers	1.345e-01	1.193e-01	1.127	0.27374
teacher_vacancy	3.076e+01	2.498e+01	1.231	0.23322
class_size	1.250e-01	1.464e-01	0.854	0.40371
expenditure	1.795e-01	9.472e-02	1.895	0.07337 .
NSDP	2.382e-05	3.729e-05	0.639	0.53061
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## 5. Results: Test 2

The results of our second test were a little surprising.

As expected, differences in NAR across the states appeared to have a strong relationship with attendance.

The other two significant findings were enrollment in primary schools and proportion of qualified teachers.

Primary school enrollment can be explained through its direct relationship with secondary school enrollment. However, proportion of qualified teachers also seemed to have a significant relationship with enrollment.

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
GER_P	1	219.3	219.3	4.678	0.04352 *
NAR	1	1930.4	1930.4	41.169	3.75e-06 ***
qualified_teachers	1	480.7	480.7	10.253	0.00469 **
teacher_vacancy	1	6.2	6.2	0.133	0.71975
class_size	1	68.6	68.6	1.462	0.24144
expenditure	1	149.9	149.9	3.197	0.08974 .
NSDP	1	19.1	19.1	0.408	0.53061
Residuals	19	890.9	46.9		

## 6. Discussion

Net Attendance Ratio (NAR) has a strong positive relationship with Gross Enrollment Ratio (GER) in secondary schools in India. Analyzing the differences across the states, attendance remains to be an important factor for enrollment.

Further, with increasing number of proportion of qualified teachers in classrooms, enrollment in secondary schools seems to increase across the states.

The government's focus on improving curriculum and infrastructure is important. However, there needs to be more attention on improving attendance in schools. Differences in secondary school enrollment across the states seem to have a strong relationship with both attendance and qualification of teachers.

### References

1. PRS Legislative Research. (2019, August 22). Draft National Education Policy 2019.
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3. Ministry of Human Resource Development. (2019). National Education Policy 2019 [PDF file]. Retrieved from [https://www.prsindia.org/sites/default/files/Draft\\_NEP\\_2019\\_EN\\_Revised.pdf](https://www.prsindia.org/sites/default/files/Draft_NEP_2019_EN_Revised.pdf)

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