

# **FACTORS AFFECTING THE LITERACY IN DIFFERENT STATES OF INDIA**

**By:**

**Arya – 1916**

**Kartikay – 1906**

**Pranjal – 1949**

**Himanshu- 1921**

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## **ACKNOWLEDGEMENT**

It gives us immense pleasure to present the project report on Factors affecting Literacy Rate in different states of India. This project enabled us to venture beyond books and understand the application of the concepts of Basic Econometrics as well as understand the usage of various software like SPSS and MS-Excel.

We would like to extend our gratitude to Mrs. Garima Babbar ma'am, Assistant professor, Sri Guru Nanak Dev Khalsa College, whose constant able guidance supported us all through. Her valuable insights played a fundamental role in shaping the research project the way it will be presented to you.. This project wouldn't have been possible without her useful guidance and supervision.

We are thankful to our friends and colleagues whose for their cooperation and unremitting support which enabled us to complete the project on time.

## **ABSTRACT**

This research paper is an attempt to understand the factors that play an instrumental role in the determination of the Literacy Rates in various states of India. The literacy rate in India varies considerably with the highest being 94%

according to 2011 consensus and the lowest being 63%. Hence there must be some pivotal factors responsible for such large variation in Literacy Rates within the states. Here key demographic indicators that might be answerable to the variation across the states such as the Sex Ratio, Per Capita Income, No. Of people Below Poverty Line (as a percentage of total population) and the number of Government Schools within a state; have been examined to see their effects on the Literacy Rate of the states.

## **INTRODUCTION**

Literacy rate is the Total number of literate persons as expressed as a percentage of population. Literacy in India is a key for socio-economic progress. Despite government programs, India's literacy rate increased only "sluggishly".

But what are the factors, which affect this important indicator of a country's socio economic progress itself?

This is the main topic of our research (which has been explained by asking questions)

What factors affect the literacy rate statistics of India?

The possible factors (under consideration, here) are:

- **Sex Ratio**: It is defined as the number of females per 1000 males in a state.

- **Per Capita Income:** It is defined as the a measure of the amount of money earned per person in a nation or geographic region (states, here). Per capita income helps determine the average per-person income to evaluate the standard of living for a population.

Is Literacy rate of a state dependent on The Per Capita Income of the State? Is it dependent on the Number of Of Government schools within the state? Can the sex ratio of a state affect its Literacy rate too? Or does the number of people living Below Poverty Line affect it?

Can all these factors account for the Literacy rate of the given states?

These are the questions we attempt to answer through our Research.

## **LITERATURE REVIEW**

1. Regional disparities in per capita income in India: convergence or divergence? By [\*\*Rowan Cherodian &A. P. Thirlwall\*\*](#)

The paper looks at the latest evidence on what has been happening to regional disparities in per capita income (measured as gross state domestic

product per capita) in India over the first decade of the twenty-first century (1999/2000 to 2010/2011) by estimating cross-section equations for unconditional and conditional beta ( $\beta$ ) convergence and sigma ( $\sigma$ ) convergence across thirty-two regions (twenty-eight states and four union territories). There is no evidence of unconditional convergence, but weak evidence of conditional convergence controlling for population growth, credit growth, male literacy, the share of agriculture in state GDP, and state expenditure as a share of state GDP. Sigma divergence has increased continuously, except among the poorest states.

Citations: 63

## 2. Education and gender bias in the sex ratio at birth: Evidence from India By [Rebeca A. Echávarri](#) & [Roberto Ezcurra](#)

The empirical validity of the proposed model is examined for the case of India, using district-level data. In this context, our econometric analysis pays particular attention to the role of spatial dependence to avoid any potential problems of misspecification. The results confirm that the relationship between the sex ratio at birth and education in India follows an inverted U-shape. This finding is robust to the inclusion of additional explanatory variables in the analysis, and to the choice of the spatial

weight matrix used to quantify the spatial interdependence between the sample districts.  
Citations:69

### 3. Inequality and correlation between literacy and sex ratio in India: A geographical analysis By Pakhare R.P.

Literacy. Generally literacy is defined as the ability to read and write. There is a close relation between literacy and economic status of the region. Sex ratio is defined as the number of females per thousand males. It depends on rate of birth, death and migration. The sex ratio is found less due to negligence of girl child, early marriage, preference for boy child etc. Sex ratio in our country since long period had remained unfavorable to females. The main objectives of the present paper are to study the variation in literacy and sex ratio in India and find out correlation between them. The present work is based on secondary sources of data and collected from census of India 2011. The two variables i.e. literacy and sex ratio of India has been taken into consideration for the study.

Citations: 2

4. Is wealthier always healthier in poor countries? Health implications of income, inequality, poverty and literacy in India

By [KeertichandraRajan](#)  
[JonathanKennedy](#) & [LawrenceKing](#)

Standard policy prescriptions for improving public health in less developed countries (LDCs) prioritise raising average income levels over redistributive policies since it is widely accepted that ‘wealthier is healthier’. It is argued that income inequality becomes a significant predictor of public health only after the ‘epidemiological transition’. This paper tests this theory in India, where rising income levels have not been matched by improvements in public health. We use state-, district-, and individual-level data to investigate the relationship between infant and under-five mortality, and average income, poverty, income inequality, and literacy. Our analysis shows that at both state- and district-level public health is negatively associated with average income and positively associated with poverty.



But, at both levels, controlling for poverty and literacy renders average income statistically insignificant. At state-level, only literacy remains a significant and negative predictor. At the less aggregated district-level, both poverty and literacy predict public health but literacy has a stronger effect than poverty. Inequality does not predict public health at state- or district-levels. At the individual-level, however, it is a strong predictor of self-reported ailment, even after we control for district average income, individual income, and individual education. Our analysis suggests that wealthier is indeed healthier in India – but only to the extent that high average incomes reflect low poverty and high literacy. Furthermore, inequality has a strong effect on self-reported health. Standard policy prescriptions, then, need revision: first, alleviating poverty may be more effective than raising average income levels; second, non-income goods like literacy may make an important contribution to public health; and third, policy should be based on a broader understanding of societal well-being and the factors that

promote it.

5. Status of Women in India with Particular Reference to Gap in Male Female Literacy Rate in India By Swati Pathak and Dr. Arti Gupta

Womanly education ensures not only better development of civilization, but to teach after that generation too. Education is landmark of women empowerment since it facilitates them to responds to the challenges, to confront their customary appearance and revolutionize their living. Gender disparity in education sector is a dilemma for a nation like India, where women constituting more than 50% of the country's human capital, still faces literacy – gender- gaps as 16.68%. The present study is an attempt to evaluate the correlation of female education with Human Development Index (HDI), based on the statistics procured from secondary sources. This manuscript also explains the significance of women education in the social and economic development of India.

## **OBJECTIVE**

The Objective of this research is:

To study the dependence of factors; Per Capita Income and Sex Ratio in a state on the Literacy Rate of the states.

## **HYPOTHESIS**

**Null Hypothesis:** Factors such as -Sex Ratio and Per Capita Income affects the Literacy Rate of the States.

**Alternate Hypothesis:** Factors such as -Sex Ratio and Per Capita Income do not affect the Literacy Rate of the States.

## **DATABASE**

We have referred to the census of 2011-2012 for Literacy Rate, Per Capita Income, Sex Ratio, and People Below Poverty Line statistics, state wise.

1. **Literacy Rate** is represented in percentage, indicating the overall Literacy within the state.

2. **Sex Ratio** has been expressed as the Number Of Females per 1000 males.
3. **Per Capita Income** is the income obtained in Rupees and is the data pertaining to the year 2011.

## **METHODOLOGY**

The research is a quantitative and structured. Present study is based on secondary data collected from census of India 2011. The data has been collected from various websites along with which several research papers have been studied thoroughly and served as aids during the research.

We have deployed the method of Linear Regression. Here,

**Dependent variable:** Literacy Rate

**Independent Variables:**

- Sex Ratio
- Per Capita Income

The software used as tools in research are:

1. **MS Excel:**

The dataset was prepared in MS excel and was imported to The PSPP Software, which we used for critical analysis.

## **2. PSPP:**

Using the software PSPP, we build a Regression Equation (Model) that explains the relationship between these variables.

The concept put in use:

Using the software PSPP we consider the goodness of fit of the fitted regression line to a set of data; that is, we shall find out how “well” the sample regression line fits the data.

$r^2$  indicates the extent to which the variation in Y is explained by the variation in X via regression

$$0 \leq r^2 \leq 1.$$

Closer  $r^2$  is to 1, better is the variation in Dependent Variables explained by the Independent variables.

## **MAJOR FINDINGS**

1. After applying the multiple regression, it was found that explanatory variables/ factors such as Sex Ratio, Per Capita Income, No. Of People Below Poverty Line, No. Of Government

Schools affect the Literacy Rate. We hence reject the Null Hypothesis.

2. With the assumed confidence interval of 95%, the significance (p value) is 0.042 for Sex Ratio and 0.008 for Per Capita Income, which is less than 0.05, which implies that variable, is significant, and hence we can readily neglect the reject the Null Hypothesis.
3. When we look at the t-values, it is 2.24 for Sex Ratio and 3.09 for Per Capita Income, which is significantly greater than zero. This implies that we can reject the Null Hypothesis.
4. The R square came out to be 0.66 which means 66% of the variation in Literacy rates of the states is explained by the factors/variables Per Capita Income and Sex Ratio

## **LIMITATIONS**

- The data considered for analysis is for the year 2011 which is ten years back from now as fresh census appears impossible in this deplorable situation due to COVID.
- A few states have been omitted from consideration because of either unavailability of data or discrepancy in the sources.

## **CONCLUSION**

The Literacy Rate of a state is considered as the important aspect of population study. Education is necessary for personal and national development.

Factors such as Per Capita Income, Sex Ratio, No. of Government Schools in state, Percentage of Population BPL should be worked upon to increase the overall Literacy Rate of the state.

