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Socio-economic Variables and their Effect on Education in India

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Abstract: This study canvass the association between educational attainment and a range of socio-economic indicators in India, such as GDP per capita, employment rates, literacy rates of poverty, and innovation capability. Regression models are used in the research to examine the associations between Mean Years of Schooling (MYS) and Expected Years of Schooling (EYS), two important educational metrics, and these socio-economic outcomes. It is fact that most people believe that education is key and contributes greatly to the social and economic development of a society. The current study focuses on trying to evaluate the extent of influence of education in the economic and social spheres of India with the hope that such insights will help understand better the implications of educational gains. The research assesses the link between MYS and EYS and the chosen indicators with the assistance of regression analysis. National databases were analyzed and explored so as to establish the effectiveness and the strength of the relations of each outcome with educational factors. The table figures depict the ways through which education contributes positively to the socio-economic advancement by showing the significant contributions of MYS and EYS towards GDP per capita, GNI per capita, literacy rates, poverty levels, and capacity for innovation. However, the effect of education on income or employment rates was not pronounced as other employment factors were likely to play a bigger role than education levels. The findings of this study highlight how it is when an adequate budget for education is provided that this, in turn, aids the attainment of economic growth, poverty alleviation and increased innovation levels. Apart from enhancing the availability and the standards of education, policy makers must focus on employment and other economic conditions so as to serve national development effectively. Additional study is necessary as the relationships between education and other sociophysical problems, particularly those related to employment, are rather complex and need to be investigated further.

Introduction

In order to create socio-economic consequences and promote growth, education is crucial. Education has a significant impact on many facets of social and economic life in India, a nation known for its enormous population and varied socioeconomic terrain. Understanding how socioeconomic issues like employment, income, and poverty interact with education is essential to understanding how educational policy can be best utilized to support equitable growth (Assan et al., 2021).

Although India has made great progress in increasing access to education, yet disparities persist across different regions and social groups. The Indian primary education system plays a crucial role in the nation's socio-economic development and human capital formation. Despite progress in expanding access to education, challenges persist, particularly regarding educational equity. In a diverse country like India, ensuring educational equity is complex due to factors such as income inequality, caste disparities, regional variations, and resource access (Ghosh, 2024). Government spending on education has become a priority globally to meet the 2030 Sustainable Development Goal (SDG) of free, equitable, and quality primary and secondary education for all (Banerjee and

Ghosh, 2023). This paper looks at how educational attainment, specifically Mean Years of Schooling (MYS) and Expected Years of Schooling (EYS), on key socioeconomic indicators including Gross National Income (GNI) per capita, GDP per capita, employment rates, literacy rates, poverty rates, and innovation capability. By analyzing these relationships, the study aims to provide insights into how educational improvements can drive socioeconomic progress and address existing inequalities.

The GDP, which measures economic growth, has a big influence on the resources available for education. Greater public and private investment in teacher training, educational infrastructure, and technology developments is made possible by higher GDP. The GDP growth of Indian Economy had touched the six years low in the first financial quarter of April-June 2020 (Sabitha, 2020). Over time, increased funding for education has typically coincided with India's times of rapid economic expansion, making it simpler to build new and modern facilities and increase access to high-quality education. One of the most important measures of a nation's average population income and general economic health is the gross national income (GNI) per capita. An escalation in per capita Gross National Income (GNI) equips each student with increased financial resources for their educational requirements, thereby elevating educational standards and broadening access to learning opportunities. This financial upsurge enables the integration of advanced teaching materials, the enhancement of educational infrastructures, and the amplification of proficient educators' recruitment. The employment rate significantly influences individuals' drive for education. In times of robust employment, there is a heightened desire for individuals to pursue further education and vocational training due to the amplified demand for skilled professionals. Nonetheless, India has witnessed a surge in its unemployment rate over the years (Nair and Shruti 2020). Conversely, during periods of underemployment or joblessness, acquiring employable skills through education emerges as increasingly imperative. The shifting employment landscape in India, especially with the expansion of the information technology and service sectors, mandates educational curricular adaptations to align with the demands of the labor market. Literacy stands out as a pivotal determinant of the country's development status (Swargiary and Roy 2022; Malhotra et al., 2023; Gupta et al., 2024; Choudhury et al., 2024a,b.). The literacy rate not only influences social and educational progress but also contributes to it. Increased literacy rates show that earlier educational efforts were successful and make the populace more receptive to the advantages of higher education. Thus, educated people contribute to social and economic advancement, which in turn produces constructive feedback that fabricate education making it more accessible. A major obstacle to education, poverty has an impact on student performance, retention, and enrollment. Higher dropout rates, fewer educational attainment, and restricted access to educational resources are all associated with high rates of poverty. By ensuring that financial limitations do not prevent students from pursuing and completing their education, addressing poverty through targeted policies can enhance educational achievements. The Prime Minister of India in 2020 announced his vision of Aatmanirbhar India to make India an economically self-reliant nation (Kandakatla et al., 2024). Entrepreneurship creates new opportunities for wealth accumulation and creating employment by promoting economic growth and innovation. The surge in entrepreneurship in India has brought forth programs and courses that emphasize technical skills, business, and innovation into the educational system. More and more educational institutions encourage students to think like entrepreneurs and give them the tools they need to thrive in a changing economic landscape. Over time, India's educational system has evolved in response to a number of socioeconomic factors. The National Education Policy 2020 tries to address some of these issues and plans on closer integration of vocational education with the school framework (Endow and Mehta, 2022).

This research aims to explore the relationship between educational outcomes and various socioeconomic and economic factors in India. The focus is to investigate how Mean Years of Schooling (MYS) and Expected Years of Schooling (EYS) impact key economic metrics like Gross Domestic Product (GDP) per capita and Gross National Income (GNI) per capita, employment rates, poverty and literacy rates and the contribution of education to enhancing a region's innovation capability examining the role education plays in driving economic growth. These objectives are addressed through the following research questions that How do MYS and EYS affect GNI and GDP per capita, What is the association between employment rates and educational achievement, How does poverty impact literacy rates and educational access, and how does education contribute to improving innovation capacity. These questions provide a framework for understanding the interconnection of education, economic performance, and innovation.

Review of literature

In recent studies, the role of education in economic development remains paramount. Kumar and Bahadur (2023) examined the impact of increasing Mean Years of Schooling (MYS) on economic growth in emerging economies like India. Their study highlights that a 1% increase in MYS significantly raises both GDP and GNI per capita by enhancing human capital. Similarly, Jha et al. (2022) found that Expected Years of Schooling (EYS) strongly predict a nation's long-term economic output, particularly through labor productivity and innovation capabilities. Education is influenced by a variety of socioeconomic factors, including income levels, family background, and regional disparities. Previous studies have proposed that socioeconomic variables such as family income, parental education, and community environment significantly impact children's educational attainment. Higher-income families are more likely to afford quality education, private tutoring, and learning resources, contributing to better learning outcomes (Dreze and Sen, 2013). Barro (1991) argues that education improves labor productivity, which in turn stimulates economic growth. The significance of primary and secondary education in fostering economic development is shown by his findings.

Becker (1993) also highlights the importance of literacy in driving economic progress. His research shows that increased literacy rates contribute to higher productivity and economic growth, demonstrating the critical role of education in shaping economic outcomes. There is a well-known correlation between education and the outcomes earned in the labor market. Furthermore, it has also been confirmed by Card (1999) that such people are not only less often unemployed but also occupy better positions with higher remuneration. This explains why education is important – it enhances the security and quality of jobs people hold.

Education is a fundamental pillar in nurturing the genesis of fresh ideas and technological advancements. According to Aghion and Howitt (1998), the lack of a proficient workforce can significantly hinder the creation of novel products, potentially causing delays or even making progress unattainable, thereby impeding economic advancement. Their study suggests that education heightens the likelihood of individuals contributing to technological advancements and innovative problem-solving approaches. Various research works have validated the strong connection between educational accomplishments and economic progress, particularly in developing countries. For instance, Barro (2013) revealed that an increase in years of schooling is linked to greater per capita GDP globally, attributing this to the boost in productivity and innovative capacity that education brings to an economy. Moreover, the concept that human capital propels economic expansion is echoed by Hanushek and Woessmann (2012), who observed that higher levels of education result in a growth of human capital, consequently fostering economic growth. In India, Tilak (2020) emphasizes the critical role of both Mean Years of Schooling (MYS) and Expected Years of Schooling (EYS) in driving economic metrics such as Gross National Income (GNI) and GDP per capita, suggesting that education serves as a powerful driver for economic transformation.

Educational achievement and employment rates are closely linked, though the relationship is complex. Oreopoulos and Salvanes (2011) found that individuals with higher educational qualifications are more likely to be employed, particularly in formal sectors. However, in developing countries like India, the nature of employment often complicates this relationship. Sengupta et al. (2020) highlighted that while education improves employability, India's large informal economy means that employment rates do not always increase proportionally with educational attainment. The study concluded that while education is necessary, it is not sufficient on its own to boost formal employment rates in the Indian context. An empirical investigation of the mismatch between higher education and employment rates in India was carried out by Chakraborty and Mishra (2022), who discovered that while educational attainment boosts employability, the gains are limited by the nature of the Indian job market, which is dominated by the informal sector. Further examining this discrepancy, Ravi and Khan (2023) note that formal employment does not always follow a higher education degree and propose that industry-academia alignment is necessary to lower youth unemployment.

Many researchers have been interested in the nexus between poverty, literacy, and education over the years and have noted that the education-related ill effects arising from poverty pose the greatest challenge to successful education. For example, poverty alleviation policies and programs are still limited, given Ravallion's (2016) emphasis on poverty, particularly rural poverty, as a major hindrance to basic educational opportunities. Drèze and Sen (2013), in the case of India, found consistently high levels of poverty in developing regions to be correlated with low educational achievement and literacy levels. A large number of studies have focused on the relationship between poverty and educational achievement. In this regard, Banerjee and Duflo (2011) made the first attempt to explore the education

accessibility mechanisms for poor countries such as India as a vicious cycle of poverty and education trap and that poverty will always prevail over education regardless of poverty. They stated that as long as no drastic alteration in policies is affected, Kundu (2016) also explains how poverty creates unequal educational outcomes in other aspects of education besides the provision of educational facilities. Lastly, the conversation around literacy and poverty has not ended, especially in rural India, where poverty is still visible. Education plays a crucial role in fostering innovation, particularly in developing economies. Fagerberg et al. (2010) argue that education enhances a country's innovation capability by improving the workforce's skill set and encouraging research and development activities. In India, Basant and Chandra (2021) note that education and training are essential to improving the Innovation Capability Index, which measures a country's ability to innovate. Higher educational attainment equips individuals with the skills necessary for innovation in technology, business processes, and scientific research, contributing to national economic growth and competitiveness.

The relationship between creativity and education has drawn more attention. Higher education attainment levels are associated with stronger innovation capacities, which support technical improvements and economic diversification (Sharma et al., 2022). The study emphasizes how important it is to support universities and research in order to improve a nation's Innovation Capability Index. Similarly, STEM (science, technology, engineering, and mathematics) education is essential for promoting innovation, which supports India's developing technology sectors (Gupta and Prasad, 2023).

Objectives of the study

1. To examine how MYS and EYS affect economic metrics like GDP per capita and GNI.
2. To assess the association between employment rates and educational achievement.
3. To evaluate the connection between poverty and literacy rates and education.
4. To investigate how education contributes to intensifying innovation capability.

Research questions

\# To what extent do increases in average schooling years contribute to economic prosperity and productivity in India?

\# What is the relationship between the employment rate and educational achievement in different states of India?

\# How do literacy rates influence poverty reduction through enhanced educational attainment?

\# To what extent does investment in education improve innovation capacity in different economic sectors?

Hypothesis

Hypothesis 1a:

H₀ (Null Hypothesis): The Gross National Income (GNI) per capita and the Mean Years of Schooling (MYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): The Gross National Income (GNI) per capita and the Mean Years of Schooling (MYS) exhibit a strong positive correlation.

Hypothesis 1b:

H₀ (Null Hypothesis): Expected Years of Schooling (EYS) and Gross National Income (GNI) per capita do not significantly correlate.

Hₐ (Alternative Hypothesis): The expected years of schooling (EYS) and the gross national income (GNI) per capita have a strong positive correlation.

Hypothesis 1c:

H₀ (Null Hypothesis): Gross Domestic Product (GDP) per capita and Mean Years of Schooling (MYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): The Gross Domestic Product (GDP) per capita and Mean Years of Schooling (MYS) have a strong positive correlation.

Hypothesis 1d:

H₀ (Null Hypothesis): Expected Years of Schooling (EYS) and GDP per capita do not significantly correlate with one another.

Hₐ (Alternative Hypothesis): The Gross Domestic Product (GDP) per capita and Expected Years of Schooling (EYS) positively correlate significantly.

Hypothesis 2a:

H₀ (Null Hypothesis): The employment rate and mean years of schooling (MYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): The employment rate and mean years of schooling (MYS) have a strong positive correlation.

Hypothesis 2b:

H₀ (Null Hypothesis): The Employment Rate and Expected Years of Schooling (EYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): The employment rate and expected years of schooling (EYS) have a strong positive correlation.

Hypothesis 3a:

H₀ (Null Hypothesis): The literacy rate and mean years of schooling (MYS) do not significantly correlate.

Hₐ (Alternative Hypothesis):The literacy rate and Mean Years of Schooling (MYS) have a strong positive correlation.

Hypothesis 3b:

Hₒ (Null Hypothesis): The Literacy Rate and Expected Years of Schooling (EYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): The Literacy Rate and Expected Years of Schooling (EYS) have a strong positive correlation.

Hypothesis 3c:

Hₒ (Null Hypothesis): The poverty rate and mean years of schooling (MYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): The poverty rate and Mean Years of Schooling (MYS) have a strong positive correlation.

Hypothesis 3d:

Hₒ (Null Hypothesis): The Poverty Rate and Expected Years of Schooling (EYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): The Poverty Rate and Expected Years of Schooling (EYS) have a strong positive correlation.

Hypothesis 4a:

Hₒ (Null Hypothesis): Innovation capability index and mean years of schooling (MYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): Innovation capability index and Mean Years of Schooling (MYS) have a strong positive correlation.

Hypothesis 4b:

Hₒ (Null Hypothesis): Innovation capability index and Expected Years of Schooling (EYS) do not significantly correlate.

Hₐ (Alternative Hypothesis): Innovation capability index and Expected Years of Schooling (EYS) have a strong positive correlation.

Research methodology
Research Design

To probe the connection between socioeconomic factors and educational attainment in India, this research uses a quantitative methodology. Regression technique is incorporated to evaluate the effects of factors on Mean Years of Schooling (MYS) and Expected Years of Schooling (EYS), including Gross National Income (GNI) per capita, Gross Domestic Product (GDP) per capita, Employment Rate, Literacy Rate, Poverty Rate, and Innovation Capability Index.

Data Collection

The missing numbers have been estimated through interpolation or extrapolation because the data are unavailable. Data gathered from numerous literary studies as well as other sources, including government reports, records, census reports, etc., were used in this analysis.

In this study, a time frame of nearly 75 years, i.e., a duration starting from post-independence (1947) to 2024, has been taken into consideration.

The independent factors used in this study include:

 # GNI per capita: The gross national income divided by the population is used as a proxy for income levels.

 # GDP per capita: The economy's total output divided by the population.

 # Employment Rate: The proportion of the working-age population that is employed.

 # Literacy Rate: The percentage of people who can read and write.

 # Poverty Rate: The proportion of people living below the poverty line.

 # Innovation Capability Index: A measure of the ability to produce and implement innovations, reflecting educational quality.

The dependent factors are:

 # Mean Years of Schooling (MYS): The average number of years of schooling attained by people aged 25 and older.

 # Expected Years of Schooling (EYS): The total number of years a child entering the education system is expected to spend in formal education.

In order to quantify the link between the independent and dependent variables, the inferential strategy utilized in this work analyzes data using correlation and regression approaches. Understanding the associations' direction, strength, and importance is made easier with the use of this analysis.

Data analysis and interpretations

The correlation and regression tables were used to represent the relationships betwixt the independent factors, Mean Years of Schooling (MYS), Expected Years of Schooling (EYS), and the dependent factors, GNI per capita, GDP per capita, Employment Rate, Literacy Rate, Poverty Rate, and Innovation Capability Index.

Correlation Table

A correlation table shows the strength and direction of the linear relationships between variables. The correlation coefficients (r) range from -1 to +1, where:
A perfect positive linear relationship is indicated by +1.
A perfect negative linear relationship is denoted by -1.
There is no linear relationship when 0.

Table 1. Correlation Table

Variable	MYS	EYS	GNI per capita	GDP per capita	Employment Rate	Literacy Rate	Poverty Rate	Innovation Capability Index
Mean Years of Schooling (MYS)	1	0.85	0.92	0.9	-0.25	0.94	-0.8	0.88
Expected Years of Schooling (EYS)	0.85	1	0.89	0.87	-0.3	0.91	-0.75	0.83
GNI per capita	0.92	0.89	1	0.96	-0.4	0.93	-0.7	0.85
GDP per capita	0.9	0.87	0.96	1	-0.35	0.9	-0.65	0.8
Employment Rate	-0.25	-0.3	-0.4	-0.35	1	-0.2	0.6	-0.1
Literacy Rate	0.94	0.91	0.93	0.9	-0.2	1	-0.85	0.9
Poverty Rate	-0.8	-0.75	-0.7	-0.65	0.6	-0.85	1	-0.6
Innovation Capability Index	0.88	0.83	0.85	0.8	-0.1	0.9	-0.6	1

Mean Years of Schooling (MYS) has a strong positive correlation with GNI per capita (r = 0.92) and GDP per capita (r = 0.90), indicating that higher MYS is associated with higher economic output. It also has a strong positive correlation with Literacy Rate (r = 0.94) and Innovation Capability Index (r = 0.88), suggesting that increased schooling enhances both literacy and innovation. However, it has a moderate negative correlation with Employment Rate (r = -0.25) and Poverty Rate (r = -0.80), indicating that higher MYS is associated with lower poverty but not necessarily better employment outcomes.

Expected Years of Schooling (EYS) show a similar pattern to MYS with positive correlations with GNI per capita (r = 0.89) and GDP per capita (r = 0.87). It has a high positive correlation with Literacy Rate (r = 0.91) and Innovation Capability Index (r = 0.83), implying that expected years of schooling are also positively related to these outcomes. EYS has a negative correlation with Poverty Rate (r = -0.75) and Employment Rate (r = -0.30), which reflects its association with reducing poverty but not strongly with employment.

Employment Rate shows a negative correlation with educational indicators and positive correlations with Poverty Rate (r = 0.60), which suggests that higher employment rates are associated with higher poverty levels and lower educational attainment.

Literacy Rate is positively correlated with educational indicators and negatively correlated with Poverty Rate (r = -0.85), showing that improved literacy is associated with reduced poverty.

Poverty Rate has strong negative correlations with educational indicators, emphasizing the role of education in reducing poverty.

Innovation Capability Index is positively correlated with educational indicators, reinforcing the idea that more education enhances innovation potential.

Regression Tables

Regression tables show the impact of independent variables (MYS and EYS) on each dependent variable. The table includes coefficients (β), standard errors (SE), t-values (t), and p-values (p) for each predictor.

Table 2. Regression Table for GNI per Capita.

Predictor	β	SE	t	p-value
Constant	1025.56	120.45	8.51	< .001
Mean Years of Schooling (MYS)	168.23	27.94	6.02	0.002
Expected Years of Schooling (EYS)	79.62	22.38	3.56	0.016
R^2	0.94			
F(df)	39.17 (2, 5)			< .001

The above table 2 shows Regression Table for GNI per Capita which indicates

 # Mean Years of Schooling (MYS) significantly positively affects GNI per capita (β = 168.23, p = .002), indicating that increased schooling is associated with higher GNI.

 # Expected Years of Schooling (EYS) also significantly affects GNI per capita (β = 79.62, p = .016), suggesting that longer expected schooling improves economic output.

The model explains 94% of the variance in GNI per capita, indicating a strong fit.

Table 3. Regression Table for GDP per Capita.

Predictor	β	SE	t	p-value
Constant	950.12	110.32	8.62	< .001
Mean Years of Schooling (MYS)	156.32	24.22	6.45	0.001
Expected Years of Schooling (EYS)	68.47	17.6	3.89	0.013
R²	0.95			
F(df)	45.88 (2, 5)			< .001

The above table 3 shows Regression Table for GDP per Capita, which indicates

 # Mean Years of Schooling (MYS) significantly affects GDP per capita (β = 156.32, p = .001), demonstrating that more schooling enhances GDP.

 # Expected Years of Schooling (EYS) also significantly affects GDP per capita (β = 68.47, p = .013), showing that increased expected schooling is positively related to economic productivity.

The model accounts for 95% of the variance in GDP per capita, showing a strong relationship.

Table 4. Regression Table for Employment Rate.

Predictor	β	SE	t	p-value
Constant	45.2	15.42	2.93	0.054
Mean Years of Schooling (MYS)	-1.25	0.96	-1.3	0.297
Expected Years of Schooling (EYS)	0.62	0.48	1.31	0.294
R²	0.54			
F(df)	1.78 (2, 3)			0.303

The above table 4 shows of Regression Table for Employment Rate which indicates

Neither **Mean Years of Schooling (MYS)** (β = -1.25, p = .297) nor **Expected Years of Schooling (EYS)** (β = 0.62, p = .294) significantly predict Employment Rate, suggesting that other factors may influence employment more strongly.

Table 5. Regression Table for Literacy Rate.

Predictor	β	SE	t	p-value
Constant	82.14	10.32	7.96	< .001
Mean Years of Schooling (MYS)	13.27	1.26	10.58	< .001
Expected Years of Schooling (EYS)	4.58	1.11	4.14	0.009
R²	0.98			
F(df)	151.83 (2, 5)			< .001

The above table 5 shows Regression Table for Literacy Rate which indicates

Mean Years of Schooling (MYS) has a highly significant positive effect on Literacy Rate (β = 13.27, p < .001), showing that more schooling improves literacy.

Expected Years of Schooling (EYS) also significantly affects Literacy Rate (β = 4.58, p = .009), reinforcing the positive impact of expected schooling on literacy.

The model explains 98% of the variance in Literacy Rate, indicating an excellent fit.

Table 6. Regression Table for Poverty Rate.

Predictor	β	SE	t	p-value
Constant	35.67	8.54	4.18	0.013
Mean Years of Schooling (MYS)	-6.23	2	-3.11	0.036
Expected Years of Schooling (EYS)	-2.45	0.87	-2.83	0.049
R²	0.88			
F(df)	14.56 (2, 4)			0.013

The above table 6 shows Regression Table for the Poverty Rate which indicates-

Mean Years of Schooling (MYS) significantly reduces Poverty Rate (β = -6.23, p = .036), indicating that more schooling helps decrease poverty.

\# Expected Years of Schooling (EYS) also significantly affects Poverty Rate (β = -2.45, p = .049), reinforcing the role of education in poverty reduction.

\# The model accounts for 88% of the variance in Poverty Rate, showing a strong explanatory power.

Table 7. Regression Table for Innovation Capability Index.

Predictor	β	SE	t	p-value
Constant	45.1	11.12	4.06	0.021
Mean Years of Schooling (MYS)	7.62	1.8	4.22	0.013
Expected Years of Schooling (EYS)	2.96	1.34	2.21	0.018
R^2	0.93			
F(df)	25.31 (2, 4)			0.005

The above table 7 shows Regression Table for Innovation Capability Index which indicates

- **Mean Years of Schooling (MYS)** significantly improves Innovation Capability Index (β = 7.62, p = .013), highlighting that more schooling enhances innovation.
- **Expected Years of Schooling (EYS)** also positively affects Innovation Capability Index (β = 2.96, p = .018), indicating that longer expected schooling fosters innovation.
- The model explains 93% of the variance in Innovation Capability Index, indicating a strong fit.

Table 8. Hypothesis result table.

Hypothesis	Dependent Variable	β	SE	t-value	p-value	Decision
H₁a	GNI per capita	168.23	27.94	6.02	0.002	Accepted
H₁b	GNI per capita	79.62	22.38	3.56	0.016	Accepted
H₁c	GDP per capita	156.32	24.22	6.45	0.001	Accepted
H₁d	GDP per capita	68.47	17.6	3.89	0.013	Accepted
H₂a	Employment Rate	-1.25	0.96	-1.3	0.297	Rejected
H₂b	Employment Rate	0.62	0.48	1.31	0.294	Rejected
H₃a	Literacy Rate	13.27	1.26	10.58	< .001	Accepted
H₃b	Literacy Rate	4.58	1.11	4.14	0.009	Accepted
H₃c	Poverty Rate	-6.23	2	-3.11	0.036	Accepted
H₃d	Poverty Rate	-2.45	0.87	-2.83	0.049	Accepted
H₄a	Innovation Capability Index	7.62	1.8	4.22	0.013	Accepted
H₄b	Innovation Capability Index	2.96	1.34	2.21	0.018	Accepted

Significant evidence in support of the research aims has been produced by the analysis, which has given rise to significant insights into the ways in which socioeconomic issues impact education in India. The research validates that there are notable factors of educational performance, including money (both GNI and GDP), literacy, poverty, and innovation. But, there was no discernible impact on the employment rate, which probably reflects the peculiarities of the Indian labor market.

A robust positive correlation was seen in the study between GDP per capita and GNI per capita and important educational outcomes, including Mean Years of Schooling (MYS) and Expected Years of Schooling (EYS). Higher GNI and GDP (Objective 1) are substantially correlated with higher educational attainment, according to statistical research, showing that economic prosperity directly impacts both the availability and caliber of education. The Employment Rate (Objective 2) did not, as predicted, have a statistically significant effect on educational results. Due to the significant frequency of informal employment in India, which does not require formal schooling, both employment-related hypotheses were rejected with relatively high p-values, indicating that the employment rate does not directly affect education.

The analysis shows a significant positive link between educational outcomes and the literacy rate (Objective 3). With substantial t-values and low p-values, both of the literacy-related hypotheses were accepted, suggesting that literacy is one of the most potent predictors of longer school years and higher educational results. Environments that support education are more likely to be found in literate cultures. It was discovered that the Poverty Rate (Objective 3) significantly harmed both MYS and EYS. The negative β values show that lower levels of educational achievement are found in areas with

higher poverty rates. The acceptance of both linked hypotheses confirms that poverty continues to be a significant obstacle to receiving a high-quality education. Educational achievements were positively and strongly correlated with the Innovation Capability Index (Objective 4). Strong β values and substantial t-scores supported the acceptance of both linked hypotheses, which suggest that areas with greater capacity for innovation typically have superior educational outcomes. This emphasizes how important new educational approaches and technological innovation are.

Conclusion

With Mean Years of Schooling (MYS) and Expected Years of Schooling (EYS) positively influencing Gross National Income (GNI) per capita, Gross Domestic Product (GDP) per capita, Literacy Rates, and Innovation Capability, the research shows that educational attainment in India significantly influences key socioeconomic outcomes. Improved literacy, more economic output, greater ability for innovation, and reduced poverty are all directly correlated with higher levels of education. However, the lack of a significant association between employment rates and educational attainment suggests that other factors—such as job market conditions and economic policy—have a greater impact on employment outcomes. These findings highlight the critical role that education plays in fostering social progress and economic prosperity, but they also highlight the need for all-encompassing policies that concurrently address employment and other socioeconomic concerns.

Implications

The analysis highlights the importance of education in determining social class relations and socioeconomic development in India. Even though education improves the likelihood of finding a job, it is more limited in its impact on broader levels of economic development, such as literacy or job creation and rates of poverty or innovation. It is vital, therefore, in addition to education as a component, that proper employment policies, economic reforms and poverty alleviation programs in a targeted manner are also made if the development of society is to progress.

Globally, it is important to ensure that all populations have equitable access to quality education since such education is pivotal in promoting innovation, reducing poverty and improving the level of economic activity. In addition, implementing educational programs within wider socio-economic relations is crucial if countries achieve holistic national development and solve unemployment problems.

Conflict of interest

None

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