Relationship in India between educational Spending and Educational Results

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Abstract - The first step in achieving this goal is to have an educated workforce. Governments all around the globe want their nations to have high-value and high-skill economies. A person's capacity for learning, processing information, and applying knowledge to specific or local circumstances is developed via education. As a result, it offers the basis for constructing knowledge in an information-based society. Analyzing the impact of government expenditure on India's economic development in this perspective is intriguing. The current research used GDP as a proxy for economic growth and total government spending on education as a proxy for the knowledge economy to examine the impact of education spending on economic development in India. The study supports the existence of a beneficial association between educational spending and academic outcomes.

Keywords - Education, GDP, Expenditure, Growth

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INTRODUCTION

Education in the primary and secondary levels is critical to the growth and development of a country. Educational attainment has been a common theme among development economists, especially those who advocate for endogenous growth. Education above the primary level is seen as a public benefit that relies mostly on government funding. One of the most significant responsibilities of governments is to fund public elementary and secondary schools. Unfortunately, the education sector has to compete with other sectors for limited funding sources.[1]

If a nation has a large resource base, allocating resources is not a difficulty, and it can spend enough in each area. A lack of resources creates an economic dilemma of choice that dictates how resources are allocated in an economy. Numerous studies have demonstrated that despite substantial investments in the education system, many nations' outcomes are woefully inadequate. Research has revealed that inefficient transfer of educational funds has a negative impact on student achievement . As a result, it is critical to study the link between education funding and educational results in India's various states.[2]

Finance, efficiency, and effectiveness, as well as equality and equitable distribution of benefits are all essential challenges in the supply of public finance for primary education in India. As the government shifts its focus from money to results, these issues have grown more pertinent. Until 1976, education in India was part of the state's purview. After then, it was moved to the

matters enumerated with the goal of improving educational achievements and reducing regional disparity. Education results have taken precedence over expenditures in recent decades, resulting in more educational equality between jurisdictions with limited resources. Using evidence-based planning, it is possible to identify disparities in results, gaps in service and process which result in poor outcomes, and financing to meet the true requirements of trailing regions/states in India.[3]

A large number of Indian states are classified as "lagging states" because they have not yet achieved the levels of participation or achievements they had hoped for. This is mostly due to a lack of educational resources in these areas. As a consequence, the current research aims to examine the disparities between the expenditures made by Indian states on primary education and the results they achieve in terms of meeting benchmarks. Since independence, there has been a rise in the need for education, and the government is making an effort to provide enough resources to primary and secondary education. The government should spend 6 per cent of national revenue on education, and three per cent of it should be spent on basic education, according to national policies on education. NEP and SAP were implemented by GOI in 1991 and 1992, respectively. Government spending on social services and primary education both have to be reduced as a result of these changes. The government's NCMP, on the other hand, includes primary and elementary education. To ensure the

safety of these two industries, the government has agreed to provide the required funding.[4]

It is hoped that the link between educational spending and educational results in India may be better understood via the work presented here. The aggregate of educational outputs from a country's educational system is known as educational outcomes. Accordingly, enrollment, minimising dropout, retention rate and transition rate are only few of the outputs of an education system. Educational outcomes are the sum of these outputs. Across India, educational achievements must be compared to educational expenditures to get a sense of the system's efficiency.[5]

THE INDIAN GOVERNMENT'S SPENDING ON EDUCATION

Table 4.1 shows the state's budgeted spending on primary education from 2000-01 to 2019-20. The planned spending on elementary education in India has increased significantly from Rs. 302.22 crore in 2000-05 and Rs.1541.85 crore in 2015-20, according to the statistics. But even while spending on primary education has increased steadily over the last two decades, just 14 of the 35 states in 2000-05 and 16 of the 35 states and UTs in 2015-20 had set aside more money than the national median. According to states, Uttar Pradesh spent the most money (Rs. 1261.26 billion) in 2001-05, while Daman and Diu spent the least (Rs. 2.25 billion), however in 2015-20, Maharashtra has replaced Uttar Pradesh and Daman and Diu has maintained its position by spending Rs. 12.76 billion. In the last two decades, the Diu & Daman have been discovered to be devoting the lowest amount to basic education.[6]

The Coefficient of Variation is a measure of how consistent states are in distributing primary education money across time. In 2001-05, Nagaland had the lowest CV of 13.90, while Lakshadweep had the highest CV of 60.86 percent. The highest percentages recorded in 2015-20 were in Tripura (8.78%) and Lakshadweep (125.96%). It shows that Lakshadweep's expenditures have fluctuated over the last two decades. CV reveals inter-state diversity at the national level across the country. From 2000 to 2005, it dropped from 37.21 percent to 30.25 percent, demonstrating a reduction in state-to-state volatility throughout that time. However, between 2011 and 2015, it rose by a whopping 102.84 percent. Throughout the 2015-20 timeframe, the percentage dropped to 54.92 percent owing to economic fluctuations in the period.[7]

Table 1: Budgeted Elementary Education Expenditure in India from 2000-01 to 2019-20 is shown in

States/UTs	AVERAGE(Rs.inCrores)				CO-EFFICIENT OF VARIATION (InPercentage)			
	2000-01 To 2004-05	2005-06 To 2009-2010	2010-11 To 2014-15	2015-16 To 2019-20	2000-01 To 2004-05	2005-06 To 2009-2010	2010-11 To 2014-15	2015-16 To 2019-20
A&N	13.47	29.30	43.69	86.92	21.46	29.49	15.50	46.06
AP	579.22	1010.23	1737.82	3005.32	17.63	23.86	17.78	24.73
Arunachal Pr.	31.81	57.67	93.29	213.94	19.45	22.34	13.03	40.97
Assam	353.77	717.74	1209.66	1772.03	20.76	25.66	14.87	25.98
Bihar	885.83	1741.64	1284.04	3585.27	15.42	33.03	57.84	28.99
Chandigarh	9.71	22.04	34.77	65.77	21.43	27.23	16.56	32.27
Chhattisgarh	-	-	501.78	1434.63	-	-	46.54	50.64
Dadra&NagarHaveli	2.82	6.33	11.40	24.67	19.47	30.36	26.40	44.74
Daman&Diu	2.25	4.52	6.71	12.76	16.25	27.02	13.57	58.58
Delhi	83.27	116.71	266.23	563.20	12.05	28.32	50.99	47.49
Goa	22.11	43.89	56.65	96.59	16.13	28.12	4.24	37.30
Gujarat	621.82	1319.29	1866.76	3098.84	23.91	23.63	11.07	29.07
Haryana	184.69	414.80	691.80	1426.90	18.32	32.71	12.28	44.62
HimachalPr.	131.45	310.12	509.55	914.08	23.42	37.62	6.59	26.60
J&K	83.14	232.82	368.90	535.10	53.95	32.93	10.99	49.64
Jharkhand	-	-	455.17	1400.49	-	-	93.70	32.85
Karnataka	582.07	1144.94	1910.67	3731.28	27.74	20.51	17.74	23.78
Kerala	482.24	887.89	1328.84	1864.74	21.59	22.45	18.09	20.15
Lakshadweep	3.34	4.77	0.62	14.02	30.29	60.86	31.21	125.96
M.P	690.98	1341.99	1656.66	2788.63	23.80	23.87	11.60	30.14

IN INDIA, THE GENDER PARITY INDEX (GPI).

GPI is a critical metric for assessing the degree of parity in student enrollment between males and females. Females-to-boys enrollment (GPI) measures how many girls are enrolled at a certain level of schooling. Close to 1.00 on the GPI reflects equal educational opportunity. In other words, boys and girls have equal access to educational opportunities at the same educational level. EFA's Global Monitoring Report states that a score of between 0.97 and 1.0 is possible.[8-10]

Using GPI, governments may track their progress toward ensuring that all children have access to a quality education. This goal is pursued by several groups both worldwide and domestic.
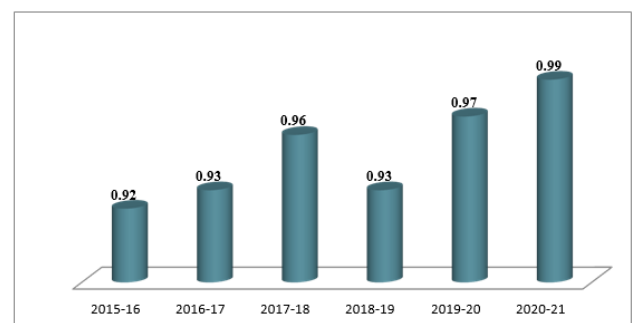
Graph 1: Gender Parity Index in India's Primary Schools

INDIA DROPOUT RATES

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Dropout rates in India's primary schools have been alarming for decades. An educational system's performance may also be evaluated using this output indicator. To calculate drop-out rates, the proportion of students who leave a certain grade, cycle, or level of study prior to graduation is taken into account. Over the last several decades, all states in India have made significant measures to minimise the dropout rate. The dropout rate has been reduced significantly under SSA, which has implemented integrated and effective and ongoing techniques.[11]
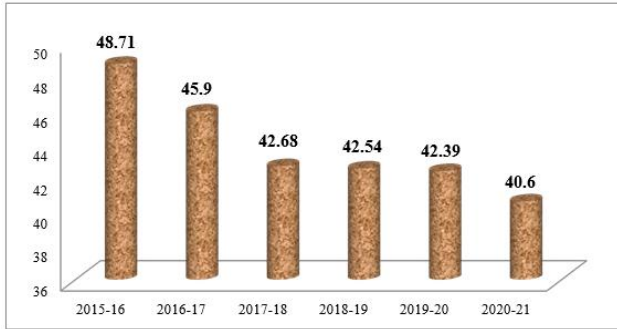
Graph 2: Trends in India's Elementary School Dropout Rates from 2015-16 to 2020-215. RESULTS

Factors That Affect Educational Progress

In order to figure out what influences a student's performance in school, researchers use multiple regression models. Proxy variables for educational outcomes include student enrolment, dropout rate, and GPI. Overall literacy levels, poverty levels, and the amount of monies used are all factors that influence these results. show the regression findings for schooling outcomes across Indian states. Logarithmic values are taken into account here to eliminate data set volatility and to provide consistent interpretation.[12-13]

- **Factors Influencing Dropout Rate**

$$\ln(dropo_i) = \alpha + \beta_1 \ln(lit_i) + \beta_2 \ln(pov_i) + \beta_3 \ln(uf_i) + u_i$$

$\ln(dropo)\ i$ = dropout

lit_i = literacy

pov_i = poverty

uf_i = utilization of funds

α = constant

β_1, β_2 and β_3 = slope coefficient

Table 2: Results of a Dropout's Regression

Variable	Coefficient	Standard error	t-statistic	Prob.
lnlit	-5.116	2.472	-2.069	0.04
lnpov	0.527	0.263	2.001	0.05
lnuf	-0.311	0.849	-0.366	0.71
C	24.829	11.930	2.081	0.04
R-squared	0.347	Adjusted R-squared		0.283
Dependent variable	Lnedropout			

shows regression findings. All predicted coefficients in this model have the anticipated signs. The dropout rate is inversely related with literacy and the usage of finances, whereas poverty is favourably associated. A 1% increase in literacy decreases dropout rates by 5.1%, which is statistically significant. However, a 1% increase in money used decreases dropouts by 0.31%, although this is a non-significant coefficient. Poverty is also linked to dropout, which means that for every 1% rise in poverty, there is a 0.533% increase in dropout, which is considerable at 10%. Explanatory factors account for just a third of the variance in dropout rates, according to the R2 value of 0.35.[14]

- **Factors Influencing GPI**

$$\ln(GPI_i) = \alpha + \beta_1 \ln(lit_i) + \beta_2 \ln(pov_i) + \beta_3 \ln(uf_i) + u_i$$

$\ln(GPI)\ i$ = Gender Parity Index

lit_i = literacy

pov_i = poverty

uf_i = utilization of funds

α = constant

β_1, β_2 and β_3 = slope coefficient

Results

Table 3: GPI Regression Analysis Shows

Variable	Coefficient	Standard error	t-Statistic	Prob.
lnlit	0.12	0.095	2.086	0.045
lnpov	-0.01	0.018	-0.521	0.605
lnuf	0.02	0.028	0.567	0.574
C	-0.94	0.490	-1.915	0.064
R-squared	0.221	Adjusted R-squared	0.146	
Dependent variable	lnGPI			

All of the predicted coefficients were in line with their predicted values. Poverty has a detrimental impact on GPI, but education and financial literacy have favourable effects. Literacy is the only factor that matters, and poverty and inefficient use of resources are of no consequence. Assuming other factors remain constant, an increase in literacy and the use of money of one percent corresponds to a rise in GPI of 0.12 percent and a decrease in GPI of 0.01 percent, respectively. There is just a 0.22%

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correlation between the GPI and literacy, poverty, and the use of finances. When it comes to gender equality, social variables have a bigger role than economic ones. In multivariate regression models, it is shown that literacy and the use of funds are important factors of enrollment and grade point average (GPI). More money and literacy should be used to improve educational achievements, but decreasing poverty should be a top priority at all times, according to this study.[15]

CONCLUSION

Prior to the advent of SSA, there was a substantial disparity in educational spending and educational achievements across states. Regional imbalance was minimised and educationally backward areas, states, and socioeconomic groups were more likely to participate in the commitment to UEE with the establishment of SSA From Rs. 302.22 crore in 2000-05 to Rs.1541.85 crore in 2015-20, the planned spending on elementary education at the national level increased significantly. In 2001-05, Uttar Pradesh invested the most at Rs.1261.26 crore, while Daman and Diu contributed the least at Rs.2.25 crore. While Lakshadweep had the biggest fluctuation (125.96 percent) between 2015 and 2020, Nagaland had the lowest variation (13.90 percent).[16]

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