# **Public Expenditure on Education in India - A Trends and Growth**

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#### Abstract

Public expenditure on education is crucial for ensuring global access to quality education. Despite recommendations to allocate 6 percent of GDP towards the education sector, this target remains unmet in India. This disparity contributes to India's low ranking in the Human Development Index. This study analyzes trends and growth in public expenditure on education by both Central and state governments in India and investigates its distribution across different sectors. The study used secondary data source of public expenditure on education from2000-01 to 2020-21. The data were collected from various governmental sources. Descriptive statistics were employed to analyze trends and growth patterns in educational expenditure. The study reveals a consistent increase in total educational spending, with state governments playing a leading role. However, public expenditure on education remains below the recommended 6 percent of GDP, hovering around 4 percent. Despite fluctuations, investments in elementary education have shown a positive trend, while secondary education expenditure has remained stable. Investment in higher education, though substantial, has declined over time, contrasting with a significant increase in spending on technical education. The study suggests allocating 3.5 percent of state budgets and 2.5 percent of GDP by the central government for education, aiming to bridge the funding gap and ensure quality education for all.

Keywords: Education, Investment, Public Expenditure, Private Expenditure, GDP

### Introduction

Education is a significant force that drives positive transformation and development in various aspects of society, including social, economic, and political domains, impacting both individuals and nations as a whole (Bandyopadhyay et al.; Tilak; Karlidag-Dennis et al.). Adam Smith, in his work The Wealth of Nations, likened educated individuals to costly machinery, emphasizing their pivotal role in driving productivity. Alfred Marshall further underscored the significance of knowledge as the primary driver of production, positioning it as the most valuable form of capital when invested in human beings. The concept of human capital, first introduced by economist Theodore Schultz in the 1960s, continues to highlight the inherent value of human capabilities, underscoring the importance of investing in human potential to foster economic development. Investment in human capital, particularly through education, is widely acknowledged across economic theories as crucial for economic growth.

Education investment offers high returns and enhances productivity, serving as a key component of human capital formation. Expenditure on education increases the stock of human capital, leading to higher societal productivity and per capita income levels. (Schultz: Capital Formation by Education; Schultz: Investment in Human Capital) and (Becker) confirm the significant returns associated with education investment. Consequently, expenditure on education is considered essential for both economic and social development. Effective expenditure on education has been shown to accelerate economic growth and foster human development (Schultz: Investment in Human Capital). The educational expenditure consists of two types of investment in education: public and private expenditure. Public expenditure on education is funded by governments, while private expenditure is incurred by families, parents, and individuals. Public expenditure on education is crucial for ensuring quality and accessibility of education globally. However, policies and reforms in this area vary based on economic, political, and social factors. Common measures include increasing promoting equity and accessibility, funding, enhancing improving quality, accountability, pursuing efficiency, fostering public-private partnerships, and prioritizing inclusive education.

### **Literatures Studies**

Earlier studies have examined public expenditure on education in recent years. Some empirical studies conducted in the Indian context consistently demonstrate a positive relationship between public expenditure on education and economic growth. Therefore, increasing government expenditure on all types of education ensures faster and more inclusive growth in the country.

(Motkuri and Revathi) examines public and private expenditure on education in India. The findings show that India expenditure on education was 6.6 percent of its GDP, with 3.9% of public expenditure and 2.7% of private expenditure on education respectivelyin 2018-19. Household expenditure on education has increased significantly since the 1950s, rising fivefold relative to private consumption, indicating its growing importance to households. Notably, private education expenditure

has surpassed the growth rate of public spending over the last three decades. This trend suggests a shift towards education privatization in India, with significant policy implications. The COVID-19 pandemic has impacted education expenditure growth, both privately and publicly.

(Premalatha) argues that investments in human capital significantly impact India's economic growth. Public expenditure on the social sector leads to the creation of human capital, which returns individual and collective economic benefits over time. The country's social sector policies are often heavily influenced by political and economic events. Both the central and state governments in India are responsible for advancing the social sector.

(Patel and Annapoorna) study pointed out that insufficient funding can be considered one of the factors for India's low ranking in terms of the Human Development Index.

(Tasleem Araf) examines the level, trends, growth and intra-sectoral allocation of public expenditure on education. The study found that the quantum of expenditure on education has increased significantly since 2001, but still the actual amount of money spent on the education sector is less than the required amount. Shortage of funds acts as obstacles to quantitate expansion and qualitative improvement on education. The govt have spent less than one percent of GDP on higher education. There is a need to increase spending on education beyond six percent of Gross Domestic Product.

(Ghosh Dastidar and Chatterji) examined the empirical relationship between expenditure on education of all levels and economic growth in India. The study found that all the levels of education expenditure positively affected GDP growth of the country.

(De and Endow) examined that while expenditure in real terms increased during the 1990s it has stagnated since then. As a proportion of GDP, the share of public expenditure on education has been less than 4 per cent. The universalization of education for India may remain a distant dream unless the problems of poverty and unemployment are addressed simultaneously with education. The study suggested that the government should be more attention on the public expenditure on education,

which will be able effectively to gain access, equity and quality of education.

(Chakrabarti and Joglekar), examined the public education expenditure varies significantly across Indian states. The study found that richer states spend more on education compared to the poorer states. A lower share of the child population (0–14 years) is found to significantly enhance education expenditure at the state level. The study did not find any evidence that political factors such as the political ideology of the ruling party and the level of corruption affect the education expenditure of state governments.

Therefore, all these studies are more concerned about government expenditure on education, which is the only tool to ensure overall growth and development in the country. The present study aims to analyze the trends and growth of public expenditure on education by both the Central and the state governments in India and investigate the distribution of public expenditure on education across different sectors.

# Financial Reforms and Challenges in Education Sector

In India, education holds a paramount position in the social sector, being regarded as a public good and listed in the concurrent list of the Indian Constitution. The significance of education in national development was promptly recognized by the Indian government following independence. In 1950, upon establishing the Planning Commission, the task of devising plans for expenditure on elementary and secondary education was entrusted to it, aiming to address the low literacy rates. The government has constituted various commissions and committees to reform the education sector, including the educational pattern and the financial requirements of the education sector.

The first major education reform occurred in 1964, following the recommendations of the Kothari Commission. The commission proposed to allocate 6 percent of the GDP towards education, a recommendation that remains unfulfilled to date. This recommendation was later endorsed by the National Education Policy (NEP) of 1968 and reiterated in the NEP of 1986. Despite these policy efforts, India's education budget has never reached

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the recommended 6 percent of GDP, as reiterated in the National Education Policy of 2020. The National Education Policy 2020 also suggested that spending on education should increase gradually to six percent of national income. This highlights a persistent gap between policy goals and actual budget allocations in the education sector. Even the government thinktank, NITI Aayog suggests that the spending on education should be increased from the current three percent of GDP to at least six percent of GDP by 2022.

The commission and policies proposed to allocate 6 percent of the GDP towards the education sector, a recommendation that remains unfulfilled to date. Despite its acceptance by the authorities, there has been a persistent gap between recommendations and implementation, particularly concerning public expenditure on education. This insufficient funding is a significant concern, likely contributing to India's low ranking in the Human Development Index (HDI). The Human Development Index for 2022 revealed that India was ranked 132<sup>nd</sup> among 191 countries based on indicators such as life expectancy, educational attainment, and per capita income. Additionally, the education index within India's Human Development Index (HDI) indicates weak performance, suggesting a need for increased investment in human capital (Economic Survey). The education sector has witnessed notable financial reforms aimed at enhancing access, quality, and equity in education. These reforms stem from the acknowledgment of education as a pivotal catalyst for economic growth and social progress. With this context, the present study aims to analyse the trend and growth of public expenditure in the education sector.

### **Objectives of the Study**

The present study aims to achieve the following objectives;

- To analyse the trends and growth of public expenditure on education by both the Central and state governments in India and
- To investigate the distribution of public expenditure on education across different sectors.

### **Data and Method**

The study examines public expenditure on education in India over a significant period from 2000-01 to 2020-21, allowing for a comprehensive analysis of trends and patterns in educational expenditure. Secondary data sources were obtained from various budgetary analyses of the Ministry of Education, Government of India. The data was sourced from various institutions and government publications, with major sources including the Global Human Development Reports, economic surveys of India, RBI reports, and annual reports of the Ministry of Education, Govt. of India.

The study works descriptive statistics, including percentages and growth rates, to conduct an in-depth analysis of trends and growth patterns of government expenditure on education. The time series dataset utilized encompassed public education expenditure by the education department as a percentage of GDP and public education expenditure includes the expenditure on education by both central and state governments. These datasets serve to indicate the priority accorded to education by governments, as published by the Ministry of Education. This present study obtains a comprehensive understanding of the trends, growth patterns, and variations in government spending across education sectors over time.

# Analysis and Discussion Trends and Growth of Public Expenditure on Education

Public expenditure on education in India is indeed a significant aspect of government budgets. The universal spread and improvement in the quality of education depend on adequate and effective allocations of resources through properly planned public spending by the governments. However, the allocation varies between the central and state governments. Education is on the concurrent list according to the 42<sup>nd</sup> Amendment of the Constitution. The Central, State and Union Territories governments are the primary sources of financing for the education sector, with the state government holding the major portion of educational expenditure in their budgetary allocations.

The public expenditure on education in both the Central and State/UT budgets continues to increase.

It is noteworthy that the state governments have allotted more share than the central government. From 2000-01 to 2020-21, there has been a significant rise in total educational spending, from Rs 82,486.5 crore to Rs 9,19,145.19 crore. During this period, the contribution from states surged from Rs 72,290.53 crore to Rs 6,66,105.47 crore, while the central government's share increased from Rs 10,195.95 crore to Rs 2,27,080.74 crore. This highlights the leading role of state governments in financing educational initiatives. Table 1 shows a consistent increase in the total expenditure on education over the years, from Rs. 82,486.5 crores in 2000-01 to Rs. 9,19,145.19 crores in 2020-21. The central government's expenditure has consistently increased, and the percentage contribution of the central government to the total expenditure on education has varied. In the initial years, the central government's share was relatively low, but it gradually increased and has remained around 24-25% in recent years. On the other hand, the state governments have been the primary contributors, consistently providing around 75-76% of the total expenditure.

The central government spending on education has generally increased, but the rate of growth has fluctuated. The percentage of GDP allocated by the central government has also seen variations, with a peak of 1.13% in 2020-21. During the period 2000-01 to 2020-21, the total expenditure on education was 4.64% of GDP. In this allocation, the state government's share of GDP was 3.52% and the central government's share was 1.13% of GDP. In 2000-01, the central government's expenditure was 12.36% of the total, whereas in 2020-21, it increased to 24.27%. While both central and state governments have contributed to the growth in expenditure, the share of the central government has been gradually increasing. This suggests a shift in responsibility towards education spending from states to the central government over the years.

Figure 1 depicts the growth rate and percentage of GDP of public expenditure on education. The expenditure on education as a percentage of GDP has also shown an increasing trend. In 2000-01, it was 4.14% of GDP, whereas in 2020-21, it reached 4.64% of GDP. This demonstrates a growing prioritization of education within the overall economic framework

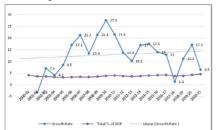
of the country. While both central and state governments have increased their expenditure on education in absolute terms, the central government's expenditure as a percentage of GDP has consistently been higher than that of the states. There are several studies on public expenditure on education which,

show that there has been an increase in public expenditure but the growth of public expenditure in education is still insufficient and is far away from the target of 6% of GDP as recommended in different education policies.

Table 1 Trends and Growth of Public Expenditure on Education in India 2000-01 to 2020-21 (Rs in Crores)

Years	Expenditure on Education		Total	Growth	% of	% of	Central Govt. As	States Govt.	% of
	Central Govt.	States Govt.	Total	Rate	Central Govt.	State Govt.	% of GDP	As % of GDP	GDP
2000-01	10195.95	72290.53	82486.5		12.36	87.64	0.51	3.63	4.14
2001-02	14119.52	65746.19	79865.7	-3.2	17.68	82.32	0.65	3.03	3.68
2002-03	16156.63	69350.7	85507.3	7.1	18.90	81.11	0.69	2.97	3.66
2003-04	17100.97	71978.28	89079.3	4.2	19.20	80.80	0.65	2.74	3.40
2004-05	18025.96	78668.14	96694.1	8.5	18.64	81.36	0.61	2.65	3.25
2005-06	23209.77	90018.94	113229	17.1	20.50	79.50	0.68	2.66	3.34
2006-07	34236.52	103147.47	137384	21.3	24.92	75.08	0.87	2.61	3.48
2007-08	39919.37	115877.9	155797	13.4	25.62	74.38	0.87	2.53	3.40
2008-09	47977.59	141091.25	189069	21.4	25.38	74.62	0.90	2.66	3.56
2009-10	64023.23	177232.79	241256	27.6	26.54	73.46	1.05	2.90	3.95
2010-11	80660.73	212817.5	293478	21.6	27.48	72.52	1.11	2.94	4.05
2011-12	86074.52	247855.86	333930	13.8	25.78	74.22	0.99	2.84	3.82
2012-13	89757.6	278375.27	368133	10.2	24.38	75.62	0.90	2.80	3.70
2013-14	112629.03	318249.79	430879	17.0	26.14	73.86	1.00	2.83	3.84
2014-15	133391.82	373457.32	506849	17.6	26.32	73.68	1.07	3.00	4.07
2015-16	142562.97	435229.55	577793	14.0	24.67	75.33	1.04	3.16	4.20
2016-17	168322.25	484777.08	653099	13.0	25.77	74.23	1.09	3.15	4.24
2017-18	166557.65	495593.8	662151	1.4	25.15	74.85	0.97	2.90	3.87
2018-19	182139.19	554442.06	736581.25	11.2	24.73	75.27	0.96	2.93	3.90
2019-20	201754.72	661362.83	863117.55	17.2	23.38	76.62	1.01	3.29	4.30
2020-21	223054.33	696090.85	919145.19	6.5	24.27	75.73	1.13	3.52	4.64

Figure 1 Trends and Growth of Public Expenditure on Education



**Source:** Analysis of Budget Expenditure on Education, Various Reports-MoE, GoI. India is spending almost 4% of GDP as the public expenditure on education which includes the expenditure incurred by the state governments and Central government. This four percent of GDP constitutes the total expenditure incurred by the central and state governments. It seems that in the last two decades, the public expenditure on education was around 3 to 4 percent of GDP. On the contrary, the share of states has increased by 3.16 percent in 2014-15 and 3.52 percent in 2020-21 periods but the proportion of state to total expenditure on education

is comparatively higher than central governments. The growth rate of educational expenditure in India has shown an increasing trend over the years, although it fluctuates annually, indicating periods of both accelerated investment and slower growth or contractions in spending. In 2001-02, the growth rate was negative (-3.2), but there have been notable spikes in certain years, such as 2005-06 (17.1%), 2006-07 (21.3%), and 2008-09 (21.4%), suggesting significant surges in education spending during those periods. Some funds were allocated under the Education for All (EFA) initiative launched in 2000 to achieve striking educational achievements in a mission-mode approach. Under EFA, the Government of India has implemented several initiatives for the development of childhood care and education, universal primary education, equal access to skill development for all, and lifelong learning opportunities.

Figure 2 Distribution of the Percentage Share of Central and State Governments



**Source:** Analysis of Budget Expenditure on Education, Various Reports-MoE, GoI.

In India, both the state and central governments bear the responsibility for expenditure in the education sector. Figure 2 provides insights into the distribution of this expenditure between the two entities. In 2001-02, the state's contribution to education expenditure stood at approximately 88%, which declined to 72.52% in 2010-11, before slightly increasing to 75.49% in 2016-17. Conversely, the central government's share started at 12.36% in 2000-01, increased to 27.48% in 2010-11, and then decreased to 24.51% in 2016-17. State governments typically allocate between 72.52% and 87.64% of the total education expenditure, 77.18%, while the central government's share ranges from 12.36% to 27.48%, averaging 22.82% of its educational expenditure.

The percentage of expenditure from the central government has shown variability over the years, ranging from a low of 12.36% in 2000-01 to a high of 27.6% in 2009-10. On the other hand, the percentage of expenditure from state governments has exhibited less variability, ranging from a low of 72.52% in 2010-11 to a high of 87.64% in 2000-01. Throughout this period, the percentage of expenditure from state governments consistently remains higher than that of the central government, indicating a greater contribution from state governments towards education expenditure. This underscores the significant role played by state governments in funding education, with their percentage of expenditure consistently outweighing that of the central government. It reflects a decentralized approach to education funding, with states bearing the larger share of financial responsibility. These trends highlight the growing autonomy and decision-making power at the state level concerning education financing. It underscores the importance of recognizing the diverse fiscal capacities and priorities of individual states in shaping education policies and investments. Furthermore, it emphasizes the necessity for collaborative efforts between central and state governments to ensure equitable access to quality education across the country.

The public expenditures in the education sector are presently inadequate compared to the requirements for maintaining global standards.

The public expenditure on education has declined from 4.14% of GDP in 2000-01 to approximately 3.9% in 2018-19. However, the well-known Kothari Commission and NEP 2020 recommended allocating 6 percent of GDP for optimal development in the education sector. Therefore, current spending on education falls significantly short of the recommendation, amounting to roughly half of the suggested allocation. Moreover, the concerning aspect is that recent trends in public expenditure on education show a downward trajectory rather than an upward one. It is imperative to increase public expenditure on education to at least 6% of GDP, which would not only enhance educational standards but also contribute to overall development indices.

### **Sector-Wise Public Expenditure on Education**

The Indian education system includes elementary, secondary, higher education, and technical education. The public expenditure was shared percentage of total expenditure on the educational sector, elementary, secondary, higher education, technical education and other education. Table 2 presents the percentage share of expenditure on education in India across different sectors over a span of twenty years, from 2000-01 to 2020-21. Elementary education was given maximum priority in the education sector in India. The share of public expenditure on elementary education in total expenditure on education was 47.61 percent in the year 2000-01 and it declined to 49.92 percent in 2020-21. The percentage expenditure on elementary education has shown some fluctuations over the years.

The initial range of 47-51% in the early 2000s indicates a relatively strong commitment to funding elementary education, which is crucial for building a

solid educational foundation for children. However, the significant dip in expenditure during the middle years (2005-2009) suggests a potential neglect of this critical sector, which could have adverse effects on access and quality of education. The implementation of the RTE Act, ensuring compulsory education for 6-14-year-olds, signifies the government's commitment to universal access to elementary education. This necessitates increased expenditure to improve infrastructure, recruit qualified teachers, and enhance educational quality. Prioritizing funding for elementary education underscores the government's dedication to providing every child with a foundational education for national development. Continued monitoring and evaluation are vital to ensuring effective resource utilization and addressing challenges like enrollment rates, dropout rates, and inclusive education for marginalized groups.

Table 2 Percentage of Share in Sector-Wise Expenditure on Education in India (in percentage)

Year	Elementary Education	Secondary Education	Higher Education	Technical Education	Others
2000-01	47.61	31.59	14.71	4.04	0.36
2001-02	50.91	33.8	11.34	2.32	1.63
2002-03	49.12	34.92	11.95	2.42	1.59
2003-04	49.57	34.95	11.61	2.28	1.59
2004-05	51.45	30.13	11.67	3.82	2.93
2005-06	46.56	25.08	19.51	7.96	0.89
2006-07	45.17	23.27	19.3	11.98	0.28
2007-08	44.62	22.98	24.47	7.67	0.26
2008-09	42.47	24.24	24.3	8.79	0.2
2009-10	40.01	26.1	24.6	9.05	0.24
2010-11	42.09	24.31	21.34	11.95	0.31
2011-12	44.66	25.62	16.14	13.28	0.3
2012-13	45.21	25.19	14.7	14.62	0.28
2013-14	44.59	24.86	15.29	14.95	0.31
2014-15	43.74	24.96	15.86	15.16	0.28
2015-16	43.94	24.52	17.53	13.76	0.25
2016-17	41.57	24.36	13.34	20.53	0.19
2017-18	41.54	26.24	12.77	19.31	0.13
2018-19	43.59	26.24	12.76	17.32	0.09
2019-20	43.15	23.37	11.75	21.65	0.09
2020-21	49.92	31.94	12.83	4.80	0.51

Source: Analysis of Budget Expenditure on Education, Various Reports, MoE, GoI.

The gradual increase in expenditure towards the latter years, reaching almost 50% by 2020-21, is a positive development, indicating a renewed focus on elementary education. Investing in elementary education is essential for addressing issues such as literacy, numeracy, and overall skill development, which form the basis for further learning and development. Neglecting this sector can have long-term repercussions on the educational outcomes and socio-economic well-being of individuals and societies. Public expenditure on secondary education in India has remained stable despite fluctuations. It's crucial for shaping students' academic and professional paths. The government recognizes its importance and allocates significant resources to enhance access, quality, and outcomes, aiming to the formation of human capital for long-term socioeconomic development. The government spent on secondary education started around 31-33% in the early years, dipped slightly in the mid-2000s, then fluctuated around 24-26% until 2020-21.

On the other hand, the share of the university and higher education in total public expenditure on education decreased from 14.71 percent in 2000-01 to 12.83 percent in 2020-21. There was a noticeable drop in the percentage share in the later years, reaching around 11-13%. The government of India acknowledges the crucial role of investing in higher education to cultivate a skilled workforce, drive innovation and research, and bolster socio-economic progress. Though the precise percentage of public expenditure on university and higher education may fluctuate, it consistently constitutes a substantial portion of the government's education budget across regions and over time.

The share of technical education in total public expenditure on education has increased significantly from 4.04 percent in 2000-01 to 21.65 percent in 2019-20. The government gave more importance to the technical education sector. Technical education expenditure has been relatively stable, starting around 2-4% and fluctuating between 12-22% in the later years. There's a notable increase in expenditure in the later years compared to the earlier ones.

The government has spent on other educational schemes like adult education and language development, remain under one percent, while investment in primary and secondary education continues to increase. The government underscores the importance of these sectors as they form the foundation for higher education. In developing nations like India, investment in primary and secondary education holds greater significance for economic growth than other educational sectors. Such expenditure positively impacts all levels of education and contributes to GDP growth.

### **Conclusion and Policy Implication**

Public spending on education in India reflects the government's priorities and responses to socioeconomic challenges. Investing in human capital is crucial for tackling poverty and unemployment, making education a fundamental right accessible to all, especially the underprivileged. Although investments in education have increased over time, persistent funding gaps highlight the need for improved financial reforms and resource allocation. However, it is essential to focus on ensuring quality education for overall development. Despite recommendations to allocate 6% of GDP to education, India has struggled to exceed 4%, leading to limited access to education due to financial constraints. Nevertheless, education expenditure has reached 6% of India's GDP, covering both private and public expenditure. Education policies and initiatives have stimulated demand, resulting in increased private spending on education over the past decade. However, actual spending falls short of targets due to challenges like fluctuations in expenditure and sectoral disparities. The present study recommends that state and union territory governments allocate 3.5% of their budget, while the central government should allocate 2.5% of GDP for education. There is need to increase spending on education beyond six percent of GDP.

# **Limitations and Scope of Further Research**

The study examined on the public expenditure on education. The study not considered the complexity of private-sector investments in education. Additionally, the study may not necessarily be applicable to contexts beyond India given the unique socioeconomic factors and governance structures in each setting. Furthermore, the study opens the

window on investigation on the impact of private sector investments in education as compared to public expenditure and policy on access, quality and equity in education across countries would ultimately help in identifying best practices and lessons to improve education systems globally.

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