



Trends in Public Expenditure on Education in India: An Inter-State Analysis

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Abstract

This paper aims to analyze the trend, variations, and inequality in the public expenditure on education in Indian states for the period of 2007 to 2023. The study concludes that public expenditure on education, constituting both revenue and capital expenditure in India, decreased by around 49% from 2007 to 2011. The total public expenditure has decreased in almost all the states during the time period of 2007 to 2012 but has increased continuously and significantly after 2012-13. In all the states, variation in the expenditure is quite high during the period under study. In per capita public expenditure on education, Sikkim secures first position, followed by Arunachal Pradesh, Goa, Mizoram, and Himachal Pradesh. Jharkhand, Bihar, and Uttar Pradesh secure the lowest position. The analysis of the Gini coefficient and Lorenz curve exhibits the low level of inequality in the public expenditure on education in India.

Key words: public expenditure on education, inequality in education expenditure, per capita education expenditure.

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Introduction

Human beings are the most important and special resource, which can create more resources when they have the knowledge, skill, and technology to do so. Education and health help in making people a valuable resource. Education is one of the most essential as well as the basic requisites for sustainable development of any country. According to the National Policy on Education 1968, expenditure on education is an investment in human beings, an important investment in development, yielding high individual and social returns, some of which are tangible and many of which are in the form of externalities; therefore, it should be highly prioritized in the list of public expenditures. Education is also regarded as one of the most important constituents of human development, and it is a fundamental right that has both intrinsic and instrumental values. Therefore, the public expenditure on education is a critically important area. Specifically in developing countries, expenditure on education by the government is very significant to ensure equality and quality in education. Private educational institutions are there in the country, but most of them are limited to the urban areas only, and all the people cannot afford to pay the fees of these institutions. Sometimes the aim of these institutes is to earn profit only by doing business in the name of education.

Recently, in Haryana, when the class 12 exam results were declared in May 2025, 18 government schools came under scrutiny. No student passed in any of these schools. According to principals, teacher shortage, as some of the seats have been vacant for the last 3 to 4 years, non-teaching tasks assigned to teachers due to a shortage of non-teaching staff, and lack of regular attendance of students are the major reasons behind the poor performance (**Times of India, 17 May, 2025**). This is one of the many cases happening in other states also where, due to the deficiency of teachers or infrastructure, the objective of quality education is lagging behind. Thus, public expenditure on education should not be treated as a burden on the public exchequer or an area on which resources have to be saved but as a prioritized investment (**Tilak, 2009**).

Nowadays there are various aspects that are being introduced so as to maintain the integrity of education and provide the best quality education to the upcoming youth, which include the introduction of active learning processes, smart classrooms, learning through activities, problem-based learning, and many more. Public expenditure on education is required for ensuring global access to these different aspects of quality education in every part of the country. But the examination of state-by-state changes in the trends and shifts in public spending on technical and higher education in India shows that, in 1980–81, India's education spending as a proportion of GDP was 2.55%, with higher and technical education accounting for 0.36% and 0.10% of the total. These percentages rose to 3.34 percent for all education, 0.45 percent for higher education, and 0.15 percent for technical education by 1990–91. However, by 2000–01, overall education spending had dropped to 3.25%, and by 2009–10, it had further dropped to 3.20%. While spending on technical education increased

from 0.13% in 2000-01 to 0.16% in 2009-10, spending on higher education decreased from 0.48% in 2000-01 to 0.41% in 2009-10 (**Anand, 2014**). The study of the differences in primary education spending per capita across states illustrates the notable disparities in the states' per capita spending on primary education (**Bairwa, 2015**). It has been seen that states bear around 77% of the costs of education, but the disparity between them is widening, with many failing to meet the 6% of GDP as suggested by the Kothari Education Commission, which says 6 percent of GDP is to be spent on education (**Gadbade & Kokate, 2021**). Over the period 2001-02 to 2014-15, the share of public expenditure on education has been less than 5 percent as a proportion of GDP, and the share of higher education in total expenditure on education is around 16.16 percent (**Ansari, 2018**).

As far as private and public spending on education in India are concerned, it has been observed that over the last seventy years, while both types of spending have grown, private spending has increased faster in recent decades (**Revathi, 2024**). This reflected rising demand, growing costs, and a shift toward private education. Showing that public education spending helps boost the economy, which encourages more private investment. The growing reliance on private funding raised concerns about affordability and access. It has been observed that for less developed countries like India, recent changes in education expenditure have improved access, and it is crucially important to mobilize resources and to improve the efficiency of spending on education sectors (**Ansari, 2018**).

To examine the relationship between economic growth and education expenditure, Pravesh Tamang (**2011**), in his study, analyzed the impact of education expenditure on India's economic growth with the help of the data from 1980 to 2008; an error-correction model was applied. The error-correction estimates showed that education expenditure per labor has a lesser impact on economic growth as compared to physical capital per labor. It was observed that a 1% increase in physical capital per labor leads to a 0.28% increase in GDP per labor, and a 1% increase in government expenditure on education per labor leads to a 0.11% increase in GDP per labor. The study concluded that the Indian economy can expect to grow by investing in education, but the rate of return will be comparatively low.

Umendra Singh (2019) studied the trends (2000-2014) of public expenditure on education. The study also analyzed the trends of public expenditure of the central government of India on education, especially on school education, and evaluated the interstate variations of the trends of public expenditure on school education in all neighboring states of Jharkhand and highlighted the recent allocation under the Union Budget of India to the education sector. National trends and interstate trends have been analyzed with the help of various indicators, i.e., public expenditure on education as a percentage of GDP, public expenditure as a percentage of GSDP, per-child expenditure and per-student spending on school education, allocation to education in the Union Budget, and allocation to various Centrally Sponsored Schemes. This study pointed out that education spending is still below the necessary GDP/GSDP levels. The federal and state governments must cooperate to increase education funding in order to raise HDI and address socioeconomic problems in Jharkhand and the surrounding states.

A study by **Subhasmita Rana (2022)** shows the dynamics of expenditure on education and economic growth in all the major Indian states both in the short run. It is evident from the study that only in long-run educational

expenditure has a significant impact on economic growth. In the short term, expenditure on education does not Granger cause economic growth. Therefore, the study confirms that in short run expenditure on education does not cause economic growth while in the long term it causes economic growth in the major Indian states.

In view of this background, the objectives of the study are to analyze

1. The trend in the public expenditure on education in India.
2. State-wise per capita public expenditure on education in India.
3. Variation in the state-wise public expenditure on education in India
4. Inequality in the public expenditure on education in India

Data and Research Methodology.

To examine the trend, variations, and inequality in the public expenditure on education, annual data on revenue and capital expenditure on education done by Indian states during the period of 2007 to 2023 has been collected from the annual reports titled “State Finances: A Study of Budgets” of RBI from the website of RBI. The state of Telangana is excluded as it is a new state founded in 2014. Jammu and Kashmir is included; it was a state till October 2019.

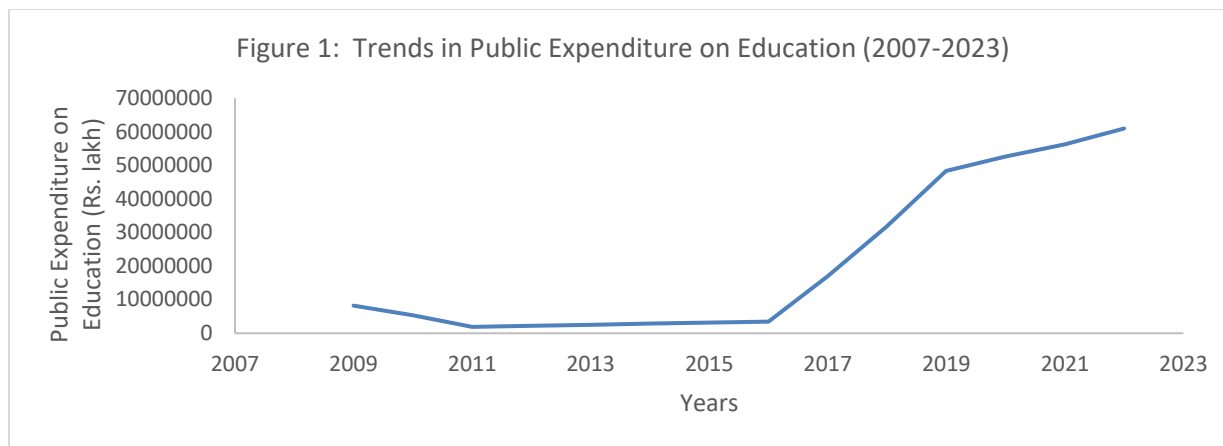
The method Moving averages is used for analysing the trend. Coefficient of variation is applied for examining the variation in the public expenditure on education. The Gini coefficient and Lorenz curve are used for examining the inequality in the per capita public expenditure on education, and Spearman’s rank correlation is used to examine the relationship between per capita education expenditure and literacy rate.

Data Analysis and Results

1. Trends in Public Expenditure on Education:

A. Trends in Public Expenditure on Education in India from 2007 to 2023

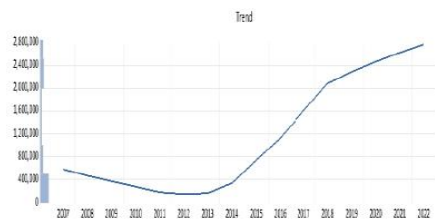
Public expenditure on education, constituting both revenue and capital expenditure in India, decreased by around 35% from 2007 to 2010, and between 2010 and 2011, it further decreased by 64%. From 2012 to 2016 there is an increase of around 12%. There is a remarkable increase in expenditure of around 200% between 2016 and 2019. From 2019 to 2023, there is an increase of around 7%. But public expenditure on education as a percentage of GDP varies between 2.2% and 2.7% during the period of study, which is not up to the significant level, as it does not fulfill the condition of the Kothari Education Commission, which says 6 percent of GDP is to be spent on education.



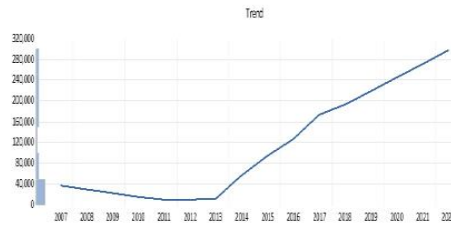
B. Trends in State-Wise Public Expenditure on Education

It is quite clear from the examination of state-wise trend graphs that the public expenditure in all the states has increased over the selected time period; specifically, from 2012-13 onwards the trend is in the upward direction, probably due to the wave of digitalization and increasing operational costs. From 2007 to 2012, there is a constant trend in education expenditure in Arunachal Pradesh, Assam, Bihar, Goa, Gujarat, Haryana, Chhattisgarh, Madhya Pradesh, and Jammu & Kashmir. Maharashtra and Meghalaya. In Jharkhand, Kerala, Karnataka, Manipur, Meghalaya, Mizoram, Nagaland, and Mizoram, it has slightly gone down during 2007-2012. After 2012-13 there is a sharp increase in the trend values of public expenditure on education in all the states till 2018-19, and from 2019 onwards till 2023 the rate of increase in trend has lowered down except in Himachal Pradesh. In Himachal Pradesh it has increased continuously without any downturn in the trend during 2007-2023.

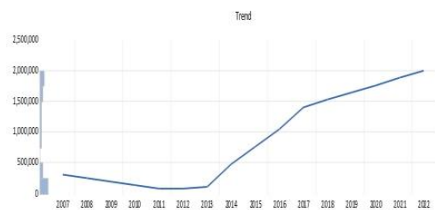
Figure 2: Trends in Public Expenditure on Education in Indian States (2007-2023)



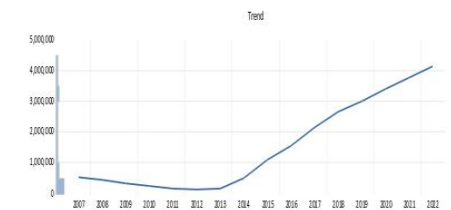
ANDHRA PRADESH



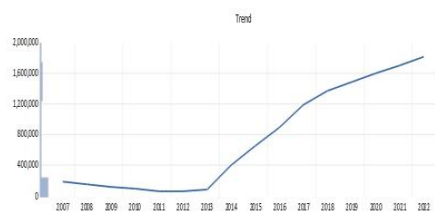
ARUNACHAL PRADESH



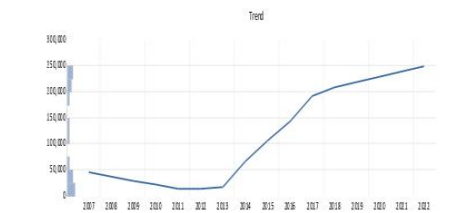
ASSAM



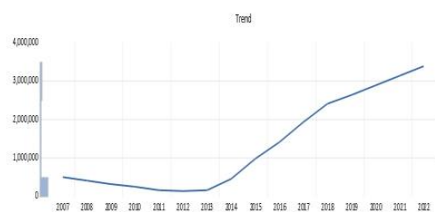
BIHAR



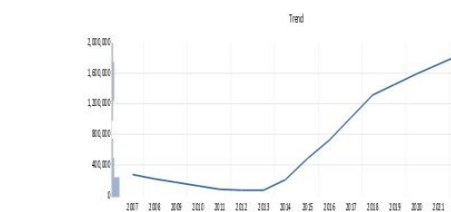
CHHATTISGARH



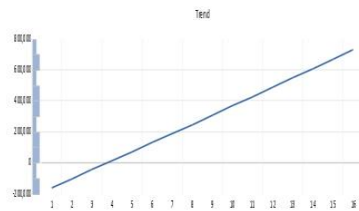
GOA



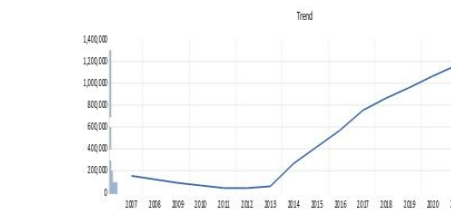
GUJARAT



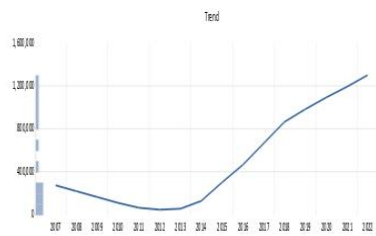
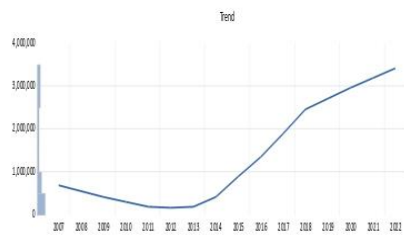
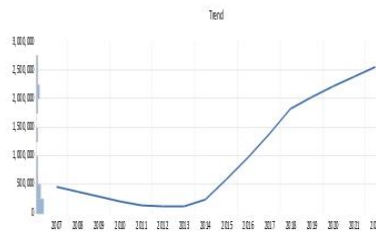
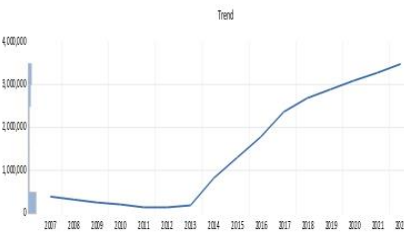
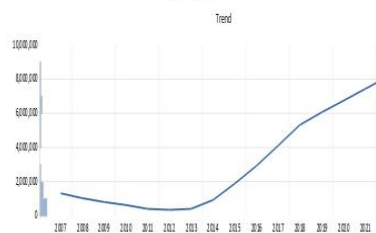
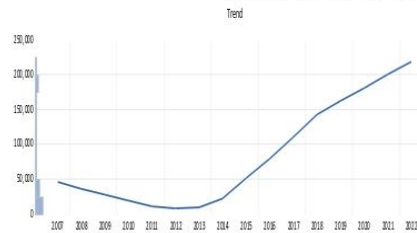
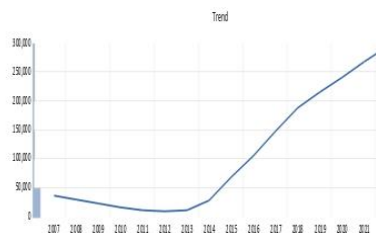
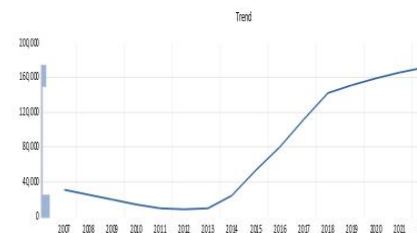
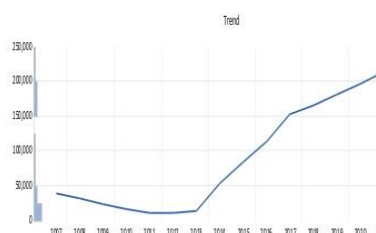
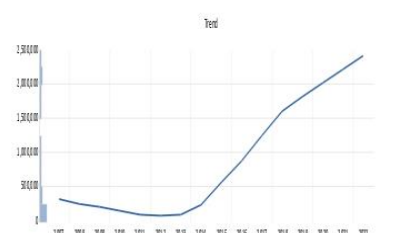
HARYANA

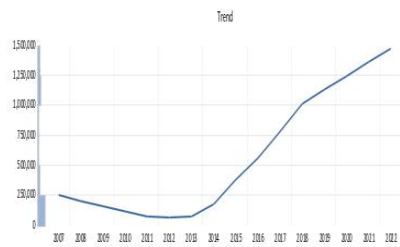


HIMACHAL PRADESH

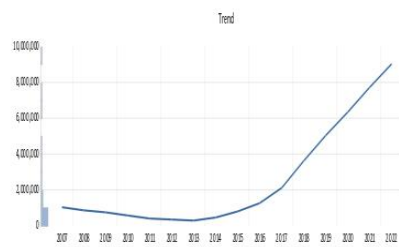


JAMMU & KASHMIR

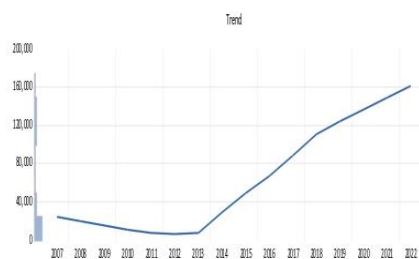
**JHARKHAND****KARNATAKA****KERALA****MADHYA PRADESH****Maharashtra****MANIPUR****MEGHALAYA****MIZORAM****NAGALAND****ODISHA**



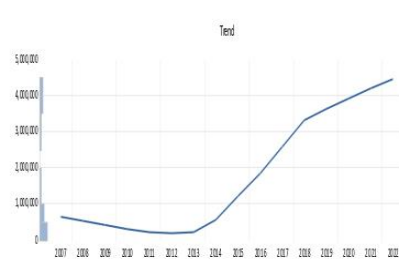
PUNJAB



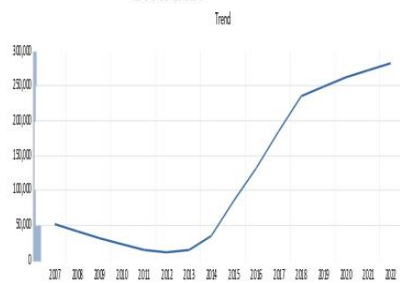
RAJASTHAN



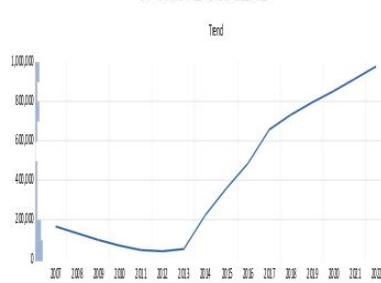
SIKKIM



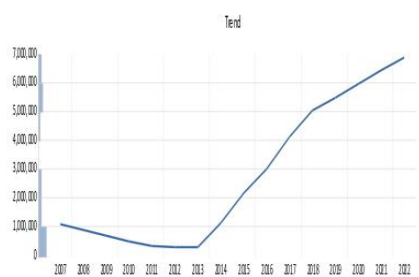
TAMIL NADU



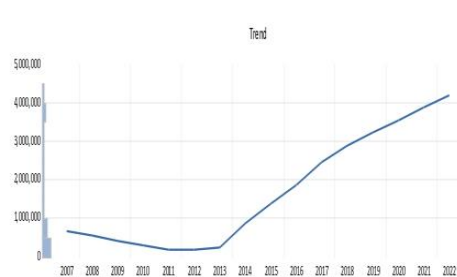
TRIPURA



UTTARAKHAND



UTTAR PRADESH



WEST BENGAL

Source: Author's Calculation

2. State-wise Average & Per-Capita Public Expenditure on Education and Variations in Educational Expenditure.

Table 1 shows the ranking of the states on the basis of the average per capita public expenditure on education incurred by the Indian states during 2007-08 to 2023-24. It also shows the average educational expenditure and volatility in the educational expenditure done by the states during the selected time period. It is evident from the table that Maharashtra, Rajasthan, and Uttar Pradesh are the top three states in total average education expenditure during the period of study, followed by Tamil Nadu and West Bengal, and population-wise, these are large states (census report of 2011), but per capita educational expenditure-wise, Maharashtra is on seventeenth rank, Rajasthan is on seventh rank, Tamil Nadu is on 18th rank, West Bengal is on 25th position out of 28 states, and Bihar and Uttar Pradesh are on the lowest position. Total public expenditure on education-wise, all the seven East Indian states (except Assam) and Goa and Sikkim are in the lowest position, but these are small states on the basis of population. Therefore, when analysis is done on the basis of per-capita expenditure on education, then Sikkim secures the first position, followed by Arunachal Pradesh, Goa, Mizoram, and Himachal Pradesh.

Examination of values of the coefficient of variation reveals that during the selected time period, variation in public expenditure on education is high in all the states, which demonstrates that expenditure on education done by states is quite inconsistent in nature. There is a lack of consistency in the amount of expenditure. In Arunachal Pradesh, Chhattisgarh, Jammu & Kashmir, and Bihar, the highest inconsistency is evident. The lowest variation is evitable in Andhra Pradesh, followed by Assam and Karnataka.

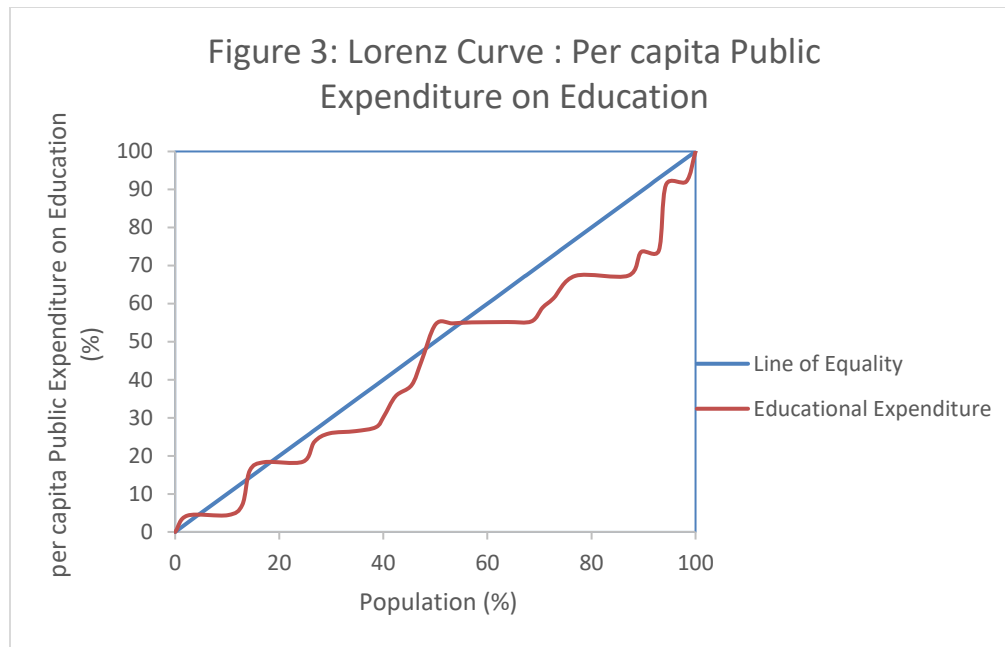
Table 1. Average & Per-Capita Public Expenditure on Education and Variations in Educational Expenditure of States (2007 to 2023)				
Ranks	States	Per-Capita Expenditure (in %)	Average Educational Expenditure (₹ lakh)	Variations in Educational Expenditure (Coefficient of Variation)
1	Sikkim	8.105304	49489.12	120.955
2	Arunachal Pradesh	6.189063	85639.73	126.763
3	Goa	5.929374	86482.59	117.287
4	Mizoram	5.464776	59959.85	115.769
5	Himachal Pradesh	3.982643	273392.6	117.914

6	Nagaland	3.667516	72561.87	119.727
7	Rajasthan	3.356961	2301144	121.853
8	Jammu & Kashmir	3.172343	389152.3	125.453
9	Uttarakhand	3.117308	314420.8	118.4
10	Meghalaya	2.901631	86088.17	124.604
11	Tripura	2.68398	98607.18	117.184
12	Manipur	2.625362	67482.03	116.053
13	Kerala	2.442174	815834	118.198
14	Haryana	2.275002	576746.2	119.437
15	Chhattisgarh	2.221381	567456.2	125.603
16	Assam	2.193491	684491.4	115.09
17	Maharashtra	2.176387	2445700	119.06
18	Tamil Nadu	1.983482	1431023	119.805
19	Andhra Pradesh	1.891824	937911.3	111.677
20	Karnataka	1.792672	1095238	115.645
21	Gujarat	1.740656	1052047	120.017
22	Odisha	1.711315	718311.2	123.619
23	Punjab	1.649446	457611.3	117.474
24	Madhya Pradesh	1.506994	1094482	125.171
25	West Bengal	1.410529	1287476	119.741
26	Jharkhand	1.213455	400296	116.624
27	Bihar	1.147837	1194892	125.419
28	Uttar Pradesh	1.095649	2189241	118.293

Source: Author's Calculation

3. Inequality in Public Expenditure on Education in India:

Level inequality in public expenditure on education as per population has been calculated with the help of Gini coefficient, the measure of inequality, The value of Gini coefficient varies from 0 to 1, 0 means no inequality and 1 shows highest inequality. Calculated value of Gini coefficient shows that there is a low level of inequality in average public expenditure on education in India from 2007 to 2023, as the value of the coefficient is 0.132. Figure 3 shows the Lorenz curve of per capita public expenditure on education, and it is visible from the figure that there is inequality in the expenditure. but the scale of inequality is low.



Conclusion:

Public expenditure on education, constituting both revenue and capital expenditure in India, decreased by around 49% from 2007 to 2011. The total public expenditure has decreased in almost all the states during the time period of 2007 to 2012 but has increased continuously and significantly after 2012-13. In all the states, variation in the expenditure is quite high during the period under study. In per capita public expenditure on education, Sikkim secures first position, followed by Arunachal Pradesh, Goa, Mizoram, and Himachal Pradesh. Jharkhand, Bihar, and Uttar Pradesh secure the lowest position. The analysis of the Gini coefficient and Lorenz curve exhibits the low level of inequality in the public expenditure on education.

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