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Public Expenditure on Education: An Interstate Analysis of India

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ABSTRACT

Since the first five-year plan of the country, the education sector attracts a major share of the total social sector expenditure of the government, but this sector has been facing a continuously acute shortage of public funds. However, the official data and various reports indicate that expenditure on education in many states has improved significantly in recent years. This study highlights the recent trend and composition of public expenditure on education incurred by both state and central governments. We found that the percentage share of state government has been reduced and the share of the central government has been increased gradually, however on an average 77% of the education sector spending has come from the state government. The expenditure on education in terms as the percentage share of SGDP has reduced in most of the Indian states during the second phase (2000-01 to 2018-19) of the study period.

Introduction:

The role of education in the holistic development of human beings has been widely acknowledged and accepted over a long period of time. Education and training enhance the person's skills, efficiency, and productivity and helps to build a capable workforce that contributes to faster economic growth. Therefore education is considered as a key for economic and social sector development in any nation and expenditure on education has observed as an investment in an economic issue that recognized more in recent years. Many economists like Schultz (1961), Swaroop (1996), Lee and Barro (1997), Gupta, and others (2004) have proved through different empirical studies that adequate

and effective public spending on education accelerates economic growth and encourages human development. In the Indian constitution, education has received the utmost importance and it is considered a fundamental right for all citizens of the country. As per the constitutional provisions, both central and state governments allocate the funds to ensure equal and easy access to quality education to all children. The universal spread and improvement in the quality of education depend on adequate and effective allocations of resources through proper planned public spending by the governments. Since the independence of the country, the education sector attracts a major share of the total social sector expenditure of the government; however, this sector has been facing a continuously acute shortage of public funds. So there is huge scope to increase the public expenditure for ensuring easy access to quality education to all children of the country.

Review of Literature:

There are different studies on public expenditure on education in recent years that majorly focusing on trends and pattern but very few studies have focused on the outcomes. However, these all studies are important for further analysis therefore in this segment we have reviewed some earlier studies.

Gupta S, Clements B, and Tiongson E (1998) explored the trends and structure of public expenditure on education and its outcomes in the selected 118 developing and industrialist countries. The study reveals that the developing countries taking efforts to increase real per capita expenditure on the education of the society, however, the developed countries are failed to maintain the same.

Jha Raghendra and Biswal Bagala (2001) conducted a study to examine how the increase in public expenditure on education can help to tackle down the poverty in Indian states. This study result that education plays a positive role in the reduction of poverty especially higher education has more impact than other levels of education.

Kaur Balbir and Misra Sangita (2003) reviewed the level and impact of social sector spending on health and education in 15 major states of India from 1986 to 2003. The study reveals that public expenditure on primary education is more efficient than that of secondary education. Also, the stronger and positive impact of public expenditure appeared in poor states than the rich states. Female

education plays a crucial role in the enrolment of children's names at both primary and secondary school levels.

Bhattacharya Govind (2009) examined interstate disparities in public expenditure on three major social issues, education, health, and water supply of six states which are facing the same socio-economic problems. The study found that the eye-opening disparities in the context of all three major social heads in all states.

Maitra Biswajit and Mukhopadhyay C.K (2012) studied the trends in 12 countries of Asia and Pacific for the 30 years about public spending on education and its impact on the promotion of the gross domestic product (GDP). This study found that half of these 12 countries showed the existence of positive relations however this positive relation was absent in the remaining six countries.. It is also observed that the gestation period of public spending on education was longer.

Bhukta Ashok and Patra Sudhakar (2019) analyzed the overall trends and nature of social sector expenditure on health and education. They also studied the correlation between public expenditure on health and education during the period of 2002 to 2018 in the country. Health and education are positively correlated with each other therefore progress in any one of them leads to the progress of another.

Objectives of the study:

This study highlights the overall pattern and trends of central and state government's public expenditure on education, the major objectives are as following:

- A) To analyze the state-wise trends and growth in public expenditure on education.
- B) To explore the level and composition of public expenditure on education.

Database:

In this present study, we have used secondary data as per the requirement of the study. We have taken data from various institutions and government publications. Among them, major sources are Global Human Development Reports, economic surveys of India, RBI reports, and annual reports of the Ministry of Human Resource Development of India.

Methodology:

We have analyzed recent trends of total public expenditure on

education, state-wise public expenditure on education in terms of total state expenditure and total GSDP. We used statistical tools like percentage, mean, standard deviation and co-efficient of variation to analyze inter-state trends and variations.

Recent Trends in Public Expenditure on Education in India:

The trends of combined public expenditure on the education sector indicate the clear idea about the commitments of governments towards this sector. The following table 1 represents the commitments of the government towards the education sector expenditure for the period 2000-01 to 2019-20.

Table 1: Trends in Public Expenditure on Education:

(Combined Centre and State Governments)

Year	2000-01	2010-11	2013-14	2017-18 (RE)	2019-20 (BE)
Expenditure As % to GDP	4.14	3.1	3	2.8	3.1
As % to total expenditure	14.4	11.4	11.6	10.7	10.6
As % to total expenditure on social services	45.28	46.1	46.7	42.4	40.7

Source: Economic Survey of India 2003-04, 2013-14, 2019-20.

Note: Expenditure on 'Education' includes expenditure on 'Education, Sports, Arts and Culture'. RE: Revenue Expenditures BE: Budget Estimates.

The above table discloses that the public expenditure on education in terms of percentage to GDP is decreased over the period instead of increase. The expenditures are inadequate as compare to its requirements for maintaining the global standards in the education sector. India's public expenditure on education declined from 4.14% of GDP in 2000-01 to around 3.1% in 2019-20, but the well-known Kothari Commission had considered 6% of GDP is ideal for development in the education sector. Hence the spending on education is around half of the Commission's recommendation, in addition, the most serious thing is that recent trends in public expenditure on education is downward instead of upward.

Share of State and Central Governments in Expenditure on Education:

In India, as per the constitutional guidelines about the division of responsibilities, both states, and central governments are incurring expenditure on the education sector of the country. Table 2 gives details about the share of the state and the central government in total expenditure on education. In 2001-

02 the states' share in expenditure on education was around 88% that declined to 72.52% in 2010-11, and slightly increased up to 75.49% in 2016-17. While the centers' contribution was 12.36% in 2000-01 that increased 27.48% in 2010-11 but it decreased to 24.51% in 2016-17. The state governments' share varies between a maximum of 87.64% to a minimum of 72.52% and spends an average of 77.18% of total expenditure on education. The central government share varies between a minimum of 12.36% to a maximum of 27.48% and it spends an average of 22.82% of total expenditure. Table 2 discloses the trend that the share of states is declined and the central government share is gradually increased. Despite the state's share is declined over the period, the state governments contributing the lion share of total expenditure on education.

The total expenditure on education in the country during the period of 2000-01 to 2016-17 expenditure on education was average 3.76% of GDP in that the state governments' share was on an average 2.90% of GDP while the central government shares stuck at 0.86% of GDP. The decline of states' share in total expenditure on education indicates that the state government's commitments toward the education sector are declined over the period.

Table 2: Total Expenditure on Education by Education & Other Department

(Rs in Crore)

Year	Exp By States	Exp. By Centre	Stats + Centre	Exp. By States as % of total Expe	Exp. By Centre as % of total Expe	States as % of GDP	Centr e as % of GDP	States + Centre as % of GDP
2000-01	72290.53	10195.95	82486.48	87.64	12.36	3.63	0.51	4.14
2001-02	65746.19	14119.52	79865.71	82.32	17.68	3.03	0.65	3.68
2002-03	69350.7	16156.63	85507.33	81.10	18.90	2.97	0.69	3.66
2003-04	71978.28	17100.97	89079.25	80.80	19.20	2.74	0.65	3.4
2004-05	78668.14	18025.96	96694.1	81.36	18.64	2.65	0.61	3.26
2005-06	90018.94	23209.77	113228.7	79.50	20.50	2.66	0.68	3.34
2006-07	103147.5	34236.52	137384	75.08	24.92	2.61	0.87	3.48
2007-08	115877.9	39919.37	155797.3	74.38	25.62	2.53	0.87	3.4
2008-09	141091.3	47977.59	189068.8	74.62	25.38	2.66	0.9	3.56
2009-10	177232.8	64023.23	241256	73.46	26.54	2.9	1.05	3.95
2010-11	212817.5	80660.73	293478.2	72.52	27.48	2.94	1.11	4.05
2011-12	247855.9	86074.52	333930.4	74.22	25.78	2.84	0.99	3.82
2012-13	278375.3	89757.6	368132.9	75.62	24.38	2.8	0.9	3.7
2013-14	318249.8	112629	430878.8	73.86	26.14	2.83	1	3.84
2014-15	373457.3	133391.8	506849.1	73.68	26.32	3	1.07	4.07
2015-16	448475.1	138964.5	587439.6	76.34	23.66	3.26	1.01	4.27
2016-17	504560.5	163834.6	668395.1	75.49	24.51	3.31	1.07	4.38
Average	198187.9	64134.02	262321.9	77.18	22.82	2.90	0.86	3.76
Max	504560.5	163834.6	668395.1	87.64	27.48	3.63	1.11	4.38
Min	65746.19	10195.95	79865.71	72.52	12.36	2.53	0.51	3.26

Source: Analysis of Budgetary Expenditure on Education 2014-15 to 2016-17, MHRD-2018.

Trends in State-Wise Expenditure on Education as a Percentage of GSDP:

Trends in levels of expenditure on education as a percentage to total expenditure has studied in 18 states over a period of 29 years from 1990-91 to 2018-19 to get a clear idea about how states are taking efforts towards the commitment of development in the education sector. For the purpose of analysis, the period of 29 years has been divided into two phases as First Phase (1990-91 to 1999-2000) and Second Phase (2000-01 to 2018-19).

It can be observed from table 3 that states like Bihar, Himachal Pradesh, Assam, and Jammu and Kashmir have incurred the recommended 6% expenditure of GSDP education in one or few financial years. Even rich states like Gujarat, Maharashtra, Punjab, and Haryana never spent 6% of GSDP on education over the period from 1990-91 to 2018-19. It is disappointing that only one state (Bihar) of 18 states could maintain the on an average 6% of GSDP spending on education during the first phase (1990-91 to 1999-2000), that too failed in the second phase (2000-01 to 2018-19). Bihar could maintain 6% or more than that for seven consecutive years (1993-94 to 1999-2000) during the ten years tenure of the first phase. The average ratio of expenditure on education to GSDP ranged between a minimum of 2.9% to 4.0% for all selected states over the period. It is observed that the value of the coefficient of variation (CV) has increased from 28.9 in 1990-91 to 54.2 in 2018-19 and ranged between lowest values 27.1 in 1991-92 to the highest value 54.2 in 2018-19. This reflects that there are huge interstate disparities in expenditure on education and moreover that disparities have increased at a rapid rate over the period.

During the first phase on an average rate of spending on education was highest in Bihar (6.4%) followed by Himachal Pradesh (5.9%), Jammu and Kashmir (5.7%), and the lowest rate witnessed in high-income states like Haryana (2.3%) followed by Maharashtra, Punjab, Andhra Pradesh with the

same value (2.6%), and Gujarat (2.9%). It may be noted that in total of 17 states (Jharkhand emitted), four states invested in an average more than 5% on education, two states Kerala and Orissa spent 4%, six states spent 3 or more than 3% whereas five high-income states have spent less than even 3% of GSDP on education.

Table 3: Trends in State-Wise Expenditure on Education as Percentage of GSDP

Year	AP	AS	BH	GU	HR	HP	J&K	JHA	KA	KE	MP	MH	OR	PN	RJ	TN	UP	WB	MEAN	CV
1990-91	2.93	4.29	4.70	3.27	2.43	6.72			3.45	5.64	3.16	2.70	4.24	2.74	4.01	4.13	3.85	3.98	3.9	28.9
1991-92	2.77	4.76	4.38	3.52	2.30	6.18			3.21	4.87	3.20	2.87	3.94	2.62	3.89	3.96	3.18	3.29	3.7	27.1
1992-93	3.07	4.98	4.20	2.84	2.56	6.24			3.34	4.69	3.13	2.61	4.17	2.39	3.95	3.65	3.63	3.19	3.7	27.9
1993-94	2.54	5.25	6.18	2.80	2.14	5.63	5.72		3.13	4.45	3.41	2.39	3.75	2.34	3.75	3.04	2.98	3.08	3.7	35.2
1994-95	2.46	4.99	6.52	2.47	2.10	5.22	5.77		3.04	4.31	3.36	2.36	3.73	2.28	3.53	2.82	3.10	2.90	3.6	37.0
1995-96	2.17	5.06	8.28	2.63	2.22	5.48	5.78		3.05	3.76	3.54	2.35	3.49	2.36	3.62	2.86	3.23	2.67	3.7	44.1
1996-97	2.22	4.95	6.86	2.40	2.13	5.43	5.83		2.97	3.70	3.55	2.37	4.07	2.38	3.46	2.84	3.06	2.97	3.6	38.8
1997-98	2.36	5.12	7.49	2.53	2.24	6.06	5.97		3.03	3.62	3.37	2.51	3.76	2.69	3.37	2.83	3.09	2.60	3.7	41.7
1998-99	2.48	5.36	6.60	2.98	2.85	6.55	5.59		3.04	3.54	3.77	2.55	4.17	3.10	3.82	3.32	3.74	2.64	3.9	34.4
1999-00	2.57	4.81	8.39	3.11	2.46	5.93	5.10		2.98	3.80	3.82	2.95	4.51	2.70	3.76	3.29	3.27	3.70	4.0	37.7
2000-01	2.58	5.28	7.01	3.32	2.29	5.78	5.19		3.22	3.63	3.49	3.73	4.06	2.49	3.99	3.00	3.40	3.19	3.9	32.8
2001-02	2.47	4.89	5.34	2.64	2.26	5.36	5.19	3.66	3.11	3.20	2.45	3.44	3.75	2.30	3.77	2.89	3.20	2.90	3.5	30.1
2002-03	2.43	4.60	5.02	2.57	2.01	5.06	4.70	4.90	2.95	3.44	2.66	2.99	3.83	2.54	3.76	2.63	2.97	2.62	3.4	29.8
2003-04	2.47	5.00	5.45	2.20	1.86	4.85	4.40	3.25	2.88	3.20	2.31	2.77	3.12	2.31	3.27	2.43	2.78	2.39	3.2	33.5
2004-05	3.50	4.69	4.06	1.97	1.75	4.51	3.96	2.91	2.62	2.75	2.28	2.45	2.57	2.20	3.11	2.15	2.83	2.39	2.9	29.8
2005-06	3.64	4.24	5.36	1.76	1.83	4.47	4.20	3.48	2.50	2.56	2.38	2.21	2.72	2.12	3.30	2.05	3.11	2.42	3.0	34.0
2006-07	3.51	4.26	5.32	1.76	1.81	4.70	4.18	3.58	2.53	2.57	2.59	2.13	2.43	1.84	2.91	2.01	3.27	2.39	3.0	35.6
2007-08	3.17	4.29	4.88	1.74	1.87	4.82	4.22	3.31	2.56	2.61	2.43	2.01	2.53	1.79	2.82	2.02	3.22	2.37	2.9	34.9
2008-09	3.05	4.06	4.84	1.65	2.16	4.88	4.44	4.37	2.80	2.68	2.61	2.23	3.03	1.87	3.34	2.22	3.11	2.34	3.1	33.0
2009-10	3.10	4.26	4.76	1.93	2.38	4.75	5.26	3.47	2.60	2.60	2.86	2.62	3.41	1.93	3.49	2.31	3.19	3.03	3.2	30.4
2010-11	3.94	5.06	4.05	2.19	2.29	5.03	5.57	3.28	2.73	2.63	3.25	2.58	3.35	1.92	3.03	2.37	3.61	3.12	3.3	31.5
2011-12	3.97	4.28	4.13	2.03	2.14	4.25	4.82	2.74	2.07	2.61	3.16	2.35	2.99	2.04	2.69	2.08	3.63	3.07	3.1	29.9
2012-13	4.05	4.42	5.12	1.94	2.06	4.33	4.42	2.58	2.15	2.59	2.90	2.33	2.79	2.29	2.65	2.09	3.66	2.92	3.1	32.3
2013-14	4.03	4.73	4.75	1.94	1.89	4.00	4.48	2.16	2.03	2.56	3.15	2.32	2.85	2.04	2.79	2.22	3.42	2.76	3.0	33.1
2014-15	3.21	5.70	4.82	1.93	2.17	4.12	4.59	2.67	2.01	2.56	3.45	2.24	3.24	2.15	3.15	2.32	3.49	2.95	3.2	33.9

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2015-16	2.81	4.70	5.15	1.87	2.04	3.88	5.64	3.22	1.86	2.59	3.30	2.19	3.52	2.25	3.12	2.23	4.06	2.70	3.2	35.7
2016-17	2.54	4.97	4.79	1.69	1.99	4.17	5.05	3.48	1.75	2.74	3.38	2.07	3.09	2.12	3.24	2.07	4.20	2.73	3.1	36.1
2017-18	2.52	4.90	5.12	1.68	1.88	4.30	5.72	3.01	1.66	2.71	3.35	2.01	3.34	1.96	3.25	2.02	3.22	2.51	3.1	40.2
2018-19#	2.27	6.23	6.79	1.71	1.96	4.79	8.55	3.64	1.71	2.52	3.54	N.A	3.61	2.20	3.84	2.02	3.45	2.57	3.6	54.2
X1	2.6	5.0	6.4	2.9	2.3	5.9	5.7	--	3.1	4.2	3.4	2.6	4.0	2.6	3.7	3.3	3.3	3.1		
CV1	11.4	6.0	23.9	12.8	10.1	8.4	4.9	--	5.1	16.1	7.0	8.4	7.7	10.0	5.7	14.9	9.4	14.7		
X2	3.1	4.8	5.1	2.0	2.0	4.6	5.0	3.3	2.4	2.8	2.9	2.5	3.2	2.1	3.2	2.3	3.4	2.7		
CV2	19.7	11.5	15.0	20.7	9.2	10.4	20.4	19.2	20.3	11.9	15.2	19.4	14.6	10.0	12.1	12.8	11.0	10.6		
X3	2.9	4.8	5.5	2.3	2.1	5.1	5.2	3.3	2.7	3.3	3.1	2.5	3.4	2.3	3.4	2.6	3.3	2.8		
CV3	20.0	9.9	22.1	24.3	11.7	15.6	18.0	19.2	20.0	25.9	14.6	16.0	16.4	13.5	12.0	23.2	10.3	13.9		

Source: Authors calculations using data of Statistics, study of State Finances: A Study of Budgets, Reserve Bank of India, 2020 Source: Central Statistics Office.

Note: #- Revised Estimate, X1, X2, X3 are the averages for the 1991 to 2000, 2001 to 2019 and overall periods, and CV1, CV2, CV3 are the corresponding coefficient of variations.

During the second phase (2000-01 to 2018-19) the percentage share of education expenditure has been reduced in all the states. However the highest ratio 5.1% maintained in Bihar followed by Jammu and Kashmir and lowest rates once again witnessed by high-income states Gujarat (2.0%) and Haryana (2.0%) and remained at bottom levels. During the overall period, Bihar maintained the highest rank with (5.5%) spending on education followed by Jammu and Kashmir (5.2%) and Himachal Pradesh (5.1%), whereas Haryana (2.1%), Gujarat (2.3%), Punjab (2.3%), and Maharashtra (2.5%) have remained at the lowest ranks. These averages rates of high-income states are less than half of the average rates of low-income states like Bihar.

For the given overall period with the lowest coefficient variation (CV) value (9.9), Assam was the most consistent state followed by Uttar Pradesh with (10.3) value, whereas with (25.9) value of coefficient variation (CV) Kerala state was the lowest consistent followed by Gujarat with CV value (24.3). However, during the first phase, an inter-temporal variation of average percentage spending on education was lowest in Karnataka (5.1) and Bihar highest with variation value (23.9). In the second phase, the coefficient variation ranged between maximum value (20.7) in Gujarat followed by (20.4) in Jammu and Kashmir and minimum value (9.2) in Haryana followed by (10.0) in Punjab.

Conclusion:

In this study, we made attempt to analyze the recent trends in public expenditure on education in India. We found that, during the period of 2000-01 to 2016-17 expenditure on education was on an average 3.76% of GDP, in that, the state governments' share was on an average 2.90% of GDP while the central government shares stuck at 0.86% of GDP. In terms of total expenditure, the percentage share of state government has been reduced and the share of the central government has increased gradually, however, on average 77% of the education sector spending has come from the state government. The expenditure on education in terms as the percentage share of SGDP has reduced in most of the Indian states during the second phase (2000-01 to 2018-19) of the study period.

The expenditure on education in terms of GSDP it is observed that the poor states like Bihar, Himachal Pradesh, Assam, and Jammu and Kashmir has incurred the recommended 6% expenditure of GSDP education in once or a few financial years. Even rich states like Gujarat, Maharashtra, Punjab and Haryana never spent 6% of GSDP on education over the period from 1990-91 to 2018-19. This study shows that there are huge interstate disparities in expenditure on education and moreover that disparities have increased at a rapid rate over the period. Considering these findings, state and central government should take efforts to increase the expenditure on education to at least 6% of GDP in India. We are expecting this increment would take place with the implementation of the New Education Policy 2020.

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