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Indian Education Scene and the Public Gap

Despite expert advocacy of an increase in the share of public expenditure on education in India's GNP, the share declined from 4.1 to 3.8 per cent between 1990-91 and 1991-96. Of this expenditure elementary education accounts for less than half – against the two-thirds plus deemed necessary. At least in respect of elementary education it should be possible, given political will, to bridge the resources gap.

ABUSALEH SHARIFF, P K GHOSH

I Introduction

The issue of financing education has been central to educational development in India. Expenditure on education comes from two major sources. The first source is the expenditure borne by the union government and state governments. The second is the expenditure incurred by households on the payment of fees, the purchase of books, stationery and uniforms, conveyance, private coaching and maintenance in schools. Besides of such direct household expenditure on education, there is indirect expenditure in the form earnings forgone by an individual who opts for schooling instead of engaging in gainful wage or self-employment. This paper, focuses on public expenditure on education in India. For a comprehensive account of private household expenditure on education see Shariff (1999).

Public investment in education in India has been inadequate for meeting the needs of education for all. This may be attributed partly to neglect during the colonial period and partly to lack of emphasis on educational investment during the post-independence period. An international comparison of public expenditure on education indicates that in a list of 86 countries for which relevant data are available, India ranks only 32nd in terms of public expenditure on education as a proportion of GNP [UNDP 1999]. At present India spends 3.8 per cent of its GNP on education, a figure which is much lower than in the case of many advanced countries such as the US (5.5 per cent), the UK (5.4 per cent), Malaysia (5.3 per cent), Mexico (5.8 per cent), Thailand (4.2 per cent) and South Korea (4.5 per cent).

However, the expenditure on education as a proportion of GNP in China (2.6 per

cent), Indonesia (1.3 per cent), Bangladesh (2.3 per cent) and Sri Lanka (3.2 per cent) is lower than in India. The case of China is unique as local governments there raise additional resources for education through various means of taxation. Taxes are levied on farmers and government employees, on the sale of private businesses and on construction and the proceeds utilised for financing education.

In India, successive versions of the National Policy on Education from 1968 onwards have resolved that the proportion of public investment in education would be raised to 6 per cent, but the target remains elusive. This paper attempts to analyse state-level and national-level patterns of public expenditure on various heads of accounts in education in India.

It is organised in five sections. This introducing section contains a discussion on the database, limitations of data and some features of educational expenditure in India. Section II describes the growth in expenditure on various sub-sectors of education in real terms since 1980-81. In Section III, patterns of intra-sectoral allocation of resources for different types of education are analysed. The priority accorded to education in the national development framework in terms of the share of education in gross national product (GNP) and government expenditure are examined in Section IV. Section V analyses government expenditure per pupil at different levels of education – that is, the unit costs of education. The paper ends with some conclusions and recommendations.

Database and Limitations

This analysis pertains to state and national level public expenditure (both revenue and capital) on various levels of education. Data have been presented for four points in time: 1980-81, 1985-86,

1990-91 and 1995-96. The estimate for a given year is actually the average for three years – the year itself and the years preceding and following it.

This study presents the most up-to-date statistical data available from various published and unpublished statistical reports. The revenue expenditure data have been compiled from an annual publication of the ministry of human resources development (Department of Education: *Analysis of Budgeted Expenditure on Education*). The data are based on the demands for grants of the central ministers and the budget documents of the states as presented in the state legislatures.

However, this source provides data on the capital expenditure on various sub-sectors of education only from 1991-92 onwards. The National Institute of Public Finance and Policy (NIPFP) provides the desired data on the expenditure since 1974-75. To make the data consistent, this study relies on NIPFP for capital expenditure data. About 1 per cent of the total expenditure on education is on capital account, and the ratio is more or less the same throughout the period (1980-81 to 1995-96).

Data on net domestic product of states at current and constant prices have been taken from various issues of *Estimates of State Domestic Product* published by the Central Statistical Organisation (CSO), Department of Statistics. For estimating per-pupil expenditure on education data were compiled from *Selected Education Statistics*, published by the department of education, government of India.

Details of expenditure under various sub-sectors of education are available only for expenditure incurred by the central and state departments of education. No sub-sectorwise break-up of expenditure on formal education incurred by departments such as the departments of arts, culture,

agriculture, health, industry and labour is available. For a more complete picture of public expenditure on various levels of education in the country, it is necessary to include the budget estimates of the above departments.

To avoid double counting of expenditure the assistance given by the central government to states under centrally-sponsored schemes needs to be identified and deducted from the expenditure of the state governments.

Indian Features

In India, both the central government and the state governments have been responsible for education since 1976. However, the centre accounts for a relatively

Table 1: Expenditure on Education (at Current Prices)
(Rs million)

Year	Centre	States	Total
1980-81	2291 (6.8)	31464(93.2)	33755
1985-86	5553 (7.4)	69805(92.6)	75359
1990-91	16507 (9.6)	155632(90.4)	172139
1995-96	35945(11.1)	287388(88.9)	323333

Notes: Figures in parenthesis are percentage shares.
The main figures are in triennium averages
Source: Analysis of Budgeted Expenditure on Education (various years).

Table 2: Total Expenditure (Centre and States) on Education (at Current Prices) by Revenue and Capital Account
(Rs million)

Year	Revenue	Capital	Total
1980-81	33444(99.1)	311(0.9)	33755
1985-86	74466(98.8)	892(1.2)	75359
1990-91	169984(98.7)	2154(1.3)	172139
1995-96	320733(99.2)	2599(0.8)	323333

Notes: Figures in parenthesis are percentage shares.
The main figures are in triennium averages.
Source: Analysis of Budgeted Expenditure on Education (various years).

Table 3: Plan and Non-Plan Revenue Expenditure on Education
(at current prices; Rs million)

Year	Plan Expenditure			Non-Plan Expenditure			Total Expenditure		
	Centre	States	Total	Centre	States	Total	Centre	States	Total
1980-81	750 (26.0)	2152 (74.0)	2902 (100.0)	1493 (5.0)	29048 (95.0)	30542 (100.0)	2244 33.4*	31200 6.9*	33445 8.7*
1985-86	2505 (29.0)	6126 (71.0)	8631 (100.0)	2901 (4.0)	62933 (96.0)	65835 (100.0)	5407 46.3*	69060 8.9*	74467 11.6*
1990-91	8887 (39.0)	14127 (61.0)	23014 (100.0)	7343 (5.0)	139626 (95.0)	146970 (100.0)	16231 54.8*	153754 9.2*	169985 13.5*
1995-96	25140 (41.0)	36027 (59.0)	61168 (100.0)	10490 (4.0)	249074 (96.0)	259565 (100.0)	35631 70.6*	285103 12.6*	320734 19.1*

Notes: Figures are triennium averages.
Figures in parenthesis are percentage share.
* Denotes plan expenditure as percentage of total expenditure.
Source: Analysis of Budgeted Expenditure on Education (various years).

small proportion of the total expenditure – though its share has been increasing over the years (Table 1). For example, the centre's share of the total expenditure increased to 11.1 per cent in 1995-96 from a low 6.8 per cent in 1980-81. This may be due to the higher outlay on education in the five-year plans since 1986.

Secondly, education expenditure in India is predominantly on the revenue account. About 99.2 per cent of the total expenditure was accounted for in the revenue account during 1995-96 (Table 2).

Thirdly, the bulk of education expenditure is from the non-Plan account. In 1995-96, 70.6 per cent of central expenditure on education was from the Plan budget, whereas in the case of the states it was only 12.6 per cent (Table 3). The states finance about 90 per cent of the total public expenditure on education. In the total government (central and state) expenditure on education, the share of Plan expenditure has increased from 8.7 per cent in 1980-81 to 19.1 per cent in 1995-96.

Plan funding from the centre has increased after the adoption of the national policy on education (NPE), 1986. In 1986 a number of centrally sponsored schemes were launched to promote universalisation of elementary education. The share of the centre in the plan outlay on education reached about 50 per cent in 1987-88 and has remained at around 39-40 per cent thereafter.

An increase in the share of Plan expenditure in the total government expenditure on education is essential for the further development of education. The current Plan outlay indicates concern not so much about further development in education as about maintaining the existing infrastructure (as revealed by the share of non-Plan expenditure to total expenditure in education). Plan expenditure is incurred largely on expansion of the education sector through the construction of new buildings, the re-

cruitment of new teachers, facilities for new enrolments and so on. Non-Plan expenditure, on the other hand, is incurred to maintain the existing infrastructure.

Further, Plan expenditure has shifted focus towards elementary and technical education in recent years (Table 4). Plan expenditure on elementary education increased from 5.8 per cent of total expenditure in 1980-81 to 20.3 per cent in 1995-96. In technical education, it rose to 41.5 per cent in 1995-96 from 23.6 per cent in 1980-81.

II Growth of Expenditure on Education

Appendix Tables 1 and 2 present the public expenditure at constant prices (1980-81=100) (and the annual average growth rate) on the entire spectrum of education, elementary education, secondary education, university and higher education and technical education in 1980-81, 1985-86, 1990-91 and 1995-96.

Public expenditure on education in India increased about 2.7 times (at constant prices) in 15 years (between 1980-81 and 1995-96). Of all the states, Rajasthan recorded the highest growth rate (15.6 per cent) while Andhra Pradesh recorded the lowest (4.9 per cent). Except for Kerala and Himachal Pradesh, public expenditure on education increased remarkably in all the states, between 1980-81 and 1985-86. The growth rate in Kerala was low during this period as the state had been spending substantial amounts on education since the inception of the planning process.

But between 1985-86 and 1990-91 Himachal Pradesh recorded the highest growth rate (14.3 per cent) among all the states due to the importance given to elementary education. After 1990-91, all the state governments except those of Assam and Kerala as well as the central government cut down expenditure on education. The rates of growth in expenditure in this period, particularly for some states like Bihar, Uttar Pradesh, Andhra Pradesh, Punjab, Haryana and Tamil Nadu have been very low. Bihar in fact had a negative growth rate between 1990-91 and 1995-96.

The rate of growth of public expenditure on elementary education in India between 1980-81 and 1995-96 was 12.7 per cent. During the periods 1980-81 to 1985-86 and 1985-86 to 1990-91, the rates of growth of such expenditure were higher than in 1990-91 to 1995-96 except in Andhra Pradesh. Between 1985-86 and 1990-91

states like Orissa, UP, Bihar and Himachal Pradesh recorded growth rates of 19.8, 18.0, 15.5 and 14.6 per cent respectively. But between 1990-91 and 1995-96, these same states invested much less on elementary education, which is reflected in their decreased growth rates of 3.8, 0.0, 0.2 and 2.8 per cent respectively. Andhra Pradesh and Punjab reported negative growth rates during this period.

III Intra-Sectoral Allocations

The relative importance attached to education at different levels is reflected by the intra-sectoral allocation of resources. The rate-of-return criterion is a useful tool for evaluating investment in education at different levels. There is abundant research to support the proposition that investment in lower levels of education contributes more to income redistribution and reduction in poverty, besides contributing to economic growth, than investment in higher levels [Tilak 1989b]. But India has disregarded the objective, enshrined in the Constitution of India, of universalisation of elementary education within 10 years of the Constitution coming into effect.

The national educational policy statements of 1968 and 1986 and the revised version of 1992 have laid special emphasis on the fulfilment of this objective. The successive five-year plans have repeatedly promised to take the nation towards this goal. However, the goal remains elusive even three decades after the deadline stipulated by the Constitution. Elementary education in India has suffered severe setbacks, one of the most important ones being insufficient allocation of financial resources [Tilak 1990]. Resources provide a necessary condition for achieving universal elementary education but not a

sufficient one. In the following, we discuss data on the intra-sectoral allocations in education.

The shares of elementary education, secondary education, university/higher education and technical education in total education expenditure are presented in Appendix Table 3.

A cross-state comparison of the spending pattern for education reveals that almost all the states have focused fiscal effort in favour of elementary education. The share of elementary education in the country as a whole, increased to 48.2 per cent in 1995-96 from 44.3 per cent in 1980-81. The states showing the highest investments on elementary education include all the 'Bimaru' states (Bihar, Madhya Pradesh, Rajasthan and UP), Orissa and Assam. Elementary education's share of the education budget in these states ranges from 55 to 65 per cent, compared to the

all-India average of 48.2 per cent. It is therefore evident that the educationally backward states have a higher allocation of resources for elementary education.

Except for West Bengal, Punjab and Andhra Pradesh, the level of spending on elementary education also exceeds the national average in the remaining states as well. It is secondary education that benefits more in West Bengal, Punjab and Andhra Pradesh. The share of elementary education in the education budget declined between 1980-81 and 1995-96 in eight states. It was higher between 1990-91 and 1995-96.

The share of secondary education in educational expenditure countrywide was more or less constant (around 31.5 per cent) between 1980-81 and 1995-96. Except for Bihar, MP and Orissa, all the states devote more than 30 per cent of their educational budgets to secondary education. Punjab spends the highest, at 49.1 per cent, followed by West Bengal (45.7 per cent) and Maharashtra (39.2 per cent). Assam, Haryana, MP, Orissa and UP reduced their investment in secondary education during this period.

The share of university and higher education in educational expenditure countrywide was 15 per cent in 1980-81. It fell to 12.2 per cent in 1995-96. Ten of the 16 mainstream states invested less on this

Table 5: Public Expenditure on Education as Per Cent of GNP

Year	Per Cent of GNP
1950-51	0.68
1960-61	1.58
1970-71	2.26
1980-81	3.00
1985-86	3.60
1990-91	4.10
1995-96	3.80

Table 6: Expenditure on Education of Various Ministries/Departments
(at current prices; Rs crore)

Year	Education Department		Other Departments		Total	
	Rs	Per Cent	Rs	Per Cent	Rs	Per Cent
1950-51	65	95.6	3	4.4	68	100.0
1960-61	240	95.2	12	4.8	252	100.0
1970-71	892	92.1	76	7.9	968	100.0
1980-81	3376	84.3	630	15.7	4006	100.0
1985-86	7536	82.5	1484	17.5	9020	100.0
1990-91	17214	83.9	3292	16.1	20506	100.0
1995-96	32333	83.2	6521	16.8	38854	100.0

Source: Analysis of Budgeted Expenditure on Education (various years).

Table 4: Plan and Non-Plan Revenue Expenditure by Levels of Education
(at current prices; Rs million)

	Plan Expenditure				Non-Plan Expenditure				Total Expenditure			
	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96
Elementary education	855 (5.8)	2940 (8.6)	9122 (11.6)	31535 (20.3)	13978 (94.2)	31130 (91.4)	69305 (88.4)	124013 (79.7)	14833 (100.0)	34071 (100.0)	78427 (100.0)	155548 (100.0)
Secondary education	467 (4.4)	1518 (6.6)	5424 (9.9)	13718 (13.4)	10047 (95.6)	21626 (93.4)	49414 (90.1)	88383 (86.6)	10514 (100.0)	23144 (100.0)	54838 (100.0)	102101 (100.0)
University and higher education	731 (14.5)	1671 (15.8)	2669 (11.5)	5340 (13.6)	4305 (85.5)	8933 (84.2)	20550 (88.5)	33832 (86.4)	5035 (100.0)	10605 (100.0)	23218 (100.0)	39172 (100.0)
Technical education	323 (23.6)	1124 (34.3)	2649 (35.9)	5594 (41.5)	1048 (76.4)	2157 (65.7)	4727 (64.1)	7871 (58.5)	1371 (100.0)	3281 (100.0)	7376 (100.0)	13464 (100.0)
Total education	2902 (8.7)	8631 (11.6)	23014 (13.5)	61168 (19.1)	30542 (91.3)	65836 (88.4)	146970 (86.5)	259565 (80.9)	33445 (100.0)	74467 (100.0)	169985 (100.0)	320734 (100.0)

Notes: Figures are triennium averages.

Figures in parenthesis are percentage shares.

Source: Analysis of Budgeted Expenditure on Education, (various years).

level of education in 1995-96 than in 1980-81.

For a balanced growth of education, an economy should start by investing a large part of its educational budget on elementary education and a small part in tertiary-level education. When development takes place and the task of universalisation of the first level of education has been achieved, the focus can be shifted to the tertiary level. The country devotes about half of its total educational expenditure to elementary education. This is low compared to the situation in some other countries.

Japan invested 84 per cent of its educational budget on six years of elementary education in 1885 and a meagre 8 per cent on higher education. By 1960, the share of higher education had increased to 13 per cent and the share of elementary education to 42 per cent; the rest (45 per cent) was devoted to the second level of education. In Sri Lanka too, the case is similar. Sri Lanka allocated 70 per cent of its educational budget to the first level of education and 6 per cent to higher education in 1970. By 1978, when primary education had become universal, the share of higher education had increased (marginally) to 8.7 per cent.

The examples of Japan and Sri Lanka shows that allocation of resources has been largely responsible for the development of elementary education and for a balanced growth of education. A developing country like India can learn a lesson from the experience of these countries. In such a country the expansion of higher education is possible (given the size of the education budget) only at the cost of elementary education. Secondary, education and university and higher education continue to receive about 32 and 12 per cent respectively of the total public budget on education in India. It is secondary education that benefits more. According to the World Bank, "Countries that have budgets favouring secondary and higher education disproportionately can, with some reallocation, finance a sizeable increase in enrolment at the elementary level" (World Bank 1986a:71-72).

IV Inter-Sectoral Allocations

The priority accorded to education in the national development framework may be evaluated by calculating the share of education in either GNP or the overall government budget. The GNP method is the most

widely employed standard indicator of educational development in a society.

The Education Commission (1964-66) and the National Policy of Education (NPE) of 1968, 1986 and 1992 (modified) have recommended that public expenditure on education should be raised to 6 per cent of the national income. Though the proportion of GNP spent on education has increased remarkably over the years, it has yet to reach this target (Table 5).

Within states, variations exist in the public expenditure on education as a proportion of net state domestic product (NSDP). Appendix Tables 4 and 5 present the percentage of NSDP spent on education as a whole and the annual average growth rate for education as a whole, elementary education, secondary education, university and higher education and technical education. All-India expenditure on education as a percentage of GNP increased from 3 per cent in 1980-81 to 4.1 per cent in 1990-91. By 1995-96 the share had fallen to 3.8 per cent. State spending on education as a share of NSDP averaged 3.7 per cent across all states in 1995-96. But this average conceals significant variations among 16 major states,

the shares ranging from 2.5 per cent in Haryana, 6 per cent in Kerala and Assam and 7.3 per cent in Himachal Pradesh (Appendix Table 4). In some backward states like Bihar, Orissa and Rajasthan, the ratio of education expenditure to NSDP increased up to 1990-91 and reached levels higher than the all-India average. But there was a significant decline between 1990-91 and 1995-96 in all the states except Assam, Karnataka, Kerala, Orissa, Rajasthan and West Bengal.

Elementary Education's Share

Elementary education holds the key to overall human development. The share of expenditure on elementary education in the Indian economy is given in Appendix Table 5. Overall, the share of elementary expenditure in GNP rose gradually through the 1980s, peaked in 1990-91, and then fell in 1995-96. Assam, Bihar, Himachal Pradesh and Kerala spent more than 3 per cent of their NSDP on elementary education in 1995-96. While between 1980-81 and 1985-86, all the states except Punjab increased their share of NSDP for this level of education, the shares declined in 10 states between 1990-91 and 1995-96.

Appendix Table 1: Public Expenditure on Education and Annual Growth Rates
(at constant prices 1980-81=100)

	States Expenditure (Rs million)				Growth Rate in Expenditure			
	1980-81	1985-86	1990-91	1980-81	1980-81 to 1985-86	1985-86 to 1990-91	1990-91 to 1995-96	1995-96 to 1995-96
Andhra Pradesh	2291	3521	3925	3987	10.7	2.3	0.3	4.9
Assam	878	1340	1634	2563	10.5	4.4	11.4	12.8
Bihar	1833	3187	5444	5358	14.8	14.2	-0.3	12.8
Gujarat	1754	3049	4059	5068	14.8	6.6	5.0	12.6
Haryana	702	1112	1534	1626	11.7	7.6	1.2	8.8
Himachal Pradesh	408	497	853	997	4.4	14.3	3.4	9.6
Karnataka	1711	2462	3569	4518	8.8	9.0	5.3	10.9
Kerala	2145	2618	3215	4707	4.4	4.6	9.3	8.0
Madhya Pradesh	1682	2494	3700	4351	9.7	9.7	3.5	10.6
Maharashtra	3783	5785	8311	9965	10.6	8.7	4.0	10.9
Orissa	1027	1333	2150	2654	6.0	12.3	4.7	10.6
Punjab	1278	1664	2357	2363	6.0	8.3	0.1	5.7
Rajasthan	1480	2296	3644	4936	11.0	11.7	7.1	15.6
Tamil Nadu	2366	3426	5622	6092	9.0	12.8	1.7	10.5
Uttar Pradesh	3374	5320	9156	9250	11.5	14.4	0.2	11.6
West Bengal	2594	3681	5433	7041	8.4	9.5	5.9	11.4
All States	29306	43785	64605	75474	9.9	9.5	3.4	10.5
Centre	2291	3753	7369	10013	12.8	19.3	7.2	22.5
All India (Centre+ States+UTs)	33756	50919	76848	90065	10.2	10.2	3.4	11.1

Notes: (1) Expenditure on education includes both revenue and capital expenditure. However, figures regarding capital expenditure on education are not available for all the years from the source. Hence, figures have been taken from NIPFP, New Delhi.

(2) The estimate for a given year is the average for triennium, including the years preceding and following it.

(3) The expenditure figures cover expenditure on elementary, secondary, university and higher, technical, adult, physical and general education and language development. About 5.1 per cent, 4.6 per cent, 4 per cent and 3.3 per cent of the total expenditure on education was devoted to adult education, physical education, general education and language development during 1980-81, 1985-86, 1990-91 and 1995-96 respectively.

Source: Computed from data in *Analysis of Budgeted Expenditure on Education* (various years).

Appendix Table 2: Annual Growth Rates of Public Expenditure on Different Levels

States	Elementary Education				Secondary Education				University and Higher Education				Technical Education			
	1980-81 to 1985-86		1990-91 to 1995-96		1980-81 to 1985-86		1990-91 to 1995-96		1980-81 to 1985-86		1990-91 to 1995-96		1980-81 to 1985-86		1990-91 to 1995-96	
	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96
Andhra Pradesh	12.1	1.7	-1.1	4.3	9.4	2.5	2.6	5.8	10.6	4.3	-1.3	4.9	8.9	4.0	-0.9	4.4
Assam	19.5	4.2	11.2	18.2	2.2	3.8	13.8	8.2	9.6	8.0	7.6	12.4	8.0	4.9	5.8	8.3
Bihar	11.8	15.5	0.2	12.4	17.7	12.8	2.1	16.1	23.2	12.1	-3.6	12.3	8.7	31.8	-7.5	8.8
Gujarat	16.5	5.2	6.3	13.5	14.2	9.1	3.9	13.2	13.5	9.3	1.6	11.0	11.0	6.7	8.7	13.2
Haryana	13.5	9.7	2.2	11.7	10.3	5.1	0.6	6.4	11.1	11.3	-0.4	9.2	10.7	18.6	11.2	24.0
Himachal Pradesh	3.8	14.6	2.8	8.9	4.4	15.2	4.5	10.9	5.7	8.7	4.0	8.1	8.0	23.1	13.5	27.0
Karnataka	7.6	8.2	5.0	9.6	15.4	9.8	8.5	18.4	4.9	10.0	2.2	7.1	7.3	6.9	4.5	8.4
Kerala	3.0	4.5	7.9	6.5	5.1	4.7	10.1	8.8	9.3	5.6	13.5	14.3	7.0	4.9	9.2	9.7
Madhya Pradesh	16.9	10.2	4.6	16.2	-0.1	9.1	-0.1	2.9	10.8	10.3	3.0	11.2	11.7	9.7	13.2	19.4
Maharashtra	11.5	6.5	4.6	10.5	12.1	11.5	4.1	13.7	4.2	8.7	1.2	5.6	12.5	13.0	4.1	14.9
Orissa	9.7	19.8	3.8	16.7	2.7	2.1	3.3	3.1	5.6	12.8	5.5	11.1	16.7	15.2	6.3	21.6
Punjab	4.3	7.0	-1.0	3.7	6.4	9.9	-0.5	6.2	10.4	8.9	-0.7	7.4	17.7	17.7	29.8	52.3
Rajasthan	9.6	12.8	7.7	15.8	14.5	10.8	7.2	17.4	8.7	8.1	2.6	8.5	18.4	24.3	7.8	32.8
Tamil Nadu	10.8	11.4	1.8	10.9	7.0	23.0	1.5	14.1	8.0	2.7	0.2	4.1	9.2	7.4	2.1	8.1
Uttar Pradesh	12.8	18.0	0.0	14.1	11.5	12.1	0.3	10.4	7.0	9.9	0.8	7.3	23.1	8.4	2.6	16.5
West Bengal	8.1	8.0	2.3	8.0	9.1	13.6	6.2	14.6	4.4	9.8	7.1	9.8	0.2	12.4	11.1	10.3
All States	10.8	9.8	3.2	11.1	9.2	10.5	3.7	10.9	8.3	8.1	2.1	8.0	10.8	10.2	5.8	13.3
Centre	39.1	90.4	52.8	389.1	32.3	32.6	2.2	44.2	8.6	10.1	-1.7	6.4	17.1	9.2	0.3	11.7
All India (Centre+States+UTs)	11.2	10.4	4.5	12.7	9.7	11.3	3.1	11.3	8.5	9.0	1.0	7.8	13.1	10.0	3.3	12.6

Source: Computed from data in Analysis of Budgeted Expenditure on Education (various years).

Appendix Table 3: Shares of Different Levels in Educational Expenditure (Percentage)

States	Share of Elementary Education				Share of Secondary Education				Share of University and Higher Education				Share of Technical Education			
	1980-81 to 1985-86		1990-91 to 1995-96		1980-81 to 1985-86		1990-91 to 1995-96		1980-81 to 1985-86		1990-91 to 1995-96		1980-81 to 1985-86		1990-91 to 1995-96	
	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96
Andhra Pradesh	44.1	46.1	44.9	41.7	29.4	28.1	28.4	31.6	20.3	20.2	22.0	20.3	3.1	2.9	3.1	2.9
Assam	44.1	57.0	56.6	56.3	38.1	27.7	27.0	29.1	9.8	9.5	10.9	9.6	2.5	2.3	2.3	1.9
Bihar	66.8	61.1	63.6	65.3	18.7	20.3	19.4	21.8	9.3	11.6	10.9	9.1	1.6	1.3	2.0	1.2
Gujarat	52.1	54.8	51.9	54.7	30.3	29.8	32.7	31.3	9.6	9.2	10.1	8.8	3.4	3.0	3.0	3.5
Haryana	37.7	39.8	42.9	44.9	41.0	39.2	35.7	34.7	13.8	13.6	15.4	14.2	2.6	2.5	3.5	5.1
Himachal Pradesh	54.7	53.3	53.7	52.2	32.4	32.4	33.2	34.9	8.6	9.0	7.6	7.8	0.7	0.8	1.1	1.5
Karnataka	55.1	52.9	51.5	50.8	21.2	26.1	26.8	30.2	17.2	14.9	15.4	13.5	3.1	3.0	2.7	2.7
Kerala	54.2	51.0	51.0	48.6	28.5	29.3	29.4	30.2	10.8	13.0	13.6	15.5	4.2	4.7	4.7	4.7
Madhya Pradesh	47.0	58.4	59.6	62.3	35.1	23.5	23.0	19.5	11.1	11.5	11.7	11.5	3.5	3.8	3.8	5.3
Maharashtra	44.8	46.2	42.6	43.7	33.8	35.6	39.0	39.2	13.9	11.0	11.0	9.8	3.6	3.8	4.4	4.4
Orissa	40.5	46.4	57.2	55.0	37.7	32.9	22.5	21.3	14.9	14.7	14.9	15.4	1.9	2.7	3.0	3.2
Punjab	35.8	33.4	31.9	30.1	47.1	47.7	50.4	49.1	11.7	13.7	14.0	13.4	1.2	1.8	2.4	5.9
Rajasthan	54.3	51.9	53.6	54.8	30.5	33.9	32.9	33.0	11.1	10.3	9.1	7.6	1.0	1.2	1.7	1.8
Tamil Nadu	47.8	50.8	48.6	48.9	28.5	26.6	34.8	34.5	17.3	16.8	11.6	10.8	4.0	4.1	3.4	3.5
Uttar Pradesh	48.2	50.2	55.3	54.8	34.5	34.5	32.2	32.3	10.5	8.9	7.8	8.0	2.6	3.5	2.9	3.3
West Bengal	39.0	38.6	36.6	31.5	38.8	39.8	45.2	45.7	14.8	12.8	12.9	13.5	2.8	2.0	2.2	2.6
All States	48.0	49.5	50.0	49.6	32.2	31.5	32.5	33.0	13.2	12.5	12.0	11.3	2.9	3.0	3.0	3.3
Centre	2.9	5.2	14.8	39.5	11.1	17.7	23.7	19.3	44.2	38.6	29.5	19.8	21.9	24.8	18.5	13.8
All India (Centre+States+UTs)	44.3	45.8	46.1	48.2	31.5	31.0	32.2	31.7	15.0	14.2	13.6	12.2	4.2	4.6	4.5	4.5
CV	16.9	15.1	16.9	19.4	21.7	21.6	25.3	24.4	26.5	24.7	28.5	30.0	40.9	40.7	33.2	42.3

Source: Computed from data in Analysis of Budgeted Expenditure on Education (various years).

Several attempts have been made in recent literature to evaluate the financial implications of achieving universal elementary education.

Ramachandran et al (1997) give all-India as well as statewise estimates of the resources that need to be mobilised to bring all children within the fold of basic education. The study concludes that investment at the all-India level needs to be more than doubled and that about 3.1 per cent of GDP needs to be allocated to primary education if every child in India is to be got into school in the next five years. The study also shows that more than 5 per cent of state domestic product (SDP) is required to achieve the objective of universal elementary education in states like Bihar, Orissa, Rajasthan, MP and UP. Bihar needs to make an annual investment of the order of 8 per cent of SDP.

The Saikia Committee (1997) estimates that an additional outlay of Rs 40,000 crore is required to universalise elementary education in the next five years. Shariff (1999) estimates that an additional outlay of 3.3 per cent of GDP is needed. An expert group [Government of India 1999] estimates an additional requirement of Rs 1,36,822 crore for the next 10 years. On average approximately 1 per cent of GDP additionally would have to be ploughed into elementary education.

Emphasising the need for a significant scaling up of education investments, Tilak (1998) states "Education is no doubt expensive, but the alternative is more expensive to the society in the long run. Hence, there is no option for the government but to find sufficient resources for free compulsory education."

One would expect that education expenditure as a proportion of NSDP would increase with an increase in per capita NSDP. But this is not the case. In fact, the estimated values are negative. The coefficient of correlation between per capita NSDP and proportion of NSDP spent on education are -0.1906, -0.3613, -0.4931 and -0.5154 respectively for 1980-81, 1985-86, 1990-91 and 1995-96. This issue needs careful consideration by policymakers even though the values are very small and statistically non-significant.

However, this finding is not conclusive and raises several questions. For instance, if the state income per capita is low, even a relatively small expenditure on education could constitute a high proportion of the income and if the income is large, a relatively large expenditure

could constitute a low proportion of it. Bihar, which is economically one of the most backward states, invested 5.1 per cent of its income in 1995-96 on education whereas Punjab which has the highest per capita income, invested only 2.6 per cent. The per capita incomes of Andhra Pradesh, Assam, Bihar, MP, Orissa, Rajasthan and UP are about half, or less than half of that of Punjab, but the former states invest a higher proportion of their incomes on education than Punjab. This implies that the level of economic development is not the only important determinant of public expenditure on education.

Tilak (1986) has found that total investment in education may be influenced by economic indicators like GNP but that the relative priority accorded to education in the national economy is not. He attempts to analyse the other factors which act as determinants of public expenditure on education. The power of a state to spend on education is largely influenced by non-economic rather than economic factors [Tilak 1995].

The composition of the expenditure on elementary education is unbalanced [World Bank 1990]. The World Bank study indicates that salaries account for roughly 97 per cent of education department expenditures in lower primary schooling and 96 per cent in upper primary schooling, while

libraries, equipment and furniture account for only 0.18 per cent.

Education in Government Budgets

The priority accorded to education can be assessed by the share of educational expenditure in total expenditure provided for in the national budget. In India budgetary resources flow into education from the department of education (in the main) and other ministries/departments, at both the central and state levels. The ministries/departments of health, agriculture, forestry and environment, welfare, labour and tribal development are known to spend large portion of their budgets on formal education. Over the years the contribution of these ministries to overall education has increased from 4.4 per cent of the total education budget in 1950-51 to 16.8 per cent in 1995-96 (Table 6). These expenditures are basically meant for higher and professional education.

As mentioned earlier this analysis is confined to expenditure incurred by the department of education – details of the expenditure borne by other departments under various sub-sectors are not available. The share of education expenditure in the government budget and annual growth rates for education as a whole; elementary education, secondary educa-

Appendix Table 4: Percentage of NSDP Spent on Education and Annual Growth Rates

States	Percentage NSDP				Growth Rate			
	1980-81	1985-86	1990-91	1995-96	1980-81 to 1985-86	1985-86 to 1990-91	1990-91 to 1995-96	1980-81 to 1995-96
Andhra Pradesh	2.9	4.0	3.3	3.0	7.6	-3.4	-2.2	0.2
Assam	3.6	4.6	4.8	6.6	5.5	0.6	7.5	5.4
Bihar	2.8	3.8	5.5	5.1	6.8	9.4	-1.8	5.3
Gujarat	2.6	3.6	3.9	3.5	8.3	1.4	-1.7	2.6
Haryana	2.3	2.8	2.8	2.5	4.6	-0.4	-2.1	0.6
Himachal Pradesh	5.5	6.1	7.5	7.3	2.2	4.6	-0.5	2.2
Karnataka	3.0	3.5	3.8	3.9	3.6	1.5	0.7	2.1
Kerala	5.6	6.5	6.2	6.6	3.1	-1.0	1.4	1.2
Madhya Pradesh	2.4	3.2	3.6	3.4	7.0	2.4	-0.7	3.0
Maharashtra	2.5	3.2	3.1	2.7	5.6	-0.3	-2.8	0.6
Orissa	3.0	3.3	4.5	4.8	2.3	6.8	1.7	4.2
Punjab	2.7	2.8	3.1	2.6	0.7	1.9	-3.4	-0.4
Rajasthan	3.4	4.3	4.6	5.0	4.9	1.6	1.5	3.0
Tamil Nadu	3.1	3.7	4.6	3.8	3.8	4.9	-3.5	1.5
Uttar Pradesh	2.4	3.1	4.1	3.7	6.3	6.1	-1.7	3.8
West Bengal	2.7	3.2	3.7	3.7	3.1	3.5	0.0	2.4
All States	2.8	3.5	4.0	3.7	4.9	2.3	-1.2	2.1
Centre	0.2	0.3	0.4	0.4	6.5	9.5	1.6	7.4
All India (Centre+ States+UTs)	3.0	3.6	4.1	3.8	4.4	2.6	-1.4	1.9
CV	32.0	28.0	28.8	35.3	-	-	-	-

Sources: Computed from data in *Estimates of State Domestic Product*, Central Statistical Organisation (CSO), Department of Statistics (various issues); and *Analysis of Budgeted Expenditure on Education* (various years).

tion, university and higher education and technical education are presented in Appendix Tables 6 and 7.

It is generally argued that about a quarter of the government budget goes to education. This is true only with respect to the state budgets. If the central and state budget allocations for education are considered together they work out to around 11 per cent of the government budget (in 1995-96) (Appendix Table 6). The share of the education sector in the central budget was only 2.5 per cent in that year. The share of education in the central budget increased from 1.1 per cent in 1980-81 to 2.5 per cent in 1995-96. Overall, it has remained more or less constant (20 to 25 per cent) in the state budgets over the years.

The priority given to education in government budgets declined in most of the states from 1980-81 to 1995-96. This is most noticeable between 1980-81 and 1985-86 and between 1990-91 and 1995-96. But the share increased between 1985-86 and 1990-91 in states such as Bihar, Himachal Pradesh, Karnataka, MP, Maharashtra, Orissa, Rajasthan, UP and West Bengal. This increase may be due to the adoption of the national policy on education in 1986, which led to the launching of a number of centrally-sponsored schemes, particularly for the backward states, to promote universalisation of elementary education.

In all the major states except Assam and Bihar, budget allocations for education (in percentage terms) were much lower in 1980-81 than in 1995-96. From Appendix Table 6 it is clear that only three states –

Kerala, Assam and West Bengal – allocate substantial shares to education. In Kerala the share has always been relatively high, though it has declined since 1980-81. It has been erratic in a few states. For example, the share of education in the budgets of Punjab and Haryana governments in 1980-81 was 22.4 per cent and 30.2 per cent respectively; by 1995-96, it decreased to 11 per cent and 15.7 per cent respectively.

The correlation coefficient between per capita NSDP and the percentage share of

total education in government budget are -0.1472 , -0.2198 , -0.5882 and -0.4314 respectively for 1980-81, 1985-86, 1990-91 and 1995-96. All the figures are statistically non-significant. There are several non-economic factors, if not irrational ones, which influence resource allocation policies [Tilak 1986].

In all the states except Assam, Gujarat and Tamil Nadu, budgetary allocations for elementary education in the 1990s were much lower than in the 1980s. The priority given to elementary education in govern-

Appendix Table 6: Shares of Education Expenditure in Total Government Budget, Annual Growth Rates

States	Percentage Share				Growth Rate			
	1980-81	1985-86	1990-91	1995-96	1980-81 to 1985-86	1985-86 to 1990-91	1990-91 to 1995-96	1980-81 to 1995-96
Andhra Pradesh	19.3	18.4	18.8	16.6	-0.9	0.4	-2.4	-0.9
Assam	25.7	23.8	23.7	26.1	-1.5	-0.1	2.0	0.1
Bihar	20.3	23.5	24.8	22.8	3.1	1.1	-1.6	0.8
Gujarat	25.1	21.9	20.7	21.1	-2.5	-1.1	0.3	-1.1
Haryana	22.4	17.8	16.7	11.0	-4.1	-1.3	-6.9	-3.4
Himachal Pradesh	24.1	17.3	19.3	18.4	-5.7	2.4	-0.9	-1.6
Karnataka	25.1	18.1	19.5	18.7	-5.6	1.5	-0.8	-1.7
Kerala	40.1	29.5	26.7	26.0	-5.3	-1.9	-0.5	-2.3
Madhya Pradesh	22.2	17.4	19.0	17.1	-4.3	1.9	-2.0	-1.5
Maharashtra	25.3	17.6	19.9	19.3	-6.1	2.6	-0.6	-1.6
Orissa	25.7	19.2	21.5	20.2	-5.0	2.4	-1.2	-1.4
Punjab	30.2	21.3	18.0	15.7	-5.9	-3.0	-2.6	-3.2
Rajasthan	29.2	22.6	23.0	21.9	-4.6	0.4	-1.0	-1.7
Tamil Nadu	26.2	20.2	19.7	20.2	-4.6	-0.4	0.4	-1.5
Uttar Pradesh	26.0	20.4	21.6	18.6	-4.3	1.2	-2.8	-1.9
West Bengal	29.5	23.3	24.5	23.0	-4.2	1.0	-1.2	-1.5
All States	25.5	20.5	21.1	19.6	-4.0	0.6	-1.4	-1.5
Centre	1.1	1.5	2.3	2.5	6.8	10.9	2.4	8.8
All India (Centre+ States+UTs)	9.3	10.4	10.1	11.1	2.5	-0.7	2.2	1.3
CV	18.5	15.8	13.1	19.4	-	-	-	-

Source: Computed from data in *Analysis of Budgeted Expenditure on Education* (various years).

Appendix Table 5: Percentage of NSDP Spent on Different Levels

States	Elementary Education				Secondary Education				University and Higher Education				Technical Education			
	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96
Andhra Pradesh	1.3	1.8	1.5	1.2	0.9	1.1	0.9	0.9	0.6	0.8	0.7	0.6	0.1	0.1	0.1	0.1
Assam	1.6	2.6	2.7	3.7	1.4	1.3	1.3	1.9	0.4	0.4	0.5	0.6	0.1	0.1	0.1	0.1
Bihar	1.9	2.3	3.5	3.3	0.5	0.8	1.1	1.1	0.3	0.4	0.6	0.5	0.0	0.0	0.1	0.1
Gujarat	1.3	2.0	2.0	1.9	0.8	1.1	1.3	1.1	0.2	0.3	0.4	0.3	0.1	0.1	0.1	0.1
Haryana	0.9	1.1	1.2	1.1	0.9	1.1	1.0	0.9	0.3	0.4	0.4	0.3	0.1	0.1	0.1	0.1
Himachal Pradesh	3.0	3.2	4.0	3.8	1.8	2.0	2.5	2.5	0.5	0.5	0.6	0.6	0.0	0.1	0.1	0.1
Karnataka	1.6	1.9	1.9	2.0	0.6	0.9	1.0	1.2	0.5	0.5	0.6	0.5	0.1	0.1	0.1	0.1
Kerala	3.1	3.3	3.2	3.2	1.6	1.9	1.8	2.0	0.6	0.8	0.8	1.0	0.2	0.3	0.3	0.3
Madhya Pradesh	1.1	1.9	2.1	2.1	0.8	0.7	0.8	0.7	0.3	0.4	0.4	0.4	0.1	0.1	0.1	0.2
Maharashtra	1.1	1.5	1.3	1.2	0.8	1.1	1.2	1.0	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1
Orissa	1.2	1.5	2.5	2.7	1.1	1.1	1.0	1.0	0.4	0.5	0.7	0.7	0.1	0.1	0.1	0.2
Punjab	1.0	1.0	1.0	0.8	1.3	1.4	1.6	1.3	0.3	0.4	0.4	0.3	0.0	0.1	0.1	0.2
Rajasthan	1.9	2.2	2.5	2.7	1.1	1.5	1.5	1.6	0.4	0.4	0.4	0.4	0.0	0.1	0.1	0.1
Tamil Nadu	1.5	1.9	2.2	1.9	0.9	1.0	1.6	1.3	0.5	0.6	0.5	0.4	0.1	0.2	0.2	0.1
Uttar Pradesh	1.1	1.6	2.3	2.1	0.8	1.1	1.3	1.2	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.1
West Bengal	1.1	1.2	1.4	1.2	1.1	1.3	1.7	1.7	0.4	0.4	0.5	0.5	0.1	0.1	0.1	0.1
All States	1.4	1.8	2.0	1.8	0.9	1.1	1.3	1.2	0.4	0.4	0.5	0.4	0.1	0.1	0.1	0.1
Centre	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
All India (Centre+ States+UTs)	1.3	1.7	1.9	1.8	0.9	1.1	1.3	1.2	0.4	0.5	0.6	0.5	0.1	0.2	0.2	0.2
CV	42.5	35.4	38.7	44.5	33.4	28.6	31.3	36.4	30.9	33.8	27.8	40.5	60.5	59.6	43.3	43.3

Source: Computed from data in *Estimates of State Domestic Product*, (various issues) and *Analysis of Budgeted Expenditure on Education* (various years).

ment budgets declined further in almost all the states in the country after 1990-91. The country, now spends only 5.4 per cent of the total government budget on elementary education.

Despite growth in GNP/NSDP and per capita GNP/NSDP, deteriorating economic conditions, as reflected in budget deficits, have adversely affected the share of education in GNP/NSDP and in the total government budget. Changing inter-sectoral priorities have moved the focus away from education to more urgent needs such as military expenditure. It has been authoritatively stated that, "if military spending levels in south Asia were cut by 5 per cent a year over the next five years, about \$ 22 billion, more than four times what is required for the goal of universal primary education, within the five-year period. It has been calculated that Even a freeze on military spending levels in current prices would release more than enough resources for attaining the universal primary education target."

V

Per-Student Expenditure

Trends in the development of education are also reflected – to some extent – in the unit cost of education – that is, the annual cost to government per pupil. In this study, the estimates of unit cost² (Appendix Tables 8-10) are based on total expenditure on education departments and official enrolment³ at different levels of education.

Expenditure per-pupil on education as a whole was Rs 492 in 1995-96. There are substantial variations amongst states in terms of per-pupil expenditure at different levels of education. The expenditure on education as a whole ranges from Rs 300 in MP and Rs 757 in Kerala (1995-96). Unit costs at real prices have increased at an annual rate of 3.5 per cent

between 1980-81 and 1995-96. It was higher between 1985-86 and 1990-91, but after 1990-91 some states like Andhra Pradesh, Bihar, Haryana, MP, Punjab, Rajasthan, Tamil Nadu and UP registered negative growth rates.

In elementary education, per-pupil government expenditure has increased countrywide from Rs 190 in 1980-81 to

Appendix Table 8: Per Pupil Expenditure and Annual Growth Rate
(at 1980-81 prices)

States	Expenditure Per Pupil in Rs				Growth Rate in Expenditure			
	1980-81	1985-86	1990-91	1980-81	1980-81 to 1985-86	1985-86 to 1990-91	1990-91 to 1995-96	1995-96 to 1995-96
Andhra Pradesh	316	376	357	330	3.8	-1.0	-1.5	0.3
Assam	309	298	313	427	-0.7	1.0	7.3	2.5
Bihar	220	296	449	410	7.0	10.3	-1.7	5.8
Gujarat	278	399	449	493	8.7	2.5	2.0	5.1
Haryana	314	443	541	499	8.2	4.4	-1.5	3.9
Himachal Pradesh	522	500	654	706	-0.9	6.2	1.6	2.3
Karnataka	285	364	405	418	5.5	2.3	0.6	3.1
Kerala	373	441	520	757	3.6	3.6	9.1	6.9
Madhya Pradesh	261	254	317	300	-0.5	4.9	-1.1	1.0
Maharashtra	316	394	479	473	4.9	4.3	-0.3	3.3
Orissa	278	294	384	410	1.2	6.1	1.4	3.2
Punjab	433	551	661	608	5.4	4.0	-1.6	2.7
Rajasthan	382	418	531	524	1.9	5.4	-0.3	2.5
Tamil Nadu	253	306	447	421	4.2	9.2	-1.2	4.4
Uttar Pradesh	229	298	478	336	6.0	12.1	-5.9	3.1
West Bengal	313	302	406	420	-0.7	6.9	0.7	2.3
All States	291	344	440	426	3.7	5.6	-0.7	3.1
Centre	22	29	47	55	6.1	13.2	3.1	10.0
All India (Centre+ States+UTs)	322	387	494	492	4.0	5.5	-0.1	3.5
CV	24.6	22.8	22.3	27.1	-	-	-	-

Note: The estimate for a given year is the average for three years including the years preceding and following the given year.

Source: Computed from data in *Selected Educational Statistics*, Ministry of Human Resources Development, New Delhi, (various years).

Appendix Table 7: Share of Different Levels of Education in Total Government Budget
(Per cent)

States	Elementary Education				Secondary Education				Univ and Higher Education				Technical Education			
	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96	1980-81	1985-86	1990-91	1995-96
Andhra Pradesh	8.5	8.5	8.4	6.9	5.7	5.2	5.3	5.2	3.9	3.7	4.1	3.4	0.6	0.5	0.6	0.5
Assam	11.3	13.5	13.4	14.7	9.8	6.6	6.4	7.6	2.5	2.3	2.6	2.5	0.6	0.5	0.6	0.5
Bihar	13.6	14.4	15.7	14.9	3.8	4.8	4.8	5.0	1.9	2.7	2.7	2.1	0.3	0.3	0.5	0.3
Gujarat	13.1	12.0	10.8	11.5	7.6	6.5	6.8	6.6	2.4	2.0	2.1	1.8	0.8	0.7	0.6	0.7
Haryana	8.4	7.1	7.1	4.9	9.2	7.0	6.0	3.8	3.1	2.4	2.6	1.6	0.6	0.4	0.6	0.6
Himachal Pradesh	13.2	9.2	10.4	9.6	7.8	5.6	6.4	6.4	2.1	1.6	1.5	1.4	0.2	0.1	0.2	0.3
Karnataka	13.9	9.6	10.0	9.5	5.3	4.7	5.2	5.6	4.3	2.7	3.0	2.5	0.8	0.5	0.5	0.5
Kerala	21.7	15.0	13.6	12.7	11.4	8.6	7.9	7.9	4.3	3.8	3.6	4.0	1.7	1.4	1.3	1.2
Madhya Pradesh	10.4	10.2	11.3	10.7	7.8	4.1	4.4	3.3	2.5	2.0	2.2	2.0	0.8	0.7	0.7	0.9
Maharashtra	11.4	8.2	8.5	8.4	8.6	6.3	7.8	7.6	3.5	1.9	2.2	1.9	0.9	0.7	0.9	0.8
Orissa	10.4	8.9	12.3	11.1	9.7	6.3	4.8	4.3	3.8	2.8	3.2	3.1	0.5	0.5	0.6	0.6
Punjab	10.8	7.1	5.8	4.7	14.2	10.2	9.1	7.7	3.5	2.9	2.5	2.1	0.4	0.4	0.4	0.9
Rajasthan	15.9	11.7	12.3	12.0	8.9	7.7	7.6	7.2	3.3	2.3	2.1	1.7	0.3	0.3	0.4	0.4
Tamil Nadu	12.5	10.2	9.6	9.9	7.5	5.4	6.9	7.0	4.5	3.4	2.3	2.2	1.1	0.8	0.7	0.7
Uttar Pradesh	12.5	10.2	12.0	10.2	9.0	7.0	7.0	6.0	2.7	1.8	1.7	1.5	0.7	0.7	0.6	0.6
West Bengal	11.5	9.0	9.0	7.3	11.4	9.3	11.1	10.5	4.4	3.0	3.1	3.1	0.8	0.5	0.5	0.6
All States	12.2	10.1	10.5	9.8	8.2	6.4	6.8	6.4	3.4	2.6	2.5	2.2	0.7	0.6	0.6	0.7
Centre	0.0	0.1	0.3	1.0	0.1	0.3	0.5	0.5	0.5	0.6	0.7	0.5	0.2	0.4	0.4	0.3
All India (Centre+ States+UTs)	4.1	4.8	4.6	5.4	2.9	3.2	3.2	3.5	1.4	1.5	1.4	1.4	0.4	0.5	0.5	0.5
CV	25.2	23.5	24.3	30.1	29.5	25.8	25.9	28.4	26.6	25.8	26.8	32.7	52.6	49.3	37.8	39.5

Rs 341 in 1995-96. The simple average for 16 states was Rs 305, whereas the centre's contribution was only Rs 31 in 1995-96. The annual cost per student varied across the states most widely in 1995-96. It was highest in Kerala (Rs 777), Himachal Pradesh (Rs 612) and Haryana (Rs 530) and lowest in West Bengal (Rs 192), Andhra Pradesh (Rs 222), MP (Rs 231) and Tamil Nadu (Rs 232).

On an average, per-pupil expenditure on elementary education increased at an annual rate of 5.3 per cent between 1980-81 and 1995-96. Bihar, Rajasthan and UP recorded the highest annual growth rates (12-16 per cent) between 1985-86 and 1990-91 due to the implementation of new schemes funded by foreign agencies, as well as by the central government. After this period the growth

rates fell in all the states except Kerala, Assam and Gujarat.

Tilak (1988) noted that a comparison of unit costs for elementary education and secondary or higher education reveals the extent of misallocation of resources or the unbalanced nature of education development. As computed by him, the ratio of per-pupil expenditure on elementary education that on

Appendix Table 9: Expenditure Per-Pupil on Different Levels of Education
(at 1980-81 prices)
(Rupees)

States	Elementary Education				Secondary Education				Univ and Higher Education				Technical Education			
	1980 -81	1985 -86	1990 -91	1995 -96	1980 -81	1985 -86	1990 -91	1995 -96	1980 -81	1985 -86	1990 -91	1995 -96	1980 -81	1985 -86	1990 -91	1995 -96
Andhra Pradesh	189	232	225	222	448	488	436	369	1295	2517	1652	749	1634	1669	1293	971
Assam	176	209	227	329	700	615	586	817	585	558	458	365	1844	2610	3032	2928
Bihar	171	216	349	326	333	462	700	752	1387	1210	863	650	675	1770	3805	1764
Gujarat	179	275	300	352	1417	2192	2191	2155	222	261	312	275	1021	1117	1324	3272
Haryana	296	412	561	530	227	363	417	438	1861	726	749	420	902	1057	1777	2020
Himachal Pradesh	365	371	539	612	867	631	931	1040	2756	2174	445	350	738	1000	1828	2447
Karnataka	188	231	266	272	616	840	989	1180	877	1310	655	566	1230	1118	923	888
Kerala	340	411	505	777	280	311	356	523	2156	1990	1982	1536	2103	2341	2242	2963
Madhya Pradesh	134	166	221	231	4647	2303	1931	1010	481	381	347	264	2702	3742	4632	4528
Maharashtra	205	284	344	349	552	656	847	930	431	315	305	239	939	1849	1546	1401
Orissa	132	153	268	283	800	1052	624	671	3395	3437	1499	905	1200	3302	5303	6071
Punjab	215	273	366	349	860	943	1290	1382	1559	1871	592	326	561	1629	1686	4096
Rajasthan	253	257	377	377	844	1423	1491	1521	1214	838	396	331	717	1084	2165	2848
Tamil Nadu	164	219	323	332	890	802	1310	1045	253	281	257	197	1446	1609	1614	1541
Uttar Pradesh	150	204	367	255	1383	1758	1546	893	120	131	215	175	1126	2288	2456	2674
West Bengal	172	178	228	198	614	508	786	876	519	360	469	530	2474	1795	2224	3459
All States	185	230	311	305	629	711	876	860	427	429	438	352	1261	1771	1859	2051
Centre	1	2	10	31	14	33	69	67	143	109	115	78	710	1301	1240	1078
All India (Centre+ States+UTs)	190	239	322	341	586	786	982	984	716	546	551	429	1987	3252	3178	3177
CV	33.7	31.4	32.4	42.6	107.3	65.9	53.6	45.5	80.4	85.8	77.1	70.4	49.1	43.2	52.4	50.2

Source: Computed from data in *Analysis of Budgeted Expenditure on Education and Selected Educational Statistics*, Ministry of Human Resources Development, New Delhi, (various years).

Appendix Table 10: Annual Growth Rate of Expenditure Per-Pupil at Different Levels
(at 1980-81 prices)

States	Elementary Education				Secondary Education				University and Higher Education				Technical Education			
	1980-81 to 1985-86	1985-86 to 1990-91	1990-91 to 1995-96	1980-81 to 1995-96	1980-81 to 1985-86	1985-86 to 1990-91	1990-91 to 1995-96	1980-81 to 1995-96	1980-81 to 1985-86	1985-86 to 1990-91	1990-91 to 1995-96	1980-81 to 1995-96	1980-81 to 1985-86	1985-86 to 1990-91	1990-91 to 1995-96	1980-81 to 1995-96
Andhra Pradesh	4.5	-0.6	-0.3	1.2	1.8	-2.1	-3.1	-1.2	18.9	-6.9	-10.9	-2.8	0.4	-4.5	-5.0	-2.7
Assam	3.8	1.7	8.9	5.8	-2.4	-0.9	7.9	1.1	-0.9	-3.6	-4.1	-2.5	8.3	3.2	-0.7	3.9
Bihar	5.2	12.4	-1.3	6.0	7.8	10.3	1.5	8.4	-2.6	-5.7	-4.9	-3.5	32.5	23.0	-10.7	10.8
Gujarat	10.8	1.8	3.5	6.5	10.9	0.0	-0.3	3.5	3.5	3.9	-2.4	1.6	1.9	3.7	29.4	14.7
Haryana	7.8	7.2	-1.1	5.3	12.0	2.9	1.0	6.2	-12.2	0.6	-8.8	-5.2	3.4	13.6	2.7	8.3
Himachal Pradesh	0.3	9.0	2.7	4.5	-5.5	9.5	2.3	1.3	-4.2	-15.9	-4.3	-5.8	7.1	16.6	6.8	15.4
Karnataka	4.6	3.1	0.4	3.0	7.3	3.5	3.9	6.1	9.9	-10.0	-2.7	-2.4	-1.8	-3.5	-0.8	-1.9
Kerala	4.1	4.6	10.7	8.6	2.3	2.9	9.3	5.8	-1.5	-0.1	-4.5	-1.9	2.3	-0.9	6.4	2.7
Madhya Pradesh	4.8	6.6	0.9	4.8	-10.1	-3.2	-9.5	-5.2	-4.2	-1.7	-4.8	-3.0	7.7	4.8	-0.4	4.5
Maharashtra	7.7	4.2	0.3	4.7	3.8	5.8	2.0	4.6	-5.4	-0.6	-4.3	-3.0	19.4	-3.3	-1.9	3.3
Orissa	3.1	15.0	1.1	7.6	6.3	-8.1	1.5	-1.1	0.2	-11.3	-7.9	-4.9	35.1	12.1	2.9	27.1
Punjab	5.4	6.8	-0.9	4.2	1.9	7.4	1.4	4.1	4.0	-13.7	-9.0	-5.3	38.1	0.7	28.6	42.1
Rajasthan	0.3	9.3	0.0	3.3	13.7	0.9	0.4	5.3	-6.2	-10.6	-3.3	-4.8	10.2	19.9	6.3	19.8
Tamil Nadu	6.8	9.5	0.5	6.9	-2.0	12.7	-4.1	1.2	2.2	-1.7	-4.7	-1.5	2.3	0.1	-0.9	0.4
Uttar Pradesh	7.2	16.0	-6.1	4.7	5.4	-2.4	-8.4	-2.4	1.9	12.8	-3.7	3.1	20.6	1.5	1.8	9.2
West Bengal	0.7	5.6	-2.7	1.0	-3.5	11.0	2.3	2.8	-6.1	6.1	2.6	0.1	-5.5	4.8	11.1	2.7
All states	4.8	7.0	-0.4	4.3	2.6	4.6	-0.4	2.4	0.1	0.4	-4.0	-1.2	8.1	1.0	2.1	4.2
Centre	27.8	77.6	43.1	238.8	27.2	21.9	-0.8	25.1	-4.7	1.0	-6.5	-3.1	16.6	-0.9	-2.6	3.5
All-India (Centre + States+UTs)	5.2	6.9	1.2	5.3	6.8	5.0	0.0	4.5	-4.7	0.2	-4.4	-2.7	12.7	-0.5	0.0	4.0

Source: Computed from data in *Analysis of Budgeted Expenditure on Education and Selected Educational Statistics*, Ministry of Human Resources Development,

and secondary education was 1:3 throughout the period 1980-81 to 1995-96. The ratio as between elementary education and higher education was 1:4 in 1980-81. It came down to 1:1.5 in 1995-96, suggesting some progress towards balanced development. But the ratio between elementary and secondary education is still very high.

The need to reduce these ratios is obvious. This can be done by improving levels of per-pupil investment in elementary education. After 1980-81 the country spent less per-pupil on higher education. Negative growth rates were observed in per-pupil expenditure on university and higher education over the whole period (-2.7 per cent). It was highest between 1980-81 and 1985-86 and between 1990-91 and 1995-96. If we concentrate on the periods 1985-86 to 1990-91 and 1990-91 to 1995-96, negative growth for university and higher education can be seen in all the states.

This apparent decline in per-pupil at all levels of education may be due to enrolments growing faster than resource allocations for education. In view of the declining or at best the stagnant costs of education per-pupil one may argue that the quality and standards of education have deteriorated in India.

VI Concluding Observations

The paper examines different dimensions of the financial scenario of education in India and its states. The main findings are as follows:

(i) The annual rate of growth of expenditure on education as a whole was 10.2 per cent between 1980-81 and 1990-91. After this period it has been declining and was 3.4 per cent between 1990-91 and 1995-96. This trend is more or less similar for all levels of education. The relative share of elementary education in the total education budget has declined over time in most states.

(ii) The Kothari Commission was the first to propose (in the 1960s) an increase in the share of public expenditure on education in India's GNP. This has figured in every major political party's election manifesto. Yet, the 1990s have seen a reversal of the earlier trend despite a large inflow of foreign funding. The share of education has declined from 4.1 per cent in 1990-91 to 3.8 per cent in 1995-96.

(iii) The share of education in the budgets of most state governments declined significantly. This decline is particularly conspicuous because structural adjustment and stabilisation policies have accorded

low priority to social sectors like education. This has had quantitative and qualitative impact on education.

(iv) Statewise figures reveal that per-pupil expenditure on education, especially by the less developed states has also declined. As 90 per cent of the expenditure on education is currently met from state funds, there are limitations on the availability of financial resources for education. The central government will need to expand its role in contributing resources, especially in respect of elementary education, to some of the poorer states. The scanty resources that many state governments devote to elementary education and the large number of out-of-school children call out for such action.

VII Recommendations

After 50 years of independence India spends less than 4 per cent of GNP on education and less than half this amount on elementary education (1.8 per cent). "Lack of resources cannot be a convincing argument for failing to discharge this national duty" [Government of India 1999]. If the government can find the money to implement the Fifth Pay Commission's recommendations, which will entail addi-

Appendix Table 11: A Funding Possibility for Out-of-School Children (1993-94)

State	6-14 years Population 1993-94#	Enrolment Rate*	Total Enrolled Children*	Per Student Household Exp in Government Schools (in Rs*)	Household Expenditure on Examination Fees, Other Fees Books and Stationery Transport (in Rs*)	Estimated Resource Available for Out-of-School Children (in Rs)	Estimated Out-of- School Children
<i>Northern Region</i>							
Haryana	3326463	78.1	2597968	608	456	1184673227	728495
Himachal Pradesh	988409	92.7	916255	815	611	560050956	72154
Punjab	3606303	86.8	3130271	479	359	1124549858	476032
<i>Upper Central Region</i>							
Bihar	17289731	58.8	10166362	311	233	2371303896	7123369
Uttar Pradesh	28201921	64.2	18105633	289	217	3924396014	10096288
<i>Lower Central Region</i>							
Madhya Pradesh	12694807	62.6	7946949	243	182	1448331488	4747858
Orissa	4866169	70.9	3450114	247	185	639133585	1416055
Rajasthan	9406972	61.3	5766474	432	324	1868337523	3640498
<i>Western Region</i>							
Gujarat	7742467	80.3	6217201	227	170	1058478470	1525266
Maharashtra	13738187	85.2	11704935	282	212	2475593821	2033252
<i>Eastern Region</i>							
West Bengal	12250585	66.1	8097637	287	215	1743016296	4152948
North Eastern Rg.	5334480	81.3	4336932	287	215	933524664	997548
<i>Southern Region</i>							
Andhra Pradesh	11648031	79.5	9260185	206	155	1430698528	2387846
Karnataka	8761864	77.9	6825492	296	222	1515259236	1936372
Kerala	5146328	98.6	5074279	533	400	2028443193	72049
Tamil Nadu	9651262	87.7	8464157	313	235	1986960803	1187105
India	162878130	71.4	116294985	317 238	27649132641	46583145	

Sources: # Selected Educational Statistics, 1993-94, Ministry of Human Resource Development.

* Shariff (1999).

tional expenditure to the extent of about 3 per cent of GNP, surely the requirement of elementary education can also be met. What is needed is political will – and public pressure.

A clear pattern of allocation of resources unfavourable to elementary education can be noted. The Education Commission (1966) suggested that at least two-thirds of the total education budget should be invested in school education and about one-third on higher education. Despite this recommendation, less than half the total education budget is being spent on elementary education. Tilak and Varghese (1990) recommend that at least two-thirds of the total educational budget should have been earmarked for elementary education. This should be the strategy for the near future if India is serious about objectives such as universalisation of elementary education.

This paper presents some preliminary calculations which reveal that substantial scope exists for channelling to elementary education part of the existing high levels of household expenditure on education. It is observed that about 75 per cent of household expenditure goes towards examination fees, other fees, books and stationery and transport even in government schools [Shariff 1999]. A total of about Rs 2,764 crore is spent by households on such account. Government schools are supposed to collect no fees from the students. Some of the government schools even distribute books free of cost. But as these books seldom get to the students before the middle of the year, most parents are constrained to purchase books at the beginning of the year.

Therefore, if that part of the current household expenditure on education which is appropriated through the community is passed on to the government, about Rs 2,765 crore can be utilised for enrolling about 46.6 million out-of-school children (Appendix Table 11).

About 58 per cent of the Indian population lives in the lowest income group (Rs 20,000 or less per annum) [Shariff 1999]. More than half of them have no resources to spend on education at the given price of education. This is the main reason for non-enrolment. About Rs 2,765 crore are spent by households in India towards their children's education due to governmental failure to provide free education for children up to 14 years old. Through better management of community resources the government

should be able to cover out-of-school children as well. [17]

Notes

- 1 Due to non-availability of statewide CSO estimates of GDP at both current and constant prices based on 1993-94=100, we have used base 1980-81=100.
- 2 The results may not be accurate for a number of reasons; among the most important are the inaccuracies in enrolment figures and the omission of expenditures from the other government departments.
- 3 (i) Total enrolment includes enrolment in elementary and secondary education/university and higher education and technical education.
 - (ii) 'Elementary education', includes classes I to VIII.
 - (iii) 'Secondary education includes classes IX and X.
 - (iv) University and higher education includes PhD/DSc/DPhil, MA, MSc, MCom, BA/BA (Hons), BSc/BSc (Hons), BCom/BCom (Hons) and Higher Secondary/Junior Colleges.
 - (v) 'Teaching education' includes BE/BSc (Engg)/BArch/BTech, BEd/BT, MBBS, polytechnic institutes and technical, industrial arts and crafts schools.

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