Chapter 12

Social Development

12.1. Introduction: Social Development and Human Development

The purpose of this chapter is to focus on the education and health capabilities of the people of Uttar Pradesh. Improvements in education and health are valuable in their own right, but they also have strong linkages with broad-based development and growth. Dréze and Sen (1995) have outlined the importance of health and education in at least five important dimensions (Box 12.1) and UNDP includes health and

BOX 12.1

Importance of Health and Education

According to Dréze and Sen (1995), education and health can be seen to be valuable to the freedom of a person in at least five distinct ways:

(1) **Intrinsic Importance:** Being educated and healthy are valuable achievements in themselves, and the opportunity to have them can be of direct importance to a person's effective freedom.

(2) **Instrumental Personal Roles:** A person's education and health can help him or her to do many things—'other' than just being educated and healthy—that are also valuable. They can, for instance, be important for getting a job and more generally for making use of economic opportunities. The resulting expansion in incomes and economic means can, in turn, add to a person's freedom to achieve functioning that he or she values.

(3) **Instrumental Social Roles:** Greater literacy and basic education can facilitate public discussion of social needs and encourage informed collective demands (e.g. for health care and social security); these in turn can help expand the facilities that the public enjoys, and contribute to the better utilisation of the available services.

(4) **Instrumental Process Roles:** The process of schooling can have benefits aside from formal education. For example, the incidence of child labour is intimately connected with non-schooling of children, and the expansion of schooling can reduce the distressing phenomenon of child labour so prevalent in India. Schooling also brings young people in touch with others and thereby broadens their horizons, and this can be particularly important for young girls.

(5) **Empowerment and Distributive Roles:** Greater literacy and educational achievements of disadvantaged groups can increase their ability to resist oppression, to organise politically, and to get a fairer deal. The redistributive effects can be important not only between different social groups or households, but also within the family, since there is evidence that better education (particularly female education) contributes to the reduction of gender-based inequalities.

These influences need not work only for the person who receives education or health care. There are also interpersonal effects. For example, one person's educational ability can be of use to another (e.g. to get a pamphlet read, or to have a public announcement explained). The interpersonal connections can be of political significance as well; for example, a community may benefit generally from the civic attention it receives through the educated activism of a particular group within that community. Also, the use of economic opportunity by one person can, in many circumstances, open up further opportunities for others, through backward and forward linkages in supply and demand. It is hard to evaluate the contributions of education except through a broad 'social choice' approach. There are similar interconnections in matters of health because of the obvious importance of externalities in morbidity, preventive care, and curative treatment. Expansion of health and education can have influences that go much beyond the immediate personal effects.

educational capability among the most important dimensions of human development.

Education is known to have vital and important links with the achievement of income and health security. A number of recent studies also provide ample evidence of the mutual analytical and empirical linkages between human resources and poverty in India.[1] Improvement in educational performance, especially of women, is closely related to health and fertility behaviour. Female literacy and workforce participation are important determinants of variations in child mortality (Kishor, 1994; Murthy *et al.,* 1995). Better educated women are more likely to marry late, exercise greater control over the choice of size of family, have fewer children and adopt family planning methods on a larger scale. A smaller number of pregnancies alone, are likely to result in better maternal and child health and lower maternal and child mortality. Better education is more likely to be associated with greater utilisation of health services by women and children (Krishnan, 1996) and improved health and hygiene practices again lowering maternal and child mortality and leading to improvements in health.

Improvements in health and education have important implications for the supply and demand of labour. Indian evidence shows that the offer price for labour improves with the health and educational attainments of the labour force (World Bank, 1997). On the other hand, the lack of education leads to greater vulnerability in labour markets. Large differentials in human resource endowments between social groups and gender have, by depressing the returns to labour of socially disadvantaged groups, women, and children, been an important cause of high relative inequalities and endemic poverty among these groups and women. In India, where educational access has traditionally been confined to upper caste males, the spread of education among socially disadvantaged groups and women has extremely significant implications for the economic progress of these groups.

Apart from the instrumentalist roles of education and good health in raising incomes and growth, and biasing these towards the poor, good health and education are also intrinsically important, in that they improve people's capabilities. Women's education and health, for instance, impact on improvements in gender equality and gender relations and women's empowerment. The spread of education among the poorer groups and women has a significant influence on participation in the democratic processes and in influencing the priorities of development in accordance with the principles of sustainable development and local needs. With the move towards devolution following the 73rd Amendment, the absence of widespread literacy is a serious obstacle in empowering women and socially disadvantaged groups who have acquired the possibility of taking responsibility of formal leadership in the various rungs of local self-government. To the extent that decentralisation and devolution can improve efficiency and design of development programmes, particularly those relating to the poor, the absence of literacy and education is likely to affect the performance of these programmes. Low educational levels of the population encourage lack of transparent functioning and information flows and reduce the accountability of government. Thus, better education can have important repercussions for the design and implementation of development strategies and their impact on the poor. Education also increases self-esteem and social dignity, reduces vulnerability and powerlessness. Hence, education impacts directly on virtually all dimensions of deprivation (physical, social, economic, political and psychological) enumerated by Chambers (1995).

This chapter focusses on an analysis of the health and education sectors of Uttar Pradesh. It analyses Uttar Pradesh's performance in these two sectors and locates current priorities and future strategies in the light of this performance. Accordingly the chapter is organised as follows: Section 12.2 gives a comparative status of education, health and fertility in Uttar Pradesh. A detailed discussion on health is provided in Section 12.3 and Section 12.4 discusses the education sector in Uttar Pradesh.

12.2 Education, Health and Fertility: Uttar Pradesh in Comparative Perspective

Despite steady improvement in the status of education and health status of the population over the last several decades, the level of social development in the state and the persistent inequalities based on socio-economic status continue to be a cause of significant concern.

Life expectancy at birth, which is a crucial summary indicator of the health status of the population, is 57.2 years in Uttar Pradesh, almost five years less than the national average, and is the third

1. Tilak, 1989; Dréze and Sen, 1995, 1997; Krishnan, 1996; World Bank 1991, 1997.

TABLE 12.1

Selected Demographic and Educational Indicators for Uttar Pradesh and Other States

States	*Birth Rate*	*Death Rate*	*IMR*	*Life Expectancy*	*TFR*	*Sex Ratio 0 to 6 Yrs.*	*Literacy Rate*		*% of 6+ Popn. with Elementary Schooling*		*Mean Yrs. of Education of 6+ Popn.*	
							Total	*Female*	*Male*	*Female*	*Male*	*Female*
	1999	*1999*	*1999*	*1994-97*	*1998-99*	*2001*	*2001*	*2001*	*1998-99*	*1998-99*	*1998-99*	*1998-99*
	1	2	3	4	5	6	7	8	9	10	11	12
Andhra Pradesh	21.7	8.2	66	62.0	2.25	978	61.11	51.17	29	14.5	4.9	0.0
Assam	27.0	9.7	76	56.2	2.31	932	64.28	56.03	31.6	22.4	4.7	2.5
Bihar	31.5	8.9	63	59.4	3.49	921	47.53	33.57	29.3	10.9	3.6	0.0
Gujarat	25.4	7.9	63	61.4	2.72	921	69.97	58.6	38	23.5	6.3	3.2
Haryana	26.8	7.7	68	63.8	2.88	861	68.59	56.31	41.4	23.4	6.2	2.4
Karnataka	22.3	7.7	58	62.9	2.13	964	67.04	57.45	37.1	23.8	6.0	3.2
Kerala	18.0	6.4	14	73.1	1.96	1,058	90.92	87.86	51	46.8	8.1	7.6
Madhya Pradesh	31.1	10.4	90	55.2	3.31	920	64.11	50.28	27.7	13.1	4.8	0.0
Maharashtra	21.1	7.5	48	65.2	2.52	922	77.27	67.51	42.1	25.6	7.1	4.1
Orissa	24.1	10.7	97	56.9	2.46	972	63.61	50.97	30.3	15.1	5.1	1.2
Punjab	21.5	7.4	53	67.4	2.21	874	69.95	63.55	42.6	32.9	6.4	5.0
Rajasthan	31.1	8.4	81	59.5	3.78	922	61.03	44.34	31.4	11.4	5.0	0.0
Tamil Nadu	19.3	8.0	52	63.7	2.19	986	73.47	64.55	40.2	26.2	6.4	4.5
Uttar Pradesh	**32.8 (15)**	**10.5 (14)**	**84 (13)**	**57.2 (12)**	**3.99 (15)**	**898 (13)**	**57.36 (14)**	**42.98 (14)**	**33.9 (8)**	**15 (10)**	**5.0 (10)**	**0.0 (15)**
West Bengal	20.7	7.1	52	62.4	2.29	934	69.22	60.22	30	17	4.7	2.1
New States:												
Chhattisgarh*	26.9	9.6	78	-		990	65.18	52.4				
Jharkhand*	26.3	8.9	71	-		941	54.13	39.38				
Uttaranchal*	19.6	6.5	52	-		964	72.28	60.26				
India	**26.1**	**8.7**	**70**	**60.7**	**2.85**	**933**	**65.38**	**54.16**	**34.9**	**19.7**	**5.5**	**1.6**

Source: Col. 1-3-*SRS Bulletin*, April 2001, Registrar General of India; Col. 6-8-*Census 2001*, RGI; Col. 4: *Compendium of India's Fertility and Mortality Indicators 1971-1997* based on SRS, RG, India, 1999; Col. 5 & 9-12 - NFHS-2; Col. 13: *Economic Survey*, 2001-02; Col. 14: Planning Commission.

Note: * IMR for these states are for three-year period 1997-99; ** NSDP is at Current Prices; figures in the parentheses show the rank of Uttar Pradesh amongst 15 bigger states.

lowest among major Indian states. The infant mortality rate was estimated at 84 in 1999, which places the state at the second lowest level. The birth rate and the total fertility rate in Uttar Pradesh is the highest among all states and the death rate is also the second highest. The 0 to 6 years sex ratio (number of females per thousand males), which is a crucial indicator of gender status, stood at 898 in 2001, showing a deficit of 102 female children per thousand male children. This was again the third lowest among the Indian states.

Educational attainment in the state is equally poor. Although literacy levels have been improving rapidly in recent years, more than two-fifths of the 7+ total population and more than three-fifths of the female population in this age group was still illiterate in 2001. The state is the second lowest among all states in terms of literacy.

Uttar Pradesh's showing in terms of the percentage of the male/female population completing elementary schooling is considerably poorer than the national average. According to the National Sample Survey (NSS) 55th Round (1999-00), only 16.2 per cent of Uttar Pradesh's population above five years in the rural areas, and 32.4 per cent in the urban areas had completed middle school, compared to 18.4 per cent of the all-India rural population and 41.8 per cent of the country's urban population. This, taken together with the literacy profile and other indicators of educational access, implies a high inequality in the access to education across socio-economic groups.

12.3 Health

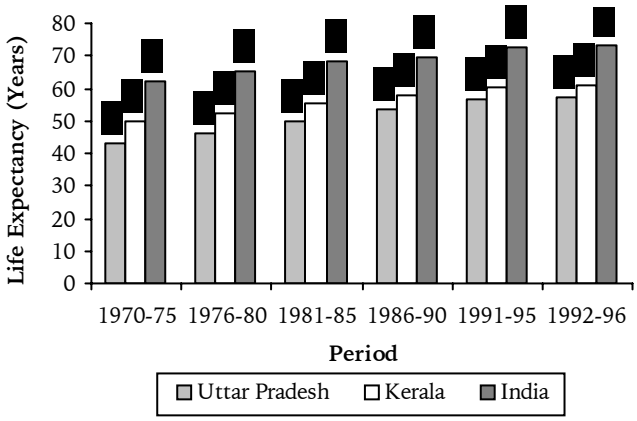
There has been steady improvement in the health status of the population, but the resultant achievement still falls short of even the average achievement in the country. Improvement in health status is linked not only to the performance of the health care system, but also to health awareness, environmental sanitation, availability of potable drinking water, nutritional intake, and various other social and cultural factors. This section reviews the state's progress and its current status in the improvement of health attainment.

12.3.1 Trends in Life Expectancy

Life expectancy at birth is considered to be the most useful indicator of health status in any society and this shows a steady improvement since 1970-75. In 1970-75, life expectancy in Uttar Pradesh was only 43 years. But by 1990-95, this had improved to 57.2 years. This was, however, well below the average for the country (60.7 years) and, of course, that of Kerala, which has achieved a life expectancy of 72 years, equivalent to some of the best performing developed countries in this respect. Life expectancy for males (57.7) was higher than that for females (56.4) and there were also pronounced sectoral differences. Life expectancy for the urban population (61.2 years) was higher than that of the rural population by 5.3 years.

FIGURE 12.1

Life Expectancy at Birth: Uttar Pradesh, Kerala and India



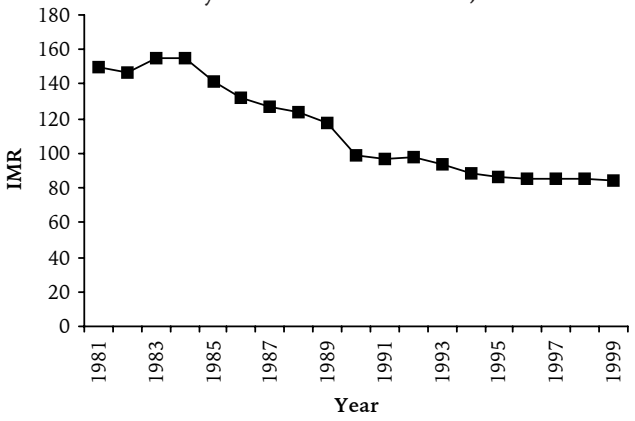
Source: CSO, *Statistical Abstracts*, various years.

12.3.2 Infant and Child Mortality

Infant and child mortality are critical indicators of health delivery, especially as excessive child mortality is associated with easily preventable causes—poor nutrition status of the mother, prenatal and postnatal care, sanitation and hygiene. Uttar Pradesh's infant and child mortality rates have shown significant improvement over the years. The probability of child survival has steadily improved in the state. Between 1971-73 and 1995-97, the infant mortality rate (IMR) reduced by more than half in the state—from 182 per thousand children born to 85 (SRS). The decline in IMR took place both in rural areas (from 189 to 89) and urban areas (from 124 to 66). For 0 to 4 year olds, the mortality rate declined from 83.7 to 31.4 during the same period. Again, this decline was observed in both rural and urban areas. In rural areas, the decline in child mortality rate (CMR) was from 86.7 to 32.6 and in urban areas from 57.6 to 24.3.

FIGURE 12.2

Infant Mortality Rate in Uttar Pradesh, 1981-1999



Source: CSO, *Statistical Abstracts*, various years.

However, as the figure shows, IMR has declined slowly in the 1990s and has virtually stagnated since the mid-1990s. Moreover, there are large differences between sectors, sexes, social groups and regions. The urban IMR was 66 in 1999 compared to 88 in rural areas. Male IMR was 81 in 1997 compared to 90 for females.

The National Family Health Survey (NFHS) also provides disaggregated information on infant and child mortality rates in Uttar Pradesh. According to NFHS-2 estimates, the IMR in Uttar Pradesh declined from 100 in the first NFHS to 87 in the second NFHS but was the highest among the states except Meghalaya. Female disadvantage is compounded between the ages of 1 to 5 with the CMR for girls being significantly higher than that for boys.

TABLE 12.2

Infant Mortality Rate and Child Mortality Rate in Uttar Pradesh, 1998-99

	IMR	*CMR*
Rural	101.3	43.5
Urban	65.3	27.3
Male	94.8	28.8
Female	96.0	53.4
Social Groups		
SC	110	54.1
ST	83.3	45.0
OBC	105.7	40.8
Others	82.3	32.5
Standard of Living Index		
Low	112.2	56.7
Medium	92.9	38.3
High	65.5	11.0

Source: *NFHS-2*, 1998-99, Uttar Pradesh Report.

IMR across social groups shows the highest figures for SCs, followed by OBCs and STs. In the case of CMR, SCs are followed by STs, OBCs and upper castes. Thus upper castes have lower rates of infant and child mortality than other social groups. By economic status, the figures predictable show a sharp decline with improvement in the standard of living.

TABLE 12.3

Region-wise Infant and Child Mortality Rates in Uttar Pradesh, 1998-99

Region	*IMR*	*CMR*
Western	81.8	29.4
Central	122.4	60.3
Eastern	97.8	43.9
Bundelkhand	118.3	55.1

Source: *NFHS-2*, 1998-99, Uttar Pradesh Report.

Region-wise figures show highest infant and child mortality rates in Central Uttar Pradesh, followed by the Bundelkhand region. In both these regions IMR is well above 100, hence they can be identified as areas of specific concern. The Eastern region follows Bundelkhand, which is then followed by Western Uttar Pradesh. It may be noted that the erstwhile Hill region had the lowest figures of IMR and CMR in the unbifurcated state.

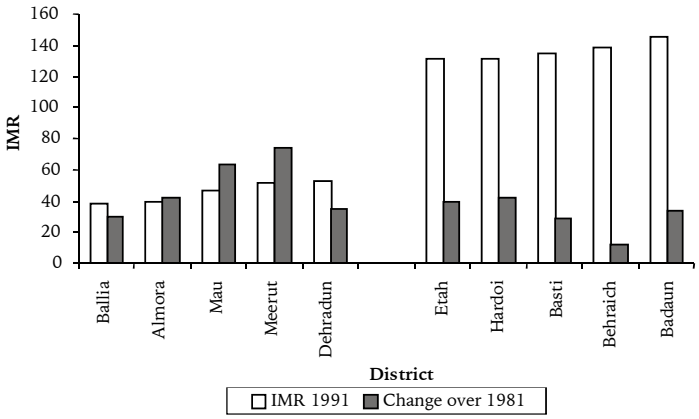
District-wise estimates of IMR and CMR available from the census show striking differences across Uttar Pradesh. The proportion of children born, but not surviving till one year were more than three times higher in 1991 in districts with the highest IMR, compared to districts with the lowest rates. Compared to an IMR of 38 in Ballia, the IMRs are more than 120 (123, 129, 130, 131, 131, 135, 138 and 146 respectively) in the districts of Pilibhit, Shahjahanpur, Gonda, Etah, Hardoi, Basti, Bahraich and Budaun. Districts with the lowest IMRs were in the Eastern, Hill and Western regions of the unbifurcated state, while districts with the highest IMRs are in the Western, Central and Eastern regions of the state. Budaun, which had the highest IMR in both 1981 and 1991, lies in the Western region of the state and is more economically developed than many of the other districts.

During 1981-1991, all districts of the state shared in the improvement in IMR. Moreover, the decadal improvement in IMRs has a small positive association with the 1991 IMR, which is heartening. But a number of districts with low IMRs in 1981 also experienced a

smaller degree of decadal improvement and continued to rank low among the districts.

FIGURE 12.3

Districts with Lowest and Highest IMRs in 1991



Source: NFHS various years.

A number of proximate factors are responsible for the high mortality among infants and children in the state. These include the poor nutritional status of expectant mothers, absence of proper antenatal care, unhygienic conditions under which children are delivered, diarrhoeal, respiratory and other diseases afflicting infants and children.

In 1971, there were 13.3 still births per 1000 children born in Uttar Pradesh and the perinatal mortality rate (which includes still births and children dying within one week of birth) was 69.4. The neo-natal mortality rate (children dying before 28 days of birth) was 99.2 while postnatal mortality rate (children dying after 28 days but before 1 year) was 67.8. By 1997, the still-birth rate, perinatal mortality rate and neo-natal mortality rate (all sensitive to the nutrition status of the mother and conditions associated with child birth) remained high but had declined to 7.8, 45.6 and 51.1 respectively.

12.3.3 The Pattern of Morbidity

The disease pattern in Uttar Pradesh provides an insight into the prevailing morbidity pattern. Information on morbidity is provided by the NSS while information on the prevalence of selected major diseases is also provided by the Health Information of India (Ministry of Health and Family Welfare, GoI) and was also collected in the NFHS-2 survey as well as the Reproductive and Child Health (RCH) survey. Morbidity is recognised as a measurable indicator of well-being although there are problems in the data on morbidity in the case of countries like India.

It is known that developing societies are confronted with a dual disease burden—diseases associated with low levels of living and poor socio-economic conditions, as well as those which are now proliferating due to industrialisation and changing lifestyles. A major part of this burden in developing countries is due to communicable diseases, which can be directly or indirectly transmitted and an improvement in the health situation is generally associated with a transition from communicable to non-communicable diseases. It may also be noted that several of these communicable diseases are also responsible for high levels of mortality among infants and children. A broad classification of the ailments reported in Uttar Pradesh in the 15 days preceding the date of the NSS 52nd Round survey, shows that 64.3 per cent of the ailments could be classified as communicable diseases, while 1 per cent were due to nutritional disorders. Eye and ENT disorders contributed to 2.4 per cent of the reported ailments while 2.8 per cent were due to bone disorders and deformities. Lifestyle diseases contributed to 4.9 per cent of the reported ailments and other diseases comprised 24.6 per cent of the ailments. Thus, the state has a fairly high disease burden due to communicable diseases.

This is also shown by the high prevalence of some of the major diseases for which information has been collected by the NFHS and other surveys. Of the 4 diseases for which the NFHS-2 collected information, malaria reported the highest incidence with more than 3500 cases on an average per lakh population as recalled in the 3 months preceding the survey. Its incidence in rural areas was 4 times higher than urban areas, with females showing greater incidence than males in both areas. The prevalence of asthma in the state was also very high with an estimated 1979 cases per lakh population, with cases concentrated in the age group above 60 years of age. It is thus a disease predominantly affecting aged people. The prevalence of asthma was much higher in rural than in the urban areas. It was also much higher for males than for females. TB is another major disease of the lungs, predominantly prevalent among people above 60 years of age. The prevalence of TB was 551 per lakh population according to NFHS-2. This is slightly lower than the national prevalence of TB as observed in the survey. The prevalence of TB was much higher in the rural than in

urban areas. Males reported a greater prevalence of TB than females. Jaundice is one of the most common infectious diseases prevalent in India, caused by poor hygiene and contaminated food and water. The incidence of jaundice recorded in the 12 months preceding the survey was 963 per lakh population and was higher in urban than in rural areas, which is reverse of the trend observed so far for other diseases. This highlights the problem of poor hygiene and quality of drinking water in urban areas.

12.3.4 Child Mortality and Immunisation

Data was collected by NFHS-2 on the incidence and treatment-seeking behaviour of childhood diseases of Acute Respiratory Infection (ARI), fever and diarrhoea for children below three years of age in the sample population through a two-week recall period. On the whole, rural areas showed higher prevalence of these diseases than the urban areas. Prevalence was slightly lower among girls as compared to boys.

TABLE 12.4

Proportion of Children Suffering from ARI, Fever and Diarrhoea and Subsequent Treatment Sought, (2 Weeks Recall), Uttar Pradesh, 1998-99

	% Children < 3 Years of Age Suffering from			*% Taken to any Health Facility/ Provider*	
	ARI	*Fever*	*Any Diarrhoea*	*ARI*	*Diarrhoea*
Rural	21.5	28.7	24.1	59.7	61.2
Urban	18.9	23.1	19.4	70.2	68.0
Male	22.7	28.9	23.8	64.5	60.6
Female	19.4	26.6	22.8	57.1	63.8
Total	21.1	27.8	23.3	61.3	62.1
Distribution by Regions					
Western	17.3	27.4	22.2	75.1	71.8
Central	27.4	31.8	22.8	54.1	58.9
Eastern	23.0	28.0	26.0	53.8	54.9
Bundelkhand	17.5	20.3	17.8	61.9	65.9

Source: *NFHS-2,* 1998-99, Uttar Pradesh Report.

ARI, which is primarily pneumonia, affected about 20 per cent children in the survey, of which 61.3 per cent were taken to a health facility/provider for treatment. Region-wise data shows that prevalence of ARI is highest in Central Uttar Pradesh, followed by Eastern, Bundelkhand and Western Uttar Pradesh regions. In terms of treatment sought, the proportion is highest for Western Uttar Pradesh followed by Bundelkhand, Central and Eastern Uttar Pradesh.

Fever had the highest prevalence among the three diseases covered, with 28 per cent children reported to have suffered from it in the two weeks preceding the survey. The regional picture shows highest prevalence of fever in Central Uttar Pradesh followed by Eastern, Western and Bundelkhand regions.

Diarrhoea is one of the most common and also most easily preventable causes of mortality among children in the world. In Uttar Pradesh diarrhoea recorded 23 per cent cases among children below three years of age in the two weeks preceding the survey. Region-wise data showed highest prevalence in the Eastern region, followed by Central Uttar Pradesh, Western Uttar Pradesh and the Bundelkhand region. Among those suffering from diarrhoea, 62.1 per cent were taken to a health facility for treatment, which is almost the same as the proportion taken for treatment of ARI. Region-wise pattern of seeking treatment is similar to that of ARI, with maximum proportion being taken to health facility in Western Uttar Pradesh, followed by Bundelkhand, Central and the Eastern regions. Eight per cent of the children suffering from diarrhoea received home treatment of some kind, while 30 per cent received no treatment. The proportion was the same for girls and boys, not indicating any discrimination in the treatment between them. The proportion of untreated cases was higher at 31 per cent in the rural areas than in the urban areas where it was 24 per cent.

Thus, on the whole, while morbidity was generally higher in the Central and Eastern regions, utilisation of health facilities for treatment was highest in the Western region. Morbidity was lowest in the erstwhile Hill region of the state, followed by Bundelkhand.

Immunisation of Children

Data on the immunisation status of children is available from various large surveys (NSS, NFHS and RCH). NFHS collected information for 1992-93 and 1998-99 on the immunisation status of children aged between 12-23 months in the sample population to assess coverage against major diseases in the population. The percentage of children fully immunised increased slowly from 20 in 1992-93 to 21.2 per cent in 1998-99. At the same time, children not getting any vaccination declined from 43 to 30 per cent. The immunisation status of children in 1998-99 is shown in Table 12.5.

TABLE 12.5

Immunisation Status of Children, Uttar Pradesh, 1998-99

Type of Vaccine	*By Residence*			*By Region*			
	Rural	*Urban*	*Total*	*Western*	*Central*	*Eastern*	*Bundelkhand*
BCG	54.3	74.3	57.5	54.1	61.4	59.0	45.7
Polio 1	63.6	81.5	66.5	52.3	61.6	60.6	43.8
Polio 2	56.9	78.5	60.3	41.3	51.5	49.4	32.8
Polio 3	39.1	59.7	42.3	27.8	39.3	37.3	21.0
DPT 1	53.8	75.8	57.3	65.8	66.0	65.9	66.6
DPT 2	42.7	66.7	46.5	59.2	58.9	59.8	42.2
DPT 3	30.9	49.6	33.9	38.7	47.3	42.2	44.7
Measles	31.7	50.0	34.6	31.8	35.5	36.6	23.8
All	**19.2**	**32.3**	**21.2**	**14.5**	**27.5**	**24.9**	**10.0**

Source: *NFHS-2*, 1998-99, Uttar Pradesh Report.

The proportion of fully vaccinated children is higher in the urban than in the rural areas. Immunisation against TB (BCG) was highest at 57.5 per cent, followed by polio (42.3%), measles (34.6%) and DPT (33.9%). In the case of both polio and DPT, immunisation is fairly high for the first dose but subsequently drops sharply till the final dose. Thus only a small proportion of the population completes the full course of vaccination. Only 16 per cent of the children were fully vaccinated by the age of 12 months, which means that a fourth of the fully vaccinated children did not receive their vaccination within the given time frame of 12 months from birth. Female children with 19 per cent full immunisation received lower priority in vaccination as compared to male children (24%).

The pattern across regions shows the highest vaccination coverage in the erstwhile Hill region followed by the Central, Eastern, Western and Bundelkhand regions. Western and Bundelkhand regions show an extremely low proportion of completed vaccinations–14.5 and 10 per cent respectively.

Vitamin A supplementation is a part of the National Programme for the Prevention of Blindness and is provided in the form of oral dose every 6 months starting at the age of 9 months till the age of 35 months. The NFHS-2 survey found that only 14 per cent of the eligible children had received Vitamin A supplementation in Uttar Pradesh. The proportion was higher in urban than in the rural areas. It was also higher for males than for females. By regions, it was seen that the former hill region showed the highest proportion of children covered (21.3%), followed by Bundelkhand (15.1%), Western region (12.4%) and lastly Central and Eastern regions with six per cent each.

12.3.5 Nutrition Status of Women and Children

The nutritional status of women and children is an important indicator of their health and their capability to resist diseases. A good nutritional status implies reduced mortality and health risk during pregnancy in case of women, and proper physical and mental development in case of children. The survey measured the height and weight as well as haemoglobin levels of the sample women and children to assess their nutritional status.

Nutritional Status of Women

The indicator used in this section to assess the nutritional status of women is the Body Mass Index or BMI which is the ratio of the weight of a person to the square of her height. BMI is an effective and widely used indicator of nutritional status. A BMI below 18.5 kg/m^2 indicates chronic energy deficiency (CED), caused by a highly deficient diet.

TABLE 12.6

Nutritional Status in Terms of BMI of Women in Uttar Pradesh, 1998-99

Categories	*Mean BMI of Women (kg/m^2)*	*% Women with BMI < 18.5*
Rural	19.5	39.1
Urban	21.8	23.3
Regions		
Western	20.5	31.1
Central	19.8	40.1
Eastern	19.7	37.5
Bundelkhand	19.4	43.1

Source: *NFHS-2*, 1998-99, Uttar Pradesh Report.

In Uttar Pradesh about 36 per cent women suffer from CED, more so in rural than in urban areas. On the whole, nutritional status of rural women is poorer than urban women. In terms of social groups, upper caste women have the highest BMI of 20.6 while all other social groups of SC, ST and OBC have BMI ranging between 19-20 kg/m^2. BMI shows an increasing trend with increasing economic status of households and with increasing education levels of women.

The regional picture shows nutritional status to be highest in the Western region, while in the other three regions it is lower, ranging between 19-20 kg/m^2. The proportion of women with BMI below 18.5 also shows

the same pattern with the lowest proportion in the Western region, followed by the Eastern region. In the Central and Bundelkhand regions the proportion is well above 40 per cent, indicating a very high prevalence of CED in these regions.

Anaemia Among Women

Anaemia is among the most widespread deficiency diseases in India, predominantly among women and children. Anaemia has a detrimental effect on women's health and may lead to enhanced risk of maternal and perinatal mortality. According to the survey, over 49 per cent of women in Uttar Pradesh had some form of anaemia. Anaemia prevalence was higher in the age group 15-19 years (52.8%) and declined marginally with increasing age. Urban women had a slightly lower prevalence of anaemia than rural women. By social groups, anaemia prevalence was highest for STs (53%), followed by SCs (52%) and OBCs (51%). The upper castes showed lowest prevalence of anaemia with a proportion of 45.2 per cent.

TABLE 12.7

Proportion of Women with Anaemia Across Regions in Uttar Pradesh, 1998-99

Regions	*% Women with any Kind of Anaemia*
Western	37.9
Central	54.0
Eastern	57.9
Bundelkhand	41.2

Source: NFHS-2, 1998-99, Uttar Pradesh Report.

The regional level data shows highest anaemia prevalence in the Eastern region followed by the Central region, Bundelkhand and lastly the Western region. There was little difference in anaemia between pregnant (46%) and non-pregnant women (47.5%).

Nutritional Status of Children

The nutritional status of children was measured through recording the extent of stunting, wasting and deficient weight among children below three years of age in the state. The data covered about 65 per cent of the eligible children in the sample population. Fifty-two per cent of the children were found to be underweight and 56 per cent stunted, while 11 per cent suffered from wasting.

On the whole, stunting was the most prevalent nutritional disorder among children. Girls showed poorer nutritional status than boys except in case of wasting. Nutritional status of children in rural areas was much poorer than children in urban areas. Region-wise data shows the Central and Bundelkhand regions as having the poorest nutritional status of children. Wasting is more prevalent among children in Bundelkhand, followed by Central and Eastern regions. Stunting is more prevalent among children in the Central region, followed by Western, Bundelkhand, and Eastern regions. Proportion of underweight children was higher in Bundelkhand and Central regions, followed by Eastern and Western regions. Overall children in the former Hill region of the state showed the highest nutritional status. Nutritional status showed an improvement with increasing income and women's nutritional status. By social groups, nutritional status was poorest for STs, followed by SCs, OBCs and upper castes.

TABLE 12.8

Nutritional Status of Children in Uttar Pradesh, 1998-99

Categories	*% of Children Below 3 Years of Age who are*		
	Underweight	*Stunted*	*Wasted*
Male	49.6	53.4	11.4
Female	53.9	57.7	10.8
Urban	42.6	46.7	9.5
Rural	53.6	57.3	11.4
Regions			
Western	50.1	57.8	8.2
Central	58.2	58.4	13.2
Eastern	50.4	53.2	12.5
Bundelkhand	58.3	54.7	15.7

Source: *NFHS-2*, 1998-99, Uttar Pradesh Report

12.3.6 Reproductive Health

Reproductive health is of great importance in the case of women since it has a bearing on the overall life expectancy of women, especially in a country like India where maternal mortality is quite high. Information collected on reproductive health issues related to the level of antenatal care preceding births, vaccination of pregnant females against tetanus, extent of post-partum checkups, and detailed information on the types of common reproductive problems faced by women. The information was collected for all births to the sample females in the three years preceding the survey.

Antenatal Care

The proportion of pregnant females that received antenatal care is quite low in Uttar Pradesh. Only 35

per cent births received antenatal checkups of which majority were carried out by doctors. In rural areas, as many as 70 per cent births did not receive any antenatal care, while in urban areas the figure was much lower at 34 per cent.

TABLE 12.9

Proportion of Births for which Antenatal Care was not Availed in Uttar Pradesh, 1998-99

Categories	*% Births without Antenatal Care*
Rural	69.6
Urban	34.1
Regions	
Western	66.3
Central	62.2
Eastern	62.9
Bundelkhand	64.7

Source: *NFHS-2*, 1998-99, Uttar Pradesh Report.

The highest proportion of births without antenatal checkups was recorded in the Western region, followed by Bundelkhand, Eastern and Central Uttar Pradesh, all above 60 per cent. The former Hill region of the unbifurcated State was the only region with more than 40 per cent births having received antenatal care. By social groups it was seen that upper castes received highest number of antenatal checkups followed by SCs, OBCs and STs. Antenatal care increased with increasing level of economic status of households, and also with increasing level of education of the females.

Immunisation against Tetanus

Vaccination of pregnant females against tetanus is carried out under the RCH Programme in order to prevent the incidence of tetanus in both the mother and the infant. It was seen that as many as 44 per cent females in rural areas had not been vaccinated against tetanus, while the figure in urban areas was much lower at 17 per cent. Three quarters of the births in urban areas had been immunised against tetanus, as compared to 46 per cent in rural areas.

Differences across regions show that Bundelkhand fared the worst with half the births without tetanus immunisation and less than 40 per cent births with two or more injections. While the Western region had a high proportion of births without tetanus immunisation, 45 per cent of the births in the Western region received two or more doses of the vaccine. The Central and Eastern regions were also advantaged in this regard, with 60 per cent births in the Eastern region and 50 per cent births in the Central region having received two or more doses of the vaccine.

TABLE 12.10

Proportion of Births for which Tetanus Toxoid Injections were Received by Mothers in Uttar Pradesh, 1998-99

Categories	*% Births for which Mother Received Tetanus Toxoid Injections*		
	None	*One*	*Two or More*
Rural	44.5	8.5	46.5
Urban	17.2	5.3	76.7
Regions			
Western	45.6	7.5	45.7
Central	38.8	11.8	49.4
Eastern	33.6	6.5	59.7
Bundelkhand	50.9	10.4	38.1

Source: *NFHS-2*, 1998-99, Uttar Pradesh Report.

Institutional and Attended Deliveries

The percentage of institutional deliveries increased from 11 in 1992-93 to 17 per cent in 1998 (NFHS, 1998-99). The percentage of births that took place in medical institutions was about five times higher in urban areas (35.4%) than in the rural areas (7.7%) (NFHS, 1992-93). There is a significant regional variation as far as institutional deliveries are concerned. Bundelkhand with 16.1 per cent of such deliveries tops the list, followed by the Eastern region (11.1%), Central region (10.8%), Western region (9.7%) (Perform Survey 1995). According to the RCH survey by IIPS, the lowest figure was of Badaun (6%). In the Central region most districts had figures below the state average.

Trained personnel provide assistance to less than one-fourth of the total deliveries in the state (IIPS 2001,). Three-fourths of the deliveries take place in unhygienic conditions at home. It is because of this that Uttar Pradesh health scenario is marked by a very high degree of reproductive morbidity and mortality.

Reproductive Health Problems in Women

The proportion of women reporting any reproductive health problem was very high in Uttar Pradesh–41 per cent in urban and 37 per cent in rural areas.

The highest proportion of women reporting any reproductive health problem belonged to Western Uttar Pradesh (48%) followed by Bundelkhand (41%). The Eastern region had 35 per cent women reporting reproductive health problems, and the lowest figure of 23 per cent was recorded in Central Uttar Pradesh.

TABLE 12.11

Proportion of Women Reporting any Reproductive Health Problem in Uttar Pradesh, 1998-99

Categories	*% Women with any Reproductive Health Problem*
Rural	37.4
Urban	40.8
Regions	
Western	47.8
Central	23.2
Eastern	34.7
Bundelkhand	41.0

Source: *NFHS-2*, 1998-99, Uttar Pradesh.

12.3.7 Provision of Health Infrastructure: Public and Private

Infrastructure for health care in Uttar Pradesh is extremely inadequate. In 1991 the number of hospitals in the state were only 6.6 per cent of the total hospitals in the country and the number of dispensaries in the state in 1989 were 6.2 per cent of the total dispensaries. Beds available in the hospitals work out to 2930 persons per bed. This is the highest figure amongst all the states in the country (except Bihar).

There are significant inter-regional variations in the availability of the public sector health infrastructure. The Perform survey (1994-95) estimated that in the public sector the number of Government hospitals, CHC/PHC and Sub-centres was 24930. Of these, 12000 were located in the Eastern region, 6000 in the Western and 1135 in the Bundelkhand region. The public sector providers include auxiliary nurse midwives (ANMs), *anganwadi* workers and village health guides. Their numbers for Uttar Pradesh as a whole was estimated at 87938. There were 37822 such providers in the Eastern region, 30216 in the Western region, 16024 in the Central region and 3000 in Bundelkhand.

Table 12.12 shows the public facilities per lakh population in 1993-94. The state had 3.6 allopathic hospitals/dispensaries (including PHCs) per lakh of population. The Eastern region had 3.2 such hospitals per lakh population and the Western region, 3.1 such hospitals per lakh population. While the state's average in the number of beds in allopathic dispensaries (including PHCs in 1993-94) per lakh population was 51.8, the average number of beds in Eastern Uttar Pradesh in allopathic dispensaries was only 43.9 per lakh population. Similarly, while there were 2.3 PHCs per lakh population in Uttar Pradesh in 1993-94, the prosperous Western region had only 1.9 PHCs per lakh of population.

TABLE 12.12

Availability of Health Infrastructure in Uttar Pradesh Per Lakh Population, 1993-94

Item	*Eastern*	*Western*	*Central*	*Bundelkhand*	*Uttar Pradesh*
1	*2*	*3*	*4*	*5*	*7*
No. of Allopathic Hospitals/ Dispensaries Including PHC's	3.2	3.1	3.5	4.6	3.6
No. of Beds in Allopathic Hospitals/ Dispensaries	43.9	45.2	64.3	55.6	51.8
No. of PHCs	3.8	1.9	2.2	2.7	2.3
No. of Maternity and Child Welfare Centres/ Sub-centre (1991-92)	14.5	12.7	13.5	19	14.3

Source: *NFHS-2*, 1998-99, Uttar Pradesh Report.

Data for the 1990s shows a steady accretion in health infrastructure. The total number of Government allopathic hospitals/dispensaries increased from 3434 (2.95 per lakh population) in 1990 to 4959 (3.49 per lakh population) in 1996, while the number of beds increased from 53631 (39.8 per lakh population) to 62529 (40.8 per lakh population) over the same period. In 1989-90, the number of ayurvedic and unani hospitals/dispensaries were estimated at 2064 which increased to 2320 by 1995-96. The number of beds and the number of patients who were treated increased from 9408 and 185 lakh respectively to 10717 and 280 lakh respectively over the corresponding period. The total number of government homeopathic hospitals/ dispensaries increased from 950 in 1989-90 to 1149 by 1995-96 while the number of patients treated rose from 36.1 lakh to 86 lakh in the corresponding period.

Although the number of health facilities has steadily increased, the population coverage under the PHCs and CHCs is still very large. Moreover, studies have noted that most of the existing facilities are non-functional on account of various factors such as lack of building equipment, equipment and stock of medicines, lack of availability of staff due to prolonged absence or vacancies. It has been noticed that patients are routinely required to resort to outside purchases of medicines and clinical investigations, in comparison to the private provider where these services are likely to be available under one roof.

Staff shortage is a major weakness of the health care system. Of 3,787 sanctioned positions for medical officers in Uttar Pradesh primary health centres, 1524 were found to be vacant in 1997. The ANMs, the most significant extension health workers, are seriously over-burdened and lack promised back up and support. One ANM subcentre is sanctioned for every 6200 population. However, 1016 ANM vacancies were recorded in 1997. According to a World Bank report it is found that there have been no new ANM postings against vacancies in a number of areas during the last 8 years. Interestingly, while there are more than 1000 ANM vacancies in the state, there are around 7000 women trained as ANM who are waiting for assignments. As a consequence of these staff shortages, most ANMs in the district are forced to cover a population larger than what is defined by government norms. A major problem of the health care system is the shortage of competent staff in rural locations and the consequent overstaffing of selected urban locations.

It is obvious from the above discussion that a massive public sector health set up exists in the state. The government provides services to the rural community through fixed site dispensaries, sub-centres and PHCs, etc. Outreach services to children and pregnant women are provided by ANMs. The services to the poor at all the facilities are provided free, though a nominal user fee has been introduced for the non-poor at the CHC level and above. It is, however, surprising that these services remain costly and bypass the bulk of the state's population. A number of studies/surveys reveal that health consumers are dissatisfied with the financial burden of care, the lack of cleanliness in facilities and behaviour and attitude of the staff.[2]

As far as the MCH services are concerned a number of studies suggest that the outreach services are actually out of reach of the needy mothers and children. A baseline survey of Uttar Pradesh (1993) suggests that less than 16 per cent of the households were actually visited by a PHC/SC worker during the three month period before the survey with the picture virtually unchanged between 1993 and 1998 (Mohan, 2001). Both inter-temporal and inter-spatial analysis also suggests that the ANMs in particular are able to visit a very limited proportion of the households allocated to them. It appears that the major reasons for this gap are the lack of local accountability structures as well as the unrealistic workload, which the ANMs are subjected to (Mohan, 2001).

This, it is apparent that the public health system suffers severely from the problem of access and quality of services delivered.

The Private Sector

A large network of private providers exists along with the public sector providers. The total number of registered and unregistered private sector doctors is estimated to be around 1.5 lakh. Trained and untrained dais are estimated at around 1.1 lakh while commercial outlets, including medical shops, pharmacies, etc. number about seven lakh (Mohan, 2001). Unlike the distribution of public sector providers, the highest concentration of the private providers is in the Western region. The distribution of health providers understandably has a strong bearing on the health care in Uttar Pradesh. Regions with a lower concentration of medical providers (in proportion to population) have lower maternal and child health care coefficient and higher unmet need for family planning services.

The total number of registered allopathic doctors was 23730 and 18400 were in the private sector. A large number of doctors in the state actually belong to the homeopathic and ayurveda/unani traditions. Lucknow, with 3993 allopathic doctors, has the highest number of doctors in the entire state. A large number of these doctors (3735) are actually in the private sectors (Mohan, 2001). Sonbhadra with only eight allopathic doctors is at the bottom of the list. The Western region has the highest concentration of allopathic doctors with 8264 registered medical providers, while the Eastern region which houses a slightly larger proportion of Uttar Pradesh population has only 6022 allopathic medical providers. The Central region has 7420 allopathic doctors and the Bundelkhand region is the least well served by registered medical providers. Records of the relevant agencies suggest that almost two-thirds of the registered medical providers in Uttar Pradesh are non-allopathic medical providers.

A number of studies show (see section 12.3.10 below) that while there is a heavy dependence on the public sector for the provision of family welfare services, a very small proportion of the population depends upon public health services in case of normal ailments, and here too, the services are mainly provided by untrained

2. Baseline survey for Uttar Pradesh Health Systems Development Project, (STEM, 2000). The findings are supported by other surveys and studies and the district level health assessment of World Bank.

practitioners. This implies that solutions to the problem of health care access will require bold and innovative solutions, based on the existing strengths of both the public and private sectors.

12.3.8 Trends in Public Expenditure on Health

Health care in India is a joint responsibility of the central as well as state governments although the state is responsible for the bulk of this expenditure. Public expenditure on medical, public health and family welfare, as detailed in the state budget documents, has been analysed here to gain an understanding of the temporal trends in public expenditure on health care in Uttar Pradesh.

Interstate Pattern in Expenditure on Health and Family Welfare

In order to gain a better understanding of the inter-state trends in health finances, and to gauge the position of Uttar Pradesh with regard to this, figures on the revenue expenditure on health and family welfare in 1999-00, taken from the RBI *State Finances*, have been analysed below for health and related sectors (family welfare, water and sanitation and nutrition):

In terms of per capita expenditure on medical and public health across the states, Uttar Pradesh (Rs. 63.23) has one of the lowest figures, much below the national average of Rs.123.2. Well performing states such as Tamil Nadu and Kerala have the highest per capita expenditures, more than twice the level in Uttar Pradesh. In case of family welfare, Uttar Pradesh again has the lowest per capita expenditure at Rs. 12.92 as compared to all other states. Highest expenditures on family welfare were seen in the states of Himachal Pradesh, Tamil Nadu, Andhra Pradesh and Kerala, while the lowest expenditures showed the same pattern as in the case of medical and public health. All states neighbouring Uttar Pradesh had higher figures than Uttar Pradesh. Even Bihar, had a marginally higher per capita expenditure on family welfare.

Per capita expenditure on nutrition in the state budget was less than Re. 1, while expenditure on drinking water and sanitation stood at Rs. 18.76, again the lowest among states. For all these sectors taken together, Uttar Pradesh per capita expenditure stood at Rs. 94.91, while Bihar had a per capita expenditure level of Rs. 120.79. Among the larger states, Andhra Pradesh, Kerala, Karnataka and Tamil Nadu had expenditure levels which were nearly three times as high and even poor states like MP and Rajasthan had per capita expenditures on health related sectors which were almost twice as high as Uttar Pradesh. Although there is some year to year fluctuation, it is apparent that per capita expenditure on health in Uttar Pradesh is among the lowest.

TABLE 12.13

Per Capita Revenue Expenditure on Health and Related Sectors

State	*Medical and Public Health*	*Family Welfare*	*Water Supply and Sanitation*	*Nutrition*	*Total*
Andhra Pradesh	117.74	31.01	53.67	147.36	349.79
Bihar	72.90	24.20	21.58	2.10	120.79
Gujarat	162.63	25.31	39.87	34.84	262.65
Haryana	120.19	21.32	110.68	12.61	264.79
Himachal Pradesh	371.66	49.51	253.22	16.25	690.64
Jammu and Kashmir	330.45	20.65	189.41	2.60	543.11
Karnataka	141.22	28.76	70.73	16.08	256.79
Kerala	186.65	33.37	58.31	1.22	279.55
Madhya Pradesh	92.54	14.80	63.79	9.66	180.79
Maharashtra	134.38	11.46	76.72	6.54	229.10
Orissa	98.16	21.28	62.28	19.01	200.74
Punjab	215.50	16.93	49.62	0.00	282.05
Rajasthan	130.61	29.10	111.33	9.92	280.96
Tamil Nadu	158.57	29.16	42.94	86.16	316.81
Uttar Pradesh	**63.23**	**12.92**	**18.76**	**0.00**	**94.91**
Rank of Uttar Pradesh	(16)	(16)	(16)	(16)	(16)
West Bengal	137.33	20.79	41.57	4.24	203.94
All States	**123.32**	**21.39**	**54.74**	**22.92**	**222.37**

Source: *RBI State Finances.*

Note: Population as on March 1999, based on interpolation.

Expenditure on Health and Family Welfare as Percentage of NSDP

The figures given in the table below show clearly that health and family welfare forms a minute part of the total net state domestic product of the states. Gujarat, Haryana, Maharashtra and Uttar Pradesh are the only states where the proportion is below 1 per cent. Uttar Pradesh (0.96) has the third lowest figure in the country. Himachal Pradesh and Jammu and Kashmir, contrary to their low per capita expenditures, show highest figures of health expenditures in terms of percentage of NSDP (3-3.5%) in the country. Other states show figures between 1-2 per cent. Among the states neighbouring Uttar Pradesh, all except Haryana have figures higher than Uttar Pradesh.

TABLE 12.14

Expenditure on Health and Family Welfare as a Percentage of NSDP Across States, 1998-99

States	*Health*	*Family Welfare*	*Total*
Andhra Pradesh	0.8	0.21	1.01
Assam	0.86	0.18	1.04
Bihar	0.82	0.2	1.02
Gujarat	0.85	0.14	0.99
Haryana	0.67	0.13	0.8
Karnataka	0.87	0.14	1.01
Kerala	0.87	0.14	1.01
Madhya Pradesh	0.94	0.14	1.08
Maharashtra	0.51	0.04	0.55
Orissa	1.05	0.27	1.32
Punjab	1.01	0.09	1.1
Rajasthan	1.28	0.3	1.58
Tamil Nadu	0.92	0.18	1.1
Uttar Pradesh	**0.81**	**0.15**	**0.96**
West Bengal	1	0.15	1.15

Source: SDP figures are taken from *RBI Statistics* related to the Indian Economy. For three states, 1997-98 figures are available. These are assumed to grow at five per cent between 1997-98 and 1998-99.

TABLE 12.15

Expenditure on Health and Family Welfare in Uttar Pradesh as a Proportion of NSDP and Total Revenue Expenditure, 1974-75 to 1999-2000

Years	*Health Expenditure as % of NSDP*	*Health Exp. as % of Total Revenue Exp.*
1974-75	.77	4.8
1978-79	.97	5.0
1982-83	1.04	5.3
1986-87	1.47	6.5
1990-91	1.10	6.5
1991-92	.97	6.0
1992-93	1.03	5.8
1993-94	1.10	6.9
1994-95	.99	5.8
1995-96	.97	5.7
1996-97	.95	6.1
1997-98	1.25	6.4
1998-99	0.96	4.7
1999-00	—	4.4

Source: RBI *State Finances* and RBI, Statistics relating to the Indian Economy.

Figures from 1974-75 to 1990-91 have been taken from Reddy and Selvaraju (1994). *Health Care Expenditure by Government of India*, while those from 1990-91 to 1999-00 have been taken from RBI reports on State Finances.

Trends in Expenditure on Health and Family Welfare in Uttar Pradesh

While the revenue expenditure on medical and public health in Uttar Pradesh has shown an increase from Rs. 46.75 crores in 1974-75 to Rs. 1066.08 crores as estimated for 1999-00, expenditure on family welfare has also increased substantially from Rs. 8.3 crores in 1974-75 to Rs. 161.42 crores as estimated for 1999-00. However, in terms of the proportion to net state domestic product (NSDP), the figure fluctuates between a mere 0.9 to 1.2 per cent over the years, the highest being 1.25 per cent in 1997-98.

The expenditure on health and family welfare as a percentage of the total revenue expenditure of the state is also very low, varying between 5 to 7 per cent over the years. The figures show an increasing trend from 4.8 per cent in 1974-75 to 6.5 per cent in 1990-91, dipping marginally and then rising again to 6.9 per cent in 1993-94. It then shows a declining trend again for two years, but again rises to above 6 per cent. Consequently, however, the figure shows a decline to 4.7 per cent in 1998-99 and is estimated further lower at 4.4 per cent in 1999-00.

TABLE 12.16

Per Capita Expenditure on Medical, Public Health and Family Welfare in Uttar Pradesh, 1974-75 to 1999-2000 (Constant Price)

Years	*Per Capita Health Expenditure in Rs. (1980-81 base)*
1974-75	8.61
1978-79	11.10
1982-83	13.25
1986-87	19.04
1990-91	17.34
1991-92	16.60
1992-93	17.24
1993-94	18.93
1994-95	17.30
1995-96	16.79
1996-97	17.31
1997-98	19.32
1998-99	14.62
1999-00*	15.26

Source: Figures from 1974-75 to 1990-91 have been taken from Reddy and Selvaraju (1994) *Health Expenditure Across the States in India*, while that from 1991-92 to 1996-97 have been taken from D.B. Gupta's paper on *Public Expenditure Analysis on the Health Sector in Uttar Pradesh*. The rest have been calculated from state budget documents.

Note: * - Revised Estimate.

Trends in Real Per Capita Expenditure on Health and Family Welfare

The per capita expenditure on health and family welfare in Uttar Pradesh (at constant 1980-81 prices) had almost doubled on an average from Rs.8.61 in 1974-75 to Rs.14.62 in 1998-99 and Rs.15.26 as indicated by the Revised Estimate (RE) of 1999-00. The data shows an increasing trend with 3 distinct peaks in 1986-87, 1993-94 and 1997-98 when the figure reached Rs.19 per capita. As shown earlier, the state government health expenditure, however, is one of the lowest in the country, well below the average health expenditure of all the state governments put together.

Public Expenditure on Health and Family Welfare by Functional Categories

Analysing the public expenditure on health and family welfare by functional categories, it is seen that while non-plan expenditure forms bulk of the expenditure in medical and public health, it is *vice versa* in the case of family welfare, with negligible non-plan expenditure over the years.

TABLE 12.17

Government Expenditure on Health and Family Welfare by Functional Categories in Uttar Pradesh, 1974-75 to 1999-2000 (Rs. Lakh)

Years	*Medical and Public Health*			*Family Welfare*		
	Plan	*Non Plan*	*Total*	*Plan*	*Non Plan*	*Total*
1974-75	1149.6	3525.4	4675.0	833.4	0.0	833.4
1978-79	2223.9	5958.3	8182.2	1332.2	0.0	1332.2
1982-83	2378.4	10823.6	13202.0	5250.9	0.0	5250.9
1986-87	14102.2	16140.1	30242.3	10001.1	0.0	10001.1
1990-91	12916.2	34686.6	47602.8	8991.8	41.3	9033.1
1991-92	7662.8	38717.0	46390.0	16450.0	0.2	16450.2
1992-93	9800.5	47719.0	57520.0	1530.0	0.8	15300.8
1993-94	8372.2	53534.0	61910.0	25590.0	1.3	25591.3
1994-95	9050.1	53251.0	62300.0	27220.0	9.6	27229.6
1995-96	9532.9	65444.0	74970.0	22420.0	0.0	22420.0
1996-97	11561.0	70660.0	82220.0	29300.0	4.1	29304.1
1997-98	36162.9	105372.4	141535.3	32229.2	0.0	32229.2
1998-99	1867.0	99933.0	101799.0	22071.1	2.2	22073.3
1999-00	4377.0	101088.0	105465.0	21555.0	0.0	21555.0

Source: Figures from 1974-75 to 1990-91 have been taken from Reddy and Selvaraju (1994). *Health Expenditure by Government of India*, while that from 1991-92 to 1996-97 have been taken from D.B. Gupta's paper on Public Expenditure Analysis on the Health Sector in Uttar Pradesh. The rest have been calculated from state budget documents.

The plan expenditure on health increased from Rs.1149 lakh in 1974-75 to Rs.12916 lakh in 1990-91, after which it declined gradually, remaining around Rs.9000-9500 lakh in 1995-96. In 1997-98 it peaked to Rs.36162 lakh but then dropped again drastically to Rs.187 million the next year. The RE for 1999-00, however, indicate a slight rise in plan expenditure to Rs. 4377 lakh. The non-plan expenditure on medical and public health has been rising steadily from Rs. 3525 lakh to Rs. 99933 lakh in 1998-99. It peaked at Rs. 105372 lakh in 1997-98. The figures for 1998-99 and 1999-00 were slightly lower at Rs. 99933 lakh and Rs. 101088 lakh respectively.

As compared to medical and public health, the expenditure on family welfare is a much smaller amount, almost all of it is plan expenditure. The plan as well as total expenditure on family welfare was Rs. 830 lakh in 1974-75. Over the years the plan expenditure increased sharply to Rs. 16450 lakh in 1991-92. It reached Rs. 25591 lakh in 1993-94 and has since fluctuated between Rs.2-3 lakh, peaking in 1997-98 to Rs. 32229 lakh but dropping again to Rs. 22073 lakh in 1998-99 and further to 21555 lakh in 1999-00. The non-plan expenditure on family welfare has remained negligible over the years, declining from a high of Rs. 41 lakh in 1990-91 to Rs. 22 lakh in 1998-1999.

Details of Revenue Expenditure on Health and Family Welfare in Uttar Pradesh

Much of the revenue expenditure by state governments goes towards payment of salaries. The same is in the case of health. Payment of salaries and wages forms bulk of the expenditure on health and family welfare. This indicates the extent of availability of funds for other purposes. This section explores further details of revenue expenditure on health and family welfare in terms of proportionate expenditure on salaries and other components of recurrent expenditure in the health budget.

In the case of medical and public health, expenditure on salaries formed 62.7 per cent of the total revenue expenditure in 1990-91. It was 69 per cent in 1995-96, from which it dipped to 54 per cent in 1997-98, but peaked again at 70 per cent in 1998-99. The RE for 1999-00 puts the figure at 56.7 per cent. Salary expenditure in family welfare shows a fluctuating pattern with generally higher proportions as compared to the medical and public health. The figure was about the same as that of medical and public health in 1990-91 and 1995-96. In 1998-99 it peaked at 89 per cent of the budget, but is estimated to fall to 62.5 per cent in 1999-00.

TABLE 12.18

Expenditure on Selected Items as % of Total Revenue Expenditure on Health and Family Welfare in Uttar Pradesh, 1990-91 to 1999-2000

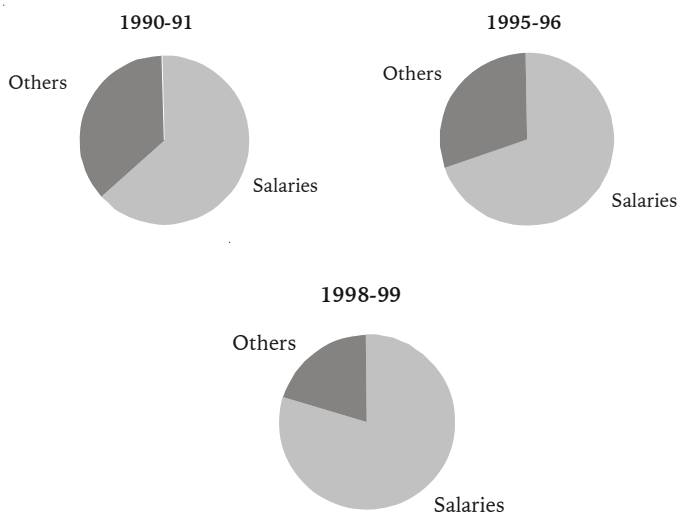
Years	*Medical and Public Health*					*Family Welfare*				
	Salaries	*Scholarships & Stipends*	*Grants*	*Maintenance*	*Drugs*	*Salaries*	*Scholarships & Stipends*	*Grants*	*Maintenance*	*Drugs*
1990-91	62.69	2.62	4.75	.82	0	62.32	3.8	.71	0	0
1995-96	69.03	1.38	6.30	1.74	.37	69.15	0	5.78	0	.31
1997-98	53.72	.88	6.88	.52	1.74	67.45	1.43	.33	0	13.43
1998-99	70.14	2.58	3.82	.94	3.96	88.92	1.09	.03	0	.90
1999-00*	56.67	2.22	16.14	.61	7.94	62.52	1.71	.13	0	2.36

Source: Uttar Pradesh State Budget Documents.

Note: * - Revised Estimate.

FIGURE 12.4

Proportion of Expenditure on Salaries to Total Revenue Expenditure on Health and Family Welfare in Uttar Pradesh, 1990-91 to 1998-99



Expenditure on scholarships and stipends forms a very small part of the revenue expenditure on medical and public health, varying around 2 per cent for most of the years. The proportion is lower in the case of family welfare, fluctuating around 1 per cent except for a high of 3.8 per cent in 1990-91.

Grants form a regular part of the revenue budget and show a variation between 4 to 6 per cent over the years in the case of medical and public health. In 1990-91 they formed 4.75 per cent of the budget, subsequently fluctuating between 3-6.5 per cent. In case of family welfare, grants form a minor part of the budget, remaining below 1 per cent, except for 1995-96 when the proportion was 5.8 per cent.

Maintenance expenditure again forms a minuscule part of the total revenue expenditure, remaining below 1 per cent for most of the years. In family welfare there has been no expenditure on maintenance for the years considered.

Expenditure on drugs and medicines also show very low figures and account for less than 5 per cent of the health budget. The 1990-91 Budget includes drugs as a part of materials and supplies, hence there are no figures for drugs in the budget. Drugs show a rising trend in the case of medical and public health, but for family welfare they show a fluctuating trend with an abnormal high of 13 per cent in 1997-98.

Thus it can be seen that expenditure on salaries dominates revenue expenditure by the government in both health and family welfare. Other expenditures form minor parts of the total budget. If all the items discussed above are clubbed as recurrent expenditure, then this forms about 70-80 per cent of the budget expenditure in health and family welfare.

Capital Expenditure on Health and Family Welfare

The figures for capital expenditure in the health budgets are usually small amounts as compared to revenue expenditure, and mostly attributed to construction and building works. Capital expenditure is wholly plan expenditure in the case of health and family welfare in Uttar Pradesh.

Figures for capital expenditure in health and family welfare have shown a rising trend from Rs.545.5 million in 1990-91 to Rs.823.2 million in 1997-98. As percentage of total capital outlay, a peak of 8.3 per cent was reached in 1991-92, but thereafter the trend has been declining, with capital outlays on health and

family welfare touching lows of 2.74 per cent and 3.19 per cent in 1998-99 and 1999-00 respectively.

TABLE 12.19

Capital Expenditure on Health and Family Welfare in Uttar Pradesh, 1991-92 to 1999-2000

(Rs. Million)

Years	*Exp. on Medical, Public Health & Family Welfare*	*% to Total Capital Outlay*
1990-91	545.5	4.63
1991-92	592.1	8.30
1992-93	533.2	4.20
1993-94	532.4	5.61
1994-95	658.9	5.88
1995-96	541.3	4.79
1996-97	644.1	4.49
1997-98	823.2	4.94
1998-99	575.6	2.74
1999-00	631.1	3.19

Source: RBI reports, on *State Finances*.

Expenditure on Major Heads in the Health and Family Welfare Budget in Uttar Pradesh

The figures on the percentage of total revenue expenditure on the major heads show that the maximum expenditure is on urban health services, which form about a third of the total health expenditure and has shown only a marginal increase over the years. This is followed by rural health services, which has shown a significant increase from about 21 per cent in 1990-91 and 1995-96 to 27 per cent in 1998-99. Expenditure on family welfare shows a marked decline over the years from 24 per cent to 21.5 per cent and then to 17.8 per cent. The other significant component of the revenue expenditure on health is public health, which includes disease prevention measures and efforts towards eradication and control of major diseases through various programmes. The share of public health in total revenue expenditure has fluctuated from 17.55 per cent in 1990-91 to 18.7 per cent in 1995-96, falling to 16.5 per cent in 1998-99. The smallest share of health expenditure is towards medical education, research and training. The expenditure on this has remained constant at around eight per cent over the years.

TABLE 12.20

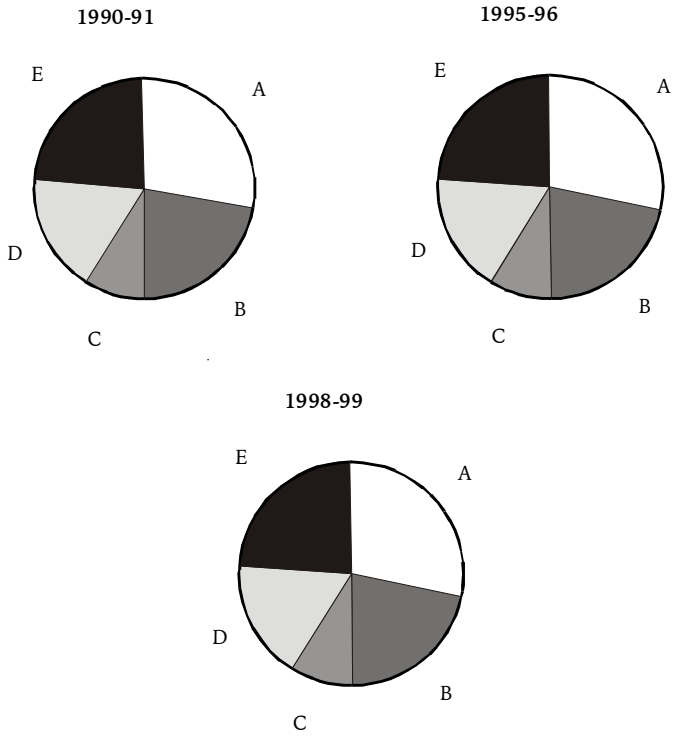
Proportion of Expenditure on Major Heads to Total Revenue Expenditure on Health and Family Welfare in Uttar Pradesh

Major Heads under Revenue Expenditure	*% Expenditure to Total Revenue Expenditure*		
	1990-91	*1995-96*	*1998-99*
Urban Health Services	28.24	30.00	30.04
Rural Health Services	21.47	21.35	27.18
Medical Education, Research and Training	8.70	8.46	8.37
Public Health	17.55	18.71	16.48
Family Welfare	24.05	21.48	17.82

Source: The figures are based on data taken from the relevant Uttar Pradesh state budget documents.

FIGURE 12.5

Proportion of Expenditure on Major Heads in the Total Revenue Expenditure on Health and Family Welfare in Uttar Pradesh



Note: A - Urban Health Services; B - Rural Health Services; C - Medical Education, Training and Research; D - Public Health; E - Family Welfare.

Sector-wise Expenditure on Health and Family Welfare in Uttar Pradesh

Expenditure on health and family welfare in Uttar Pradesh can further be grouped into primary, secondary and tertiary sectors broadly on the basis of the information available on expenditure by minor heads in the state budget documents. It can be seen from the table below that the proportions have been constant over the years across all the three sectors.

TABLE 12.21

Percentage Expenditure Across Sectors in Health and Family Welfare-Uttar Pradesh

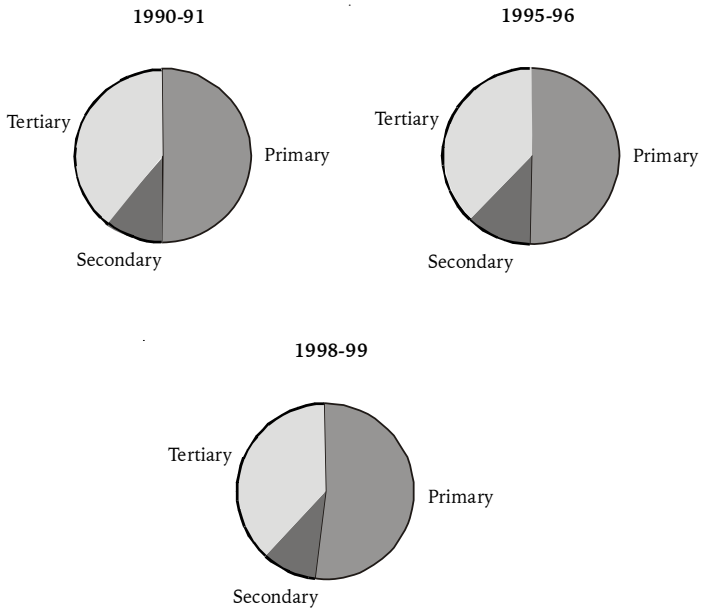
Sectors	*% of Total Health Expenditure*		
	1990-91	*1995-96*	*1998-99*
Primary	50.12	49.97	51.67
Secondary	10.05	11.96	9.59
Tertiary	39.83	38.07	38.74

Source: The figures are based on data taken from the relevant Uttar Pradesh state budget documents.

The primary sector includes expenditure on rural health services, prevention and control of diseases and public health publicity. It accounts for half of the total expenditure in medical and public health. This is followed by the tertiary sector which includes all administrative expenses, hospitals and dispensaries, medical stores and drug manufactures as well as expenditure on medical education, research and training. The percentage has been constant at around 38-40 per cent over the years in this case. The secondary sector accounts for the lowest proportion of health expenditure. Its percentage has almost been constant between 10-12 per cent from 1990-91 to 1998-1999.

FIGURE 12.6

Proportionate Sector-wise Health Expenditure in Uttar Pradesh



Health Expenditure in Uttar Pradesh: Some Conclusions

Compared to other states, the fiscal priority given to health in Uttar Pradesh is lower than the national average. As a percentage of total budgetary expenditure, the outlay on health shows some decline. While there is no systematic trend in relation to state income, the latter has itself grown very slowly in the state in the period up to the late 1990s.

The per capita expenditure on health and related sectors is among the lowest in Uttar Pradesh (along with Bihar) and has stagnated in real terms over the last decade and a half. Capital outlays on health have fallen as a proportion of total expenditure. A very small proportion of the expenditure is devoted to items such as drugs and maintenance. Urban health services receive a higher allocation compared to rural services, and the tertiary sector absorbs close to 40 per cent of the budgetary resources devoted to health.

12.3.9 Financial Burden of Health Care and Utilisation of Public and Private Health Services

This section explores the crucial dimension of utilisation of public and private health services in various economic groups across the different regions of Uttar Pradesh. It is primarily based on an analysis of the NSS 52nd Round Survey data, supplemented by the World Bank Living Conditions Survey (1997-98) and the NFHS-2 survey. The conclusions reached here are important and of considerable concern to the policy makers and planners. Briefly put, these are as follows:

(i) The cost of accessing health services, both from the public and private sector, is quite considerable, in relation to the meagre resources of households. This determines both access, and the pattern of utilisation of health services by households.

(ii) In case of hospitalisation, it is quite clear that the poor are not able to access the required services, and it is therefore disconcerting to note that the share of the public sector has been declining over the years.

(iii) Better-off households are able to access the meagre public sector health resources far more effectively than the poor households. Cost is one dimension determining this differential access.

(iv) Outpatient services are now largely being provided by the private sector. But the quality

of such services is exceedingly poor and bulk of the providers are unqualified practitioners.

(v) Public health inputs (vaccinations, pre and postnatal maternal care) is still largely a prerogative of the public sector.

Expenses on Hospitalisation

Hospitalisation imposes a huge cost on households. The average total expenditure per case of hospitalisation in the last one year is higher for Uttar Pradesh than for India as a whole in both rural and urban areas. The cost of hospitalisation and medical expenses was found to be Rs. 4949 per person in India and Rs. 5580 per household in Uttar Pradesh.

Hospital expenditures appear to be associated with the ability to bear the financial burden of such episodes with better-off households in better-off regions being able to avail slightly better facilities—quite often in the private sector. The average cost of hospitalisation was the highest in the Hills and the Western region, followed by the Central and Eastern region, while it was the lowest in the Bundelkhand region, which is also the poorest.

TABLE 12.22

Cost of Hospitalisation Per Hospitalised Person

Region/ Sector	*Cost of Hospitalisation & Other Medical Expenses*	*Other Hospitalisation Related Expenses*	*Total Direct Expenses*	*Indirect Cost*
West	5424.3	417.65	5841.95	827.63
Central	4302.11	375.76	4677.88	745.73
East	3786.14	375.62	4161.76	718.8
Bundelkhand	2707.64	182.9	2890.55	636.26
Total	**4567.97**	**381.88**	**4949.85**	**759.79**

Source: NSS 52nd Round (computed).

The same feature is also shown in the quintile-wise expenditure on hospitalisation. Expenditure per person on hospitalisation in rural Uttar Pradesh increases from Rs. 1495 in the lowest quintile to Rs. 10204 in the highest quintile. Similarly in urban Uttar Pradesh, expenditure on hospitalisation is the lowest in the poorest quintile (Rs. 2291) and increases to Rs. 11628 in the highest quintile. This is also the case for the regions of Uttar Pradesh—with expenditures in the higher quintiles generally much higher than that incurred in the poorer quintiles.

TABLE 12.23

Cost of Hospitalisation and Related Medical Expenses per Hospitalised Person in Uttar Pradesh by Per Capita Consumption Quintile (Rs.)

	Region/Sector		*Monthly Per Capita Consumption Quintile*			
	1	*2*	*3*	*4*	*5*	*Total*
Rural						
West	1249.88	1643.91	2457.65	3639.5	11369.35	5451.11
Central	1786.8	1434.29	1414.92	4724.66	8529.98	4380.9
East	1492.09	2669.59	2785.01	3482.71	10201.65	4167.16
Bundelkhand	646.53	827.12	1267.31	4113.37	3147.64	1398.65
Total	**1494.76**	**2080.3**	**2131.87**	**3666.49**	**10203.76**	**4638.59**
Urban						
Hill	125	852.81	2802.23	4374.88	11895.14	8184.81
West	2791.88	4007.36	5564.96	5193.34	14073	6806.68
Central	756.47	2373.6	2593.14	3750.97	9749.73	5454.55
East	2902.54	2841.18	3371.17	2743.79	7890.89	4107.79
Bundelkhand	982.83	3424.63	3023.96	10764.51	21139.44	4737.85
Total	**2291.12**	**3424.05**	**4156.35**	**4866.15**	**11627.92**	**6044.8**

Source: NSS 52nd Round (computed).

While the expenditure per day is considerably higher in the private hospitals (Rs. 504 in private hospitals, compared to Rs. 290 in public hospitals), except for Central Uttar Pradesh, the number of days in hospital are higher for public hospitals (14) than for private

TABLE 12.24

Cost of Hospitalisation Per Person in Public and Private Hospitals in Uttar Pradesh

Region/Sector	*Public*				*Private*				*Both Public and Private*			
	Cost Incurred in Hospital	*Other Medical Costs*	*Other Costs*	*Total Costs*	*Cost Incurred in Hospital*	*Other Medical Costs*	*Other Cost*	*Total Costs*	*Costs Incurred in Hospital*	*Medical Costs*	*Other Costs*	*Total Costs*
West	4960	475	547	5982	5536	369	949	6854	5350	403	820	6572
Central	3154	390	611	4154	5184	317	827	6327	4097	356	711	5164
East	3597	367	710	4674	3964	381	728	5073	3782	374	719	4875
Bundelkhand	2162	121	705	2989	3621	282	550	4453	2740	185	644	3568
Total	**3830**	**391**	**631**	**4852**	**5032**	**357**	**845**	**6234**	**4495**	**372**	**750**	**5617**

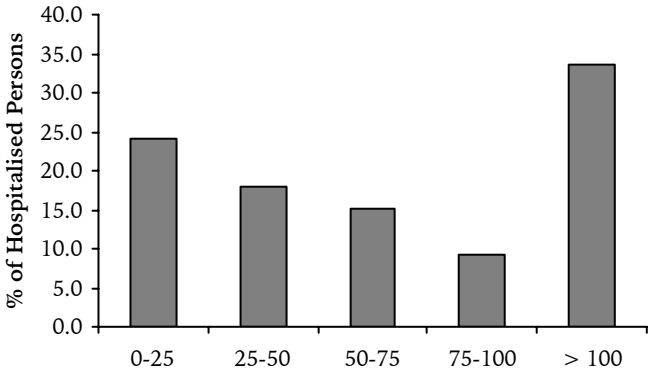
Source: NSS 52nd Round (computed).

hospitals (10.2). This may be because of the nature of cases or because of the lengthening of investigation/ treatment time. The net result is that private hospitals are about 25 per cent costlier in the state as a whole as well as across each of the state's regions.

More than one-third of the households reporting hospitalisation cases spent an amount exceeding the annual per capita expenditure on hospital related expenses. More than a quarter of the households spent between more than half their annual per capita expenditures on hospitalisation.

FIGURE 12.7

Expenses Per Hospitalised Person as % of Per Capita Consumption Expenditure



Since better-off households spent more on hospitalisation, hospitalisation would appear to be a normal good (those with higher incomes spending more) but this ignores the compelling evidence that in the absence of resources, the poor are not able to take recourse to hospitalisation, or can take recourse to inadequate or very poor quality of hospital care only. While the rich are able to spend more on hospitals, there is evidence from the NSS surveys to show that the financial burden on them is also extraordinarily high.

As a percentage of per capita consumption expenditure, both the poor and the rich (i.e. all expenditure classes) spend a great deal on hospital cases. In fact, the richest households in both the rural and urban areas of Uttar Pradesh are found to be spending more as a percentage of their annual consumption expenditure than the poorest households in terms of consumption.

TABLE 12.25

Per Capita Expenditure on Hospitalisation as Percentage of Per Capita Consumption Expenditure (All Households, Uttar Pradesh, 1995-96)

Region/Sector	*1*	*2*	*3*	*4*	*5*	*Total*
Rural						
West	56.72	62.33	91.45	98.26	143.20	117.69
Central	82.36	53.91	49.69	115.03	123.27	100.26
East	84.94	115.81	89.78	92.06	151.82	116.50
Bundelkhand	30.42	41.15	66.32	97.21	51.90	52.07
Total	**79.03**	**85.20**	**73.40**	**97.22**	**139.76**	**112.19**
Urban						
West	98.69	102.22	118.16	81.08	99.73	98.27
Central	31.23	63.99	56.31	65.65	83.68	74.21
East	100.76	74.35	75.51	48.39	65.17	66.61
Bundelkhand	37.01	87.63	58.15	173.38	78.82	100.74
Total	**82.62**	**88.28**	**88.50**	**79.69**	**91.56**	**87.72**

Note: Expenditure includes Medical Expenditure only.

Source: NSS 52nd Round (computed).

Table 12.26 gives the sources from which households have financed their hospital expenditures. More than 44 per cent of expenditure on hospitalisation is financed from sale of assets or debt. This is only marginally less than the proportion of expenditure financed from current income or own savings.

TABLE 12.26

Source of Meeting Expenditure on Hospitalisation

Region/ Sector	*Income/ Savings*	*Sale of Assets*	*Debt*	*Other Sources*	*Total*
West	41.80	20.01	33.36	4.83	100.00
Central	49.39	6.62	23.81	20.19	100.00
East	46.72	8.50	35.76	9.02	100.00
Bundelkhand	53.58	1.88	39.46	5.08	100.00
Total	**46.41**	**12.63**	**31.80**	**9.16**	**100.00**

Source: NSS 52nd Round (computed).

In rural Uttar Pradesh, almost half of the expenditure of households has been financed from borrowings and sale of assets, whereas for urban Uttar Pradesh, the proportion is smaller at about 27 per cent. About two-fifths of the expenditure was financed through current income and savings in rural Uttar Pradesh, and around three-fifths in urban Uttar Pradesh. It is noteworthy that households in the highest consumption quintiles have financed a significant proportion of their expenditures through

borrowings and sale of assets, which also shows that poor households are severely constrained not only in terms of asset ownership but also with respect to access to credit.

TABLE 12.27

Source of Meeting Expenditure on Hospitalisation in Uttar Pradesh

Monthly Per Capita Consumption Quintile	*Income/ Savings*	*Sale of Assets*	*Loan Sources*	*Other*	*Total*
Rural					
1	44.37	9.45	39.79	6.39	100.00
2	55.61	2.36	36.93	5.11	100.00
3	43.85	4.85	48.05	3.26	100.00
4	34.98	11.03	48.36	5.63	100.00
5	41.29	21.50	27.20	10.02	100.00
Total	**41.19**	**16.12**	**34.65**	**8.04**	**100.00**
Urban					
1	75.19	0.62	10.26	13.93	100.00
2	57.39	4.19	29.83	8.58	100.00
3	61.98	1.00	14.29	22.74	100.00
4	64.59	8.01	17.43	9.97	100.00
5	51.47	0.00	45.75	2.79	100.00
Total	**60.41**	**3.27**	**24.14**	**12.18**	**100.00**

Source: NSS 52nd Round (computed).

Expenditure on Outpatient Health Services

The average expenditure on outpatient treatment is much less as compared to inpatient treatment, the amount, at the national level, being Rs.144 in rural areas and Rs.175 in urban areas. The expenditure in Uttar Pradesh on outpatient treatment is, however, more than the national average for rural as well as urban population. Expenditure on treatment of females is less than that for males in rural areas but more than that of males in urban areas in Uttar Pradesh. In India, as a whole, females show less expenditure than males in both rural and urban areas.

Paradoxically, the cost of treatment for outpatients in the state is higher for those taking treatment from government sources. This may be because government sources are preferred in the case of more serious ailments.

Significantly, even in the case of outpatient care, only about 35 per cent of the expenditure in the state was financed from current income and a similar proportion from savings. About 7.6 per cent of expenditure was financed through the sale of assets and 14.9 per cent through borrowings.

TABLE 12.28

Cost of Treatment Per Episode by Source of Treatment

Source	*Medical Treatment*	*Other Expenditure*	*Total Expenditure*
Rural			
Government	379.69	47.62	427.3
Private	206.31	21.23	227.55
Mixed	51.00	6.13	57.12
Unspecified	13.45	0.43	13.88
Total	**201.79**	**21.03**	**222.82**

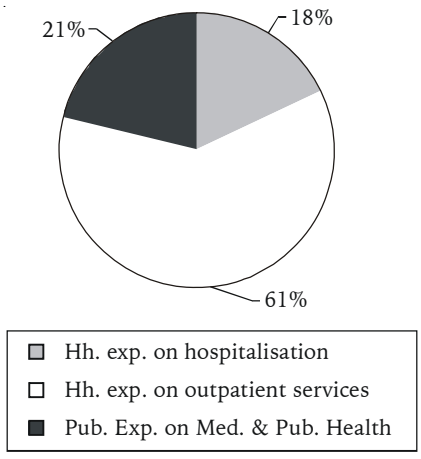
Source: NSS 52nd Round (computed).

Comparison of Household Costs and Public Expenditure on Health

At the all-India level, estimates show that household out-of-pocket expenses on health constitute about 80 per cent of health expenditure (Ministry of Health & Family Welfare, 2001). In this case, we have compared household expenses on health care with public expenditure on medical and public health in Uttar Pradesh for the year 1995-96, for which NSS estimates of household expenditure can be made. Outpatient care was the most expensive for households, amounting to a total estimated out-of-pocket expenditure of Rs. 2165.41 crores. Hospital expenses by households amounted to another Rs. 636.62 crores. As against this, the state-level expenditure on medical and public health amounted to Rs. 749.70 crores. Thus, a total of 79 per cent of total expenditure on health was incurred by households, while only 21 per cent was incurred by the state government.

FIGURE 12.8

Household and Government Expenditure on Medical and Public Health, Uttar Pradesh, 1995-96



Source: NSS (1995-96).

Of the total public resources for health, about 15 per cent are contributed by the Central government. Taking this into account, slightly less than 24 per cent of the expenditure on health in Uttar Pradesh was contributed by the Central and state governments, while 76 per cent came from households. This represents a high burden on households in a poor state like Uttar Pradesh.

TABLE 12.29

Expenditure on Health in 1995-96

Item	*Expenditure (Rs. Cr.)*
Hh. Exp. on Hospitalisation	636.62
Hh. Exp. on Outpatient Services	2165.41
Pub. Exp. on Med. & Pub. Health	749.70
Total	**2802.04**

Source: NSS (1995-96).

12.3.10 Utilisation of Hospitalisation Services

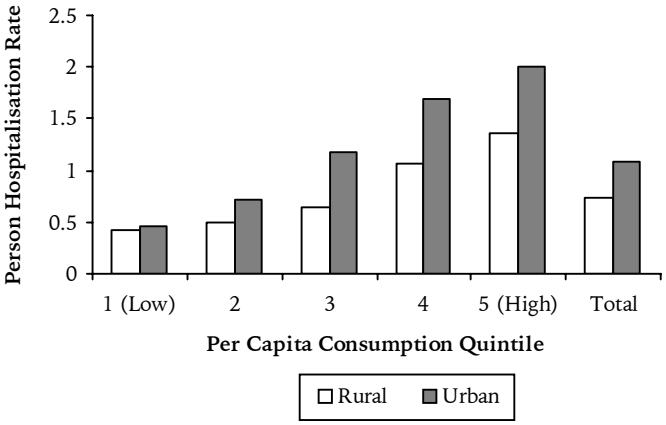
The rate of hospitalisation in Uttar Pradesh in 1995-96 (in terms of episodes per 100 persons) was marginally higher than the national average for rural areas but significantly higher for urban areas. Only 0.8 per cent of the state's population had to undergo hospitalisation. The hospitalisation rate was slightly higher among females (0.83 per cent) than among males (0.77 per cent), mainly due to higher hospitalisation rates for women in the 15-49 age group. Hospitalisation was availed of to a much greater extent by better-off persons in the top two quintiles. Overall, the rate of hospitalisation was more than three times and more than four times in the highest quintile group compared to the lowest quintile group, in rural and urban Uttar Pradesh respectively. In rural areas, these disparities were particularly significant in Central Uttar Pradesh, followed by Western Uttar Pradesh and Bundelkhand. In the urban areas, these disparities were exceptionally large in Central Uttar Pradesh.

As a result, the top two quintiles accounted for 53.28 per cent of hospitalisations, while the bottom two quintiles accounted for 28.14 per cent hospitalisations. In urban Uttar Pradesh, the corresponding percentages were 52.83 and 25.15 per cent. Thus, the richest 40 per cent households were nearly twice as likely to be able to avail of hospitals compared to the poorest 40 per cent in the state.

Less than half the hospitalisations in Uttar Pradesh (44.66 %) occurred in government institutions. This is lower than the percentage of hospitalisations in the public sector in all other low income states such as Orissa, Madhya Pradesh and Rajasthan (with the exception of Bihar where public sector hospitalisations are the lowest). However, this is also mainly due to a sharp decline in utilisation of public hospitals in Western Uttar Pradesh where only 32.28 per cent availed of these facilities. The highest utilisation of public institutions was in the Bundelkhand region where 60.42 per cent cases availed of these facilities. One can see a steady growth of private hospitals and nursing home facilities in the state. Nursing homes provided more than a quarter of the hospitalisations and more than 37 per cent in the case of Western Uttar Pradesh.

FIGURE 12.9

Percentage of Persons Hospitalised, by Per Capita Consumption Quintile, Uttar Pradesh, 1995-96



Source: NSS (1995-96).

Table 12.31 shows the utilisation of public and private hospitalisation facilities in rural and urban Uttar Pradesh by consumption quintiles. It will be seen that public facilities are more important in the case of rural areas where they provided for 47.62 per cent of the hospitalisation cases compared to only 34.45 per cent cases in the urban areas. Both in rural and urban areas, the lower two consumption quintiles availed of public hospitalisation facilities to a much greater extent. However, it will be seen that charitable hospitals were far more progressive in providing hospital care to poor households. Almost 16 per cent of the poorest individuals in the rural areas went to charitable hospitals (which were among the cheapest hospitalisation facilities available in rural areas), compared to 7.6 per cent of all cases, while in urban areas, approximately 12 per cent of the poorest individuals went to charitable hospitals compared to 5.2 per cent overall.

TABLE 12.30

Type of Hospitalisation Facility Availed Per Person, Region-wise in Uttar Pradesh

Region/Sector	*Public Hospital*	*PHC*	*Public Dispensary*	*Total Public*	*Private Hospital*	*Nursing Home*	*Charitable Hospital*	*Others*	*Total Private*
West	26.11	6.1	0.07	32.28	25.75	37.46	3.97	0.54	67.72
Central	50.85	2.46	0.23	53.54	12.55	25.02	8.04	0.85	46.46
East	44.11	5.13	0.3	49.54	21	16.99	11.17	1.31	50.47
Bundelkhand	50.01	10.41	0	60.42	7.95	26.39	5.24	0	39.58
Total	**39.35**	**5.14**	**0.17**	**44.66**	**20.35**	**26.62**	**7.1**	**1.27**	**55.34**

Source: NSS 52nd Round (computed).

TABLE 12.31

Utilisation of Public and Private Hospitals Per Person in Uttar Pradesh

Per Capita Consumption Quintile	*Public Hospital*	*PHC*	*Public Dispensary*	*Total Public*	*Private Hospital*	*Nursing Home*	*Charitable Hospital*	*Others*	*Total Private*	*Total*
Rural										
1	54.95	2.55	0.34	57.84	10.89	13.09	15.77	2.42	42.17	100
2	47.4	5.32	0.2	52.92	16.57	18.6	11.03	0.89	47.09	100
3	41.72	5.29	0	47.01	19.32	20.04	12.86	0.77	52.99	100
4	31.23	12.48	0.21	43.92	28.76	20.25	3.87	3.21	56.09	100
5	42.63	1.94	0.07	44.64	19.51	33.22	2.54	0.09	55.36	100
Total	**41.46**	**6.02**	**0.14**	**47.62**	**20.57**	**22.71**	**7.64**	**1.47**	**52.39**	**100**
Urban										
1	41.94	3.82	0.00	45.76	13.18	29.11	11.96	0.00	54.25	100.00
2	42.25	2.73	0.24	45.22	14.19	36.71	3.88	0.00	54.78	100.00
3	26.78	2.09	0.79	29.66	25.93	42.35	1.95	0.12	70.35	100.00
4	31.97	1.98	0.00	33.95	19.42	42.31	4.33	0.00	66.06	100.00
5	27.92	1.37	0.20	29.49	19.23	42.13	7.05	2.10	70.51	100.00
Total	**32.05**	**2.13**	**0.27**	**34.45**	**19.57**	**40.14**	**5.24**	**0.60**	**65.55**	**100.00**

Source: NSS 52nd Round (computed).

Thus, the poor are able to use hospitals in a more limited way and are confined to cheaper facilities in the public and private sector. The better-off households are able to make higher use of hospitals—both in the public sector and in the private sector. They are able to make larger use of the more expensive private facilities such as those offered by private nursing homes.

Utilisation of Outpatient Services

The information on per thousand distribution of outpatient treatments in the past 15 days by NSS 52nd Round respondents shows a greater extent of outpatient treatment in urban areas in case of females as compared to males. This is true for Uttar Pradesh as well as India as a whole.

According to the NSS, 6.1 per cent of the population reported some ailment during the reporting fortnight and 90.7 per cent reported receiving some treatment for the ailment (higher than the national average). A slightly higher proportion of females reported ailments, but a lower percentage among them reported receiving treatment.

Table 12.33 classifies the reported source(s) of treatment for outpatients in Uttar Pradesh. While 3 to 9.6 per cent (5.45 per cent at the state level) of the treatment sources were unspecified or mixed (both public and private), private sources emerged as the preponderant source of treatment in all regions. In the state as a whole, 90.22 per cent of the treatments were given by private sources. The highest percentage availing of government sources was in the Bundelkhand region (6.97%) while the lowest percentage was in the West (2.73%).

TABLE 12.32

Percentage of Population Reporting Ailment and Treatment in Uttar Pradesh (by Gender)

Region/ Sector	% Reporting Ailment			Of which, % Reporting Treatment		
	Male	Female	Total	Male	Female	Total
West	7.1	7.8	7.4	92.2	90.6	91.4
Central	7.8	8.3	8.0	88.1	88.6	88.4
East	3.9	3.9	3.9	95.5	94.8	95.2
Bundelkhand	5.5	5.5	5.5	91.1	90.3	90.7
Total	**5.9**	**6.3**	**6.1**	**92.1**	**91.3**	**91.7**

Source: NSS 52nd Round (computed).

The use of government facilities is smaller in the lower quintiles in the rural areas. Only 2.24 per cent of outpatients were treated at government centres compared to 6.67 per cent in the highest quintile.

TABLE 12.33

Region-wise Source of Treatment for Outpatients in Uttar Pradesh

Source	West	Central	East	Bundelkhand	Total
Government	2.73	4.63	4.59	6.97	4.33
Private	92.53	92.34	87.75	87.82	90.22
Mixed	0.46	1.28	0.70	0.11	0.81
Unspecified	4.28	1.75	6.96	5.10	4.65
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source: NSS 52nd Round (computed).

TABLE 12.34

Source of Treatment for Outpatients in Uttar Pradesh in Urban and Rural Uttar Pradesh by Consumption Quintile

Source/ Sector	Per Capita Monthly Consumption Expenditure Quintile					
	1	2	3	4	5	Total
Rural						
Government	2.24	3.35	2.53	3.79	6.67	3.59
Private	89.82	92.39	92.4	89.7	88.39	90.7
Mixed	1.1	0.1	0.21	1.67	0.57	0.71
Unspecified	6.84	4.16	4.87	4.83	4.37	5
Total	**100**	**100**	**100**	**100**	**100**	**100**
Urban						
Government	6.14	8.16	5.8	12.37	6.97	7.75
Private	89.05	87.41	87.16	86.62	89.77	87.98
Mixed	0.66	1.82	3.24	0.13	0	1.26
Unspecified	4.15	2.61	3.8	0.88	3.27	3.01
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: NSS 52nd Round (computed).

NFHS-2 also collected information on the source of health care generally availed by households in time of need (Table 12.35).

TABLE 12.35

Utilisation of Healthcare Facilities by Source in Uttar Pradesh, 1998-99

Sources of Health Care	% of Population Utilising the Given Health Care Facilities by					
	Residence		Standard of Living Index			Total
	Urban	Rural	Low	Medium	High	
1. Public Medical Sector	15.3	10.4	9.1	11.9	14.9	11.4
Government/ Municipal Hospital	10.9	3.7	3.7	5.0	8.7	5.2
CHC/Rural Hospital/ PHC	0.9	5.8	4.8	5.2	3.4	4.7
2. NGO or Trust Hospital/ Clinic	0.3	0.1	0.2	0.1	0.4	.02
3. Private Medical Sector	83.8	89.0	90.2	87.6	83.8	87.9
Private Hospital/Clinic	18.1	14.2	13.0	14.8	20.1	15.0
Private Doctor	62.6	71.3	73.2	69.7	60.8	69.5
*Vaidya/Hakim/*Homeopath	1.5	0.6	0.9	0.5	1.5	0.8
4. Other Source	0.6	0.5	0.5	0.4	0.9	0.5

Source: NFHS-2, 1998-99, Uttar Pradesh.

The data again confirms that the overwhelming majority (88%) of the population in Uttar Pradesh goes to private health facilities in time of need. The share of public sector is only 11 per cent. Among the different sources of private health care, private doctors are the most frequented with 70 per cent of the population availing their services. This is followed by private hospitals and clinics. The share of NGOs, trust hospitals and others is negligible. Sources of non-allopathic care such as ayurveda and homeopathy also have a negligible share, the bulk of utilisation being in urban areas and among the high-income groups. Utilisation of private facilities is more in rural than in urban areas, more so of private doctors. Public facilities are utilised more in urban than in rural areas, mainly government hospitals. Utilisation of health care facilities by economic status shows that utilisation of private health care facilities is more in the low-income group (90%) and declines with increasing standard of living.

The so-called 'private doctors' consist of a mix of qualifications (those with allopathic, ayurvedic or homeopathic degrees, registered medical practitioners (RMPs), quacks or 'jhola chhap' doctors and faith

healers). Among these, quacks are the most preponderant, as the following table from the World Bank Living Conditions Survey in the rural areas of Eastern Uttar Pradesh and Bundelkhand shows. Nearly half the cases are accounted for by 'jhola chhap' doctors, and 8.3 per cent by faith healers. Qualified private practitioners account for about a quarter of the cases, well ahead of the 11.5 per cent taken care of by the government system.

TABLE 12.36

Profile of Healthcare Providers in Rural Uttar Pradesh (Bundelkhand and East), 1997-98

Medical Practitioner	*Per Capita Consumption Quintile*					
	1st	*2nd*	*3rd*	*4th*	*5th*	*Overall*
Indigenous Practitioner/ Faith Healer	8.6	11.7	7.8	8.4	5.3	8.3
Jhola Chhap Doctor	53.2	52.6	49.6	42.9	43.1	48.3
Chemist	0.9	1.6	1.7	3	0.9	1.6
Government Doctor: PHC,CHC,Subcentre or Village Health Worker	5.1	4	5.2	6.4	5.5	5.2
Government Doctor, Hospital or Other	9	10.4	10.6	12.9	14.7	11.5
Private Doctor or Clinic	23	19.4	24.7	24.7	30.5	24.5
Charitable, NGO, Other	0.2	0.3	0.5	1.8	0.1	0.5
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: *World Bank Living Conditions Survey*, 1998 (computed).

Reasons for non-utilisation of government sources are given in Table 12.37. Dissatisfaction with the treatment was given as the reason in the largest percentage of cases (30.36) followed by the distance of the government facility/doctor (28.01% cases) and easier availability of the private doctor (26.06%). Dissatisfaction with the treatment was the highest in the Bundelkhand region (71.01% cases).

Distance of the government facility/doctor and easier access of the private doctors seems to be a more important reason for not using government facilities in the case of the poorer households in the rural areas. In the poorest quintile, 35.2 per cent referred to the distance of the government facility/doctor as the reason for their non-utilisation, while 31.58 per cent referred to easier access of the private doctor (together comprising 66.78% cases). In the second-poorest quintile, 36.8 per cent gave the distance of the government facility as the most important reason, whereas distance of government facility/easier access of the private doctor together comprised 59.73 per cent cases. In the higher quintiles, however, a slightly lower percentage of cases refer to distance/access as the key factors for non-utilisation of government facilities/ doctors.

TABLE 12.37

Reasons for Not Taking Treatment from a Government Source

Reason	*West*	*Central*	*East*	*Bundelkhand*	*Total*
Government Doctor/ Facility Too Far	26.15	33.69	26.11	23.04	28.01
Not Satisfied with Treatment	29.27	31.2	24.38	71.01	30.36
Long Wait	1.32	0.72	0.67	2.46	1
No Personal Attendance	1.85	0.09	0.5	0	1.12
Bad Treatment	7.49	2.64	3.2	0.37	4.58
Doctors Corrupt or Charge Money	2.9	0.93	2.14	0	1.95
Medicines not Available or Ineffective	4.32	4.1	5.49	2.37	5.16
Private Doctor More Easily Available	24.94	24.85	35.14	0.26	26.06
Others	1.76	1.78	2.37	0.5	1.76
Total	**100**	**100**	**100**	**100**	**100**

Source: NSS 52nd Round (computed).

However, in the urban areas, dissatisfaction with treatment and bad treatment were the main reasons for non-use of government facilities/doctors in all the consumption quintiles.

As regards cases where no treatment has been taken, in the state as a whole, about half the cases were not considered serious enough to merit treatment but the next most important reason (accounting for about 40 per cent of the remaining cases) was financial constraints, followed in about one-fifth of the remaining cases by lack of a medical facility. However, there were large regional variations in the reasons for not availing treatment. In Bundelkhand, 72.81 per cent cases reported financial constraints as the reason for not availing treatment.

TABLE 12.38

Reason for Not Taking Treatment from Government Facility in Uttar Pradesh (Rural/Urban, By Per Capita Consumption Quintile)

Reason/ Sector	*Per Capita Monthly Consumption Expenditure Quintile*					
	1	*2*	*3*	*4*	*5*	*Total*
Rural						
Government Doctor/ Facility Too Far	35.20	36.80	32.64	24.85	25.33	31.16
Not Satisfied with Treatment	18.76	25.06	30.70	31.98	27.13	27.10
Long Wait	0.81	0.45	0.22	0.56	0.00	0.40
No Personal Attendance	0.26	0.26	1.95	1.73	0.66	1.06
Bad Treatment	6.92	3.50	5.30	2.89	4.98	4.70
Doctors Corrupt or Charge Money	2.40	2.57	2.32	1.65	0.62	1.97
Medicines Not Available or Ineffective	2.03	7.97	3.17	4.17	7.36	4.79
Private Doctor More Easily Available	31.58	22.93	22.34	31.15	30.81	27.30
Others	2.04	0.46	1.34	1.03	3.11	1.52
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Urban						
Government. Doctor/ Facility Too Far	13.85	15.96	13.12	10.24	10.18	12.76
Not Satisfied with Treatment	44.71	50.01	48.02	43.35	43.78	46.1
Long Wait	1.84	3.74	2.92	5.92	5.77	3.91
No Personal Attendance	0.75	0.2	2.99	2.45	0.69	1.45
Bad Treatment	7.86	2.89	3.11	4.88	1.37	4.02
Doctors Corrupt or Charge Money	2.94	1.43	2.93	1.14	0.44	1.86
Medicines Not Available or Ineffective	5.75	7.18	6.47	7.74	7.99	6.96
Private Doctor More Easily Available	20.48	16.99	18.35	20.56	24.12	20.02
Others	1.83	1.61	2.1	3.73	5.67	2.91
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: NSS 52nd Round (computed).

Immunisation and Preventive Health Services

The NSS results for vaccination of children show that about half the children in the rural areas and about one-third of the children in the urban areas still go without any vaccination. Moreover, while the proportion of children without any vaccination is larger in the poorer groups but in the rural areas, a substantial proportion of the children from better off groups also go without vaccination. However, vaccination is still largely within the domain of the public sector and anything between 75 per cent and 90 per cent of vaccinations are by free government sources.

TABLE 12.39

Reason for Not Taking Treatment

Reason for No Treatment	*West*	*Central*	*East*	*Bundelkhand*	*Total*
No Facility	1.92	17.65	7.78	0.00	10.17
No Faith	4.83	9.45	0.82	0.00	5.38
Long Wait	0.07	0.05	0.00	0.00	0.04
Financial	15.84	23.32	37.24	72.87	22.99
Not Serious	67.30	44.42	30.22	27.13	52.01
Other	10.05	5.10	23.93	0.00	9.41
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source: NSS 52nd Round (computed).

TABLE 12.40

Source of Vaccination in Uttar Pradesh

Rural	*BCG Source*				
	Govt.: Free	*Govt.: Paid*	*Pvt.: Free*	*Pvt.: Paid*	*Total*
BCG- Rural	80.62	6.39	0.91	12.08	100
BCG-Urban	74.14	4	1.33	20.53	100
DPT-Rural	88.04	3.56	1.73	6.67	100
DPT-Urban	76.52	3.59	1.35	18.55	100
OPV-Rural					
OPV-Urban					

Source: NSS 52nd Round (computed).

The NFHS-2 survey also confirms a similar picture. The overall rate of utilisation of public health services for immunisation is high, with as much as 82 per cent vaccinations being carried out in public health centres such as public dispensaries, PHCs, hospitals and by health workers. The private sector has a share of 13 per cent in the vaccinations. Utilisation of private health facilities for immunisation is more in urban than in rural areas. But Bundelkhand and the Western region

TABLE 12.41

Utilisation of Health Facilities for Immunisation Purpose, Uttar Pradesh, 1998-99

Regions	*% of Population Utilising the Facility for Immunisation*		
	Public	*Private*	*Others*
Western	76.1	18.7	5.1
Central	85.4	12.9	1.7
Eastern	86.0	8.4	5.4
Bundelkhand	74.1	5.4	20.1
Total	**81.9**	**12.9**	**5.5**

Source: NFHS-2, 1998-99, Uttar Pradesh Report.

show a relatively low utilisation of public health facilities. Bundelkhand shows an abnormally high proportion of utilisation of 'other' facilities (20%) for the purpose, while the western region shows the highest utilisation of private facilities for immunisation in Uttar Pradesh.

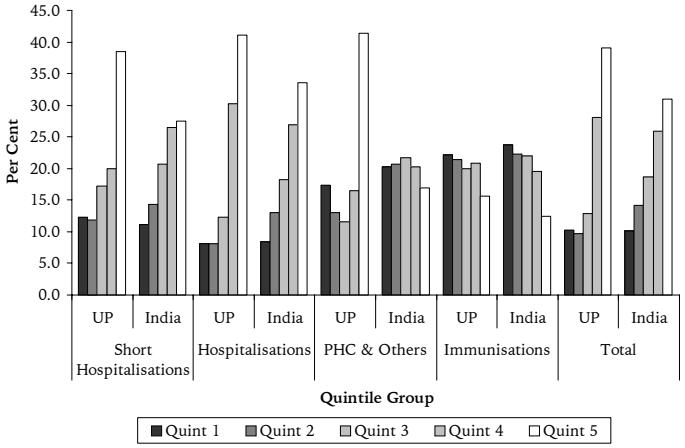
12.3.11 Distribution of Net Public Sector Health Subsidies

The distribution of net public sector subsidies has been estimated by NCAER (2000) for each component of the health programme. By and large, expenditure on immunisations is found to be relatively the most progressive, followed by expenditure on PHCs, while the expenditure on short stays and long stays in hospitals is found to be the most regressive for Uttar Pradesh. This pattern is also common to other states.

The highest two quintiles in terms of per capita consumption expenditure account for 67.1 per cent of the net public subsidy in Uttar Pradesh for all categories of public expenditure, while the two poorest quintiles account for only 20 per cent of the net subsidy. However, in the case of hospitalisations, the top two and the bottom two quintiles accounted for 71.5 per cent and 16. 2 per cent of the subsidy respectively, while for immunisations, the respective figures were 36.5 per cent and 41.6 per cent respectively.

FIGURE 12.10

Percentage Distribution of Net Public Subsidy on Health Expenditure by Quintile Groups, 1995-96



Source: NCAER (2000).

In each expenditure category, Figure 12.10 shows that net subsidies are more regressively distributed in Uttar Pradesh compared to the country as a whole. In fact PHC expenditure is progressively distributed for the country as a whole, compared to Uttar Pradesh where it is estimated to be regressively distributed.

12.3.12 Current Directions of Reform

The concern with poor health outcomes in the state has led to a number of policy changes in population and health and several collaborative interventions in the fields of reproductive and child health, primary health care and improvement in hospitals.

Uttar Pradesh Population Policy

The state has unveiled a population policy in July 2000. The policy aims at contributing to sustainable development through population stabilisation and health improvement, especially of women and children. The principal objective of the population policy is to bring down the total fertility rate (TFR) from 4.3 in 1997 to 2.6 in 2011 and further to 2.1 in 2016 through increased contraceptive acceptance, improved maternal care and reduction in maternal mortality, and reduction in child mortality, under-nutrition and anaemia. The policy has laid down a number of specific goals in each of these areas, to be achieved in phases by 2016:

1. Reduction in TFR will be achieved through increased use of contraceptives. Unmet need to be reduced from 56 per cent in 1998-99 to 10 per cent in 2016. Increase the average age of the mother at the birth of her first child from the current 18 years to 21 years by 2016. The contraceptive prevalence rate by modern methods must increase from 22 per cent in 1998-99 to 52 per cent in 2016. Median age at marriage for women should also increase from 16.4 years to 19.5 years by 2016. This will be achieved by increased awareness about the legal age of marriage.
2. Reduction in maternal mortality by improving ANC coverage from 46 per cent in 1997 to 90 per cent in 2016 through increased TT coverage; increased deliveries attended by trained personnel and increased institutional deliveries; reduction of anaemia among mothers. Eliminate severe anaemia among all women by 2011. Strengthen the systems to identify pregnant mothers at risk and referral system to attend to high-risk cases.
3. Reduction in infant and under-five mortality by increasing complete immunisation of children from 42 per cent in 1997 to 69 per cent in 2006, to 85 per cent in 2011, and to all children in

2016. Increase the use of oral rehydration salts among children suffering from diarrhoea. Eliminate severe malnutrition among children by 2011. Reduce mild and moderate anaemia among children. Reduce the incidence of ARIs among children. Ensure that 50 per cent of all children receive all required doses of vitamin A by 2006 and 90 per cent by 2016.

4. Reduction in RTI/STI and AIDS prevalence and incidence.

Cost Recovery and User Charges in Health

Given the overall burden of poverty and existing pattern of utilisation of health services and the burden of financing health care in the state, the scope of raising significant revenues through user charges seems limited. The existing revenues realised through such means have fluctuated from year to year but remained below three per cent of expenditure on health and family welfare in most of the 1990s. But the percentage of revenue receipts to expenditure has shown a rising trend since 1998-99. In 1998-99, for the first time, this ratio touched 3.54 per cent, rose to 4.1 per cent in 1999-00 and further to 7.25 per cent in 2000-01 (revised estimates). During 2001-02, the budget estimates this ratio to be 5.8 per cent. The major source of this increase comes from urban health services. The total receipts from this source ranged from Rs. 10 to 20 crores between 1994-95 to 1997-98 but rose to 30.7 crores in 1998-99. The revised estimates for 2000-01 put this figure at 83 crores.

TABLE 12.42

Revenue and Expenditure—Health and Family Welfare, Uttar Pradesh (in Rs. Crore)

Year	*Revenue Receipts*						
	Urban Health Services	*Medical Edu. Training & Res.*	*Public Health*	*Total Health*	*Family Welfare*	*Total Health & Fly. Welfare*	*% Total Rev. to Total Exp.*
1990-91	15.23	0.05	0.46	15.74	1.47	17.21	3.04
1991-92	5.62	0.02	8.80	14.45	1.73	16.17	2.57
1992-93	10.81	0.05	7.75	18.61	1.44	20.05	2.75
1993-94	3.59	0.04	11.14	14.77	1.14	15.91	1.82
1994-95	17.36	0.09	1.50	18.94	0.82	19.76	2.21
1995-96	10.61	0.04	3.15	13.79	1.28	15.07	1.55
1996-97	16.73	0.02	2.10	18.85	2.89	21.73	1.95
1997-98	19.86	0.03	1.89	21.78	4.00	25.78	1.48
1998-99	30.74	0.16	2.12	33.03	10.79	43.81	3.54
1999-00	26.89	0.10	7.98	34.97	17.65	52.62	4.14
2000-01(RE)	83.04	0.08	14.98	98.10	3.40	101.50	7.25
2001-02(BE)	83.03	0.08	15.11	98.22	3.50	101.72	5.78

Source: Uttar Pradesh Budgets.

Note: Under family welfare, receipt of Rs. 30 crores is shown receipts under family welfare programme. It is not clear whether this means grants received from Centre and other sources. But this appears to be a one-time receipt. We have excluded this from the receipts shown here for 2000-01.

The three broad areas which have contributed to the increase in revenue are hospital receipts, employee insurance and other receipts (each contributing 24.9 crores, 27.2 crores and 30.3 crores respectively in 2000-01). Further analysis shows that hospital charges increased from 27 lakh in 1999-00 to 6.1 crores in 2000-01 while hospital registration charges increased from 10 lakh to 18.7 crores. Receipts from the State Insurance Corporation increased from 13.76 crores to 27.14 crores while miscellaneous receipts from allopathic outpatient services in this sector increased from 9.96 crores to 28.31 crores over this period.

Thus, a major part of the increase comes from increases in user charges for hospital registration, hospital and outpatient services. The contributions from cost recovery have been very low in Uttar Pradesh in the past. The contributions from patient registration totalled Rs. 60 lakh in 1996-97 and receipts from fees etc. was around Rs. 2.5 crores in 1996-97, less than half per cent of the state's health expenditure (Gupta, 1999). A study of selected hospitals showed a low recovery rate of 0.42 per cent (Sanyal and Tulsidhar, 1995).

User charges in the state remained fixed since 1986 but were revised by the state in 1997. However, the courts stayed their operation since it was alleged that there was arbitrariness in the selection of the non-fee-paying category. In 1998-99, the state government issued comprehensive guidelines linking the revision of user charges to the provision of a package of improved services, which were free for poor patients (those identified as being below poverty line for the PDS and provided with white cards).

Some of the improved services promised within three years included filling up of the post of specialists and providing their services to rural hospitals on designated days, free nutritious food to poor patients, ambulance services at fixed charges in urban and rural hospitals, etc.

An important feature of the new system was to permit retention of 50 per cent of the charges collected by the facility itself which could be used for emergency medicines, cleanliness of buildings, improvement, procurement of equipment, etc.

A full assessment of the new system of discriminatory user charges is still to be made. But one obvious source of concern is the high extent of inclusion and exclusion errors in the preparation of the below poverty line (BPL) lists in Uttar Pradesh (Srivastava, 2002).

The Uttar Pradesh Health System Development Project (UPHSDP)

The UPHSDP started in 2000 with World Bank assistance for 10 years. The first phase of the Project will last five years and will involve a cost of about Rs 468 crores of which 86 per cent will be World Bank credit. The objective of the project is to establish a well managed health system which delivers more effective policy reform, institutional and human resource development and investment in health services. Thus, the four pillars of the project are: (a) policy reforms, (b) strengthening and renovation of existing resources, (c) skill development of human resources, and (d) public and private partnerships.

A detailed health systems development policy matrix has been evolved consisting of the following directions:

- Restoration and stepping up of allocations to the health sector.
- Increased allocation to drugs and other medical supplies and maintenance of equipment and increased share of allocations to primary and secondary health care.
- District level planning and budgeting to meet local needs within resource constraints.
- Cost sharing and user charges to partly cover non-salary recurrent steps, while at the same taking steps to protect the poorest sections of society.
- Increased public accountability and implementation of the Citizen's Charter.
- Strengthening of policy and strategy development capabilities.
- Reduction in skill mismatch, improved incentives for rural postings, etc.
- Incorporation of the private sector in meeting health sector goals; better regulation of the private health sector and effective partnerships.
- Contracting for support services.
- Coordination of various projects for improving health.

A Strategic Management Board (SMB) and Strategic Support Group (SSG) have been set up to initiate policy reforms and capacity building in the medical and health system. The infrastructure development component of the project will consist of improvements in buildings and equipments by renovations, strengthening, additions and replacement in primary/community health centres and district (male/female) hospitals, and getting ambulances and computers in secondary level health care delivery institutions.

The project aims at renovation and strengthening of 117 health units in 28 selected districts and equipping these with necessary equipment and infrastructural facilities. It will also ensure availability of staff and medicines at these centres.

In order to improve capacity of the health system, the project proposes to set up a computerised health management and disease surveillance information system. It will also set up a district level disease surveillance system and strengthen labs for prompt investigations.

Innovative approaches will be developed to make health services accessible to remote areas through community, NGO and public-private partnerships. The latter will also be used to provide a minimal level of standardised medical services in other areas.

Transparent quality maintenance systems will be developed to ensure good quality medicines and control on food adulteration.

The performance of the programme will be measured by a number of indicators. These include:

(a) increased budgetary resources to the health sector with greater share for the primary and secondary levels and an increasing non-wage component in the current expenditure; and

(b) improved health facility service quality measured by increased utilisation of inpatient and outpatient facilities, especially by the poor and by women; increased patient and attendant satisfaction; increased referrals from lower levels, efficient utilisation of retained user charges, availability of staff at centres according to norms, optimum use of disease surveillance system, adoption of clinical waste management practices, application of computerised financial practices and other appropriate management systems, etc.

Reproductive and Child Health Programme (RCH)

Launched in 1998 with the support of the World Bank, EC, UNFPA and UNICEF through the government of India for a period of five years with a total allocation of Rs. 6736.7 million, the programme includes all components of maternal and child health, child survival and safe motherhood, family planning services, RTI/TI and AIDS. All the districts in the state are being covered since April 1999. The objectives of the programme are to bring about a reduction in birth and death rates, infant and child mortality, child under nutrition, and to increase the couple protection rate (CPR).

State Innovations in Family Planning Services (SIFPS)

The SIFPS Project is another major initiative taken for reorienting and revitalising the family planning services in Uttar Pradesh. The project is the result of an agreement signed between the GoI and the United States Agency for International Development (USAID) on September 30,1992. Under the agreement, USAID is to provide a total assistance of US$ 325 million, out of which $225 million is to be spent in Uttar Pradesh for specific activities and $100 millions to be spent on equipment, services and training for the project. The major objectives of the project are to: (1) bring down the TFR from 5.4 (5.2 as per SRS 1993) to four at the end of project period of 10 years; (2) to increase the CPR from 35 to 50 per cent at the end of project period of 10 years; (3) to increase percentage of births receiving ANC from 30 to 40 per cent; (4) to increase percentage of deliveries assisted by a doctor or nurse/ mid wives from 17 per cent to 30 per cent.

The objectives are sought to be achieved through:

- Increasing access of family planning services by expanding service delivery in the public sector and in the non-governmental sector.
- Improving the quality of family planning services by expanding the choice of contraceptive methods and improving the technical competence of personnel.
- Promoting family planning by broadening support among leadership groups and increasing public understanding of the benefits of family planning.

The project is implemented by an autonomous society (the State Innovations in Family Planning Services Project Agency (SIFPSA)) and is presently operative in 22 districts. It has funded more than 150 private sector/NGO projects in the state.

State Programme for Action on Nutrition (SPAN)

In order to reduce child malnutrition, the GoUP Department of Women and Child Development has developed a state plan of action on nutrition. The Integrated Child Development Services (ICDS), is run by the department with the support of UNICEF, CARE, WFP and the GoI in 550 rural blocks and 21 urban slums (to be expanded to another 110 rural blocks with the support of the World Bank), along with other programmes and sectoral activities.

12.3.13 Future Challenges in Health in Uttar Pradesh and Recommendations

Health is acknowledged to be a multiplex issue which has strong linkages with nutritional intake, environmental sanitation, availability of safe drinking water, education and awareness and the access to preventive and curative health care. Uttar Pradesh continues to have a high burden of disease, high levels of infant and child mortality, high maternal mortality, low life expectancy which reflects a huge developmental backlog in the health-related spheres mentioned above. Moreover, progress in these indicators has been slow in the recent decade.

Detailed district-level analysis carried out for the *Uttar Pradesh Human Development Report* shows that there is considerable variation in health outcomes across districts with a few districts showing a clustering of poor input and outcome indicators. As far as the health care system is concerned, the poor delivery of health services through the public health system is forcing poor people to fall back upon a mainly unskilled and unqualified private sector for curative services. Despite poor quality, the cost of accessing health services, especially hospitalisation services is very high in relation to income, forcing the poor to remain outside the purview of these services.

The state government has laid down a number of important health related goals in its population policy, discussed above in Section 3.12. These include adherence to strict time bound objectives in improving ANC coverage, proportion of births attended by trained personnel, reduction of anaemia among mothers, reduction in MMR, increase in child vaccination rates, reduction in IMR and CMR, reduction in child malnutrition, and in diarrhoea and ARI cases, and improvement in vitamin A coverage. As detailed above, a number of reforms are already under way in the health sector which address institutional, managerial, professional and financial issues. Some of the issues

which need to be underscored and are crucial to improved health outcomes in the state are discussed below:

(1) The pattern of health outcomes across Uttar Pradesh again emphasises the need for a convergent and holistic approach to health. Health should not be seen as a concern of the Department of Health and Family Welfare alone. Health goals should be dovetailed with goals set in the areas of environmental sanitation, drinking water, elimination of maternal and child malnutrition, education and health awareness. Safe drinking water, availability of latrines, drainage and sewage systems and waste disposal should be a priority. The quality of drinking water should be regularly monitored by the health boards and the findings publicised through radio and newspapers.

(2) The significant variations in the health outcomes across the state also call for a decentralised approach to health management based upon a holistic approach and convergence between basic services and health services, as outlined earlier. Such an approach should rely upon district-level epidemiological surveillance, computerised MIS, flexibility in meeting gaps in requirements locally, and greater control over health related decisions and health care institutions by people's committees linked to the representative institutions at the local level (such as village health committees, district health boards, etc.). A similar approach was recommended by the Bhore committee and is also the cornerstone of the health care system in states such as Kerala and Karnataka.

(3) Using inputs from micro-level planning at local levels and people health committees, strengthened by epidemiological surveillance and MIS, district health plans may be prepared. These plans should identify needs and requirement gaps, from the primary health care level upwards and should set clear goals which are linked to key health outcomes. The performance of the functionaries in the health-related sectors should be periodically assessed in terms of the achievement of these goals.

(4) A set of core standards in basic services and health care should be identified at each level with the help of the state government and should be linked to the people's charter in health and basic services. The indicators and inputs which feed into the core standards should be easily monitorable and the standards and the charter should create clear entitlements and accountability.

(5) The requirement and gaps in the health care system are normally related to health personnel, medical inputs, equipment and institutional reform and change. The health plans should be able to indicate non-resource-based changes which can lead to improved utilisation and better performance from existing resources. At the same time, the health plans should be able to identify critical resource gaps, which also contribute to sub-optimal performance through shortages, etc.

(6) At the state level, the district, regions and state level needs in relation to the health-related sectors have to be carefully strategised and prioritised. In comparison to other states, Uttar Pradesh per capita allocation to health, family welfare, water and sanitation is much less. We have no analysis of these expenditures at the substate level, but it is likely that per capita expenditures are much below the state average in several parts of the state. Expenditures may have to be raised at the state and district level to ensure good performance. Even to arrive at the current national average, Uttar Pradesh expenditure on health and related sectors would need to be more than doubled. The under-funding of the health sector is now well recognised and the new national policy on health aims at increasing the share of health expenditure in GDP from about 1 to 2 per cent, with the Centre bearing up most of the additional burden. Assuming progressiveness in Central allocations, clear financial goals and targets can be set after taking into account requirements and the current slack in terms of the efficiency of resource use. The raising of user charges for the non-poor, permission for its retention at the unit level, and laying down of service standards are moves in the right directions, but identification of the eligible poor and provision of quality will remain major issues requiring close monitoring.

(7) The state has a large set-up of trained private medical and para-medical staff, and a much larger untrained component which has been

providing a modicum of health services in the rural and urban areas. There are now some instances even in preventive health (such as IPOV and measles vaccine) where the private-public collaboration has worked well. Public hospitals routinely resort to using diagnostic facilities provided by the private sector and in some of the programmes, private doctors are being contracted to provide certain services in rural areas. While some of these examples have emerged because of the inefficiency of the public sector, the others could possibly represent a more cost-effective and optimal use of resources already available. Decentralised health planning should see how the availability of the private sector could be best utilised to meet health care needs. At the same time, a comprehensive scheme should be drawn up, with appropriate incentives, to draw doctors in the public health services to rural areas.

(8) The significant financial burden of health care, particularly in cases where hospitalisation is required, should be reduced. This requires a two pronged strategy of improving services in the public sector (and keeping these affordable) and encouraging forms of health insurance for poor and non-poor households. In the case of the poor, schemes of health insurance can be envisaged in which insurance premia are paid from the funds available for anti-poverty programmes, as suggested by Krishnan (1996).

12.4. Education

12.4.1 The Literacy Challenge and Levels of Schooling/Education

Between 1961 and 1991, the percentage of literate population in Uttar Pradesh nearly doubled, from 17 per cent to 33.2 per cent, still leaving two-thirds of the state population illiterate. During the same period, the percentage of literates in the Indian population increased from 24 to 42.9 per cent. The following table shows the increase in literacy in Uttar Pradesh between 1961 and 1991:

Even though rural literacy rates in the state have increased at a higher pace compared to urban literacy, there is still a large gap between literacy levels in the rural and urban areas.

Similarly, while there is still a large gap between male and female literacy, female literacy has been rising at a faster rate compared to male literacy, and gender disparity in literacy has been declining. Figure 12.11 gives the female-male disparity in literacy over the decades. Female-male disparities in literacy in Uttar Pradesh are higher than those prevailing nationally. In 1991, while the percentage of female to male literates was 60.8 nationally, this percentage was only 44.8 in Uttar Pradesh. The major gap is in rural literacy where the proportion of female to male literates in just over one-third, compared to more than half nationally.

Social group disparities in literacy still continue to be very large in the state. The Census only collects information on the general population and on

TABLE 12.43

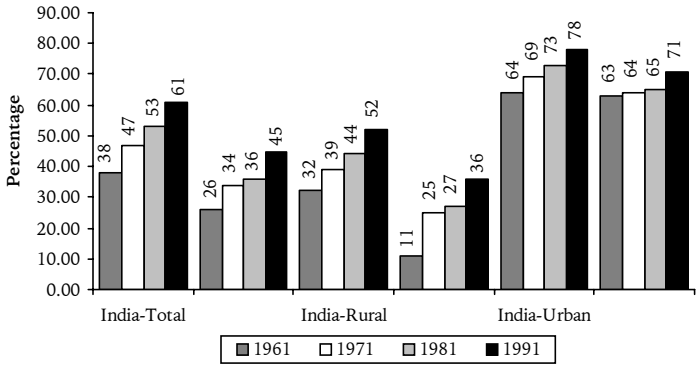
Levels and Trends in Literacy Rate Among All Population

	Persons				*Males*				*Females*			
	1961	*1971*	*1981*	*1991*	*1961*	*1971*	*1981*	*1991*	*1961*	*1971*	*1981*	*1991*
Total												
India	24.0	29.5	36.2	42.9	34.4	39.5	46.9	52.8	13.0	18.7	24.8	32.1
Uttar Pradesh	17.7	21.7	27.2	33.2	27.3	31.5	38.8	44.7	7.0	10.6	14.0	20.0
Rural												
India	18.4	23.7	29.7	36.2	28.3	33.8	40.8	47.1	9.1	13.1	18.0	24.6
Uttar Pradesh	14.3	18.1	23.1	29.1	23.1	28.0	35.2	41.5	2.6	7.0	9.5	15.0
Urban												
India	49.2	52.4	57.4	61.6	58.7	61.2	65.8	68.7	37.4	42.1	47.8	53.7
Uttar Pradesh	41.2	43.6	45.9	49.8	49.6	52.1	54.7	57.6	31.4	33.3	35.4	40.7

Source: Population Census, India, 1961, 1971, 1981 and 1991.

FIGURE 12.11

Female Literacy as a Percentage of Male Literacy



scheduled castes (SC) and scheduled tribes (ST). The changing pattern of literacy among the social groups shows that literacy among SCs and STs has increased at a higher rate for these groups compared to the general population, but the deficit is still substantial, particularly among women belonging to these social groups.

Since STs are a very small percentage of the state population, we focus attention here only on the SC population. By 1991, SCs had achieved a literacy rate which was 64 per cent of the total literacy rate. But scheduled caste women had achieved a literacy rate which was only two-fifth the literacy rate achieved by all women in the state. Gender disparity in literacy among SCs is still very high. Compared to 32.3 per cent literate males in 1991, only 8.3 per cent SC females were literate.

TABLE 12.44

Literacy Among Scheduled Castes and Scheduled Tribes in Uttar Pradesh

	Persons				*Males*				*Females*			
	1961	*1971*	*1981*	*1991*	*1961*	*1971*	*1981*	*1991*	*1961*	*1971*	*1981*	*1991*
SC												
Total	**7.1**	**10.2**	**15.0**	**21.1**	**12.8**	**17.1**	**24.8**	**32.3**	**1.1**	**2.5**	**3.9**	**8.3**
Rural	6.3	9.1	13.5	19.4	11.6	15.8	23.2	30.7	0.7	1.7	2.7	6.6
Urban	19.0	23.4	27.4	33.6	28.5	33.0	38.5	43.9	7.7	11.8	14.3	21.5
ST												
Total	**-**	**14.6**	**20.5**	**28.4**	**-**	**22.5**	**31.2**	**40.0**	**-**	**5.6**	**8.7**	**15.7**
Rural	-	13.3	19.0	26.8	-	21.4	29.7	38.5	-	4.3	7.3	14.1
Urban	-	29.1	50.7	54.2	-	35.1	60.9	63.9	-	21.1	38.1	42.3

Source: Population Census, India, 1961, 1971, 1981 and 1991.

TABLE 12.45

Disparity in Literacy Rate Between All and Scheduled Caste Population, 1961-1991

	Persons				*Males*				*Females*			
	1961	*1971*	*1981*	*1991*	*1961*	*1971*	*1981*	*1991*	*1961*	*1971*	*1981*	*1991*
Total												
India	42.9	49.9	59.0	70.2	49.4	56.7	66.4	76.2	25.4	34.2	44.0	59.3
Uttar Pradesh	40.1	47.0	55.1	63.6	46.9	54.3	64.1	72.2	15.7	23.7	27.8	41.5
Rural												
India	48.4	54.0	52.3	73.5	53.4	59.2	68.4	78.4	27.5	39.0	47.0	63.1
Uttar Pradesh	44.1	50.2	58.6	66.8	50.2	56.4	65.9	73.9	26.9	24.3	28.7	44.0
Urban												
India	44.3	54.8	63.8	73.0	54.9	63.5	72.2	79.5	26.7	40.4	50.9	63.9
Uttar Pradesh	46.1	53.6	59.7	67.4	57.5	63.4	70.3	76.3	24.5	35.4	40.3	52.7

Source: Computed from *Population Census*, India, 1961, 1971, 1981 and 1991.

Trends in Literacy during the 1990s

These trends show a more rapid increase in literacy, with female and SC literacy rising at a faster rate than the overall rate. The latest (2001) Census figures permit an analysis of the overall trends in literacy during the past decade.

By 2001, Uttar Pradesh had achieved an overall literacy rate of 57.4 per cent (70.2 % for males and 43% for females). In terms of growth in literacy, Uttar Pradesh ranks 5th among all states and female literacy has increased at a rate higher than total literacy. But the state still ranks 17th among 20 large Indian states, with three-fifth of the women still reported as being illiterate.

District level analysis of the literacy situation, carried out for the Uttar Pradesh Human Development Report, shows that certain important changes seemed to have occurred in the literacy situation, which have both positive and negative features. Between 1981 and 1991, there was a close correlation between the level of literacy of a district in 1981 and the change that it experienced during 1991. In other words, most low literacy districts also experienced low rates of change during 1981-1991. This seems to have changed during 1991-2001. First, the coefficient of variation (measuring the relative distance between districts in terms of literacy), has gone down for total, male and female literacy, but it is still the highest for female literacy.

Second, the correlation between male literacy in 1991 and change in it during 1991-2001 is small but negative (indicating that low male literacy districts experienced relatively higher rates of change). A similar result holds for total literacy although the correlation is still weaker. But in the case of female literacy, however, the correlation between the level of literacy in 1991 and rate of change during 1991-2001 is positive although very small. A fairly large number of below average female literacy districts continued to show poor rates of change during the decade. The low female literacy-poor performance districts were distributed over all the regions of Uttar Pradesh and included Bareilly, Etah,

TABLE 12.46

Literacy Growth in India, 1991-2001

State	*Literacy 2001*			*Literacy 1991*			*Decadal Change in Literacy*			*Gender Gap*	
	Persons	*Male*	*Female*	*Persons*	*Male*	*Female*	*Persons*	*Male*	*Female*	*1991*	*2001*
India	**65.38**	**76**	**54.28**	**51.63**	**64.1**	**39.28**	**13.75**	**11.8**	**15**	**24.85**	**21.68**
Andhra Pradesh	61.11	70.9	51.17	44.09	55.1	32.72	17.02	15.7	18.45	22.41	19.68
Assam	64.28	71.9	56.03	52.89	61.9	43.03	11.39	10.1	13	18.84	15.9
Bihar	47.53	60.3	33.57	37.49	51.4	21.99	10.04	8.95	11.58	29.38	26.75
Chhattisgarh	65.18	77.9	52.4	42.91	58.1	27.52	22.27	19.8	24.88	30.55	25.46
Gujarat	69.97	80.5	58.6	61.29	73.4	48.92	8.68	7.11	9.68	24.47	21.9
Haryana	68.59	79.3	56.31	55.85	69.1	40.47	12.74	10.2	15.84	28.63	22.94
Himachal Pradesh	77.13	86	68.08	63.86	65.7	50.41	13.27	20.4	17.67	15.25	17.94
Jammu & Kashmir	54.46	65.8	41.82	NA	NA	NA	NA	NA	NA	NA	23.93
Jharkhand	54.13	67.9	39.38	41.39	55.8	25.52	12.74	12.1	13.86	30.28	28.56
Karnataka	67.04	76.3	57.45	56.04	67.3	44.34	11	9.03	13.11	22.92	18.84
Kerala	90.92	94.2	87.86	89.81	93.6	86.17	1.11	0.58	1.69	7.45	6.34
Madhya Pradesh	64.11	76.8	50.28	44.67	58.5	29.35	19.44	18.3	20.93	29.19	26.52
Maharashtra	77.27	86.3	67.51	64.87	76.6	52.32	12.4	9.71	15.19	24.24	18.76
Orissa	63.61	76	50.97	49.09	63.1	34.68	14.52	12.9	16.29	28.41	24.98
Punjab	69.95	75.6	63.55	58.51	65.7	50.41	11.44	9.97	13.14	15.25	12.08
Rajasthan	61.03	76.5	44.34	38.55	55	20.44	22.48	21.5	23.9	34.55	32.12
Tamil Nadu	73.47	82.3	64.55	62.66	73.8	51.33	10.81	8.58	13.22	22.42	17.78
Uttar Pradesh	**57.36**	**70.2**	**42.98**	**40.71**	**54.8**	**24.37**	**16.65**	**15.4**	**18.61**	**30.45**	**27.25**
Uttaranchal	72.28	84	60.26	57.75	72.8	41.63	14.53	11.2	18.63	31.16	23.75
West Bengal	69.22	77.6	60.22	57.7	67.8	46.56	11.52	9.77	13.66	21.25	17.36
Uttar Pradesh's Rank	**17**	**17**	**17**	**17**	**18**	**17**	**5**	**6**	**5**	**17**	**18**

Source: Population Census, 2001.

Rampur, Budaun and Moradabad in the Western region; Bahraich, Mirzapur, Sonbhadra, Balrampur, Gonda, Shravasti and Kushinagar in the Eastern region; Hardoi in the Central region and Lalitpur in Bundelkhand.

12.4.2 Access to Elementary Schooling—Enrolment, and Dropouts

According to the Directive Principles of the Indian Constitution, the state should provide free education to every child till the age of 14 years, which roughly corresponds to the completion of elementary education.

Enrolments in primary (Basic) and upper-primary (Senior Basic) education have been expanding steadily in the state. Between 1951 and 2000, according to GoUP statistics, total enrolments in primary classes in the state increased from 2.63 million to 13.4 million, while those in the upper primary classes have increased from 0.35 million to 3.18 million. Overall elementary enrolments have increased from 2.98 million to 16.59 million. Between 1950-51 and 1990-91, enrolments increased at an annual rate of 4.08 per cent but during 1991-00, the rate of increase dipped to 1.34 per cent per year. Throughout the five decades, enrolment of girls increased at a faster rate than that of boys. For elementary education as a whole, enrolment of girls rose at a rate of 6.37 per cent during 1951-1991 and during the 1990s at 2.25 per cent per year while the enrolment of boys rose at 3.43 per cent and 0.88 per cent during 1951-1991 and 1991-2000 respectively. The share of girl students in elementary education increased from 19.8 per cent in 1950-51 to 35.2 per cent in 1999-2000.

Since enrolment figures based on statistics supplied by schools are somewhat suspect, one needs to rely on large household surveys. School enrolments in Uttar Pradesh have improved dramatically in the recent years, not only in the urban areas but in the rural areas as well. A comparison of the NSS results between 1986-87 and 1995-96, shows that male and female enrolments in elementary classes increased by 47.6 per cent, or at an annual rate of 4.6 per cent, with the percentage increase in female enrolment (83.7%) clearly outstripping male enrolment which increased by 35.3 per cent over the period.

Estimates of gross and net enrolment rates are provided both by the Sixth Education Survey of the NCERT and by the NSS, for 1995-96. For 1992-93, the NCERT estimated the Gross Enrolment Rate (GER) to be 74.59 per cent for boys and 50.63 per cent for girls in Class 1 to 5. The GER for Class 6 to 8 was estimated to be only 54.57 per cent for boys and 30.52 per cent for girls (Table 12.47). But by 2002-03, GoUP estimates the combined GER to have grown to 83.85 per cent class 1 to 5 and to 87.66 per cent for Class 6 to 8.

TABLE 12.47

Gross Enrolment Rates for Education in Uttar Pradesh, 1992-93

Item	*Uttar Pradesh*	*India*
Gross Enrolment Ratio	74.59	90.04
Class 1 to 5 – Boys		
Class 1 to 5 – Girls	50.63	73.10
Class 6 to 8 – Boys	54.57	62.10
Class 6 to 8 – Girls	30.52	45.42

Source: Sixth All India Educational Survey – Selected Statistics (NCERT).

This undoubtedly reflects a rapid increase in enrolments in recent years. According to surveys carried out in the late 1990s, the percentage of rural children enrolled in schools has grown quite significantly between 1995-96 and 1998-99. According to the NSS (50th Round), about 67 per cent of the children in the 6 to 13 year age group were enrolled in schools (59 and 63 per cent in the age groups 6 to 10 and 11 to 13 in rural areas, and 73 and 76 per cent respectively in the two age groups in the urban areas). But according to the NFHS–II results, the percentage of children enrolled in the 6-14 year age group is estimated to be about 76 per cent (82.4 % boys and 62.5 % girls).

A survey carried out by UNICEF in 1999, shows that in 1998-99, about 20 per cent of children in the 6 to 13 year age group were out of school in Uttar Pradesh. The NSS of 1999-00 estimates that 28.6 per cent rural children and 22.5 per cent urban children in the age group 6 to 14 years were still out of school in 1999-00.

TABLE 12.48

Percentage Children, 6 to 14 Years, Attending School in Uttar Pradesh in 1999-2000

	Boys	*Girls*	*Total*
Rural	79.1	62.5	71.4
Urban	79.8	74.9	77.5

Source: National Sample Survey, 55th Round (computed).

The NSS estimates show that the gender gap in attendance ratios was quite significant both in urban

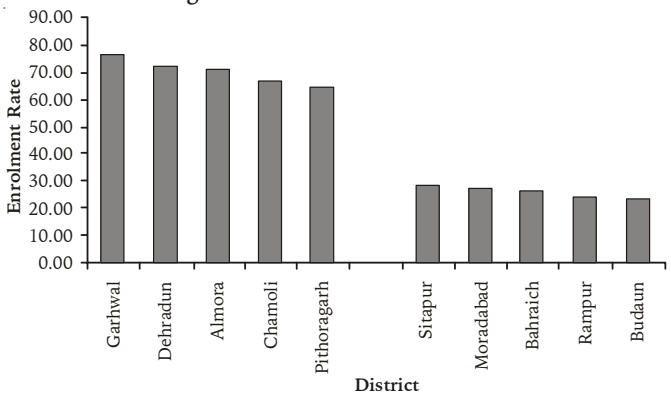
and rural areas, but in the latter only 62.5 per cent girls were enrolled as compared to 79.1 per cent boys. Almost two-fifth of girls in the age group 6 to 14 years were still out of school at the end of the 1990s. These differences reflect on the need to make special efforts to remove the disadvantage faced by girls in receiving education in order to bring their enrolment at par with the boys, especially in rural areas.

Variations in Enrolment Across the State

The Census shows that in 1991 only 41.4 per cent of children in the 6 to 13 year age group were attending school in the state. Almost half the boys but less than one-third of the girls were in school. The position was worse in the rural areas of the state where only about a quarter of the girls were in school. But there are huge variations across the state. While more than three-quarters of all children were attending school in Pauri Garhwal in the Hill region of the unbifurcated state, in Budaun district, less than one-quarter of the children were in school. For girls in schools, the variation is even larger—ranging from a low enrolment rate of just 14 per cent in Budaun to over 72 per cent in Pauri Garhwal. Seven of the top 10 highest enrolment districts were in the former Hill region of the state, while the other three are highly urban districts like Kanpur Nagar, Lucknow and Ghaziabad.

FIGURE 12.12

Highest and Lowest Enrolment Rates (6 to 13 Years) among Uttar Pradesh Districts in 1991



Source (Basic Data): Census 1991.

Several of the districts with the poorest enrolment rates are in the Rohilkhand Division (Budaun, Rampur, Moradabad), while others are in the state's Central and Eastern regions.

One may like to see whether enrolments are rising at a faster rate in the educationally poorest districts. We have computed the district-wise growth rate of student enrolments between 1979-1990 and 1998-99 based on the government enrolment figures. The Hill districts in the unbifurcated state again show the highest growth rates in enrolment while the annual growth in enrolment in the educationally poor districts is generally below the rate of growth of the child population.

Differences in Enrolment Across Socioeconomic Groups

The Human Development Survey of NCAER (Shariff, 1999) shows that not only are there large differences in enrolment rates across social groups in Uttar Pradesh, these differences are also much larger than those in educationally developed states. Enrolment rates among Muslims and SCs are much lower in Uttar Pradesh compared to the overall enrolment rates. Moreover, inter-group disparities are much lower in states like Kerala, Tamil Nadu, Maharashtra and Himachal Pradesh, compared to Uttar Pradesh.

The World Bank sponsored survey in two regions of Uttar Pradesh (Bundelkhand and Eastern Uttar Pradesh) in 1997-98 shows how educational participation among children varied quite significantly, depending upon their class, social and gender status. Enrolment among boys increased from 58 per cent in the lowest quintile to 74.6 per cent in the highest quintile, while enrolment among girls increased from 35.3 per cent to 53.8 per cent in the highest quintile. Enrolment among Muslims and SCs is much lower compared to other social groups, while children belonging to high caste groups enjoy nearly universal access to education. The largest differences were between SC girls in the lowest consumption quintile who had an enrolment rate of only 30.6 per cent and upper caste boys belonging to the high castes in the highest consumption quintile who had an enrolment rate of 95.3 per cent, more than three times as high.

In the UNICEF survey, trends across caste groups indicate a lower enrolment for SC/STs and OBCs as compared to upper castes. This difference is much larger in rural than in urban areas. The OBCs show the lowest enrolment in both rural and urban areas. The difference between the enrolment of girls and boys is also the largest in the backward castes, indicating that the greatest disadvantage is faced by girls in this group. This is followed by SC/STs and upper castes. The difference across all caste groups is again larger for rural than for urban areas.

Level-wise enrolment ratios estimated from the UNICEF survey shows that both gross and net

enrolment ratios are higher for urban than for rural areas, being highest in the primary level, followed by the upper primary level (Table 12.49). Further analysis of these rates shows that girls in all cases have lower gross and net enrolment ratios than boys, the difference being larger for rural than for urban areas. Among caste groups, enrolment ratios are highest for the upper castes followed by the SC/STs and the OBCs. The difference between the enrolment ratios of girls and boys is also lowest for upper castes, but is high for SC/STs and OBCs.

TABLE 12.49

Enrolment Ratios

	Grades 1 to 5		*Grades 6 to 8*		*Grades 1 to 8*	
	Rural	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*
Gross Enrolment Ratio	102.57	108.52	69.87	57.24	92.95	96.17
Net Enrolment Ratio	79.1	80.0	43.3	45.46	79.80	79.89

Source: UNICEF Survey.

Thus, educational participation of children in the state is still significantly differentiated, with class, social group and gender differences reinforcing differential access and the focus of educational policy naturally has to shift to those groups who are not able to participate in the educational process.

Educational Efficiency: Dropouts and Repetition

Dropouts are known to be high in elementary education in the state, though reliable figures are difficult to obtain due to the unreliability of school records, on the one hand, and weak parental recall (by which parents tend to club never-enrolled and early dropouts). But according to GoI Education Department data, more than half (52.45%) of the enrolled children drop out of school between Class 1 and 8 (49.87% boys and 57.28% girls). This is very close to the all India figures, according to which 54.14 per cent of children drop out of school between these classes.

The UNICEF survey assesses dropouts in two different ways. First, as the difference between ever enrolled and currently enrolled children. This method has to cope with recall lapses on the part of respondents and dropout rates are shown to be low. Nevertheless, a certain pattern emerges which shows that the proportion of dropouts to total age-wise population is slightly higher in urban areas (3.97) than in rural areas (2.97) in all age groups, the difference being greater in the age-group 11-13 years than in 6 to 10 years. In the age group 6 to 10 years, the proportion of dropouts for girls in the rural population (1.79) is marginally higher than that for boys (1.29). The pattern is *vice versa* in urban population, girl dropouts being marginally less than boy dropouts. The same trend continues in the 11-13 year age group but the difference increases.

In the rural areas the proportion of dropouts for all age groups are highest among the SC/STs , followed by the OBCs and the upper castes. However, in urban areas, the overall proportion of dropouts are slightly higher for OBCs as compared to SC/STs. In the 11-13 age group for urban population, SC/STs show highest proportion of dropouts followed by OBCs and upper castes.

TABLE 12.50

Percentage of Dropouts to Total Age-wise Population

	6-10 Years			*11-13 Years*			*6-13 Years*		
	Boys	*Girls*	*Total*	*Boys*	*Girls*	*Total*	*Boys*	*Girls*	*Total*
Rural	1.29	1.79	1.51	5.30	8.03	6.45	2.51	3.54	2.97
Urban	1.90	1.45	1.7	9.37	8.16	8.84	4.32	3.53	3.97

Source: UNICEF Survey.

Secondly, dropout rates are estimated from an examination of school records for 1997-98 and 1998-99. These show that, in the sample schools, of 100 children enrolling in Class 1 in government schools,

TABLE 12.51

Dropout Rates by School Management, 1997-98 to 1998-99

	Grade 1	*Grade 2*	*Grade 3*	*Grade 4*	*Grade 5*	*Grade 6*	*Grade 7*	*Grade 8*
Rural								
Government	7.42	6.50	8.60	9.71	3.20	4.51	2.66	0.80
Private	10.92	4.04	5.51	3.73	4.29	6.03	17.83	12.40
Urban								
Government	19.32	13.65	15.03	12.35	6.18	3.29	5.25	1.62
Private	7.72	5.13	5.91	4.62	2.96	4.14	1.75	1.39

Source: UNICEF Survey.

only 68 in rural areas and 49 in urban areas would cross grade five at the current rates.

Although automatic promotions are assured in primary classes, the repetition rates are still quite high impacting further on the efficiency of the system. According to the UNICEF survey in the state, the proportion of children repeating classes out of the total children currently attending school shows an increasing trend from Class 1 to 8. The repetition rates are higher for urban than for rural areas, the difference increasing markedly from Class 5. Girls in rural areas on an average have shown slightly lower repetition rates than boys, especially after Class 5. The trend in urban areas shows higher repetition for girls till Class 5, after which it gradually declines.

By caste groups, in rural areas the repetitions were highest among the upper castes followed by the SC/STs and the OBCs. In the urban areas also the repetitions were highest in OBCs, followed by the upper castes and the SC/STs. The latter two caste groups showed a very marginal difference. However, the trend for classes above Class 5 was different, showing lowest repetitions among the upper castes followed by SC/STs and then OBCs. The difference between the repetition rates for boys and girls did not show any trends across caste groups. Repetition rates by grade and school management are shown below:

Three major trends emerge from the analysis of the figures on enrolment, dropouts, proportion never enrolled and repetition rates. They are:

- Children in rural areas face a greater disadvantage in attaining basic education as compared to children in urban areas.
- Among caste groups, children of the lower castes and backward castes face a greater disadvantage in education as compared to upper caste children, and this difference is more pronounced in rural areas.
- The bias against the girl child is reflected in every indicator of basic education both in rural and in urban areas. This neglect is, however, greater in rural than in urban areas. Among caste groups, girls face a greater disadvantage in lower and backward castes as compared to the upper castes, though the disadvantage exists in all caste groups. This disadvantage is further accentuated in rural areas as compared to urban areas. Low/backward caste girls in rural areas are, therefore, educationally the most disadvantaged section in Uttar Pradesh.

12.4.3 Constraints to Education: Physical Infrastructure, Teachers, Quality

Official statistics show a steady expansion of school infrastructure in the last decade. The number of primary schools grew by 2.69 per cent annually between 1991-2001 compared to 2.22 per cent in the period 1951-1991. During the same periods, upper primary schools increased by 42.5 per cent and 4.35 per cent annually. The growth rate of teachers was, however, lower during 1991-2001 (2.06% in primary schools and 1.03% in upper primary schools) compared to 3.38 per cent and 4.75 per cent respectively during the period 1951-1991.

The EMIS for primary schools in District Primary Education Project (DPEP)-2 districts shows that despite improvement in school physical infrastructure and recruitment of teachers, the position in this regard is still far from satisfactory. A high proportion of schools continued to be single teacher schools in these districts with very high pupil-teacher ratios. Many schools still lacked basic prerequisites in the form of blackboards or toilets.

TABLE 12.52

Repetition Rates by School Management, 1997-98 to 1998-99

	Grade 1	*Grade 2*	*Grade 3*	*Grade 4*	*Grade 5*	*Grade 6*	*Grade 7*	*Grade 8*
Rural								
Government	7.70	5.85	3.20	3.19	2.81	1.47	0.46	13.68
Private	0.41	0.00	0.19	0.98	0.00	0.20	0.31	9.59
Urban								
Government	17.76	5.87	4.46	4.44	3.38	0.51	0.26	0.00
Private	4.31	1.69	8.23	6.73	1.73	0.67	2.96	0.69

Source: UNICEF Survey.

Student performance has been measured in baseline surveys for the UPBEP and the DPEP, using the MLL competency tests, and has been found to be very wanting (Section 12.4.4), though mid-term appraisals show some improvement in learning in the project areas.

Teacher performance and teacher accountability has also been a matter of concern, with government strategies focussed on many dimensions of the problem (teacher shortage, motivation, training, accountability, etc.). A major non-governmental report (PROBE, 1999) has brought out a number of significant shortcomings in the education system leading to lowering of student and parental motivation and poor learning quality. Apart from infrastructure issues and high student-teacher ratios, schools are able to function only about 150 days in a year and teaching effectively takes place for about two hours on an average. The low level of teaching activity is described by the Report as the fundamental flaw in the schooling system. In single teacher schools, the teacher's main preoccupation was to maintain a semblance of order in the classes. Even though the Report points to many elements constraining teacher performance it raises a number of issues regarding the accountability of teachers. The Report is critical of the meaningless 'information invasion' to which the students are subject and the 'minimum levels of learning' competency achievements which presently dominate decisions and actions in school education. It points out that enrolment and attendance are routinely exaggerated for a variety of reasons.

The UNICEF survey also probed issues relating to teacher attendance and student attendance. The former was done both through focus group discussions and recording the number of days a teacher had to absent for non-teaching duties. The latter was done through physical verification at the school. Irregular hours or absenteeism was reported on the part of teachers in a number of locations. At the same time, teachers themselves reported a heavy burden of official duties outside school. The survey noted that on the day of inspection, there was a substantial gap between students reported as enrolled and those recorded as present, and further between those marked as present and actually present in the school. This gap was the largest for grade one and for government schools. Thus, enrolment figures appeared to provide excessively inflated figures of students actually attending school.

12.4.4 Recent Initiatives in Elementary Education

The state has taken a number of major initiatives in the area of primary/elementary education over the last decade. The main objectives of the state in this sector during 1997-2002 have been to provide universal elementary education; to provide education to all

TABLE 12.53

Selected Indicators of Teacher Availability and Infrastructure in DPEP-2 Districts, 1999-2000

District	*Pupil-Teacher Ratio in Govt. Schools*	*% Single Classroom Schools*	*% Single Teacher Schools*	*% Schools without Common Toilets*	*% Schools with Girls Toilets*	*% Students in Schools without Blackboards*
Moradabad	66.2	8.1	14.9	39.8	51.3	11.5
Buduan	72.3	12.8	21.1	63.4	70.3	14.1
Bareilly	75	4.9	19	47.1	59.7	17.9
Pilibhit	79.4	8.7	26	62	72.3	20.8
Shahjahanpur	82.4	15.1	38.1	44.6	57.1	31.5
Firozabad	68.8	10.7	20.9	40.5	54.4	12
Lalitpur	60.9	9.9	23.7	56	69.9	4.8
Kheri	98.3	7.5	38.2	66.9	76.4	18.3
Hardoi	77.1	8.2	24	59.4	66.8	12.2
Gonda	75.9	14.5	40.8	70.1	79.2	21.1
Siddharthnagar	89.3	5.9	37.2	71.2	79.8	35.3
Maharajganj	104.7	3.2	30.9	65.9	74.6	14
Deoria	73.8	5.4	19.5	76.3	86.4	19.4
Sonbhadra	84.2	8	63	32.7	33	28.8

Source: EMIS of DPEP-2 Districts (SIEMAT, Allahabad, 2000).

children up to age of 14; decentralise planning, delivery and maintenance of educational services through local bodies; and to help enforce the legal embargo on child labour (GoUP, Ninth Plan).

A State Policy on Education (GoUP, 1999) has also been enunciated and it spells out a number of steps to improve access and quality of education, but falls short of articulating clear-cut goals. However, the Policy has accepted in principle, the need to step up allocations to basic and secondary education and to achieve an outlay of 6 per cent of SDP on education within a period of five years. According to the Policy Statement, the outlay on basic and secondary education will be raised immediately to at least 15 per cent of state expenditure. According to the Policy, private institutions will be encouraged and rules will be framed to allow them to raise revenue from tuition and other heads. While the government will not impose tuition fees at the elementary fees, it proposes to review the structure of fees under other heads, as also fees under all heads in secondary and higher education.

The emergence of education as a priority sector has led to a number of important Central and state schemes/projects being adopted, several of them having been taken up with external assistance:

Central Government Schemes

Operation Blackboard was started in 1986-87 with the aim of providing adequate physical infrastructure to primary schools, at least two teachers and essential teaching-learning material. An outlay of Rs. 1037.8 million was been made in the scheme in 2000-01. The Education Guarantee Scheme is another central scheme which has the objective of setting up educational centres, called *Vidya Kendra* in educationally unserved localities where there are at least 30 children in the 6 to 11 age group. The teachers in these centres are appointed on a contract basis by the *panchayats*, and the community is expected to find the space for the centre. The mid-day meal is an incentive scheme under which each child in a recognised primary school, with minimum certified attendance, has been (till September 2004) provided a ration of three kilos of cereal per month. However, since September 2004, cooked meals are being provided to the school-going children and provision has been made for cooking and sundry expenses.

The most important scheme is now the Sarva Shiksha Abhiyan (SSA) which has been developed by the Central government with time bound goals for Universal Elementary Education (UEE). The SSA, in partnership with the states, aims to provide useful and quality elementary education to all children in the 6-14 age group by 2010. It has laid out the time bound objectives as follows:

- All children in school, Education Guarantee Scheme, Alternate School, 'Back to School Camp' by 2003.
- All children complete five years of primary schooling by 2007.
- All children complete eight years of schooling by 2010.
- Universal retention by 2010.

The funding provided by the SSA is based on decentralised planning, integrated at the district level. Unit costs and physical norms have been developed to estimate the financial requirements at the district level. The norms are those which have been considered feasible by GoI and which are somewhat different from those used by the Expert Group set up by the Government of India. The sharing formula envisaged by SSA implies a gradually increasing share for the states (15 % in the Ninth Plan, 25% in the Tenth Plan, 50% thereafter). The SSA is an umbrella programmes which embraces existing programmes such as Operation Blackboard and seeks to integrate other bilateral and multilateral programmes in due course.

The GoUP has decided to develop plans for SSA in a phased manner with 16 districts in the first phase, 22 districts (DPEP-2) in Phase 2, and 32 districts (DPEP-3) in Phase 3. A sum of Rs. 162.75 crore was sanctioned by GoI for Phase 1 districts in 2001-02. Since 2002-03, the scheme has been implemented in all districts of the state, and district plans developed have been sanctioned.

Basic Education Project (I and II)

The state government launched the Uttar Pradesh Basic Education Project (UPBEP)–1, with World Bank assistance in 1993 in 17 districts with the aim of achieving universalisation of elementary education. UPBEP-II was started in the same districts to meet the requirement of schools, teachers and classrooms and as a result an increase in enrolments. These projects concluded in 2000.

The main objectives of the UPBEP were to improve educational access by ensuring capacity to enrol all children in the 6-10 year age group, 75 per cent of the

children in the 11-13 year age group in schools and by reducing the percentage of SC/ST children and girls not in school by at least half; improving quality and completion by bringing about 50 per cent improvement in dropout and repetition rates and MLL over the base line and making the Village Education Committees (VECs) functional; building institutional capacity at all levels.

Although admittedly there are problems in the quality of data, the growth rate of enrolment in the EP districts may have been higher than the non-BEP districts by about 33 per cent and the enrolment of girls, particularly SC girls increased more rapidly than the overall rates. Official enrolment data show an increase in total enrolment from 2.6 million in 1993 to 5 million in 2000, with the percentage of girls enrolled increasing from 31 per cent to 43 per cent over this period. Net enrolment rates in a survey of 6 districts were estimated at 84 per cent for the primary level (World Bank, 2001b). Rapid increases were also observed at the upper primary level, enabling the project to meet its enrolment goals. The percentage of girls (6-14 years) out of school is estimated to have fallen from 50 to 18 over the project period.

Dropout rates, which were estimated to be 60 per cent for girls and 40 per cent for boys, may have fallen to 27.7 per cent as per EMIS data with little differences between genders. Repetition rates at the primary stage are also estimated to have fallen from 12 per cent average to 3.3 per cent. While the mid-term assessment did not show an improvement in MLLs, the final assessment study does show improvement, although the methodologies are not comparable. But the Project has made an impact on classroom processes (World Bank, 2001b). VECs have played a role in school construction and enrolment drives in the project areas.

To improve access, 3396 new primary schools, 1464 upper primary schools, and 3429 classrooms were built under BEP. In addition, 1284 primary schools, 601 upper primary schools, and 7081 classrooms were built under BEP-II, while 870 primary schools and 80 upper primary schools were rehabilitated.

In order to convert all single teacher schools to two teacher schools, 9482 teachers in new schools, 15175 additional teachers and more than 57000 para-teachers have been appointed. Even so, 15 per cent of the schools remained single teacher schools.

Moreover, enrolment growth in Class 1 slowed down since 1997 and the enrolment increase out-stepped the increase in the creation of physical capacity and recruitment of new teachers bringing about an increase in the pupil-teacher ratio (from 47 to 60) and students per classroom in many of the districts remained very high (World Bank, 2001b)

Major inputs in the programme have been in the strengthening of decentralised management, building institutional capacity at all levels, improving and strengthening teacher training, curricula revision and improved textbooks, supporting improved classroom processes. Several models were evolved for alternative schooling, although the total number of children enrolled were below target.

The District Primary Education Project (DPEP-II)

The District Primary Education Project–II was started in 18 districts in 1997 (extended to 4 more districts in 1999) as a centrally sponsored scheme to achieve universal primary education. The objective of the project is to expand access, increase retention, improve quality and build institutional capacity. The specific aims of the project are to:

- Reduce differences in enrolment, dropout and learning achievement among gender and social groups to less than 5 per cent.
- Reduce average primary dropout rate for all students to less than 10 per cent.
- Raise average achievement level by at least 25 per cent over measured baseline assessment level and ensure achievement of basic literacy and numeracy competencies and a minimum of 40 per cent achievement level in other competencies by all primary school children.
- Provide access to all children to primary education or its equivalent non-formal education.
- Strengthen the capacity of national, state and district level institutions and organisations for planning, management and evaluation of primary education.

The DPEP has been conceived as a holistic programme, with flexible approaches, operationalising the NPE's strategy for decentralised planning and disaggregated target setting. Central to the DPEP strategy is the concept of contextuality so that programme interventions are tailored to meet the specific needs and requirements of the district. This requires decentralised planning, management and target setting for achievement of the goal of Universal Primary

Education (UPE). The approach bases itself on intensive community participation, with the community playing an important role in mobilisation, awareness building, planning and management of educational resources.

To improve access and retention, the project plans to build 3744 new primary schools, reconstruct 2398 existing schools, add 7547 new classrooms and provide 16130 toilets and 3620 hand-pumps. Sixty per cent of the cost of construction is being borne by other schemes of the Department of Rural Development or the PMGRY through convergence. To meet shortage of teachers, 8649 teachers were appointed and an additional 6471 *shiksha mitras* were in place by March 2001.

Apart from strengthening the regular school system, the projects also aims at improving access to marginal groups and older girls through several models of alternative schooling, and improving the access and retention of young girls by strengthening early care and education in the ICDS centres (which is expected to lower the load of sibling care on young girls). Integration of children with disabilities is now a special focus of the programme and a number of initiatives have also been taken to increase girls' participation. A number of alternative schooling models have been adopted under DPEP-2. These include the *shikshaghar*, *balshala*, *prahar pathshala*, *maktabs/madarsas*, Rishi Valley model and camps. Together with EGS centres, these models catered to 92613 children (50635 boys and 41978 girls).

Community participation, in particular the participation of women, is being encouraged and facilitated in a number of ways and capacity building and training of the VECs is a special priority of the programme.

A large number of measures have been taken to improve the quality of education which include improved training, focus on classroom processes, and improvement in curricula and textbooks. These appear to have been reflected in the levels of learning. A comparison of learning levels in language and mathematics between the BAS (1997) and the MAS (2000) shows an improvement for Class 1 in language in 12 of the 15 districts, (with 8 registering more than 25 per cent improvement) and in mathematics in all the districts (with only 2 registering less than 25 per cent improvement over the base year). Among Class 5 students, language competency in 8 of the 15 districts improved (with only 1 registering a more than 25 per cent increase) while mathematics learning improved in 10 districts (with 25 per cent or more improvement being registered in four districts) (DPEP Core Resource Group, November 2000).

Official enrolment statistics, quoted in the 2000-01 Annual Report, show an increase of 35 per cent in enrolment in 2000-01 over 1996-97, with girls' enrolment increasing by 60 per cent. EMIS data shows an increase in dropout rate from 52 to 46.8 per cent, while repetition rate has declined from 5.24 per cent to 3.34 per cent over the period. Detailed EMIS statistics for the period 1997-2000, reported by SIEMAT, and analysed by Aggarwal (2000) show a mixed picture in some respects. GER showed an improvement in all but 2 districts, with girls' enrolment growing more rapidly. Infrastructural facilities also improved in the districts between these years. But teacher strength had not kept pace with the increase in the number of schools, leading to a significant increase in the percentage of single teacher schools in all the 16 districts for which results were reported. Pupil teacher ratios were higher than 60 in all the districts and showed an improvement in only 2 of the districts. The extent of enrolment increase varied between districts, but 6 districts showed a decline in enrolment in Class 1. The percentage of SC/ST students enrolled showed small changes (in either direction).

The District Primary Education Project (DPEP-III)

Under DPEP-III, launched in April 2000, an additional 38 districts (6 of which are now in Uttaranchal have been de-linked from the Uttar Pradesh Project Board) are being covered with a total project cost of Rs. 804 crores and a project duration of five years. Thus, in all, 77 of erstwhile Uttar Pradesh 83 districts have been/are being covered under the projects. The objectives and the approach of DPEP-III are similar to DPEP-II. The physical inputs which will be provided by the project include 2502 new primary schools and 2977 reconstructed schools; 10140 new classrooms, 13958 toilets and 4418 hand pumps, 1530 ECCE rooms, 377 BRCs and 3833 NPRCs.

Studies of the BEP/DPEP show that project districts have experienced a higher rate of increase in enrolments and higher retention compared to non-project districts. Also learning achievements in these districts also show an improvement. The projects have also impacted teacher quality (through better training), quality of text books, and availability of physical and educational infrastructure and have given a fillip towards a greater role for the rural and urban communities and the Village and Ward Education Committees (VECs and WECs).

Joint UN Initiative and UNICEF Supported Primary Education Project

A joint UN initiative has been launched in the state which will supplement DPEP in specific focal areas, such as the programme to make education interesting for students and teachers (*Ruchipoorna Shiksha*). In addition, a UNICEF-supported project is underway which will cover the six districts in the state not included under DPEP-III.

Other State Schemes/Projects

The state has started a para-teachers or Shiksha Mitra scheme under which youths who have passed 10+2 can be employed as para-teachers. Half of those employed should be women. The selection of the *shiksha mitras* will be done by the VEC of the *panchayats*, who will have administrative control over them. The para teachers will be employed contractually for a period of 10 months and will be paid Rs 2250 per month. The scheme is expected to reduce the pupil-teacher ratio of 52:1 at the primary level. Till date more than 57000 para-teachers have been appointed, mostly in single teacher schools.

12.4.5 Role of the Private Sector

Uttar Pradesh has a long and distinguished tradition of provision of education by non-governmental religious, social and philanthropic bodies. The modern school system in Uttar Pradesh developed under the aegis of British rule. But according to the Indian Education Commission of 1881, there already existed in the state a large network of indigenous schools, the *pathshalas* or *maktabs/madarsas*, in which a single teacher imparted education to a small group of children. Till Independence, most of the primary and middle schools were managed by local bodies which also had substantial powers of regulation. However, the role of the state government in funding school education increased in the first half of the 20th century and the government also acquired regulatory and supervisory powers. By 1921, the state government's contribution in education had already increased to 52.8 per cent with the share of local bodies declining to 27.4 per cent and that of fees to 9.6 per cent.

In 1960-61, about one-fifth of educational institutions at all levels were managed by the government, while 46.5 per cent were managed by local authorities and 33 per cent were privately managed. At the primary level, local authorities managed 55.9 per cent of the schools, while at the upper primary level, they managed 53.4 per cent of schools (Vashisht, 1994). However, governments were the major source of finance for all types of managed schools, contributing 67.5 per cent of funds, while the contribution of fees was 16.9 per cent. Local Board funds contributed 9.7 per cent to the total expenditure on schools (Vashisht, 1994:5).

During the 1960s, the urban and local bodies gradually became moribund in Uttar Pradesh and in large parts of the country and their financial resources continued to dwindle. The lack of uniformity in the service conditions of teachers, in recruitment conditions etc. led the state government to promulgate the Basic Education Act, under which basic education was effectively decentralised at the state level. Under the Uttar Pradesh Basic Education Act of 1972, all educational institutions of the municipal boards and *zilla parishad's* imparting primary education were transferred to the basic shiksha parishad constituted under the Act. The *Parishad* has the responsibility of promoting basic education and to this end appointing officers and teachers, organising training, preparing the syllabi, giving recognition to schools, conduct of examinations, etc. Under Section 12, the director is empowered to issue directions for the effective control of basic schools through inspection and visits. Recruitment and service conditions of teachers are covered by Section 19 of the Act.

Although the state government bore the principal financial burden of fostering the expansion of the education system, non-governmental organisations, societies and trusts as well as private individuals continued to set up institutions for diverse reasons. These institutions were 'recognised' by the state government if they fulfilled certain laid down norms, and the further observance of certain normative criteria could entitle them to a 'grant-in-aid' which would cover the bulk of their recurring expenses, and occasionally certain specific capital outlays. Thus government financing and regulation (of fee structures, qualifications, salaries and recruitment of teachers, quality of physical infrastructure, etc.) was generic to a whole range of management structures.

Since official statistics do not cover private institutions adequately, we have taken recourse to estimates generated from the 52nd Round of NSS to consider the significance of the 'private' sector in education.

TABLE 12.54

Distribution of Enrolments by Type of Institution, Uttar Pradesh, 1995-96

		Govt.	*Local Body*	*Pvt. Aided*	*Pvt. Unaided*	*Total*
Primary	Rural	65.1	9.2	6.05	19.65	100
	Urban	24.08	5.66	20.6	49.66	100
Middle	Rural	51.41	5.02	25.32	18.25	100
	Urban	32.46	4.6	37.63	25.3	100
Secondary	Rural	43.07	2.84	46.96	7.13	100
	Urban	33.99	3.37	50.15	12.48	100
Higher Sec.	Rural	44.41	4.11	46.92	4.56	100
	Urban	38	3.12	49.35	9.53	100
Diploma	Rural	84.59	0	14.09	1.31	100
	Urban	48.61	0	41.3	10.09	100
Graduate	Rural	47.66	0.53	51.8	0	100
	Urban	39.43	3.77	54.04	2.76	100
Postgraduate	Rural	30.12	10.21	59.67	0	100
	Urban	49.05	9.97	39.93	1.05	100
Total	**Rural**	**59.23**	**7.46**	**16.04**	**17.28**	**100**
	Urban	**29.81**	**4.83**	**32.88**	**32.47**	**100**

Source: NSS 52nd Round (Computed).

First, there is a clear urban-rural divide, with two-thirds of all enrolments in urban areas in privately managed institutions, while one-third of the total were in unaided institutions (which are the most expensive). In the rural areas, only about one-third of enrolments were in privately managed institutions, with about half of these in unaided institutions. It is note-worthy that privately managed institutions play an important role even in primary and middle education and at the primary level, nearly 20 per cent of rural enrolments and half of urban enrolments are accounted for by the private unaided schools. Private aided schools are more important in the middle and secondary grades. In the latter grades, they account for about of 50 per cent of rural and urban enrolments. At graduate and postgraduate levels, government and local body managed institutions appear to include universities while colleges are covered by the grant-in-aid system.

Table 12.55 gives the distribution of enrolment according to the nature of the educational institution in Uttar Pradesh. 'Unrecognised' institutions are generally those which are unable to meet government norms and are likely to remain 'invisible' in surveys. These institutions are clearly quite important in rural Uttar Pradesh and (together with 'unknown' institutions) account for 12.8 per cent enrolments at the primary level and 10.3 per cent enrolments at the middle level. They also account for 12.5 per cent enrolments at the primary level in urban areas.

TABLE 12.55

Distribution of Enrolments by Nature of Institution, Uttar Pradesh, 1995-96

		Recognised	*Unrecognised*	*Unknown*	*Total*
Primary	Rural	87.06	10.59	2.34	100
	Urban	87.5	7.35	5.15	100
Middle	Rural	89.68	7.83	2.49	100
	Urban	96.49	2.14	1.37	100
Secondary	Rural	96.9	2.25	0.85	100
	Urban	96.39	2.96	0.66	100
Higher Sec.	Rural	97.89	0.95	1.15	100
	Urban	98.43	1.55	0.02	100
Diploma	Rural	95.9	0	4.1	100
	Urban	95.17	0.78	4.05	100
Graduate	Rural	100	0	0	100
	Urban	99.54	0.22	0.24	100
Post-graduate	Rural	100	0	0	100
	Urban	98.95	1.05	0	100
Total	**Rural**	**89.14**	**8.71**	**2.15**	**100**
	Urban	**92.43**	**4.6**	**2.97**	**100**

Source: NSS 52nd Round (Computed).

While each type of educational institution is not homogenous in terms of quality and cost, nor do students necessarily have unrestricted choice between the types of institutions (particularly in rural areas), to the extent that these choices can be made, they can be discerned through the differences in the pattern of enrolment across gender, social group, economic classes, etc. Table 12.56 brings together the results on the pattern of enrolment in different types of institutions.

Analysing the results first for rural Uttar Pradesh, we find that participation in government and local body institutions drops sharply as we move from low to high consumption quintiles. In the lowest quintile, 79 per cent of the children went to such schools in the primary grade, compared to 55.5 per cent in the highest quintile. In upper primary grades, 66 per cent children in the lowest quintile went to government/local body schools, compared to 56.5 per cent in the highest quintiles. Naturally, a much larger percentage of better-off children were able to avail of private schooling in rural areas. Similar differences exist among SC/ST and other children, and to a lesser degree, among boys and girls

TABLE 12.56

Enrolment by Sex and Type of Institution

Type of Institution	*Sex*		*Social Group*		*Per Capita Consumption Quintile Group*					
	Male	*Female*	*SC/ST*	*Other*	*1*	*2*	*3*	*4*	*5*	*Total*
Rural/Primary										
Govt.	63.8	67.2	70.8	63.0	70.23	68.89	67.86	58.23	47.64	65.0
Local	9.5	8.7	11.6	8.4	8.48	7.65	10.29	11.72	7.94	9.2
Aided	5.6	6.8	3.7	6.9	2.67	4.63	4.15	11.36	13.89	6.1
Unaided	21.2	17.3	13.9	21.7	18.62	18.84	17.7	18.68	30.54	19.7
Total	100.0	100.0	100.0	100.0	100	100	100	100	100	100.0
Rural/Upper Primary										
Govt.	49.9	55.5	57.8	49.7	61.68	53.38	53.7	43.17	47.65	51.4
Local	4.7	5.8	3.8	5.4	4.28	2.38	2.56	6.22	9.94	5.0
Aided	27.5	19.6	23.6	25.8	17.85	24.28	24.42	30.77	27.55	25.3
Unaided	17.9	19.1	14.9	19.2	16.19	19.96	19.33	19.84	14.86	18.3
Total	100.0	100.0	100.0	100.0	100	100	100	100	100	100.0
Urban/Primary										
Govt.	23.6	24.7	29.7	23.0	37.1	36.1	17.4	9.0	3.6	24.0
Local	6.0	5.3	14.3	4.1	12.5	6.3	2.0	3.5	0.6	5.7
Aided	19.1	22.5	18.8	20.7	13.9	17.4	22.0	24.6	34.2	20.6
Unaided	51.4	47.6	37.3	52.2	36.5	40.2	58.6	62.8	61.6	49.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Urban/Upper Primary										
Govt.	32.6	32.3	38.0	31.7	47.5	36.4	35.6	27.6	13.3	32.5
Local	4.1	5.2	5.5	4.5	6.3	5.8	3.4	3.1	5.6	4.6
Aided	35.6	40.0	33.0	38.3	30.2	36.1	36.6	40.1	46.0	37.6
Unaided	27.8	22.4	23.6	25.5	16.0	21.7	24.5	29.1	35.1	25.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: NSS 52nd Round (Computed).

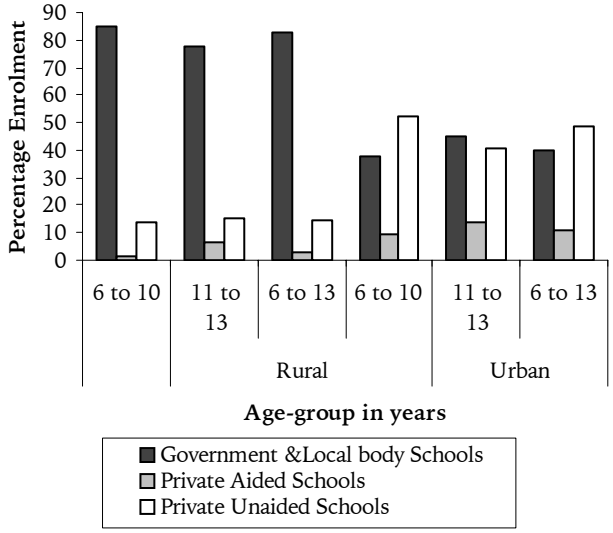
In the urban areas, the differences are much sharper. Compared to 49.6 per cent of the poorest children, only 4.2 per cent of the richest children were enrolled in government or local body schools at the primary level. Compared to 53.8 per cent of the poorest children, only 18.9 per cent of the richest were enrolled in these schools. At the primary schools, the bulk of the enrolment in the richer classes went to unaided private schools. Again while 44 per cent of SC/ST children in primary grades went to government/local body schools, among 'others' the percentage was only 27. The differences between boys and girls were negligible.

Thus, although we do not have a detailed analysis of the factors underlying school choice, taken together with the cost of schooling results discussed earlier, it seems that poorer households might be, of necessity, opting for less expensive schools, which are likely to be in the public sector.

The results of the UNICEF survey also point to similar conclusions. A total of 83 per cent children in the age group 6 to 10 years were enrolled in government and local body managed schools, 15 per cent in private unaided schools and the rest in private aided schools. In the age group of 11-13 years the proportion in private schools increased while that in government schools declined from 85 to 77 per cent. A greater proportion of SC/ST children were in government schools as compared to other castes, the highest proportion being for OBCs followed by the upper castes. In the urban areas, the private unaided schools had higher enrolment at 49 per cent than government schools (39%) and private aided schools (11%). The difference in the proportional enrolment between the private unaided schools and government schools was higher in the 6 to 10 year age group than the 11-13 year age group. A larger proportion of boys were enrolled in private unaided schools rather than girls. Among the caste groups, enrolment in private unaided schools was highest for upper castes, followed by the OBCs and SC/STs. The latter had the highest enrolment in government schools. The trend in private aided schools was the same as that of private unaided schools.

FIGURE 12.13

Percentage Enrolment by Management to Total Enrolment in Formal Schools



The results of the foregoing analysis are clear: the issue of costs of education is at the heart of the access of deprived groups to education. Initiatives to expand the private sector in education, or to increase the costs of public education across the board must confront the issue of access and equity in education.

12.4.6 Household Costs of Education

This section analyses the household expenses on various levels of education. The Directives Principles of the Constitution, the Convention on the Rights of the Child (CRC) as well as the Declaration on the Rights to Development, to which the Government of India is a signatory, provide a framework within which we can view not only the question of access to education, but also the question of costs of education. Both the Constitution (as interpreted by the Unnikrishnan judgement of the Supreme Court) as well as the International Treaties and Conventions lay down specific obligations on the Indian government with respect to the different levels of education. These issues are also, in turn, linked to the debate on the public/ private good character of the levels of education.

On the basis of evidence gathered through several large-scale surveys (NSS 42nd and 52nd Round, NCAER, UNICEF) it has convincingly been shown that all levels of education throughout the country are associated with household costs. The picture in Uttar Pradesh, in the NSS 52nd Round (1995-96), is shown in Table 12.57.

TABLE 12.57

Annual Costs of Education in Uttar Pradesh and Comparison with Per Capita SDP and Daily Wages

Education Level	*(a) Average Annual Cost Per Student (Rs.)*		*(b) Cost as % of SDP Per Capita*		*(c) Cost as Multiple of Daily Wage*	
	Rural	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*
Primary	321	1412	5.5	24.0	12.8	35.3
Middle	689	1803	11.7	30.7	27.6	45.1
Secondary	1104	2171	18.8	37.0	44.2	54.3
Higher-Secondary	1453	2693	24.7	45.9	58.1	67.3
Diploma	2975	4713	50.7	80.3	119.0	117.8
Graduate	2191	2318	37.3	39.5	87.6	58.0
Post Graduate	2115	2629	36.0	44.8	84.6	65.7
Average	**544**	**1801**	**9.3**	**30.7**	**21.8**	**45.0**

Source: NSS 52nd Round (Computed) & Directorate of Ec. and Statistics, GOUP.

It will be seen that even the lowest level (primary) is associated with an annual per student cost of Rs. 321 in rural areas, and a substantially higher cost of Rs. 1412 in urban areas. These costs rise with successively higher levels, although at each level, the costs borne per student are lower in the rural areas. At the middle school level, per student costs rise to Rs. 689 in rural areas and Rs. 1803 in urban areas. Still higher costs are associated with secondary and higher secondary levels of schooling. In urban areas, these costs are on par with the costs of university education. The most expensive education is technical (diploma) which attracts the highest cost in both rural and urban areas.

A comparison of these costs with SDP per capita and daily wage rates of unskilled workers in 1995-96 is also presented in the above Table. At the primary level, the unit costs in rural and urban areas respectively are 5.5 per cent and 24 per cent of the per capita income. They also represent 13 and 35 times the daily wage rate in rural and urban areas respectively. At the next level (upper primary), unit costs are 12 per cent and 31 per cent of per capita income in the rural and urban areas respectively. As multiples of daily wage rates, unit costs are 28 and 45 times the daily wages. The most expensive (diploma) education constitutes 51 per cent and 80 per cent of the per capita income in rural and urban areas respectively, and nearly 120 days of daily wages in both rural and urban areas. These costs have to be viewed against the Constitutional entitlement of 'free' elementary education and a treaty obligation to 'inexpensive' education at higher levels.

TABLE 12.58

Percentage Distribution of Cost Components, by Levels of Education, Uttar Pradesh, 1995-96

	Tuition	*Exam Fee*	*OtherFee*	*Books*	*Stationery*	*Uniform*	*Transport*	*Coaching*	*Other Expenses*	*Donation*	*Total*
Rural											
Primary	12.9	4.4	11.2	22.2	17.3	18.9	2.2	3.3	7.4	0.2	100.0
Middle	7.2	3.9	9.8	24.9	17.8	19.8	2.5	6.9	7.3	0.1	100.0
Secondary	2.9	6.2	8.6	23.7	15.5	16.6	4.2	16.3	5.8	0.3	100.0
Hi Sec.	4.0	5.8	7.4	25.4	14.5	10.7	7.8	14.9	6.0	3.4	100.0
Diploma	17.8	4.5	7.9	23.3	14.9	1.9	13.6	9.4	6.8	0.0	100.0
Graduate	10.4	6.8	14.0	21.3	13.0	0.4	18.3	8.2	7.7	0.0	100.0
Postgrad.	11.9	9.5	16.0	22.3	12.9	6.2	10.8	4.9	5.5	0.0	100.0
Total	**8.6**	**4.9**	**10.1**	**23.4**	**16.5**	**16.6**	**4.2**	**8.2**	**6.9**	**0.5**	**100.0**
Urban											
Primary	30.9	8.7	2.6	12.5	8.2	18.5	6.6	8.1	3.7	0.2	100.0
Middle	21.0	9.4	2.4	14.4	9.4	18.7	6.3	13.6	4.6	0.1	100.0
Secondary	14.4	8.2	3.7	14.8	10.1	15.7	5.5	22.6	4.7	0.3	100.0
Hi Sec.	12.6	9.0	4.1	15.6	9.0	12.4	7.7	24.1	5.2	0.2	100.0
Diploma	45.4	14.5	4.8	13.8	7.6	1.3	3.4	5.9	3.3	0.0	100.0
Graduate	16.6	11.3	5.6	20.7	10.4	3.6	15.1	10.9	5.8	0.0	100.0
Postgrad.	26.7	11.0	6.6	21.2	8.6	5.0	14.8	3.2	2.9	0.0	100.0
Total	**23.2**	**9.3**	**3.3**	**14.5**	**9.0**	**15.4**	**7.3**	**13.4**	**4.3**	**0.2**	**100.0**

Source: NSS 52nd Round (computed).

The contribution of different components to education costs is shown in Table 12.58. For all levels of education taken together, the share of the fee component (comprising tuition fee, examination fee and other fees) is the highest—23.6 per cent in rural areas and 36 per cent in urban areas. But what is surprising that, at the primary level, the share of fees in total cost is even higher—28.5 per cent in rural areas and 42.2 per cent in urban areas. At the upper primary level, the share of fees to total cost is 20.9 per cent in rural areas and 31.8 per cent in urban areas. Books and stationery comprise about 40 per cent of costs in rural areas and 24 per cent of costs in urban areas, with little variations between levels. Close to one-fifth of the total cost at the elementary level in both rural and urban areas is on uniforms, which is not directly related to educational performance. Coaching is a significant element of cost at higher levels of schooling. It takes up a higher share of the cost in urban areas, where it is important even at the elementary schooling level. In urban areas, the share of coaching to total costs increases from 8 per cent at the primary level to 24 per cent at the higher secondary level. In rural areas, coaching takes up 3.3 per cent of the cost at the primary level, 6.9 per cent at the upper primary level, 16.3 per cent at the secondary level and 14.9 per cent at the higher secondary level.

Student costs can naturally be expected to vary across different regions and different types of institutions, especially between government and private institutions, and there is likely to be a great deal of variation in the latter category. We have exclusively focussed on the costs of education across the four major types of institutions (government, local body, private-aided and private-unaided). First, it can be seen that while the cost of education is less than average in government institutions, education even in these institutions carries a cost in both rural and urban areas, with the cost rising quite sharply at the upper primary level. Secondly, and quite interestingly, the unit costs of government schooling also vary across regions, and are higher in the rural areas of the Western region in rural Uttar Pradesh, and in Western and Central Uttar Pradesh (which has large urban centres) in urban Uttar Pradesh. Third, private institutions are much more expensive than government institutions, particularly at the primary level. For example, the unit costs of primary education in rural areas were Rs. 609 in aided institutions compared to Rs. 210 in government schools, while in urban Uttar Pradesh, the unit costs were Rs. 1813 and Rs. 505 respectively. The differences, though less at the upper primary level, are still significant, especially in urban Uttar Pradesh. Finally, the average costs of schooling

TABLE 12.59

Average Annual Per Student Cost of Education, by Type of Institution, Uttar Pradesh, 1995-96 (in Rs.)

Region	Type of Institution				Type of Institution			
	Govt.	*Local*	*Aided*	*Unaided*	*Govt.*	*Local*	*Aided*	*Unaided*
	Rural/Primary				**Urban/Primary**			
West	220	213	725	787	499	530	1478	1475
Central	161	145	439	657	473	2288	1618	2310
East	192	303	613	509	488	560	1244	1619
Bundelkhand	153		475	478	326	1148	766	1165
Total	**210**	**242**	**609**	**638**	**505**	**543**	**1813**	**1787**
	Rural/Upper Primary				**Urban/Upper Primary**			
West	700	1002	859	1063	1026	1543	1692	1941
Central	544	519	663	864	1265	1478	1861	2998
East	483	532	631	618	871	2345	1041	3417
Bundelkhand	474	1930	476	1119	692	1127	1351	1341
Total	**622**	**624**	**740**	**826**	**1040**	**1707**	**1984**	**2534**

Source: NSS 52nd Round (computed).

TABLE 12.60

Per Student Cost of Education by Gender, Social Group and Consumption Quintile, Uttar Pradesh, 1995-96

(in Rs.)

Region	Sex		Social Group		Per Capita Expenditure Quintile				
	Male	*Female*	*SC/ST*	*Others*	*1*	*2*	*3*	*4*	*5*
Rural/Primary									
West	374	322	231	400	243	272	278	376	698
Central	312	210	220	291	164	228	175	418	736
East	296	286	206	317	216	245	260	370	751
Bundelkhand	269	195	156	260	110	314	252	397	244
Total	**338**	**293**	**241**	**349**	**210**	**261**	**268**	**397**	**747**
Rural/ Upper Primary									
West	834	861	580	907	551	746	756	859	1,067
Central	665	667	561	700	455	495	585	809	854
East	552	494	429	560	411	503	535	581	865
Bundelkhand	530	430	481	517	439	405	596	735	1295
Total	**697**	**668**	**572**	**720**	**446**	**563**	**646**	**744**	**1053**
Urban/Primary									
West	1206	1168	791	1270	533	814	1260	1787	3177
Central	2018	1391	998	1883	644	706	1559	2130	4590
East	1017	1184	576	1174	481	643	1291	1950	2796
Bundelkhand	934	765	499	935	520	770	1444	1710	2148
Total	**1487**	**1323**	**818**	**1525**	**557**	**771**	**1399**	**1968**	**4127**
Urban/ Upper Primary									
West	1709	1340	1102	1600	749	995	1348	1643	3101
Central	2454	1693	1606	2136	780	1135	1375	2336	4208
East	1819	1202	692	1667	683	784	1014	1563	4992
Bundelkhand	1096	1096	1083	1104	702	889	1346	1783	2469
Total	**2005**	**1566**	**1159**	**1886**	**764**	**983**	**1302**	**1896**	**4272**

Source: NSS 52nd Round (computed).

are not very different between subsidised and government-financed 'private-aided' schools and the 'private-unaided' schools. This is, we believe, because the latter category consists of a heterogeneous category of schools, including some of the 'elite' schools and those in the 'unrecognised' category.

Faced with different types of schooling costs, households make decisions keeping in mind their economic circumstances and the value they place upon education. Table 12.60 shows how the average cost of schooling varies across regions, for boys and girls, SC/ST and others and for households placed in different per capita consumption quintiles.

The unit costs of education are lower for girls than for boys in both rural and urban Uttar Pradesh and for primary as well as upper primary education. Since girls and boys come from similar socio-economic backgrounds (in fact, girls from less favoured economic circumstances are less likely to find themselves in schools than boys), parents appear to opt for lower investments in girls' education even at these levels. These results hold for most of the regions across the two levels of education and urban/rural areas, although there are a few exceptions.

The amount spent on the education of an SC/ST student is invariably less than what is spent for other students, at both levels of education, in urban as well as rural areas but the differences are much larger in the urban areas. For example, an SC/ST student spends, on average, Rs. 818 in urban primary education compared to Rs. 1525 for other students, while at the urban upper primary level, SC/ST students spend Rs. 1159 compared Rs. 1886 spent by others.

Across quintile groups, differences are very large at all levels, but again higher in urban areas. A student in rural Uttar Pradesh in the highest quintile spends nearly three times as much in acquiring education as a student in the lowest quintile at the primary level and about twice as much at the upper primary level. In comparison, in urban areas, a student in the highest quintile spends nearly eight times as much in acquiring education as a student in the lowest quintile at the primary level and about seven times the amount at the upper primary level.

Thus, the out-of-pocket cost of education, was by no means, inconsiderable in Uttar Pradesh in 1995-96 even at the elementary level, and tended to rise with each successive level of education. These costs naturally varied with the type of school. These costs have led to highly differentiated strategies of schooling between boys and girls, socially deprived groups and others, and between different economic strata. This is but another demonstration of market failure in the provision of education, requiring effective public policy intervention.

12.4.7 Public Resources for Education–Expenditure and Revenue Mobilisation

Since education is a state subject, bulk of the expenditure on education is incurred by the State government. But the Central government also contributes to the education sector. Moreover, external assistance has also contributed quite significantly to the growth of educational expenditure in the state.

The expenditure on education is classified under two heads—revenue expenditure which reflects operational expenditure, and capital expenditure. Most educational expenditure in Uttar Pradesh (close to 99%) is in the form of revenue expenditure though it is widely agreed that capital expenditures, which are often made out of *ad hoc* grants to educational institutions, or in recent years, out of the Department of Rural Development Schemes, are not captured well in the present classification.

Further, all expenditure is also divided into 'Plan' expenditure (reflecting investment/expenditure on new schemes) and 'non-plan' expenditure (reflecting maintenance and current expenditure on old schemes). In general, the expenditure on schemes which are in the 'Plan' in the first round are subsequently transferred to the 'non-plan' side, but there are some schemes which continue to be shown in the 'Plans'.

A number of departments, other than the education department, also cater to education at the state level. These include the Central Ministries of Social Empowerment, Rural Development, Agriculture and the Ministry of Labour. At the State level, the Departments of Technical Education, Medical Education, Labour and Employment, Agriculture, Rural Development, Social Welfare, Minorities Welfare, Rural Development, and Women and Child Development—all spend on education.

Educational expenditure is also incurred in the state through external assistance, provided either through Central schemes like 'Joyful Learning' or through state programmes like the BEP. These funds are made available directly through a state implementing agency and these transfers are not reflected in the state budget (except for the state component which is shown in the budget). External assistance to state programmes is provided to state governments as 'Additional Central Assistance' on the same terms and conditions as 'Central Assistance', whereas external assistance through Central schemes is provided to the state on the terms and conditions (of counterpart funding, etc.) which are specified for the scheme.

Public Expenditure on Education: Uttar Pradesh and Other States

It has been shown in other studies that there is no systematic pattern across states in the level of resource mobilisation for education (Tilak *et al.,* 2000, Srivastava, 2001b). Srivastava (2001b) has shown that educationally poor states show a highier level of fiscal effort, on average, in the 1990s, compared to educationally developed states. But the hallmark of educational deprivation is in the low level of per capita or per child expenditure on education which reflects in inadequate educational infrastructure.

The broad inter-state pattern in educational expenditure is captured in Table 12.61 below. The table analyses the pattern of educational expenditure in 1996-97, the last year for which details by levels of education are available.

It will be seen that in terms of fiscal effort, measured by the share of elementary/total education expenditure to the state budget and the state income, as well as the share of elementary education in total education expenditure, Uttar Pradesh rank is close to the average. But in terms of the per capita expenditure on elementary education and on total education, the state is ranked very low—15th among 16 states.

Below, we focus on trends in the state's revenue expenditure on education, since capital outlays on education, as Figure 12.14 shows, are less than one per cent of expenditure for most years.

Trends in Revenue Expenditure

After allowing for inflation, real education expenditure in Uttar Pradesh declined between 1991-92

FIGURE 12.14

Percentage of Capital to Total Expenditure on Education

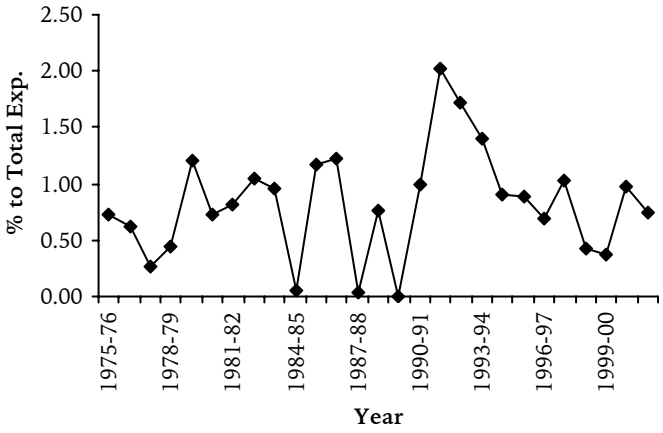


TABLE 12.61

Revenue Expenditure on Education by States, 1996-97

State	As % of Budget		As % of State Income		Per Cap. Exp. on		Plan Exp. as % of Total		
	Elem. Education	Total Education	Elem. Education	Total Education	Elem. Education	Total Education	Elem. Education	Total Education	% of Edu.Exp. on Elem. Edu.
Andhra Pradesh	5.92	13.44	1.04	2.37	12.01	27.26	11.04	6.56	44.04
Assam	17.23	28.26	3.33	5.47	25.18	41.31	27.99	32.06	60.94
Bihar	17.87	26.93	2.89	4.35	15.15	22.82	3.11	2.87	66.37
Gujarat	10.61	19.72	1.45	2.69	23.81	44.26	3.46	4.50	53.80
Haryana	5.26	10.86	1.13	2.34	19.10	39.46	13.67	16.91	48.40
Himachal Pradesh	10.69	18.79	3.60	6.34	40.94	71.98	30.25	32.81	56.88
Karnataka	9.55	18.16	1.54	2.92	20.01	38.04	21.86	20.13	52.61
Kerala	11.04	23.33	1.84	3.88	24.62	52.03	1.75	5.47	47.32
Madhya Pradesh	9.89	16.17	1.73	2.82	15.46	25.29	13.58	17.85	61.13
Maharashtra	9.23	20.16	1.19	2.60	22.01	48.09	11.34	10.89	45.78
Orissa	11.36	20.59	2.51	4.55	17.06	30.90	10.53	31.89	55.20
Punjab	4.50	14.73	0.77	2.52	14.03	45.97	0.56	10.98	30.51
Rajasthan	12.99	23.29	2.20	3.95	21.96	39.37	22.80	21.35	55.77
Tamil Nadu	8.87	18.91	1.40	3.00	19.67	41.94	7.15	5.81	46.89
Uttar Pradesh	**11.09 (5)**	**19.90 (8)**	**1.76 (7)**	**3.16 (8)**	**13.67 (15)**	**24.54 (15)**	**13.52 (7)**	**10.85 (10)**	**55.73 (6)**
West Bengal	7.48	22.99	1.05	3.22	10.48	32.24	2.43	3.32	32.51

Note: Figures in parentheses represent ranks of Uttar Pradesh among states.

Source: Various sources.

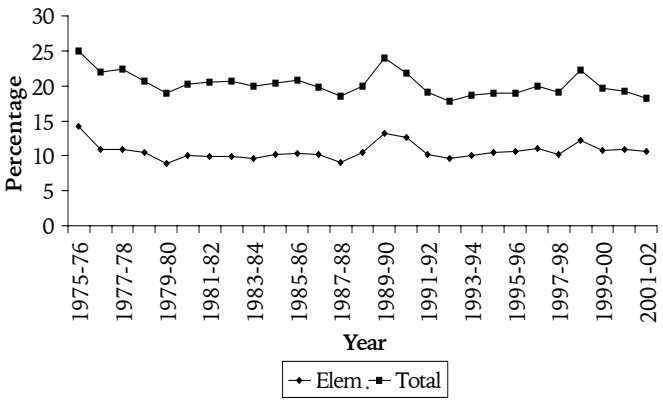
and 1995-96 and thereafter registered an increase, growing at an average rate of less than one per cent in Uttar Pradesh between 1990-91 and 1996-97. These were among the lowest growth rates registered by Indian states during the 1990s (Bashir, 2000). The alternative deflators, such as the SDP deflator or the Public Administration deflator, also show low rates of growth—lower than the two per cent annual increase assumed on account of annual rise in teachers' salaries (Bashir, 2000). These trends in the early 1990s have triggered a debate on the impact of structural adjustment on the state's expenditure on education. However, expenditure trends are now available till 2001-02 and are used here to re-examine these issues in detail. The data analysed here relate roughly to a 25-year period (1975-76 to 2001-02).

Expenditure in Relation to State Revenue Expenditure

The share of elementary education and total education in the state's budget appear to have fluctuated around 10 per cent and 20 per cent respectively over the entire period. The share of basic and total education expenditure in total revenue expenditure (including technical education) was at a peak at the beginning of the period studied here (1975-76), (-)14.2 per cent and 24.9 per cent respectively. It touched another peak in 1989-90 (13.21% and 23.98% respectively of revenue expenditure). Thereafter, the shares have fluctuated between 10-11 per cent and 20-21 per cent respectively for most years. In 1997-98, the share of basic and total education in total revenue expenditure was 10.23 and 18.73 per cent respectively. But in 1998-99, this touched another peak with the two shares rising to 12.33 per cent and 22.19 per cent respectively.

FIGURE 12.15

Percentage Share of Revenue Expenditure on Elementary and Total Education Expenditure in Total State Revenue Expenditure (%)



Thus, over the period as a whole, there is no evidence of a systematic trend. A kinked exponential function has been fitted to this data to examine the impact of structural adjustment and the results are reported in Table 12.63. Elementary education expenditure and total education expenditure show a small negative trend in the first period (1975-76 to 1991-92), which is only significant for total education expenditure, and exhibit a small positive (but non-significant) trend in the second period (1992-93 to 2000-01). There is, thus, no evidence of the state devoting a smaller share of fiscal resources in the post-reform period.

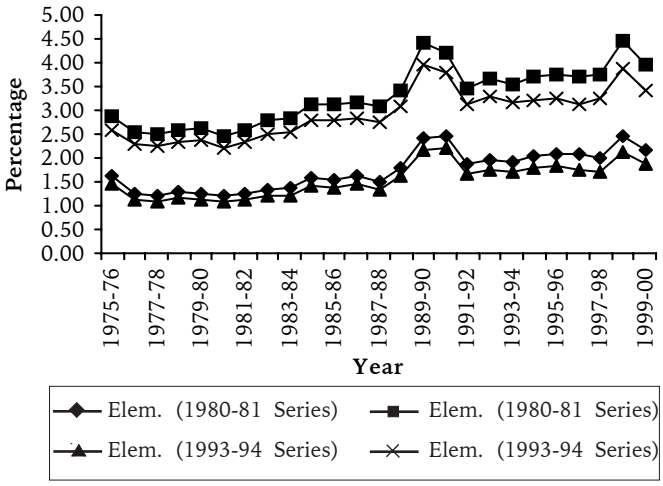
Education Expenditure as Percentage to SDP

The share of education expenditures to the State SDP has been estimated on the basis of the 1980-81 SDP series and the 1993-94 SDP series, which yields higher estimates of SDP (and hence lower estimates of expenditure to SDP ratios). The percentage of education expenditures to the state SDP has shown a positive trend in the earlier period but does not show any definite trend in the 1990s, even though Uttar Pradesh income has grown rather slowly over this period. The share of basic and total education in state income fluctuated around 1.2-1.8 per cent and 2.2-3 per cent respectively for most years in the 1980s, but rose to 2.43 per cent and 4.41 per cent respectively in 1989-90 and to 2.45 per cent and 4.2 per cent respectively in 1990-91. Compared to these years, the expenditure on basic education and total education (including technical education) has been slightly lower during the 1990s, touching 2.1 per cent and 3.77 per cent respectively in 1995-96, and declining to 2.45 per cent and 4.46 per cent in 1998-99.

The results of the kinked exponential function regression (Table 12.63) show that elementary education expenditure as percentage of SDP (1980-81 series) grew at a significant rate of 3.17 per cent in the first period, but the rate of growth in the post-reform period was not significantly different from zero. In the case of total education expenditure also, expenditure as percentage of SDP grew at a significant rate during the first period (1975-76 to 1991-92), but during the second period, the rate of growth although positive was not significantly different from zero.

FIGURE 12.16

Expenditure on Elementary and Total Education as % of SDP in Uttar Pradesh

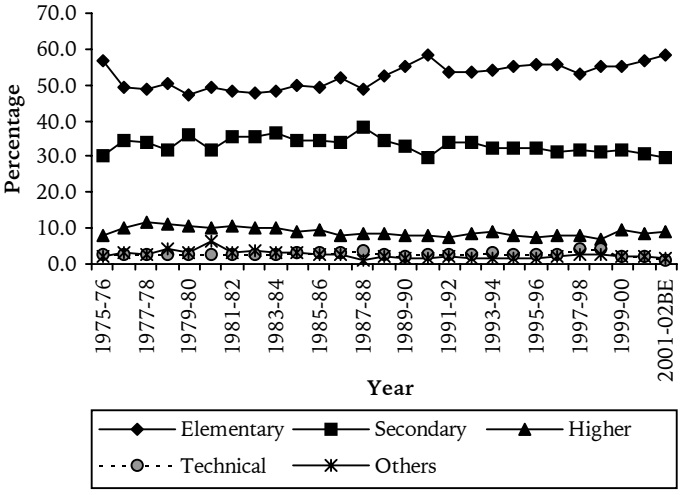


Revenue Expenditure by Levels of Education as Percentage of Total Expenditure on Education

It has been argued that governments in India devote a relatively low share of the education budget to elementary education which takes care of eight years of schooling. Trends in this regard do not show dramatic shifts in the recent years, although some realignment of expenditure in favour of elementary education is in evidence. For all years except one since 1994-95, the share of elementary education in the total budget has exceeded 55 per cent and in the Budget of 2001-02, this is slated to touch 58.27 per cent, which will be the highest ever. Correspondingly, there has been a small shift downwards in the share of secondary education and technical education.

FIGURE 12.17

Percentage Share in Total Revenue Expenditure on Education, by Levels of Education, Uttar Pradesh, 1975-76 to 2001-02



Trends in Real Per Capita/Per Child Expenditure

Although, expenditure on education has been rising in Uttar Pradesh, the gap between real per capita spending on education in Uttar Pradesh compared to other educationally advanced states remains large and persistent. Per pupil nominal expenditures in Uttar Pradesh are also among the lowest—in 1995-96 the third lowest among major states and only about 40 per cent the level of Kerala, Haryana or Himachal (Bashir, 2000). Trend growth rates in per capita expenditure have been analysed for expenditure on all levels of education in Srivastava (2001b). These results show that although real expenditures continue to increase, there has been a sharp deceleration for all levels other than elementary education.

TABLE 12.62

Exponential Growth Rates of Real Expenditures on Education in Uttar Pradesh by Major Sectors (1980-81=100)

Years	*Elementary*	*Secondary*	*Higher*	*Technical*	*Total*
1975-2000	6.71	5.96	4.9	6.7	6.2
1975-1990	6.98	7.41	5.07	7.41	6.84
1990-2000	8.72	3.96	3.98	5.86	3.98

Note: Growth rates are obtained by fitting log-linear trend lines for the relevant period.

Here we focus exclusively on elementary education expenditures per child in the age group 6 to 13, and total education expenditure per capita. The relevant trends are shown in Figures 12.18 and 12.19.

Both expenditure trends show a peak around 1989-90/90-91 and then again in 1998-99/2000-01. These peaks are undoubtedly due to adjustment to new pay scales and payments of salary arrears and have to be discounted if trend rates have to be ascertained.

We have again resorted to the kinked exponential function and the results are shown in Table 12.63. There has been some deceleration in growth rates in per capita/per child education expenditures in the post-structural adjustment period, but these rates are still significantly positive. Real elementary education expenditure per child grew at 5.4 per cent per year during 1975-76 to 1991-92 but the growth rate declined

FIGURE 12.18

Real Per Capita Revenue Expenditure on Education in Uttar Pradesh, 1975-76 to 2000-01 (Rs.)

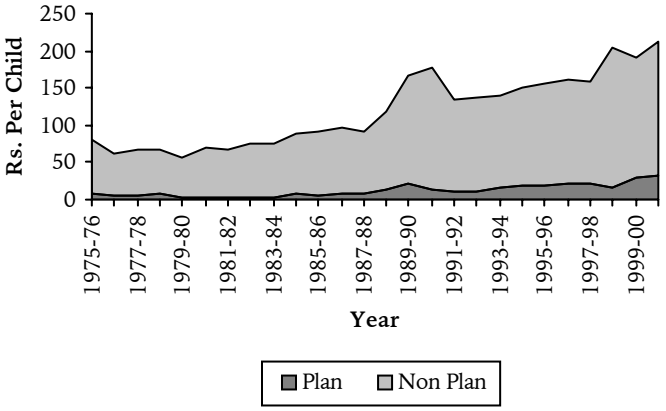
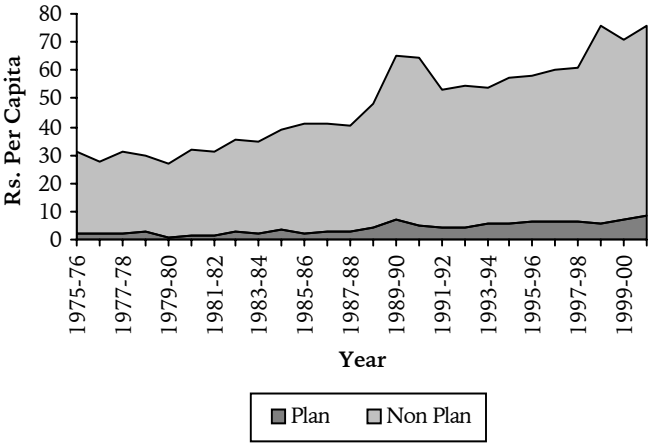


FIGURE 12.19

Real Revenue Expenditure on Elementary Education Per Child in Uttar Pradesh (Rs.)



somewhat to 4.45 per cent in the second period (1992-93 to 2000-01). Real per capita total expenditure on education grew at 4.56 per cent per year during 1975-76 to 1991-92 but the growth rate declined to 3.17 per cent during 1992-93 to 2000-01.

We have shown in Srivastava (2001b) that Uttar Pradesh is one of the few states which has been able to slightly cushion the adverse impact of structural adjustment on educational spending. The analysis here confirms the earlier findings.

Plan and Non-Plan Expenditures

Plan expenditures on education, particularly elementary education have grown more rapidly compared to overall growth in total plan expenditures. While total plan expenditures have grown at a compound growth rate of 9.9 per cent between 1985-86 and 1998-99, plan expenditures on education and elementary education have grown at rates which are twice as high—21 per cent and 22.1 per cent respectively. Most of this recent growth has been registered since 1994-95. However, plan expenditures form only a small proportion of the expenditures on education, 11.7 per cent in the case of total education and 14.4 per cent in the case of elementary education while overall plan expenditures formed 22.7 per cent of total state expenditure in 1997-98.

Plan-wise shares given in Table 12.64 show higher share of plan spending in the Eighth and Ninth Plan periods in elementary education. But all other sectors (secondary, higher, technical) show a decline in the share of plan spending in the Ninth Plan period.

TABLE 12.63

Growth of Elementary Education/Total Education Expenditure Using Kinked Exponential Regression

Category	*Period I*	*Period II*	*Whole Period*
	1975-76 to 1991-92	*1992-93 to 2000-01*	*1975-76 to 2000-01*
Elementary Education			
Real Expenditure/Child	5.4** (8.168)	4.45** (3.455)	5.11** (13.20)
Expenditure as Percentage of Budget	-0.23 NS	0.84 NS	0.09 NS
Expenditure as Percentage of SDP 80-81 Series	3.17** (5.54)	1.52 (1.19)	2.73** (7.66)
Expenditure as Percentage of SDP 93-94 Series	2.63** (6.62)	0.37 NS	2.20**
Total Education			
Per Capita Real Expenditure on Total Education	4.56** (9.97)	3.17** (3.56)	4.14** (15.13)
Expenditure as Percentage of Budget	-0.77 (2.399) NS	0.24 NS	-0.46 (2.41) NS
Expenditure as Percentage of SDP 80-81 Series	2.64** (6.76)*	1.00 (1.152) NS	2.201** (8.5)
Expenditure as Percentage of SDP 93-94 Series	2.63** (6.62)	0.37 (0.414) NS	2.57** (7.06)

Notes: Values in the parentheses are t^1 values. * - Significant at 5 % level of significance.

** - Significant at one % level of significance.

TABLE 12.64

Percentage Plan and Non-Plan Expenditure in Uttar Pradesh by Levels of Education

Years	*Elementary*		*Secondary*		*Higher*		*Technical*		*Total*	
	Plan	*Non-Plan*	*Plan*	*Non-Plan*	*Plan*	*Non-Plan*	*Plan*	*Non-Plan*	*Plan*	*Non-Plan*
1974-1978 (V)	7.53	92.47	3.63	96.37	7.12	92.88	15.51	84.49	6.81	93.19
1978-1980	7.13	92.87	3.28	96.72	5.99	94.01	18.29	81.71	6.68	93.32
1980-1985 (VI)	5.29	94.71	3.90	96.10	9.18	90.82	36.24	63.76	6.78	93.22
1985-1990 (VII)	10.02	89.98	2.87	97.13	5.52	94.48	41.32	58.68	8.57	91.43
1990-1992	8.20	91.80	4.56	95.44	5.36	94.64	50.03	49.97	7.84	92.16
1992-1997 (VIII)	12.15	87.85	4.88	95.12	5.33	94.67	42.56	57.44	10.10	89.90
1997-2002 (IX)	12.85	87.15	3.49	96.51	3.05	96.95	19.74	80.26	9.83	90.17

Source: Computed from State Budgets.

Expenditures by Other Departments on Education

Expenditure by other departments on education has fluctuated between 11.5 per cent of total education expenditure to 15.5 per cent and has grown more rapidly during the 1990s. In basic education, the contribution of other departments is lower—ranging from 2.9 per cent in 1990-91 to 7.1 per cent in 1997-98. However, the latter estimate is probably an underestimate as it ignores the contribution of several departments such as Rural Development and *Panchayati Raj*, which are playing a more important role in the provision and maintenance of school infrastructure.

Central and/or External Funding

Central and/or external funding account for an important part of plan expenditure on education—55 per cent for the country as a whole. In general, as discussed earlier, except for DPEP and a few other transfers (such as those by the Finance Commission for upgradation of schools), Central and/or external funding are reflected in the Plan expenditure of the Education Department. In the case of Uttar Pradesh, the share of CSS and external funds has been comparatively high. In two out of four years for which data could be collected, the share of CSS and external funds was 65 per cent of plan spending, but was 30 per cent in 1996-97 (Bashir, 2000). The contribution of Central Sector Schemes (Operation Blackboard, Non-formal Education and Teacher's Education, etc. but excluding the Mid-day Meal Programme) has steadily increased from 21.5 crores in 1990-91 to 69.7 crore Rs. in 1996-97. With the launch of DPEP, Central contribution increased to Rs. 124.8 crores in 1997-98, Rs. 156.2 crores in 1998-99 and Rs. 159.9 crores in 1999-2000. External assistance amounted to Rs. 328 million in 1993-94 and 537 million in 1995-96 (Bashir, 2000.).

In recent years, the Basic Education Project (I and II), DPEP-II and DPEP-III have brought in important and significant resources into basic/primary education. While the BEP was a state project funded in collaboration with the World Bank, DPEP-I and II are Centrally sponsored projects in which the State government contributes 15 per cent of the resources. These projects are funded and implemented through the Education for All Board, which functions as an autonomous society set up by the State government. The total outlay of these projects is as follows: Uttar Pradesh Basic Education Project (1993-2000)—17 districts and Rs. 728.7 crores; DPEP-II (1997-2002)—22 districts and Rs. 629,93 crores; DPEP-III (2000-2005)—38 districts and Rs. 887.29 crores.

Conclusion: State Expenditure on Education in Uttar Pradesh

More than one-fifth of the State's revenue expenditure is devoted to education which also constitutes about 3.5 per cent of NSDP. It is natural to enquire into the current status of educational expenditures in the current scenario, when education, in particular elementary education has been accorded significant priority.

The fiscal priority given to education expenditures has marginally increased although as a proportion of state income, expenditure on education does not show an upward trend. There is some evidence that the relative inter-sectoral priority given to elementary education has improved in recent years. The availability

of plan funds for elementary education has also improved, which is not the case for other sectors in education.

Per capita/per child education expenditures appear to be closely correlated to educational performance and these are comparatively very low for Uttar Pradesh. In the post-structural period, per child real expenditures in elementary education, and per capita real expenditures in total education have continued to increase at a significant rate, although this is lower than the pre-structural adjustment growth rate in real per capita expenditures. The inflow of external and central funds (mainly to the elementary education sector) have also increased and this is partly reflected in the increased plan outlays.

12.4.8 Revenue Receipts and Cost Recovery from Education

Till recently, the government of Uttar Pradesh did not charge tuition fee up to the higher secondary level. But prescribed tuition fees are chargeable by aided institutions and the government has also prescribed, from time to time, the schedules of tuition fees (at the higher education level) and other fees and charges. But the schedule of such fees remains unrevised for several years at a stretch. As a consequence, the contribution of revenue (fee) receipts to the expenditure made by educational institutions has been constantly declining at all levels, necessitating a higher level of budgetary support, even at the same real expenditure levels.

As far as the government itself is concerned, it is only entitled to the revenues accruing in government institutions and a share of specific items of fees (such as tuition fees) collected by aided institutions. In recent years, the government of Uttar Pradesh has made a concerted effort to increase the fees payable at secondary, higher secondary and higher education levels. It has also given certain categories of institutions the flexibility of adopting a fee rate, and of raising resources through self-financed courses, consultancies and so on. Thus, the major implication of revenue raising measures in institutions drawing financial support from government is likely to be on own revenues, which may help to strengthen the internal resources of these institutions and consequently help the government in reducing its financial burden (and refocus on areas requiring a greater degree of such support).

So far as the government itself is concerned, the contribution of fees to the state budget in Uttar Pradesh has been very small. In 1984-85, revenue receipts to the state government were Rs. 13.46 crores which was only about 2 per cent of the state educational expenditure in that year. In 1990-91 the amount of revenue went up to Rs 33.90 crores but its relative contribution came down to 1.63 per cent. The contribution from educational revenue could never reach even 2.5 per cent of the total educational expenditure in a particular year right up to 1998-99. In 1998-99, fee contributed Rs 95.89 crores, which represented only 1.63 per cent of the total educational expenditure of that year.

However, the reform in the fee structure, especially in secondary level educational institutions, higher and technical education institutions is slowly making itself felt. The revenue receipts from secondary education rose from Rs. 81.28 crores in 1999-00 to Rs. 108.64 crores in 2000-01 (RE) and were budgeted to rise to Rs.127.22 crores in 2001-02. The revenue receipts from higher education were only 4.24 crores in 1999-00, but this fell to 1.01 crores in 2000-01. However, receipts from this sector were budgeted to increase to Rs. 75.15 crores in 2001-02. Receipt from fees in technical education fell marginally from Rs. 3..66 crores in 1999-00 to Rs. 4.84 crores in 2000-01 but this is expected to increase to Rs. 10.16 crores in 2003-04. But 'other receipts' have been fluctuating, so that total receipts from the sector fell from Rs. 8.85 crores in 1999-00 to Rs. 6.17 crores in 2000-01 and 11.02 crores (estimated) in 2003-04. However, this is now budgeted to increase to Rs. 57.01 crores. The percentage of total revenue receipts in education to revenue expenditure in Uttar Pradesh was 3.25 per cent in 1999-00 and rose to 3.63 per cent in 2000-01 (revised estimates). In 2001-02, this was budgeted to increase to 6.76 per cent.

It therefore appears that of late the growing concern on the part of the state government to increase the resources available from education and to collect more revenue from educational fees for the state exchequer has succeeded in raising fee rates and increasing revenue collections. The recent moves have partly offset the long-term declining trend of fee receipts to institutional budgets. But such changes have to be judiciously applied and carefully calibrated so as not to further reduce access and equity in the educational system. During 1995-96, when the government's revenue receipt from education was only Rs. 48.5 crores, estimates from the NSS 52nd Round showed that students in the state paid Rs. 628.9 crores as fees and other charges to educational institutions. The analysis in the preceding sections has shown that the cost of education is certainly one of the

factors reducing the intake of poorer students, those from socially deprived groups and women, to higher levels of education. Although the argument of 'private return' holds for certain sections of society, others still face pervasive market failures, which justifies policy intervention to improve their access to quality education at all levels.

TABLE 12.65

Total Revenue and Expenditure from General and Technical Education in Uttar Pradesh (Rs. Crores)

Year	*Revenue*	*Expenditure*	*Rev. as % Exp.*
1990-91	33.89	2079.84	1.63
1991-92	34.68	1984.95	1.75
1992-93	55.70	2267.68	2.46
1993-94	29.74	2474.59	1.20
1994-95	41.12	2922.19	1.41
1995-96	48.53	3337.48	1.45
1996-97	46.71	3823.24	1.22
1997-98	81.67	4229.65	1.93
1998-99	94.53	5787.09	1.63
1999-00	183.91	5654.23	3.25
2000-01(RE)	234.41	6451.74	3.63
2001-02(BE)	421.49	6236.69	6.76

Source: Computed from State Budgets.

12.4.9 Resource Requirements for Universal Elementary Education

With the promulgation of the Constitution 93rd Amendment and the commitment of the Central government to ensure that every child is in school by 2007, an estimation of the additional resource requirements for UEE in the state becomes imperative. There have been several attempts to estimate the additional financial requirements of UPE or UEE in Uttar Pradesh under varying assumptions. These include the Expert Committee set up by the Union government, the World Bank, Jha (1999) and Srivastava (2001c).

Jha (1999) estimates that with 2005 as the target year, additional costs for UPE would be Rs 3100 crores (1999 prices) implying a growth rate of 8.7 per cent. With 2008 as the target year, the final year requirements fall by 100 crores. These estimates are for a pupil-teacher ratio of 50:1 and include other cost reducing strategies such as para-teachers and double shifts. Assuming a 60 per cent share in the education to basic education and a GSDP growth rate (in a reform scenario) of 4.5 per cent, it is estimated that the additional expenditure required would be 0.4 per cent of GSDP for UPE and 0.6 per cent for UEE.

In the study by Srivastava (2001c), two sets of norms have been drawn from the Expert Group Report and the Sarva Shiksha Abhiyan(SSA). These two norms have been combined with three basic scenarios: (a) all additional enrolments in government financed schools with regular teachers; (b) part of the additional enrolment in recognised unaided private schools; (c) hiring of para-teachers to meet additional teacher requirements instead of regular teachers. The goal posts are the same as those of the SSA and it is assumed that the required capital costs are incurred in the first two years.

The year-wise estimates of the requirements under these assumptions are given in Tables 12.66 below. It can be seen that SSA norms are, by and large, cheaper as compared to those adopted by the expert group, and savings in salaries bring the public resource requirements for UEE down by a considerable margin.

The cost of achieving UEE could necessitate an additional expenditure varying from an average of 2.6 per cent of SDP to 0.79 per cent of SDP. In the cheapest scenario, it is envisaged that the state will effect cost-savings through adherence to the SSA norms and would hire additional teachers only as para-teachers/*gurujis*.

12.4.10 Decentralisation and Community Participation for Education

Reaching the goal of Universal Elementary Education (UEE) requires the active role of local communities in building awareness and bringing children to school, planning the development of educational resources commensurate to local need, and in the management of these resources. It is now increasingly being realised that the non-involvement of the local communities, who are the primary stakeholders, in the affairs of elementary education, has led to poor planning and management of resources, poor awareness and low accountability of all those involved in the process of educating.

The National Policy on Education (NPE) had reiterated the goal of decentralised planning and management of elementary education. The Policy visualises direct community involvement in the form of Village Education Committees (VECs) for management of elementary education. The POA, 1992, emphasised

TABLE 12.66

Additional Cost of Universal Elementary Education (UEE) in Uttar Pradesh

Variants		*2001-02*	*2002-03*	*2003-04*	*2004-05*	*2005-06*	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*Aggregate*
A. Expert Group Norms												
1A	*Addl. Cost*	12011	11772	7509	7062	7015	6971	7700	7957	8211	8471	84680
	% of SDP	6.6	5.7	3.2	2.7	2.4	2.1	2.1	1.9	1.7	1.6	2.6
	% of RE	30.36	26.16	14.67	12.12	10.59	9.25	8.98	8.16	7.40	6.71	11.20
2A	*Addl. Cost*	8779	8315	4935	4904	4874	4846	5220	5411	5606	5806	58695
	% of SDP	4.8	4	2.1	1.9	1.7	1.5	1.4	1.3	1.2	1.1	1.8
	% of RE	22.19	18.48	9.64	8.42	7.36	6.43	6.09	5.55	5.05	4.60	7.76
3A	*Addl. Cost*	8896	8500	4076	3653	3630	3607	4066	4204	4338	4474	49444
	% of SDP	4.9	4.1	1.8	1.4	1.2	1.1	1.1	1	0.9	0.8	1.5
	% of RE	22.49	18.89	7.96	6.27	5.48	4.79	4.74	4.31	3.91	3.54	6.54
B. SSA Norms												
1B	*Addl. Cost*	7157	5940	4263	4053	4017	3927	4452	4652	4850	5052	48362
	% of SDP	3.92	2.88	1.84	1.55	1.36	1.18	1.19	1.10	1.02	0.94	1.46
	% of RE	18.09	13.20	8.33	6.96	6.06	5.21	5.19	4.77	4.37	4.00	6.40
2B	*Addl. Cost*	5470	4564	2653	2494	2471	2450	2829	2981	3137	3296	32344
	% of SDP	2.99	2.22	1.14	0.95	0.84	0.74	0.75	0.71	0.66	0.61	0.97
	% of RE	13.83	10.14	5.18	4.28	3.73	3.25	3.30	3.06	2.83	2.61	4.28
3C	*Addl. Cost*	5260	3926	2129	1937	1918	1845	2167	2278	2385	2494	26341
	% of SDP	2.88	1.91	0.92	0.74	0.65	0.55	0.58	0.54	0.50	0.46	0.79
	% of RE	13.30	8.72	4.16	3.33	2.89	2.45	2.53	2.34	2.15	1.98	3.48

Source: Panchmukhi *et al.,* 2001.

Note: Variant 1 assumes that all additional enrolments will be in government schools. In variant 2, the present share of private unaided schools in enrolment is assumed to continue. Under variant 3, additional teaching requirement is met through recruitment of para-teachers.

micro-planning as a process of designing a comprehensive plan of action by which every child regularly attends either a school or NFE centre and completes at least eight years of schooling or its equivalent at the NFE centre.

The 73rd and 74th constitutional amendments provide for devolution of powers, responsibilities and authorities to *panchayats*, such that the legislature of a state may endow the *panchayats* with such powers and authority to enable them to function as institutions of self-government and such law may contain provisions for the devolution of powers and responsibilities upon *panchayats* at the appropriate level, subject to such conditions as may be specified therein, with respect to:

(a) the preparation of plans for economic development and social justice; and

(b) the implementation of schemes for economic development and social justice as may be entrusted to them in relation to the matters listed in the Eleventh Schedule.

Schedule 11 (Article 243G) lists a number of activities including education (primary and secondary schools).

Following the 73rd Amendment, the functions of the *gram panchayat* in Uttar Pradesh specified earlier have been substituted under a 1994 State Amendment by a list of items included in the Eleventh Schedule of the Constitution. However, these functions have been further elaborated (as assistance to the state government; promotional; implementation of existing programmes; maintenance or developmental functions) and include interventions in the agrarian economy (agricultural extension, land consolidation, land reforms, soil conservation, water management, animal husbandry, social forestry, fisheries, etc.) and other functions ranging from rural housing, education, electricity, electrification, village roads, sanitation, social welfare, public distribution system, and poverty alleviation programmes.

Under the amended Uttar Pradesh Panchayat Act, the *panchayats* are expected to constitute the following

committees to assist in the performance of their duties: the *Vikas Samiti* (agriculture, rural industry and development schemes), the *Shiksha Samiti* (education), the *Lokhita Samiti* (public health, public works) and the *Samata Samiti* (welfare of women and children and interests of SC\ST and backward classes, and protection of these groups from 'social injustice and exploitation in any form'). Higher tiers of the PRIs are also required to form similar committees. Thus, the education committee has emerged as the main instrument to give shape to the responsibilities entrusted to *panchayats* in the sphere of primary and secondary education.

It should be noted that Section 10 of the Uttar Pradesh Basic Education Act of 1972 provides for the establishment of education committees—the *Zilla Basic Shiksha Samiti* and the *Nagar Basic Shiksha Samiti* to administer basic education. Section 11 provides for the formation of a *Gaon Shiksha Samiti* (Village Education Committee) for each village or group of villages, to make suggestions to the *Zilla Samiti* for the management of basic schools. Since the UPBEP, DPEP and other education programmes have envisaged a greater role for VECs and the WECs, the Education Department has been providing for the composition, powers and functions of the education committees, under the Basic Education Act.

Under the amendment of the Basic Shiksha Act in 2000, the Village (*Gaon*) *Shiksha Samiti* (VEC) would consist of the *pradhan* as chairperson, three parents/guardians (one of whom shall be a woman), and seniormost head teacher of the primary schools (who shall be the member secretary). The guardians shall be nominated to the VEC by the Additional Basic *Shiksha Adhikari* as per laid down procedure.

The VEC shall meet at least once every month and shall be responsible for several designated functions, including ensuring the attendance of teachers, planning the development of the school, promoting non-formal and adult education, etc. (Box 12.2). The Act also prescribes the functions of the *Zilla Panchayat Basic Shiksha Samiti* and the *Nagar Palika Basic Shiksha Samiti*.

Other functions of the VEC include the selection of '*Shiksha Mitra*' (para-teachers) as per norms, wherever necessary, providing support for the establishment of EGS centres and the selection of the *'acharyas'* for these centres and supervising the construction of new schools.

It should be noted that the present powers of the VEC fall short of the pronouncements made by the government in Uttar Pradesh wherein it was decided to bring basic school teachers under the administrative control of the VECs, transfer all school assets and buildings to *panchayats*, and make VECs responsible for the management and repair of existing assets (with requisite funds being given to them for the purpose).

In any case, since the education committees have been endowed with a number of powers and responsibilities, building their capacity is crucial to the development of basic education in the state. Both the UPBEP and DPEP projects have undertaken capacity development of VEC members on a large scale. A three-day training programme is organised at the village level with the twin objectives of capacity development and environment building. The recent World Bank Report (World Bank, 2001) acknowledges the role of the VECs on the construction of new schools, micro-planning and campaigns, but notes that their role in day to day management is yet to be established.

BOX 12.2

The *Gram Shiksha Samitis*

Constitution

- The *pradhan* of the *gram panchayat* is the chairperson.
- Three guardians of the student of Basic school—at least one of whom is a woman
- The head teacher of a basic school situated in the *gram panchayat*.

Roles

- Establish, administer, control and manage basic schools in the *panchayat area*.
- Prepare basic schemes for the development, expansion and improvement of such basic schools.
- Promote and develop education, non-formal education and adult education in the *Panchayat* area.
- Make suggestions to the *zilla panchayat* for the improvement of basic schools.
- Take all such steps as maybe considered necessary to ensure punctuality and attendance of the teachers and other employees of the basic schools.
- Make recommendations for minor punishment in such manner as may be prescribed for a teacher or other employees of a basic school situated within the limits of the *panchayat area*.
- Other functions pertaining to the basic education as may be entrusted to it by the state government.

Source: Uttar Pradesh Basic Education Act (Amendment), 2000.

BOX. 12.3

Shiksha Mitra Yojana

- To remove teacher shortage and improve teacher-pupil ratio in schools, the Shiksha Mitra Yojana (Friend of Education Scheme) is being implemented under the control of village *panchayats*.
- Under the scheme, educated local persons will be appointed on contractual basis at Rs. 2250 per month attending to teaching related activities.
- Persons appointed on such a contractual basis will be called "shiksha mitras".
- The selection of *shiksha mitra's* will be done by the VECs.
- The minimum qualification for *shiksha mitras* will be Intermediate.
- Under the scheme 50 per cent of the *shiksha mitras* will be women.
- Initially 10000 *shiksha mitras* will be appointed under the scheme.
- Shiksha Mitra Scheme: Under the scheme, the desired teacher-pupil ratio would be achieved at relatively low cost.

The BEP and the DPEP have also used a number of other mobilisation forms and institutions to build awareness and raise the level of community participation. *Kala jathas* (cultural troupes), *Nukkad nataks* (street plays), *school chalo abhiyan*, (enrolment campaigns) *maa beti melas* are organised under DPEP to generate community awareness and interest in primary education and to create supportive environment for girls education.

The *Mahila Samakhya* programme as a women empowerment strategy was under implementation in 17 districts of the state. Under DPEP III the programme has now been extended to another 7 districts. Under this programme *mahila sanghas* (women's collectives) are the nodal point around which several activities are planned at the village level. Women collectively analyse their situation in the form of the *sangh*. This programme has developed local ownership of programmes. This has also given a fillip to the demand for educational opportunities for women and their daughters. It has enabled women to take control of their lives and appreciate the value of formal schooling for their children and themselves. Besides *Mahila Sanghas* the Mahila Samakhya programme has initiated other relevant interventions. These include *Bal Kendras* (children centres for both boys and girls in the age group of 4-14 years) *kishori kendras* (centres for adolescent girls) women literacy centres, camps and *mahila shikshan kendras* (for women and girls).

The above experiments demonstrate increasing participation and active roles played by the community in supporting schooling and strengthening systems. However universal community support and involvement in primary education are yet to go a long way in expanding out reach and ensuring in-depth qualitative support.

12.4.11 Challenges and Future Scenario in the Development of Education in Uttar Pradesh

There is no doubt that Uttar Pradesh has made a fairly significant progress in education during the last decade.

- Literacy has increased at a faster rate than ever before.
- Many more children are in school today than was the case a decade ago.
- The gap between boys and girls, and between socially deprived groups and others has narrowed over the decade.
- Male and overall literacy in the educationally poor districts has improved at a faster rate than the overall rates.

But at the same time as seen from the earlier sections, several challenges remain to be overcome. Briefly, these are as follows:

- **Access**: Despite progress, about 29 per cent of rural children and 22 per cent of the urban children were still out of school at the end of the 1990s. Most of these children belong to the poorer and socially deprived groups and girls bear a disproportionate burden of educational deprivation.
- **Availability**: Although schools, other physical infrastructure and the number of teachers have increased over the 1990s, the growth has lagged between requirements. Many schools still lack the basic minimum infrastructural prerequisites and school space and teaching strength are still not adequate in relation to current enrolments. The SSA is planning to meet the infrastructural requirements by end 2005 and resources will be dovetailed with other schemes as well.
- **Quality**: Quality is a major concern in a number of ways. First, the overall quality of education in the state at each level of education remains low

in terms of content, teaching methods, etc. Further, quality is seriously compromised by the evaluation system which is expected to assess quality and screen students on its basis.[3] Second, different groups of students have differential access to schools of variable quality, with poor students and those belonging to socially deprived groups accessing the poorest quality schools. Thus quality, along with issues of access, is integrally linked to the issue of equity in the educational system.[4]

- **Accountability***:* The system is afflicted with low accountability of the administration and teaching staff which is then intimately connected with their performance and the overall efficiency.
- **Efficiency***:* Both internal (measured by indicators such as dropout, repetition, average years taken to complete an educational cycle) and external (measured by indicators such as maintenance and optimum utilisation of assets, performance and accountability and teachers, administrators and other components of the educational system) efficieny is low.
- **Participation:** In addition to contributing to efficiency and accountability, participation of the primary stakeholders in decision making and management of education, particularly at lower levels, is now considered to be part of a rights based approach to educational development. Despite some change, progress in this direction continues to be slow.
- **Resources***:* Per capita and per student public resources allocated to education in Uttar Pradesh continue to be very low and have serious implications for access, adequacy and quality of the system.

12.4.12 Recommendations

As analysed in the earlier sections, major governmental initiatives in the recent years have aimed at: (1) bringing socially deprived children into the educational mainstream through formal or alternate schooling streams and improving their retention and learning; (2) ensuring improved quality of education through better teacher motivation and training, focus on curricula, classroom processes, etc.; (3) ensuring better planning, improved care of educational infrastructure and better delivery through greater decentralisation and more responsibilities/powers to VEC/WECs. Many of these initiatives are fairly recent and, although some evaluations exist, it is still early to come to a firm conclusion regarding them.

i) In the sphere of decentralisation, as noted earlier, some progress has mainly been achieved in the rural sector where VECs have been given some powers and considerable responsibilities, but the principal powers still continue to reside with the educational administration at the block and higher levels. There is no further move on the anvil to devolve the administrative control of educational institutions any further. There is, in our view, a mismatch between the powers and responsibilities of the VECs and higher committees at the block and district level, have, in any case, very limited roles. In other words, the current reforms have tinkered with the responsibilities and functions assigned to various agencies in a minor way, and one may question, whether the change is sufficient to bring about greater ownership in the community, and greater accountability in the school system. This is a central issue. Having brought an increasing number of parents and children to the doors of the school, it is important that they step and stay in as direct stakeholders, and that the teaching-learning process can expand and improve in step with the increased enrolments.

ii) The state has adopted a number of innovative approaches to bring children from socio-economically deprived groups into the educational process. The children who remain out of school belong to the poor sections among these groups, often eke out a living in ways which makes a social stable existence difficult, and where the children's contribution is often considered to be quite central to the household's subsistence strategies. All in all, these children come from a variety of social, cultural and economic settings, which can be identified through local micro-planning, but

3. Evaluation system has been revamped at class 5 and class 8 level. The annual examinations of these classes have been made public examination. Proper setting of question papers, evaluation of answer, books, sample checking, analysis of results are the new measures that have been adopted.
4. Recently, GoUP has taken measures to revamp the evaluation system at class 5 and class 8 level. The annual examinations of these classes have been made public examination. Proper setting of question papers, evaluation of answer, books, sample checking, analysis of results are the new measures that have been adopted.

the solutions to bring these children into school may require strong community participation, local institutional support and commitment of resources.

iii) Each of the various estimates of the additional costs of reaching UEE in Uttar Pradesh suggest that at the very minimum, additional resources equivalent to about 0.7 per cent of GSDP will be required annually, on average, if the state is to reach this goal within the time frame and the minimum norms accepted by the SSA. We have seen that GOUP has only been able to maintain the share of basic education in GSDP over the last decade, but raising this share to the level required requires a close look at the financial resources available within the state. At the same time, resource flows from the Centre and the external agencies have already been augmented to some extent. Under the SSA, the Centre has committed itself to meeting 50 per cent of the required resources in the Tenth Plan, with the burden of financing being gradually assumed by the state. In view of the resource requirement, and the commitments of the Centre, we suggest that the state work out its own financial requirements and commitment to the education sector as a whole over a period of 15 years.

iv) It has to be emphasised that the requirements mentioned above are based upon a minimum set of norms and a package of cost-saving strategies. The issue here is that state strategies which are predicated upon bringing the more difficult areas into the educational mainstream through inexpensive strategies 'can' succeed in the short run if they are predicated upon strong community support, and this may also be essential, but in the long run, considerable (and marginally greater) investments may be required to bring such children into schools, retain them, and provide them with good quality education.

v) A further core issue here, is that the state's commitment to provide 'free' elementary education to all children up to 14 years must remain undiluted and free education must not simply be interpreted as free tuition. There are a number of studies, summarised in earlier sections, which show that households incur substantial direct costs in sending children to government schools, and it has to be the obligation of the state, to assess and offset such costs. The preceding analysis also shows that a substantial part of the household costs are incurred on items (such as uniforms) which have a doubtful relationship with the quality of education. State policy should also be directed at eliminating such expenditures.

vi) Substantial resources have come into the education system in the recent past through externally assisted programmes, which pose a repayment liability either on the state or the Centre and which, in any case, have to be fiscally and institutionally sustainable after the project duration. The first such programme launched during the preceding decade (the Basic Education Project) came to an end in September 2000. Considerable attention was paid to internal financial sustainability after the project and the state government has been able to absorb the additional commitments raised by the programme. The issue of financing education through alternative channels and the issue of institutional sustainability needs to be seen and addressed in its wider context.

vii) The role of the non-governmental and private sector in elementary education has been widely discussed. There is no contradiction in recognising the pivotal duty of the state in providing free, good quality elementary education, on the one hand, and recognising that the private sector will continue to play an important role in this sector in view of the changing income and demand patterns. It is, therefore, a positive step that the state policy gives due recognition to both these aspects. On the other hand, the non-governmental sector, which has played an important role in this sector in a number of ways has neither been assessed fully, nor has it been given due recognition in the state policy.

viii) With respect to secondary and higher levels of education, the government has now accepted the argument that a greater proportion of responsibility of financing these sectors should come from the private and household sectors. As far as households are concerned, this follows the understanding that there are greater private returns from higher levels of

education and that fee realisation as a proportion of school/college revenue resources has been gradually falling. Both these arguments merit attention and the government has, in line with this understanding, revised fee structures along with giving private institutions greater flexibility in determining their own fees. The role of the private sector in the investments and managements of institutions at secondary and higher levels of education has been amply recognised by the state, which has also liberalised the norms of recognition and functioning of these institutions. Some attention is also being paid to regulating the quality of these institutions, such as through the process of centralised admission and examinations in engineering institutions. However, given the centrality of secondary, technical and higher levels of education in the state, the impact of low funding and overall poor infrastructure (in both private and government institutions) and pervasive market failure (manifested in poor enrolments of girls and students belonging to socially deprived groups, and regional disparities in the growth of institutions) has not been given due significance. These shortcomings imply need for greater funding of these levels of education, and a package of measures to make such education more accessible to students from weaker sections, while also giving scope to the private sector.

In conclusion, there is clear evidence of considerable dynamism in the elementary education sector in the state in recent years. Building upon the foundations of the earlier years, it is now possible to reach the crucial goal of universal elementary education in the near future. What is required is a strong state commitment to this goal expressed both in terms of commitment of higher resources and relevant policies around a core flexible and decentralised approach which will allow community ownership to develop over all aspects of this programme. The private sector and the wealthier sections of households are now expected to play a much greater role in financing investments and expenditure at the higher levels of education. But the need to provide greater access and quality (central to establishing the competitiveness of human resources in the state) implies greater state funding in these sectors as well, along with a greater need to improve efficiency and regulate quality.

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