
An all-India perspective on the extent of subsidies can be provided by putting together subsidy estimates for the Centre and the States. In the ensuing discussion, estimates of budget-based subsidies for the Centre and the States taken together are discussed first, in terms of their overall magnitudes, relative shares of the Centre and the States, the recovery rates and the sectoral shares. A comparison of the major findings for 1994-95 is then made with the previous estimates of subsidies pertaining to 1987-88 and 1992-93. In this chapter, some of the major subsidies in India, like those relating to power, irrigation, health, education and petroleum products are also discussed individually.

CENTRE AND STATES: AGGREGATE BUDGET-BASED SUBSIDIES

An estimate of subsidies emanating from the Central government budget was given in Chapter 2 for 1994-95, while that for the States, as projected on the basis of estimates for 15 major States (1993-94), and four special category States (1994-95) was provided in Chapter 3. An all-India estimate of budget-based subsidies can be obtained by adding the Central and State government subsidies.

a. All-India Profile

The all-India profile of subsidies is presented in Table 4.1. In 1994-95, aggregate government subsidies (Centre and States) amounted to Rs. 136844 crore, constituting 14.35 per cent of GDP at market prices in that year. Out of this aggregate subsidy, merit subsidies accounted for 23.84 per cent and non-merit subsidies 76.16 per cent, amounting to 3.42 and 10.93 per cent of GDP respectively. Social sector subsidies, relating to both merit and non-merit services, amounted to 37.82 per cent of total subsidies.

Table 4.1
All-India Subsidies: 1994-95

<i>Services</i>	<i>Rs. Crore</i>			<i>Recovery Rate (%)</i>	<i>Subsidies as Percentage of Total Subsidies</i>
	<i>Total Cost</i>	<i>Total Receipts</i>	<i>Subsidies/ Surplus (-)</i>		
1. Merit Goods/Services (Subsidy Sectors)	32991.35	362.84	32628.51	1.10	23.84
a. Social Services	20149.79	149.39	20000.40	0.74	14.62
b. Economic Services	12841.56	213.45	12628.11	1.66	9.23
2. Non-Merit Goods/Services (Subsidy Sectors)	114491.93	10276.95	104214.98	8.98	76.16
a. Social Services	32916.91	1166.89	31750.02	3.54	23.20
b. Economic Services	81575.02	9110.06	72464.96	11.17	52.95
3. Surplus Sectors (Merit and Non-Merit)	25984.85	35446.49	-9461.64	136.41	-
Total Subsidies (1 + 2)	147483.28	10639.79	136843.49	7.21	100.00
Social Services (Merit and Non-Merit)	53066.70	1316.28	51750.42	2.48	37.82
Economic Services (Merit and Non-Merit)	94416.58	9323.51	85093.07	9.87	62.18
Subsidies Net of Surplus (1 + 2 + 3)	173468.13	46086.28	127381.85	26.57	-

b. Relative Shares of Centre and States

Category-wise relative shares of subsidies are given in Table 4.2. The share of the Centre in merit services (16.92 per cent) is much smaller than its share in non-merit services (36.05 per cent). In both cases, the share of the States is, of course, much higher. Looked at from the viewpoint of social and economic aggregates, Centre's share is much smaller (9.86 per cent) in social services as compared to its share in the economic services (44.64 per cent). Surpluses generated by the Centre and the States are roughly of an equal size. The relative shares of the Centre and the States for the aggregate categories of social and economic services, and for major services within each of these broad heads are depicted in Chart 4.1

Table 4.2
Centre, States and All-India Subsidies: 1994-95

<i>Services</i>	<i>Rs. Crore</i>			<i>Per Cent</i>	
	<i>Centre</i>	<i>States</i>	<i>All-India</i>	<i>Share in All-India Subsidies</i>	
				<i>Centre</i>	<i>States</i>
1. Merit Goods/Services (Subsidy Sectors)	5521.91	27106.60	32628.51	16.92	83.08
a. Social Services	1162.93	18837.47	20000.40	5.81	94.19
b. Economic Services	4358.98	8269.13	12628.11	34.52	65.48
2. Non-Merit Goods/Services (Subsidy Sectors)	37567.12	66647.86	104215.00	36.05	63.95
a. Social Services	3939.53	27810.49	31750.02	12.41	87.59
b. Economic Services	33627.59	38837.37	72464.96	46.41	53.59
3. Surplus Sectors (Merit and Non-Merit)	-4642.83	-4818.81	-9461.64	49.07	50.93
Total Subsidies (1 + 2)	43089.03	93754.46	136843.50	31.49	68.51
Social Services (Merit and Non- Merit)	5102.46	46547.96	51750.07	9.86	90.14
Economic Services (Merit and Non-Merit)	37986.57	47106.50	85093.07	44.64	55.36
Subsidies Net of Surplus (1 + 2 + 3)	38446.20	88935.65	127381.86	30.18	69.82

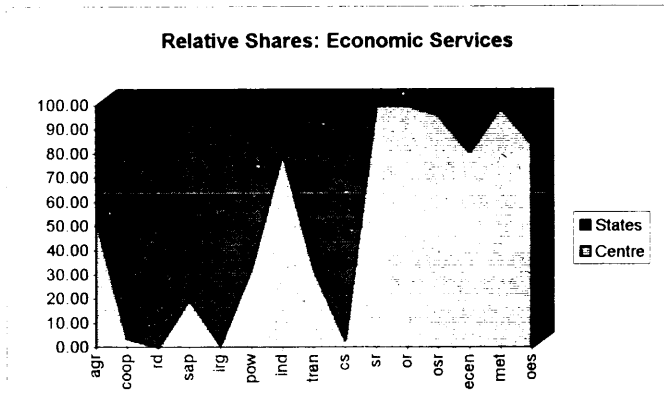
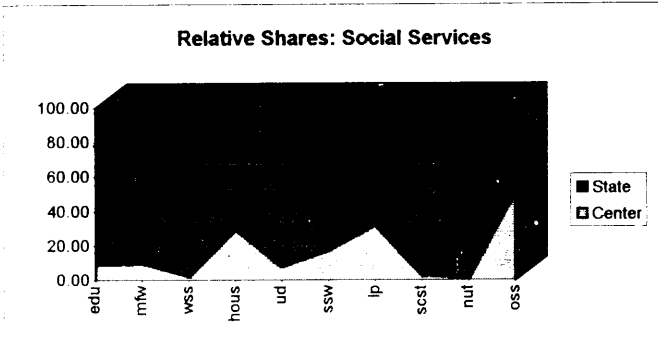
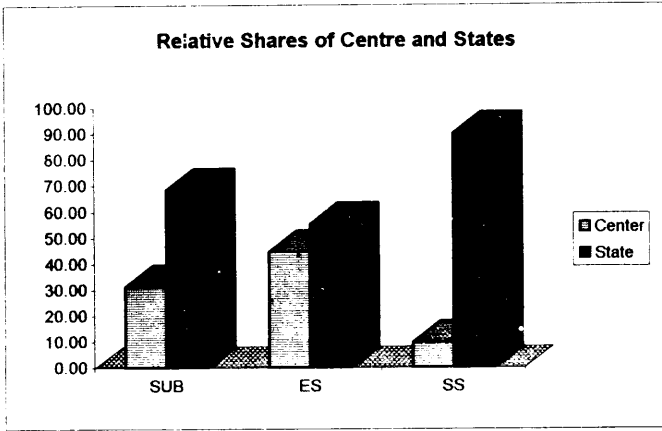
c. Recovery Rates

A profile of recovery rates are shown in Table 4.3.

Table 4.3
Profile of Recovery Rates: 1994-95

	<i>Merit</i>			<i>Non-Merit</i>			<i>All Services</i>
	<i>Social</i>	<i>Economic</i>	<i>Total</i>	<i>Social</i>	<i>Economic</i>	<i>Total</i>	
Centre	2.93	1.72	1.98	12.38	11.65	11.73	10.59
States	0.60	1.63	0.92	2.15	10.75	7.35	5.58
All-India	0.74	1.66	1.10	3.54	11.17	8.98	7.21

Chart 4.1



The average recovery rate, all services taken together, is substantially lower in the case of States, being only 5.58 per cent (Table 4.3). The corresponding figure for the Centre is 10.59 per cent, which also, by itself, is quite low. The aggregate all-India recovery rate is just 7.21 per cent, indicating that nearly 93 per cent of costs in the provision of social and economic services remain unrecovered. As expected, the recovery rates in the case of merit goods is very low, not rising beyond 2 per cent in most cases. In the case of non-merit goods, the Centre performs better in all categories, the difference being much larger for social services as compared to that for economic services.

d. Sectoral Shares

Sector-wise shares have been worked out putting merit and non-merit subsidies together. Relative shares of different sectors are indicated in Chart 4.2. Education as a sector claims the largest share of subsidies accounting for 21 per cent, followed by agriculture (12 per cent), irrigation (11 per cent), industries (10 per cent), power (9 per cent) and transport (7 per cent).

Relative shares of different sectors within their sub-groups (social and economic) are highlighted in Chart 4.3. Among the social services, education has the largest share, followed by medical and family welfare. Among the economic services agriculture, irrigation, industries and power have claimed major shares.

COMPARISON WITH PREVIOUS STUDIES

While it is tempting to compare these results with those obtained in the two previous exercises directed towards subsidy estimation, viz., Mundle and Rao (1991) and Tiwari (1996), relating respectively to years 1987-88 and 1992-93, with a view to obtaining some idea as to the pattern of change in subsidising government services over time, such a comparison cannot be done in a straightforward manner because of the differences in method and procedure of estimating subsidies in this study vis-a-vis the two earlier studies. Some of the important differences are noted below.

- i. The interest-rate, reflecting the opportunity cost of capital employed in the provision of services, has been estimated here as the average rate of interest on internal (including small savings and provident fund) and external debt incurred by the government. For the

estimation of State level subsidies, average effective interest rates were calculated for each State separately. Thus, there is a vector of interest rates used in this study which gives individual rates for the Centre and each of the States.

Chart 4.2

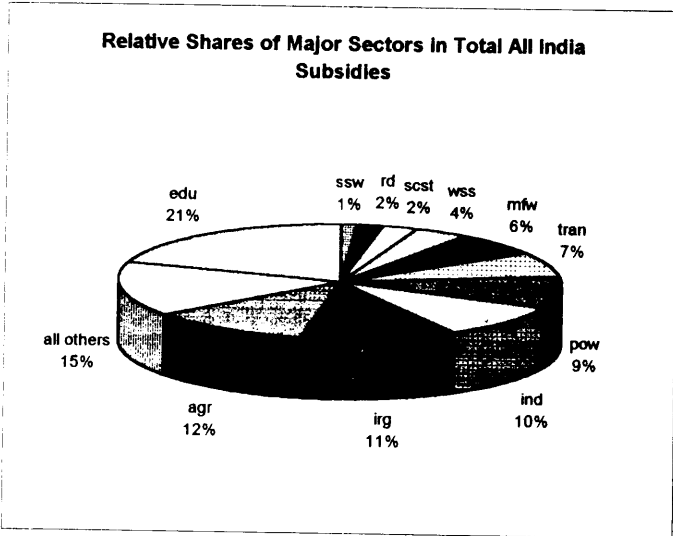
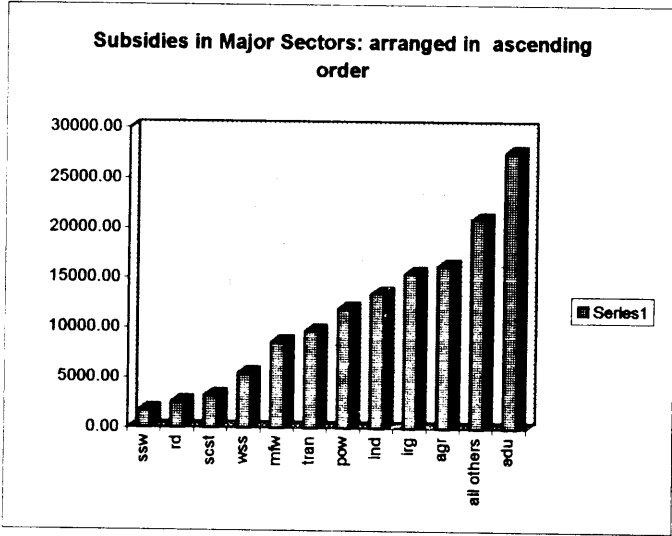
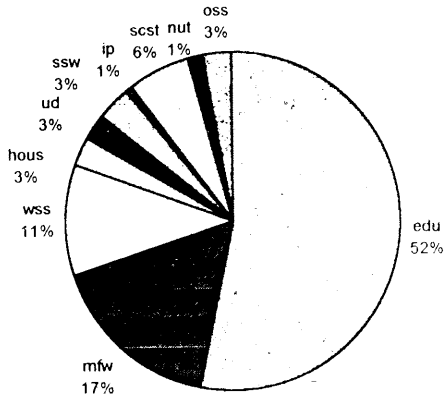
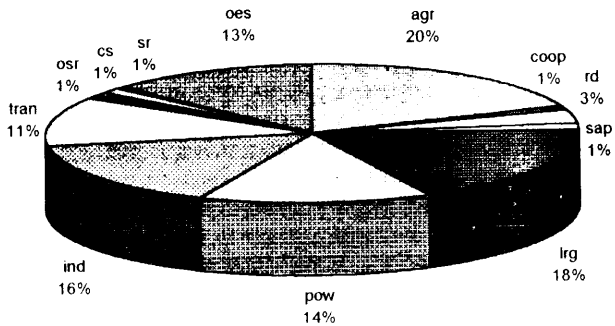


Chart 4.3

Relative Shares of Subsidies: Social Services



Relative Shares of Subsidies: Economic Services



In the Mundle and Rao exercise, the interest rate is calculated as the ratio of domestic interest payments by government to the stock of domestic public debt. Although not explicitly stated in their study, we understand that this pertains to the combined accounts of Central and State governments. In the Tiwari study, interest rate is calculated with reference to the domestic debt of the Central government only. In both cases, it is only one uniform interest rate which has been applied for the estimation of subsidies for the Centre as well as for each individual State.

- ii. The method of sector-wise aggregation of subsidies in this study differs from that of its two predecessors in an important way. In those cases, surpluses in some sectors were adjusted against subsidies in others in the process of aggregating them. In the present exercise, at the level of major budgetary heads, surplus sectors and subsidy sectors are aggregated separately.
- iii. Our all-India estimates relate to all States and the Centre, whereas the coverage in the earlier studies were limited to only 14 States, without any adjustment to take into account the remaining States.
- iv. In our case, State level subsidies for 15 major States relate to the year 1993-94. Hence, for an all-India perspective for 1994-95, the States' subsidies at an aggregate level are projected for 1994-95. In the Tiwari study, data for two States were not available for 1992-93. As such, in these cases, data for earlier years were used. It is not clear whether the estimated subsidies were correspondingly projected forward.

FISCAL DEFICIT AND AGGREGATE SUBSIDY

Our estimates indicate that even when unrecovered costs for specified merit goods are not included, the aggregate subsidy in India, Centre and States taken together, amounted to 10.93 per cent of GDP in 1994-95. In the same year, the fiscal deficit of the Centre and States taken together after netting out intergovernmental transfers, was 7.3 per cent of GDP at market prices. Gross primary deficit in this year was 2.45 per cent of GDP at market prices. Any reduction in the quantum of subsidy would be a direct reduction of the borrowing requirements of the government. It is clear that a substantial dent on fiscal deficit can be made by raising the relevant user charges pertaining to governmental provision of social and economic services. It is expected that

the entire primary fiscal deficit would be wiped out by moderate increases in user prices which will have direct as well as secondary effects on fiscal deficit.

The direct effects towards reduction in the extent of unrecovered cost would flow from several channels. First, as user prices go up, recoveries would increase. Secondly, the quantity demanded of the concerned governmental provision of the service would also fall, if the relevant demand curve is elastic such that demand falls below present levels of supply/consumption. The more elastic the demand curve, the larger would be the positive impact on cost recovery. Thirdly, if the government provision/production of the concerned good (service) is on the rising portion of the average cost curve, there would be a reduction in average cost itself. For these reasons, the impact on fiscal deficit would be immediate and substantial, as user prices go up.

In addition, there would also be some secondary effects of an increase in the user prices. These effects would emanate from the fact that once scarce resources are released from oversubsidised sectors, the overall productive efficiency of the system would also increase leading to an increase in the tax-base, which will also reduce the fiscal deficit.

MAJOR SUBSIDIES IN INDIA: SOME OBSERVATIONS

Some of the major and frequently discussed subsidies in India relate to: food, fertilisers, exports, power, irrigation, health and education. In addition, subsidies through the public sector enterprises affect those sectors/industries in which these enterprises participate. A discussion of the explicit Central subsidies relating to food, fertilisers and exports was undertaken in Chapter 2. Similarly, subsidies in respect of the Central and State public sector enterprises were discussed in Chapters 2 and 3. Some of other major subsidies, *viz.*, power, irrigation and the social sector subsidies (health and education) are briefly discussed here. In addition, some important off-budget or regulatory subsidies like petroleum subsidies are also discussed.

a. Power (Electricity) Subsidies

Subsidies implicit in the supply of electricity through State Electricity Boards are estimated and presented periodically in the annual report on the Working of State Electricity Boards and Electricity Departments prepared by the Power

and Energy Division of the Planning Commission. In this exercise, effective subsidy is defined as the difference between the cost of supply and revenue realisation.

Different categories of consumers of electricity are charged differential rates. Six major categories of electricity consumers in this context are: (i) domestic, (ii) agriculture (irrigation), (iii) outside-State, (iv) commercial, (v) industrial and (vi) railway traction. The tariff-rates for the first three categories are less than the average per unit cost of supplying electricity while that for the last three categories are more than the average cost. Thus, the first set of consumers are cross-subsidised by the second set. The subsidy rates differ for the three subsidised categories of consumers. In 1994-95, the average cost of electricity was 159.92 paise per kilowatt hour. The average subsidy for domestic consumption was 66.94 paise, 138.10 paise for use in agriculture/irrigation and 50.39 paise for use outside the State. Similarly, the burden of cross-subsidisation was differentially distributed. For commercial and industrial users, this cross-subsidy rate was 43.47 and 51.66 paise on average. Since industrial consumption was nearly eight times the commercial consumption, most of the cross-subsidisation in electricity comes from the industrial consumers. The estimated subsidies are not fully recovered by the State Electricity Boards through compensation from their respective State governments. Some States provide partial support. Some State governments also write off interest payable to them in lieu of subsidised sale of electricity by the SEBs.

Estimates for gross electricity subsidy are given in Table 4.4. In 1994-95, this subsidy amounted to Rs. 10113 crore for the agricultural sector and Rs. 2963 crore for the domestic sector, the former being 76 per cent of the total electricity subsidy. There could be an element of overestimation in the agricultural sector. Since in many cases agricultural use of power is unmetered, the possibility of transmission and distribution losses being classified as agricultural consumption cannot be ruled out. The subsidy rates have been rising for both agriculture and domestic sectors because the unit cost has been rising faster than the relevant tariff rate. Between 1992-93 and 1995-96, the unit cost rose from 137.44 paise to 170.11 paise per kilowatt hour, implying a rise of 32.67 paise per unit. In the same period, the tariff rate for the domestic consumers rose only by 13.52 paise, and that for the agricultural sector, by 8.89 paise.

Escalation in the cost of production has been primarily due to increased fuel costs, costs of establishment, purchase of power and interest

payments. Inefficiencies in generation, transmission and distribution of power also account for the high level of costs. These inefficiencies may be listed as: (i) low plant load factor; (ii) high transmission and distribution losses; (iii) poor maintenance, deployment of excessive staff and consequently high operating costs; and (iv) non-availability of good quality of coal.

Table 4.4
Electricity Subsidy for Agriculture and Domestic Sectors

(Rs. Crore)

Year	Gross Subsidy to Sectors			Total Gross Subsidy	Subvention Received from State Government	Surplus Generated by Sale to Other Sectors (Cross-Subsidy)	Uncovered Subsidy
	Agriculture	Domestic	Inter-State				
1991-92	5938	1310	201	7449	2045	2173	3231
1992-93	7205	1919	226	9350	1911	3312	4127
1993-94	8888	2420	138	11446	2068	3502	5876
1994-95*	10113	2963	232	13308	1831	5308	6169
1995-96*	13794	3158	330	17282	7229	6660	3393
1996-97*	15329	3898	267	19494	4000	7494	8000
1997-98 (AP)	17285	4295	274	21854	4340	10643	6871

Source: *Economic Survey, 1995-96 and 1996-97.*

Notes: # Revised Estimates
* Excluding DESU for all items
AP Annual Plan Projections

b. Irrigation Subsidies

Irrigation is a State subject as per the constitutional division of functions, and therefore the responsibility of expenditures on and recovery from irrigation rests primarily with the States. The total public investment in the irrigation sector (major, medium and minor irrigation along with command area development) is above Rs. 70,000 crore. An additional irrigation potential of about 87 million hectares has been created, utilisation being 78 million hectares by the end of 1994-95. The impact of this scale of government intervention on the agricultural sector has naturally been considerable. It helped in the stabilisation and augmentation of agricultural production, and made possible the adoption of high yielding varieties of seeds and an optimal cropping pattern for the farmer (including cash crops like sugarcane). However, creation of further irrigation potential as well as the maintenance of already created irrigation systems has over time become more and more

difficult due to the inadequate attention paid to financial viability of the entire irrigation system by most of the States. The irrigation sector approximately broke even upto the early fifties, but the financial scenario became progressively worse after that. While the costs have risen continuously over the years, their recovery has been tardy due to low water rates, infrequent revision of the rates and large arrears even with respect to these low rates. Two estimates of unrecovered costs of providing irrigation services from major and medium works in 1977-78 and 1986-87 have been provided in Government of India (1992)(Table 4.5). These estimates are based on data provided by the Central Water Commission (CWC) with some modifications. In particular, depreciation at the rate of 1 per cent was added and a three year gestation period of the capital base with interest at the average borrowing cost was also provided for. It can be seen from the table that the total unrecovered costs increased more than five-fold in a period of 10 years. The gross receipts of major and medium irrigation projects fell short of even the working expenses. The CWC compilation ends at 1986-87. Table 4.6 gives more recent and State-wise information compiled by the Planning Commission on the financial aspects of government provision of this service. The total losses, it can be seen from the table, amounted to a staggering Rs. 4504 crore in 1994-95.

Table 4.5
Estimates of Unrecovered Cost: Irrigation

	(Rs. Crore)	
	1977-78	1986-87
Gross Revenue	969	1667
Working Expenses	1272	4927
Interest on Capital	2113	10589
Depreciation	385	1406
Unrecovered Cost	2801	15255

Source: *Report of the Committee on Pricing of Irrigation Water*, Government of India, 1992.

The reasons for the financial difficulties are not difficult to see. The Tenth Finance Commission had recommended an average water rate norm of Rs. 300 per hectare. while the Committee on Pricing of Irrigation Water (Government of India, 1992) had suggested a rate of Rs. 310 per hectare. In fact, the rates vary considerably depending on the crop and other variables. However, the maximum rate charged for foodgrain crops (which still accounts for the bulk of the irrigated land) is Rs. 250 in Gujarat and Rs. 200 in Maharashtra. In most cases, these rates are below Rs. 100 and the lowest

rate is as low as Rs. 19.77 (Uttar Pradesh). In the case of cash crops like sugarcane, the rates are higher, particularly in Maharashtra (Rs. 1750 per hectare) and Gujarat (Rs. 830 per hectare). The average rates for irrigation water in most of the States are thus very low. It has been estimated that the average irrigation rates will have to be increased by 25 per cent every year to meet the operation and maintenance costs alone in the next ten years.

Table 4.6
Operational Profit/Loss of Irrigation Projects: 1994-95 (Pre-Actuals)

(Rs. Crore)

<i>State</i>	<i>Gross Receipts</i>	<i>Working Expenses</i>	<i>Interest</i>	<i>Total Expenses</i>	<i>Net Profit/Loss (-)</i>
Andhra Pradesh	11.95	131.31	498.38	629.69	-617.74
Bihar	20.31	110.96	0.00	110.96	-90.65
Goa	1.05	0.00	0.00	0.00	1.05
Gujarat	53.87	569.88	0.00	569.88	-516.01
Haryana	19.19	330.59	81.44	412.03	-392.84
Karnataka	14.09	329.23	0.00	329.23	-315.14
Kerala	1.42	13.83	0.00	13.83	-12.41
Madhya Pradesh	49.06	103.17	0.00	103.17	-54.11
Maharashtra	88.00	164.54	753.81	918.35	-830.35
Orissa	5.52	47.57	0.00	47.57	-42.05
Punjab	31.46	119.40	0.00	119.40	-87.94
Rajasthan	35.61	98.73	195.38	294.11	-258.50
Tamil Nadu	2.83	71.03	72.08	143.11	-140.28
Uttar Pradesh	93.40	735.12	342.44	1077.56	-984.16
West Bengal	7.56	35.65	25.45	61.10	-53.54
Total Non-Special Category States	435.32	2861.01	1968.98	4829.99	-4394.67
Special category States	3.29	107.47	5.57	113.03	-109.74
Grand Total	438.61	2968.48	1974.55	4943.02	-4504.41

Source: Planning Commission.

The available information of revision of water rates also shows that even normal cost increases resulting from inflation have not been recovered, although there were other elements of cost increase like rising wages and salaries and higher interest costs. There is hardly any case of an automatic rise in rates, and the *ad hoc* revisions have been rather infrequent. Out of 20 States for which information is available, only four (Assam in 1993, Haryana

and Maharashtra in 1994, and Bihar in 1995) have revised the water rates in the nineties. Uttar Pradesh did so in 1994, but withdrew it next year. Similarly Madhya Pradesh first revised and then withdrew the revision in 1992. As against this, in five States (Jammu and Kashmir since 1976, Kerala since 1974, Punjab since 1974, Tamil Nadu since 1962 and West Bengal since 1977) the rates have not been revised for twenty years or more. In fact, there is a move to abolish water rates in Kerala. These facts speak for themselves.

The accumulated arrears are also generally very large. For example, in Uttar Pradesh the arrears of irrigation rates amounted to about Rs. 700 crore as against a collection of Rs. 84 crore only during 1994-95. In Gujarat, the amounts were Rs. 61 crore and Rs. 13 crore respectively in the same year. Other States with similar problems were Maharashtra and Bihar; the problem of arrears is sufficiently general to cause concern and look for remedies.

The Committee on Pricing of Irrigation Water (Government of India, 1992) therefore felt that both revision and restructuring of irrigation rates were called for. They should be revised in such a way that the gross receipts cover operation and maintenance costs, depreciation and interest on capital. Evasion of water rates on the ground of non-use being rather common, as also to promote optimal utilisation, a levy on unutilised capacity has also been recommended (by the Ninth and Tenth Finance Commissions). Given the present situation, it would be noteworthy if only the operational and maintenance expenses were recovered through the rates, as the Group of Officials constituted by the Planning Commission in 1992 to examine the recommendations of the above Committee felt, but there are several problems even for this limited measure. The problem is not with the willingness to pay for the use of water. Various studies have shown that far higher rates are paid by farmers for water from alternative sources other than canal irrigation. To some extent, the user resistance to cost recovery can be attributed to poor availability of water in terms of timeliness of supply, adequacy and extent of private costs involved in utilising the available water.

It has been observed [Gulati, Svendsen and Roy Chowdhury, (1995)] that the problems of poor performance of irrigation systems in India (especially canal irrigation networks) are linked with poor cost recovery. On the one hand, lack of sufficient funds lead to low performance levels, and on the other, poor operational performance further reduces cost recovery. As such, the system of irrigation is caught in a downwards spiral. Gulati, *et al.* (1995, p. 337) observe: "Experts fear that unless some urgent steps are taken

to stem this steady downwards spiral, it will not be long before the entire system, built up at enormous cost, becomes sub-optimal", and later "... the return from the existing schemes, at the margin, is the highest when better operation and maintenance is provided".

Thus, a vicious circle of inadequate finances, inadequate maintenance, loss of water and inavailability to farmers is already in operation. Further, poor monitoring has converted irrigation water into a public good with the classic problem of free-riding. As it is, despite water being a precious natural resource, there is hardly any attempt to encourage its efficient use through consumption-linked pricing on the ground of non-enforceability. Solutions to these problems need to be found urgently, before the irrigation rates become acceptable to the farmers. And without such acceptability, it would be difficult to implement rate revisions due to the electoral power of the farmers as a group, which the elected representatives would find impossible to ignore.

c. Social Sector Subsidies

Being associated with strong externalities and scale economies, both education and health qualify for large subsidies. Education improves sociability, occupational mobility, voluntary responsibilities and law conformity. Better health reduces morbidity and mortality levels and spread of communicable diseases. Both education and health contribute to productive efficiency of the system and a more equitable income-distribution.

Alternative ways of administering subsidies in these sectors may be listed as:

Health: tax deductibility of medical expenses; subsidies to employer/employee for medical insurance; direct transfers to individuals; provision of medical services (consultation/medicines) free or at highly subsidised rates; and, subsidisation of inputs like medical instruments, medicines, domestically produced or imported.

Education: low (less-than-cost) fees; scholarships; education loans; subsidised supply of books, meals, uniforms; direct investment in educational institutions, especially for higher and technical education, where private investment is not forthcoming; and government aid to private educational institutions.

Education is a subject on the concurrent list, and subsidies to this sector flow from both the Central and the State governments. In 1994-95, according to our estimates, Central government subsidies on general education amounted to Rs. 1,629.4 crore, constituting 3.8 per cent of the total Central subsidies of Rs. 43,089.03 crore. The share of subsidies on education was much higher in the case of States. For 1993-94, for the States covered under this study, the subsidies on general education amounted to Rs. 18,620.2 crore, in a total of Rs. 73,100 crore. Thus, roughly one-fourth of State subsidies are on education.

The intra-sectoral allocation of State subsidies on education between elementary, secondary, university levels is given in Table 4.7, along with a residual category. It will be observed that about 50 per cent of the total educational subsidies go for elementary education, while the share for secondary and university education is 35 and 13 per cent, respectively. The subsidy figures are in fact very close to the figures for revenue expenditure indicating that most of the government expenditure in education is revenue expenditure. The recovery-rate as a whole in this sector is less than 1 per cent. The recovery rate even in the university sector is as low as 1.25 per cent.

Table 4.7
Subsidies on Education: Selected States (1993-94)

<i>Sectors</i>	<i>Revenue Expenditure</i>	<i>Subsidy</i>	<i>Recovery Rate (%)</i>	<i>Subsidy as Percentage of Total Subsidy</i>
Elementary	9338.8	9377.8	0.30	50.36
Secondary	6478.2	6451.4	1.46	34.65
University	2410.8	2430.3	1.25	13.05
Others	357.9	360.8	6.00	1.94
Total General Education	18585.7	18620.2	0.94	100.00

Both the Centre and the States contribute to subsidies going to health and family welfare. According to our estimates, in 1994-95, the Central government subsidy on health and family welfare amounted to Rs. 855.77 crore comprising just about 2 per cent of total Central government subsidies. In the case of States, for 1993-94, the estimated amount, for the 15 major States covered in this study, was Rs. 5,935 crore comprising 8.1 per cent of the total subsidy provided by them. The subsidy rate for the health sector is nearly 96.70 per cent for the Centre and 98.45 per cent for the States.

Some noticeable empirical features in regard to social sector subsidies may be listed as:

- i. health expenditure is primarily on curative rather than preventive health care; a reversal of these priorities may be more efficient and economical in the long run, and it would also reduce the subsidy burden on the government considerably;
- ii. social services, even though highly subsidised, may still be out of reach for the poor, because the component of private costs (transportation, book, medicines, etc.) may be prohibitively high;
- iii. a large part of the benefit of higher and technical education which are highly subsidised is appropriated by the better off people, who are more advantageously placed in getting admission into and pursuing these courses;
- iv. there is a substantial amount of interdependence between these two sectors; for example, female literacy has been shown to reduce infant mortality; and
- v. it cannot always be assumed that the subsidies actually benefit the target groups, even when such groups are defined in a general way. For example, education subsidies may not reach the students or even teachers; possibilities of leakages cannot be ruled out.

The issue of incidence of education and health subsidies is discussed further in Chapter 5.

d. Petroleum Subsidies

Petroleum subsidies ensue from an administered price regime governing the sale of petroleum products, and thus provide an important example of an off-budget regulatory subsidy. The interface between the government and the oil industry is managed by the Oil Coordination Committee (set up in July, 1975) which regulates and monitors the production of petroleum products in India, prepares long term demand estimates, formulates new oil industry projects, assists in reviewing and implementing pricing policies concerning petroleum products, and manages the oil pool accounts. Expert committees appointed by the Central government review the pricing structure from time to time.

There are four major oil pool accounts, known respectively as Crude Oil Price Equalisation Account (COPE), Cost & Freight Adjustment (C&F) Account, Freight Surcharge Pool (FSP) Account, and Product Price Adjustment (PPA) Account. There are also several sub-accounts. The main objectives of the Oil Pool Accounts (OPAs) are (i) to maintain price equity throughout the country notwithstanding whether the product is domestically produced or imported; (ii) to provide retention margins to refineries and marketing companies operating at various cost levels; and (iii) to even out imbalances caused by State/local levies like purchase tax, octroi, etc.

The funds of the pool are kept in the Public Account. Oil Coordinating Committee (OCC) withdraws from the pool account for liquidating pool's liabilities to oil companies. A major exception occurred in 1990-91, when the Central government directly appropriated an amount of Rs. 2,300 crore to the Consolidated Fund of India, which was later written off by the OCC. The pool funds deposited in the Public Account were earning 5 per cent interest on minimum monthly balance until 1987. Since then, these deposits have been rendered as non-interest bearing by a decision of the government. Payments are made from the pool account to the oil companies as per their due under various arrangements. The pool has to pay interest at 10.5 per cent on the amounts due to various oil companies.

Although currently running into huge deficit, the oil pool accounts were originally intended as self-balancing. The deficits are the result of increasing amounts of subsidies implicit in maintaining increasing differentials between costs of crude oil, and those of refining and marketing it, and the administered prices of petroleum products. The four major oil pool accounts are described below:

i. *Crude Oil Price Equalisation Account.* With the help of this account, the price of crude oil received from various sources, imported as well as indigenous are equalised. This uniform price is referred to as the pooled f.o.b. cost of crude. If the actual price of crude is higher than the pooled f.o.b. price, the difference between the actual price and the pooled price is borne by the COPE account. On the other hand, refineries which obtain crude oil at a price lower than the pool price, contribute the difference to the pool account.

ii. *Cost and Freight Adjustment Account.* This comprises a number of sub-pool accounts pertaining to:

- a. The difference between the ex-refinery price of petroleum products and the cost of importing them (since there is shortage of these due to limits in the domestic refining capacity) is met out of the C&F account.
- b. The difference between the cost of bringing the crude oil to the refineries and the cost built in the retention prices of the refineries is adjusted in the C&F surcharge account.
- c. The demurrage on crude/products imports is reimbursed to the oil companies from the pool account.
- d. Under-recoveries of some levies of some State governments and local bodies by the oil companies through the price mechanism, are compensated by the pool accounts.
- e. Losses due to exchange-rate variations relating to foreign currency loans taken by the oil companies on behalf of the government are also absorbed by this pool accounts.

iii. *Freight Surcharge Pool Account.* This account covers the additional costs of transportation on account of authorised out-of-zone and coastal movements of the petroleum products.

iv. *Product Price Adjustment Account.* Increases in the prices of petroleum products are made through this account. Surcharges are also levied through this account. Important price hikes/surcharge during the period 1988-89 to 1993-94 were:

Price increases: w.e.f. 20.3.1990, 25.7.1991, 16.9.1992, 2.2.1994 and 2.7.1996

Surcharge: Gulf surcharge of 25 per cent w.e.f. 15.10.1990

The Pool Account position under its various sub-accounts has been described in Table 4.8.

The oil pool account had the highest net surplus at the end of 1988-89 when it stood at Rs. 9,267 crore. Since then, the balance in oil pool account has steadily deteriorated turning into a deficit in 1992-93. There was a small net surplus in 1994-95. But since then the magnitude of deficit has continued

to grow. At the time of July 1996 price hikes it was estimated that the deficit on the oil pool account could be contained at Rs. 2,000 crore at the end of 1996-97. With the announcement of a roll-back in the proposed increase in diesel prices, this figure was revised upwards to Rs. 5,000 crore. However, the November 7, 1996 presentation of the Ministry of Petroleum & Natural Gas to the Parliamentary Consultative Committee has estimated (November 7, 1996) that the net deficit on the pool account at the end of 1996-97 will be around Rs. 15,500 crore. By the first week of January, 1997, this estimate was already revised upward to Rs. 16,900 crore.

Table 4.8
Position of Oil Pool Accounts: 1987-88 to 1994-95

Year	Opening Balance	COPE	Net Inflow/-Outflow			Others	Closing Balance
			C & F	FSP	PPA		
1987-88	7,452	-295	1,346	-148	12	-93	8,295
1988-89	8,295	-70	943	-158	225	32	9,267
1989-90	9,267	-2,167	-391	-332	431	-38	6,770
1990-91	6,770	-3,638	-2,382	-428	5,391	-2,490	3,223
1991-92	3,223	-6,441	-6,037	-483	10,169	-379	52
1992-93	52	-8,737	-5,775	-664	15,114	-446	-456
1993-94	-456	-9,056	-8,011	-964	18,728	-847	-606
1994-95	-606	-9,876	-6,936	-1,280	19,886	-511	677

(Rs. Crore)

Source: *Centre for Monitoring Indian Economy*, September, 1996, p. 129.

The structure of the oil pool account is such that deficit on all other accounts are to be met out of surpluses in the PPA account. This surplus has been proving to be inadequate due to the growing implicit subsidies in the petroleum sector. If the COPE account could have been self-balanced, some of the other deficits could be met out of the PPA account.

Under the 'retention price' scheme for oil refineries, oil marketing companies and the pipelines, these units are compensated for operating costs and ensured a return of 12 per cent post-tax on net worth subject to their achieving laid down capacity norms.

With reference to pricing, petroleum products may be divided in two categories, viz., administered products and free trade products. In the first case, prices are uniform for each product at all primary pricing points. About 90 per cent of total petroleum products including MS, HSD, SKO, AVF, LPG, Naphtha, FO, LSHS fall into this category. Products like LOBS,

Benzene, Toluene, Hexane, RPC, CPC, MTO and CBFS fall into the category of free trade products where oil companies are free to fix prices on market considerations although refinery-to-marketing transfer prices of specified products are fixed by government.

For refining activities, the retention price takes into account the (pooled) cost of crude plus refining cost and ensures a fixed (12 per cent) return on net worth. For marketing activities, the retention price takes into account ex-refinery prices and marketing costs and then ensures a 12 per cent return on net worth.

Major costs which have not been passed on to the consumers are on account of: (i) LPG Price/Freight differential, (ii) dealers/distributors commission differential, (iii) bitumen drum cost differential, (iv) coastal freight under recovery, (v) railway freight incrementals, (vi) exchange rate variations and (vii) differential due to change in custom/excise duty structure from specific to ad-valorem (1.3.1994) and budget changes for 1996-97.

Total petroleum subsidy, as per the calculations of the Ministry of Petroleum & Natural Gas, Government of India, in a presentation made to Parliamentary Consultative Committees on November 7, 1996, amounts to a total of Rs. 18,440 crore in 1996-97, which represents a near one hundred per cent increase over the corresponding amount in the previous year. Product-wise breakdown of this amount, as also the subsidy rates, are given in Table 4.9.

Table 4.9
Subsidy on Major Petroleum Products

<i>Product</i>	<i>1994-95</i>	<i>1995-96</i>	<i>1996-97</i>
Subsidy Amount (Rs. Crore)			
SKO (Domestic)	3740	4190	6350
LPG (Domestic)	1410	1630	1950
HSD	430	2180	8340
Naphtha	520	640	980
FO (Fertiliser)	200	420	390
LSHS (Fertiliser)	130	140	200
Bitumen Packed	110	120	190
WAX	20	40	40
Total	6560	9360	18440
Subsidy Rates (Rs.)			
SKO (Domestic) Per Litre	3.39	3.69	5.18
LPG (Domestic) Per Cylinder	64.36	69.70	70.22
HSD Per Litre	0.13	0.59	1.97

Source: Presentation to Parliamentary Consultative Committee, Ministry of Petroleum & Natural Gas, Government of India, November 7, 1996.

In terms of both the magnitude and the rates, the increase in subsidy for HSD (diesel) is phenomenal. It increased from Rs. 430 crore in 1994-95 to Rs. 8340 crore in 1996-97. In terms of subsidy rates, the increase between the two years is from Rs. 0.13 to Rs. 1.97 per litre. The 1996-97 per litre subsidy rate on HSD is more than 97 times the corresponding figure in 1991-92 (= Rs. 0.02). Diesel consumption has also increased by about 42 per cent during 1991-92 to 1995-96. Together, these factors have contributed to a massive increase in the magnitude of subsidy for HSD. Since diesel is used in mass transport and agriculture, diesel prices could not be appropriately revised upwards. It may be recalled that while announcing an across the board increase in prices of petroleum products on July 2, 1996, the proposed increase of 30 per cent in diesel prices was intended to bring the diesel subsidies to zero. However, within a week, a rollback on diesel prices had to be announced cutting the proposed increase by 50 per cent, thus implying a final increase of 15 per cent. As a result, the proportion of diesel subsidy in total petroleum subsidy has increased from 6.55 per cent to 45.23 per cent over just the two-year period from 1994-95 to 1996-97. With many car manufacturers shifting to diesel driven engines, and rise in the number of buses and goods vehicles, it is not clear as to how far the benefits of such high level of subsidisation are accruing to the weaker sections of the society. This situation is further complicated by private and captive diesel-based generation of electricity. Also, the increase in consumption of diesel, based on prices maintained by an extremely high subsidy rate cannot generate efficiency-oriented substitutions in accordance with the appropriate market signals, leading only to an overuse of the product.

SKO (kerosene) is another petroleum product that is heavily subsidised. It is a deficit product and more than half of the requirements are met by imports (54 per cent in 1995-96). A large proportion of total kerosene consumption is distributed through the public distribution system. For example, in 1994-95, 8.8 million tonnes of kerosene (total consumption in the country was 8.96 million tonnes) was allocated to the States/Union territories for the PDS by the Central government. The subsidy on kerosene is also substantial. It was Rs. 3,740 crore in 1994-95, rising to Rs. 6,350 crore in 1996-97. Kerosene consumption through the PDS also shows a clear urban bias. According to the 1991 Census, kerosene usage for cooking was 23.62 per cent in urban households and only 1.34 per cent in rural households.

Some of the burden of subsidy is met out of cross-subsidisation. The overall logic of cross-subsidisation is to use petrol, and aviation turbine fuel (used by the relatively rich) to subsidise the consumption of kerosene, cooking

gas and fuels for fertiliser use, i.e., products meant for the vulnerable sections of society.

The cross-subsidy implies that within the overall product range some products are priced higher than cost in order to finance partially the subsidy on other products that are priced below cost. The cross-subsidies therefore mitigate the extent of deficit on the oil pool accounts. However, to the extent that the increased cost of products like petrol and ATF feeds back into government expenditures, the cross-subsidisation simply replaces oil pool deficit by conventional budgetary deficit. Estimates of cross-subsidies borne by major petroleum products are given in Table 4.10.

Table 4.10
Cross-Subsidy on Major Petroleum Products

<i>Product</i>	<i>1994-95</i>	<i>1995-96</i>	<i>(Rs. Crore)</i> <i>1996-97</i>
Motor Spirit (Petrol)	5,000	5,100	6,380
Aviation Turbine Fuel (ATF)	600	530	330
Other/FTP	2,210	1,830	1,956
Total	7,810	7,460	8,666

Source: Presentation to Parliamentary Consultative Committee, Ministry of Petroleum & Natural Gas, Government of India, November 7, 1996.

Maintaining a large differential, and for too long a period, between international prices/domestic costs and the prices paid by the users blunts the capacity of the economy to adjust to the market signals. These adjustments cannot be postponed indefinitely, and when such adjustments are eventually made, the element of shock to the economy is much larger. Further, maintaining large differential in the element of subsidy between different types of petroleum products also generates inefficient patterns of consumption. A redesigning of the petroleum subsidy programme and the attendant administered price regime should consider the following:

- Price adjustments should be formula-based and automatic, so that no particular government shoulders the blame. These price adjustments should be periodically announced.
- The relativities among different petroleum products should be fixed at a base level. Once these relativities between those products that may be favoured with high subsidy rates (like kerosene and diesel), and

those that are to be used for cross-subsidisation (like petrol, ATF, etc.) are established, the adjustment in all prices should be automatic, without the need for readjusting these relativities in each revision of prices, which generates undesirable consumption patterns.

- The retention price scheme should only ensure a lower profit margin (as against 12 per cent presently), and a significant portion of this should be linked to explicit efficiency norms.