

Budgetary Subsidies in India

Subsidising Social and Economic Services

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Preface

This study has been undertaken by the National Institute of Public Finance and Policy at the instance of the Planning Commission, Government of India.

The study team consists of D. K. Srivastava, C. Bhujanga Rao, Pinaki Chakraborty, and T. S. Rangamannar. Opinions and analyses here are those of the authors. The members of the Governing Body of the National Institute of Public Finance and Policy are in no way responsible for these.

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This work has been undertaken at the instance of the Planning Commission, Government of India. It provides an update of the earlier study relating to **Government Subsidies in India**, in connection with the preparation of the Discussion Paper, which was brought out in 1997 by the Ministry of Finance, Government of India.

In May 2001, preliminary results pertaining to central budgetary subsidies were presented to the Planning Commission in a meeting presided over by Shri K. C. Pant, Deputy Chairman, whose observations have greatly helped us in formulating the scope as well as the content of the study. Several useful suggestions emerged from the discussion that followed. We thank Shri N. K. Singh, and Shri Som Pal, Members of the Planning Commission, and Dr. N. J. Kurian and Dr. Arvind Virmani, advisors, for their valuable comments. As the work progressed, we have had constant interaction with Dr. Kurian who provided valuable ideas and suggestions.

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Executive Summary

Introduction

1. Government subsidies, which often remain hidden in the budgetary magnitudes, were discussed at length in a **Discussion Paper** which the Government of India brought out in May 1997 (DP 1997). This paper had considered the subsidy regime in India as unduly large, non-transparent, largely input-based, poorly targeted, generally regressive, and inducing waste and misallocation of resources. The present study revisits the issue of budgetary subsidies in India, provides an estimate of the implicit budgetary subsidies for 1998-99, examines recent trends, and discusses critical policy issues in the context of subsidies.

Meaning and Rationale

2. Goods and services provided by budgetary resources may be classified as public and private goods. But there are many congestible goods in the intermediate space. In a budgetary context, subsidies are taken as unrecovered costs of public provision of goods, that are not classified as public goods. These are private goods or congestible goods where user charges can be levied either according to individual consumers or according to groups of consumers. In particular, the present study (as in DP 1997), focuses on governmental provision of social and economic services.
3. Subsidies are justified in the presence of positive externalities because in these cases social benefits require higher consumption levels than what would be obtained on the basis of private benefits only. In addition, subsidies are sometimes justified for well defined redistributive objectives. However, the financing of subsidies induces its own costs whether these are financed through additional taxation or borrowing. The welfare gains of subsidies should be matched against the costs of financing subsidies. Over-subsidisation could adversely affect allocation of resources and environment.
4. Subsidies in this study, as in the comparable previous studies including DP 1997, are measured as the excess of costs over receipts on relevant budgetary heads in social and economic services. The costs are calculated as the sum of current costs and annualised capital costs. The receipts comprise interest receipts, dividends and other revenue receipts from user charges.

Subsidy Issues in India

5. The size, incidence, allocation distortions, and recent upsurge in some subsidies are the key issues in the context of budgetary subsidies in India. The main issues pertaining to subsidies in India may be listed as: (i) are budgetary subsidies provided for the right reasons; (ii) are many wrong goods/services being subsidised; (iii) does over-subsidisation lead to harmful effects; (iv) are subsidies too large relative to resources; (v) what are the implications of cross-subsidies and off-budget subsidies; (vi) has there been an upsurge in some subsidies in recent years; (vii) what are the implications of subsidising inputs; (viii) is the subsidy regime in India regressive; (ix) what is the interface of subsidies with inefficiencies; (x) is there a case for increasing subsidies in some sectors; and (xi) is there a need for distinguishing long-term subsidies from those that should have a limited life?

Central Budgetary Estimates: Magnitudes and Trends

6. Aggregate central budgetary subsidies in 1998-99 are estimated to be Rs. 79828 crore, amounting to 4.59 percent of GDP at current market prices, and constituting 53.40 percent of the net revenue receipts of the centre, which, as an item, is the highest draft on revenue receipts as compared to estimates for earlier years.
7. The central subsidies decreased from 4.25 percent of the GDP in 1994-95 to 3.49 percent of the GDP in 1996-97. Reversing the trend of a decline since 1994-95, they increased to 4.59 percent of GDP in 1998-99. Four reasons account for the inordinate increase in the central budgetary subsidies in 1998-99: (i) the impact of salary revisions in the wake of the recommendations of the Fifth Central Pay Commission; (ii) the deterioration of position of railways from a surplus sector into a subsidy sector; (iii) large increase in explicit subsidies of the centre; and (iv) increase in other input costs unaccompanied by any improvement in recovery rates. The explicit subsidies, especially in food have risen sharply since 1996-97.
8. In the case of central subsidies, economic sector subsidies are nearly five and half times as large as those for the social sector. Economic sectors arranged in diminishing order of size of subsidies are: agriculture and allied services, industry and minerals, energy, general economic services, and transport.
9. In the context of central subsidies, current costs dominate total costs in both social and economic services, and more so in social services. The energy sector is a notable exception where the capital costs have a much larger share.

State Subsidies: Broad Trends

10. Budgetary subsidies of the state governments amounted to 8.96 per cent of the GDP and about 90 percent of their revenue receipts. After adjustment for salary arrears paid in 1998-99, the state budgetary subsidies are estimated at 8.47 percent of the GDP.
11. Relative to the GDP, aggregate budgetary subsidies of the state governments have fallen in 1998-99 as compared to the earlier available estimates for 1994-95. The recovery rate has also fallen. This can only be explained by a fall in expenditure (relative to GDP), revenue and capital, allocated to social and economic services in the State budgets.
12. Agriculture and irrigation sectors account for the largest share in the state subsidies, followed by elementary education, energy, secondary education and medical and public health.
13. For the special category states, subsidies relative to their GSDPs are extremely high amounting to 22 percent for the larger special category states, and about 34 percent of their GSDPs for the smaller special category states.
14. Per capita state subsidies generally show a regressive pattern: the higher the per capita income of a state, the higher are the per capita subsidies. Per capita subsidies in the special category states are noticeably higher than those in the general states.

15. The state public sector has drawn an implicit subsidy amounting to Rs. 9561 crore. The overall recovery rate in the state level public sector for the budget is dismally low at 1.64 percent of the costs.
16. Per capita subsidies in education and health showed a regressive pattern where, in comparative terms, low subsidies are available to residents of low income states and *vice-versa*.

All India Subsidies

17. In 1998-99, aggregate budgetary subsidies of the central and state governments are estimated to be 13.54 percent of GDP at market prices, and 85.8 percent of the combined revenue receipts of the centre and states. After adjustment done for salary arrears paid in 1998-99, the aggregate all India subsidies are estimated to be about 13 percent of GDP.
18. As compared to 1994-95, subsidies as percentage of GDP have virtually remained unchanged. Although central subsidies have increased as percentage of GDP, the state subsidies show a small fall. The relative share of the centre is about one-third of the total subsidies, and that of the states, about two-thirds.
19. Agriculture, irrigation, energy, and industry and minerals have the highest shares in that order, followed by elementary education.
20. Together, the public sector covering both central and state level public enterprises, obtains a subsidy from the budget of an estimated amount of Rs. 20,540 crore which is a little more than one percent of GDP.

Policy Issues

21. Cross-subsidies arise in the context of regulated price structures which distinguish between prices according to use/products for the same group of goods/services. Considerable cross-subsidies exist, for example, in the power and, until recently, in the petroleum sectors.
22. There are many off-budget subsidies in the system. An important off-budget subsidy in the petroleum sector has recently been brought on the budget. Subsidies that arise due to guarantees extended by governments for loans taken by the public enterprises are also off-budget subsidies. These have the potential of becoming budgetary liabilities if there are defaults in loans guaranteed by the government or if deficits and surpluses do not balance out as in the case of the Oil Pool Account.
23. Subsidies often promote inefficiencies. For example, fertiliser subsidies promote inefficiencies, and are ill-targeted. In general, administering subsidies through inputs should be discouraged. In the case of fertiliser, presently the old RPS system is being given up. After an adjustment period of five years, fertilisers subsidies should be given up in their present form. At best, there may be a case of subsidising small and marginal farmers to a limited extent.

24. In the case of food subsidies greater decentralisation can lead to efficiencies in carrying and transportation costs, and delivery and targeting mechanism. A well-designed two-tier intervention can increase efficiencies and reduce subsidies to the public distribution system, while providing for the food needs of the BPL population better. Subsidisation of food, targeted towards the BPL population, as a policy objective should be delinked from that of support provided to agriculture. These objectives should be addressed through separate policy instruments.
25. Improving the quality of publicly provided services is crucial to persuading users to pay higher charges. At the same time unit costs need to be reduced to ensure full cost recovery, wherever desirable, and viable. Surplus employment and other operational inefficiencies must be reduced.
26. Subsidy reforms must focus on selected sectors in the first instance which would yield maximum results. In particular, attention can be focused on food and fertiliser subsidies at the central level, and agriculture, irrigation, power, industries, and transport sectors at the state level.
27. Increase in input costs depends significantly on market conditions and is almost continuous. Increase in user charges should be synchronised with this in terms of automatic periodic revisions. Autonomous bodies that can look after the interests of the users as well as service providers are needed to constantly monitor the link between cost escalation and user charges.

List of Abbreviations

ADR	Adjusted Depreciation Rate
APL	Above Poverty Line
APM	Administrative Price Mechanism
ATF	Aviation Turbine Fuel
BPL	Below Poverty Line
C & F	Cost and Freight Adjustment
COPE	Crude Oil Price Equalisation Account
CRS	Compulsory Retirement Scheme
CSO	Central Statistical Organisation
DAP	Di-Ammonium Phosphate
DP	Discussion Paper (May 1997)
ERC	Expenditure Reforms Commission
FCI	Food Corporation of India
FO	Fuel Oil
FOB	Free on Board
FSP	Freight Surcharge Pool
GDP	Gross Domestic Product
GNP	Gross National Product
GSDP	Gross State Domestic Product
HSD	High Speed Diesel
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
LSHS	Light Sulphur Heavy Stock
MOP	Muriate of Potash
MS	Motor Spirit
MSP	Minimum Support Price
NIA	National Income Accounts
NPK	Nitrogenous Phosphate Potash
OCC	Oil Coordination Committee
OIDB	Oil Industry Development Board
O&M	Operation and Maintenance Cost
PDS	Public Distribution System
PPA	Product Price Adjustment
RPS	Retention Price Scheme
SC	Scheduled Caste
SEBs	State Electricity Boards
SKO	Kerosene
ST	Scheduled Tribe
T&D	Transmission & Distribution
TPDS	Targeted Public Distribution System
TR	Target Ratio
VRS	Voluntary Retirement Scheme

Chapter 1

SUBSIDIES: CONCEPTS AND ISSUES

Introduction

Subsidies are used to modify market outcomes, especially to take account of positive externalities, and, sometimes, to subserve certain well-defined redistributive objectives.

Subsidies, as converse of an indirect tax, constitute an important fiscal instrument for modifying market-determined outcomes. While taxes reduce disposable income, subsidies inject money into circulation. Subsidies affect the economy through the commodity market by lowering the relative price of the subsidised commodity, thereby generating an increase in its demand. With an indirect tax, the price of the taxed commodity increases, and the quantity at which the market for that commodity is cleared, falls, other things remaining the same. Taxes appear on the revenue side of government budgets, and subsidies, on the expenditure side.

Subsidies can have a major impact in augmenting welfare of the society provided these are designed and administered efficiently to serve a clearly stated set of objectives. However, subsidies can also be very costly if they are poorly designed and inefficiently administered. Subsidies in areas such as education, health and environment are advocated on grounds that their benefits are spread well beyond the immediate recipients, and are shared by the population at large, present and future. Subsidies are also used with redistributive objectives, particularly for ensuring minimum consumption levels of food and other basic needs.

Subsidy Reforms: The 1997 Discussion Paper

A Discussion Paper of the Government of India brought out in May 1997 critiqued the subsidy regime in India as unduly large, non-transparent, largely input-based and poorly targeted, generally regressive, and inducing waste and misallocation of resources.

While tax reforms in India took off in the early nineties, the first major expenditure side reform was brought under focus in May 1997 with the Ministry of Finance of the Union Government bringing out a Discussion Paper (DP 1997) on the subject of subsidies. This paper had taken a broad view of subsidies considering these as unrecovered costs of public provision of non-public goods and services financed by the budget. The DP 1997 critiqued the subsidy regime as being unduly large, non-transparent, largely input-based and poorly targeted, generally regressive in its incidence, and inducing waste and misallocation of

resources. The subsidy estimates in DP 1997 pertained to 1994-95 for the centre, and those projected forward for major states, related to 1993-94 to provide an all India picture for 1994-95. Estimates for the centre were updated with some methodological changes for 1995-96 and 1996-97 in a later study (NIPFP, 2001). The DP 1997 had argued that the proliferation of subsidies in India flowed from an undue expanse and growth of governmental activities in the provision of private goods. Apart from public goods like defence and maintenance of law and order, the government had extended itself into various social and economic sectors producing a wide range of private goods and services. However, in many of these areas, costs tended to be very high and cost recoveries poor, giving rise to an undue growth both in the extent and volume of subsidies implicit in the budgetary provision of these services.

The objective of the present study is to update the DP 1997 estimates for the centre and the states, and focus on major policy issues for reforming the subsidy regime. The present study contains estimates for 1998-99 for the Centre as well as all the states and provides a comprehensive estimate of total budgetary subsidy.

Meaning of Subsidy

In a budgetary context, subsidies are taken as unrecovered costs of public provision of non-public goods, although the term may be defined in a variety of other ways.

Defining a subsidy is not a straightforward proposition. Subsidy has been used by economists with different meanings and connotations in different contexts. The dictionary [Concise Oxford] defines it as "money granted by state, public body, etc., to keep down the prices of commodities, etc.". Environmental economists define subsidies as uncompensated environmental damage arising from any flow of goods and services. In a budgetary context, it may be defined as "unrecovered costs in the public provision of private goods" as was done in DP 1997. Prest [1974] had commented way back in 1974 that economists have not settled upon a commonly acceptable definition of subsidy. The House Committee on Agriculture of the U.S. Congress (1972) acknowledged that "the definition of a subsidy, like that of beauty, varies with the beholder" and Houthakker (1972) had observed that "the concept of a subsidy is just too elusive to even attempt to define". In the present exercise, budgetary subsidies will be treated as unrecovered costs in the public provision of goods and services that are essentially private in nature.

Rationale of Subsidies

Subsidies are justified in the presence of positive externalities because in these cases consideration of social benefits would require higher level of consumption than what would be obtained on the basis of private benefits only.

In general, subsidies are advocated in the presence of positive externalities. In such a case, the social benefit from the consumption of a particular commodity or service is greater than the sum of the private benefits to the consumers. Primary education, preventive health care, and research and development are prime examples of positive externalities. In these cases, private valuation of the benefits from such goods or services is less than their true value to society, and normal pricing mechanism will not produce efficient outcomes. Subsidies can provide the necessary corrective in such cases. Subsidies have also been advocated for redistributive objectives, especially to ensure minimum level of food and nutrition to all sections of society.

However, subsidies need to be financed. These may be financed through additional taxation or borrowing. Taxation leads to dead weight losses in welfare. Therefore, whether introducing a subsidy is a welfare augmenting measure or not can only be judged in terms of additional welfare resulting from the subsidy against welfare loss from additional taxation. The implications of additional borrowing also need to be considered in a macro framework because of the pressure it may exert on interest rates and on crowding out of private investment.

Subsidies: Implications in a General Equilibrium Framework

The financing of subsidies induces its own costs. Subsidies should be considered in a macro and general equilibrium framework.

As noted, provision of subsidies is not a costless exercise because these need to be financed through taxation. Further, since markets in the economy are linked, the effect of introducing a subsidy in one market will affect the other markets through backward and forward linkages. Since taxation involves dead weight losses, every increase in tax rates would involve a welfare loss, which needs to be matched by the welfare gain through the subsidy. As long as the subsidy-induced welfare gain is more than the tax-induced welfare loss, subsidisation may be recommended. But it is important that the welfare and efficiency losses associated with the cost of financing the subsidies are taken into account. Using even partial equilibrium analysis, several works [e.g., Browning (1993 & 1976), Ng, Yew-Kwang (1980), Fullerton (1991)] offer insights into the welfare implications of tax-financed subsidies. In a recent work Browning (1993) made an attempt to extend the partial

equilibrium analysis to take into account the welfare cost of raising taxes to finance a subsidy. The two together can be studied by using marginal social cost and marginal social benefit to determine the second best optimal subsidy. Although a number of important factors concerning administrative and compliance costs are not taken into account, he has argued that subsidies are more efficient when these involve lower levels of spending to achieve the desired output levels. In addition, most desirable subsidies are often those that redistribute the smallest amount to the consumers.

In a general equilibrium framework the introduction of subsidy in one market would reverberate into the system through several channels. First, if the subsidies would serve as an input like power, diesel or irrigation, the benefit of the subsidy will be extended to all final outputs where the subsidised good is being used as an input. In particular, their unit cost would go down. This will have implication for the final incidence of the subsidy which will be dispersed through several markets.

On account of the interdependence among markets, subsidies may induce a number of efficiency losses. If subsidies are introduced by regulation of prices, in particular, by making a distinction between the consumption of the same good according to its usage, inefficiencies may be generated. Thus, if a distinction is made between agricultural use of electricity vis-à-vis its industrial use, there may be excess use of electricity in the subsidised agricultural sector, reduce the availability of electricity for the industrial sector, which, in the context of overall shortage, would lead to loss of output and, therefore, welfare. The degree and volume of subsidisation must, therefore, take into account not only the first round effects of subsidies affecting the subsidised sector but also the second and subsequent round effects. A full analysis would require a general equilibrium framework in which interdependence of different sectors is fully taken into account. Further, macroeconomic effects need to be factored in specifying the government budget constraint and the cost of financing the subsidies.

Classification of Goods: Public, Congestible, and Private

Goods and services may be classified as public and private goods. But there are many congestible goods in the intermediate space.

In a budgetary context, it is useful to distinguish between three sets of goods provided by the government, viz., public goods, private goods and ‘club’ goods or congestible goods. Public goods are identified by the twin characteristics of non-rivalry (consumption by one user does not reduce the quantity available for another) and non-excludability (consumption by one cannot be distinguished from consumption by another). Defence and law and order are examples of public goods. In the case of private goods, the consumer is identifiable, and the

extent of his consumption is measurable. In modern economies, there are many goods/services that do not clearly fall into the exclusive categories of purely public or purely private goods. Both the characteristics of rivalry and excludability are matters of degree, and often there are some goods which can be seen as characterised by different degrees of 'publicness' and, therefore, fall in an intermediate category. A conceptual category is that of 'club' goods or congestible goods like roads or swimming pools which relate to goods that are non-rival for small groups but become rival when the group of users becomes large. In the case of congestible goods, user charges are leviable, although these may be varied according to groups of consumers rather than individual consumers.

Government expenditures in India are broadly classified with respect to three service categories: general, social, and economic. In the general services, expenditure heads like organs of state, fiscal and administrative services are included. These services are in the nature of public goods. These are not supplied by the market although sometimes services can be individualised. In most cases, individuals cannot be charged for services according to the extent of their consumption. In such cases, these are appropriately paid for by taxation. Although some services within the category of general services may be individually chargeable, it is difficult to disentangle public and private services and effect corresponding recoveries in this group of services.

Governments in India, both at the centre and in the states, actively participate in the provision of a range of private goods or congestible goods under the head of social and economic services where users or groups of users are identifiable and user charges can be levied. Budgetary subsidies arise when the budgetary cost of providing the good/service is more than the recovery made from the user/beneficiary of the service, the difference being financed by the taxpayer. Clearly, some subsidies are less justified than others. How far can a service be subsidised through taxation is the critical issue.

The criterion of 'externality' determines whether and to what extent the concerned service should be subsidised. In DP 1997, services were classified into merit and non-merit categories. While the merit goods deserve subsidisation, there is no case for subsidising non-merit goods. However, even in the case of merit goods, one still needs to determine the desirable degree of subsidisation. Given that some services like higher education were put into the non-merit category in the earlier classification which may deserve some subsidisation, it was felt that an intermediate category may be needed. Thus, even if elementary education and higher education may both require subsidisation, the degree of subsidisation may be much higher for elementary education. In an earlier study (NIPFP, 2001), subsidies and related services were divided into three categories, *viz.* (i) Merit I; (ii) Merit II and (iii) Non-Merit. These broadly refer to categories of services with desired high,

intermediate and low (or zero) degrees of subsidisation. The distinction between these may be made on the basis of the extent of externality associated with the service. The exact degree of subsidisation ultimately needs to be determined, service by service. Determining the right degree of subsidisation depends on the elasticities of social and private demand, the extent of externalities, the associated cost (supply) functions, and the relative preferences (weights) given by the society to distributional objectives. Since quantifying the relevant parameters often proves to be difficult, the society has to exercise a collective judgement. In this study also, three-part classification of government services has been resorted to, as indicated below.

Merit I: Elementary education, primary health centres, prevention and control of diseases, social welfare and nutrition, soil and water conservation, and ecology and environment.

Merit II: Education (other than elementary), sports and youth services, family welfare, urban development, forestry, agricultural research and education, other agricultural programmes, special programmes for rural development, land reforms, other rural development programmes, special programmes for north-eastern areas, flood control and drainage, non-conventional energy, village and small industries, ports and light houses, roads and bridges, inland water transport, atomic energy research, space research, oceanographic research, other scientific research, census surveys and statistics, meteorology.

Non-Merit: All others.

Subsidies and Transfers

Transfers to individuals are income supplements and may be distinguished from price subsidies.

Transfers which are straight income supplements need to be distinguished from subsidies. An unconditional transfer to an individual would augment his income and would be distributed over the entire range of his expenditures. A subsidy, however, refers to a specific good, the relative price of which has been lowered because of the subsidy with a view to changing the consumption/allocation decisions in favour of the subsidised good. In this sense, transfers and subsidies can be considered respective obverses of direct and indirect taxes. Even when subsidy is hundred percent, i.e., the good is supplied free of cost, it should be distinguished from an income-transfer (of an equivalent amount). Transfer payments can be better targeted at specific income groups as compared to free or subsidised goods (see Annexure 1 for a discussion). Price subsidies focus on the consumption levels of specific goods (e. g., education, health, and food). However, subsidised prices also have associated income effects leading to an increase in the consumption of other (non-subsidised) goods.

Harmful Subsidies

Over-subsidisation could adversely affect environment and allocation of resources.

In the context of environment, subsidies are often interpreted as opportunity costs which arise due to negative environmental externalities. For example, car drivers pollute the atmosphere for all citizens and gain a benefit at everyone's expense implying that common citizens subsidise the car owners. Similarly, when farmers spray pesticides, they introduce toxic effluents into the commonly shared ecosystems. Industrialists often introduce pollutants into citizens' water supply.

Over-subsidisation often leads to an adverse effect on the environment. In recent years, the phenomenon of environmentally perverse subsidies has been widely recognised in the literature. There is considerable international concern about environmentally harmful subsidies. Myers, *et. al.* (1998) estimate that perverse subsidies in the world may amount to as much as \$1.5 trillion, which is larger than the economies of all but five countries in the world (using purchasing power parity for the GNPs of China and India). They have argued that perverse subsidies have the capacity to exert a highly distortive impact on the global economy, and to inflict large scale injuries on environment.

A recent study [NIPFP (2001): Pandey and Srivastava] identified and estimated the subsidies having a bearing on environment in respect of the budgetary heads in the Indian context. It was argued that subsidies on irrigation (major, medium and minor), and command area development and fertilisers, pesticides and chemicals have the potential of significant adverse effects on the environment.

Subsidy Issues in India

The size, the incidence, the allocation distortions, and the recent upsurge in some subsidies are key issues in the context of budgetary subsidies in India.

It is arguable that instead of governmental provision, if a similar service was provided by the private sector, the costs of provision of the service would have been less. In other words, the government may be subsidising its own inefficiency to a considerable extent, and to that extent the benefit of the subsidy does not really accrue to the user/consumer. Inefficiency costs are such that a tax payer cannot be asked to pay for it, nor the user of the service be justifiably charged for it. The only alternative is to eliminate the inefficiency costs.

Although the issue of equity and efficiency has to be considered keeping in view the impact of the entire fiscal and regulatory system (taxes, subsidies, fiscal deficit, government expenditures and administered prices), subsidies in India have a significant impact on the equity and efficiency of the fiscal regime because of their size and spread. If excess subsidisation is financed through distortionary taxation, efficiency of the system is doubly compromised. An appropriate degree of subsidisation may lead to a better alignment of market prices to the structure of social demands; but excessive subsidisation would distort their alignment leading to waste of scarce resources, and regressive outcomes. Striking the right balance, therefore, is the key question in achieving the equity and efficiency objectives of fiscal intervention.

Some of the important contemporary subsidy related issues in India are listed below:

1. Are budgetary subsidies being provided for the right reasons, especially in the context of arguments like the infant industry argument which may not be valid any more?
2. Are there many wrong goods/services being subsidized, especially in the context of many goods/services belonging to the non-merit category?
3. Does over-subsidisation lead to perverse results, especially in the light of experience regarding the damage to soil productivity by subsidy-induced distortions in the NPK ratio and other environmentally adverse effects?
4. Are subsidies too large relative to resources, especially in the context of the fall of the tax-GDP ratio in the nineties?
5. What are the implications of cross subsidization and off-budget subsidies?
6. Have budgetary subsidies increased relative to the GDP and revenue receipts in recent times?
7. What are the implications of subsidising inputs?
8. Is the subsidy regime in India regressive in its final incidence?
9. Do subsidies hide and promote inefficiencies?
10. Is there a case for increasing subsidies in some sectors?
11. Is there need for distinguishing between subsidies that are to be given on a long-term basis from those that should be used on a temporary basis with a pre-determined life?

Outline of Present Work

The present work provides an estimate of budgetary subsidies for 1998-99 for central and state governments and discusses some of the key subsidy related issues in the Indian context.

This work is divided into seven chapters. The first chapter deals with concepts and issues. The approach to estimating budgetary subsidies and the methodology is given in chapter 2. Chapter 3 presents an estimate of central budgetary subsidies for 1998-99 and places these in perspective by comparing with the earlier estimates. Chapter 4 provides the magnitude of state budgetary subsidies along with cost recovery estimates and examines their implications. Chapter 5 provides comprehensive estimates of government subsidies in India considering both the central and the state budgetary subsidies. Chapter 6 raises relevant policy issues in the context of subsidising services through budgetary support. In particular, five issues have been dealt with *viz.*, cross-subsidies that arise due to regulated price structures, off-budget subsidies, targeting of subsidies, delivery mechanisms, and inefficiencies induced by subsidies. The concluding chapter focuses on the strategy for reforming government subsidies in India.

Chapter 2

ESTIMATING BUDGETARY SUBSIDIES: APPROACH AND METHODOLOGY

Measuring Subsidies: Alternative Approaches

There are three main approaches to measuring government subsidies: aggregating explicitly stated subsidies in government budgets, national income accounting approach, and measuring budgetary subsidies as unrecovered costs.

It is commonly recognised that entries in the budget under the head 'subsidies' would give a very incomplete picture of subsidies. An alternative approach is used in the national income accounting framework. Another alternative, which is used here, is to define subsidies as unrecovered budgetary costs. While, several subsidies are explicitly stated in the central budget, the state budgets show few subsidies explicitly. Therefore, explicit subsidies provide only a limited idea of the overall volume of budgetary subsidies in the system. Since observed or explicit subsidies cover only a fraction of total subsidies, methodologies have been developed to also estimate the implicit subsidies in the system as unrecovered costs of public provision of goods/services that are not classified as public goods. In these cases, it should be possible to recover, at least in principle, the cost of providing services according to the extent of their consumption. It is a general practice to exclude pure public goods such as defence, general administration, etc., as these are meant to be financed by tax revenues, although, sometimes, subsidies are implicit in these cases also. For example, in the case of defence expenditure, there may be a procurement subsidy in the purchase of defence goods.

National Income Accounting Approach

In the national income framework, subsidies net of indirect taxes, constitute the difference between product measures (GDP, GNP) at factor cost and at market prices.

In national income accounts (NIA), indirect taxes are deducted and subsidies are added in order to arrive at estimates of gross domestic product (GDP) at factor cost from the estimates of GDP at current market prices. Indirect taxes that are part of the sale price of commodities do not create incomes for factors of production. These are, therefore, deducted from GDP at market prices to get at GDP at factor cost. On the other hand, subsidies have the reverse effect. A subsidy received by a firm will be paid out as wages, rents or profits, and would therefore, become an income of the factors of production. However, this component of their income is not generated by the sale of output. Hence, subsidies must be added to expenditure, i.e., GDP at market prices.

In the Central Statistical Organisation's NIA methodology, subsidies include grants on current account which private industries, public corporations and government enterprises receive from the government. These may be in the form of direct payments or those estimated on the basis of differentials between buying and selling prices of government trading organisations. The NIA approach focuses only on firms/producers or government departments. It does not fully cover all the budgetary costs in the public provision of non-public goods.

Uncovering Implicit Subsidies: Subsidies as Unrecovered Costs

Here, budgetary subsidies are measured as unrecovered costs in the public provision of goods not classified as public goods through budgetary allocations.

In the present exercise, the focus is on budgetary subsidies and the main objective is to uncover implicit subsidies. Accordingly, subsidies are measured here as "unrecovered" costs of governmental provision of goods/services that are not classified as public goods. In particular, the goods/services under reference are those that are categorised as social services and economic services. The unrecovered costs are measured as the excess of aggregate costs over receipts from the concerned budgetary head. The aggregate costs comprise two elements: (i) current costs, and (ii) annualised capital costs. Current costs consist of revenue (current) expenditures directly related to the provision of services classified under different heads. Transfers to funds are not included as these do not contribute to the provision of service in the current cost. Transfers from funds are included. Transfers to individuals are also separated out, as these add to incomes of individuals and do not constitute provision of goods/services. For capital costs, we distinguish between three forms of government investment resulting in accumulated capital stock. If services are departmentally provided, there is investment in physical capital. In addition, there is investment in the form of equity and loans including those given to public enterprises. The annualised cost of capital is obtained by applying the interest rate at which funds have been borrowed by the government to capital stock. This represents the opportunity cost of capital. In the case of physical capital, a depreciation cost is calculated, in addition. The receipts come in three forms: revenue receipts from the user charges, interest receipts on loans, and dividends on equity investment.

In terms of symbols, these costs may be written as:

$$C = RX + (i + d^*) K_0 + iZ_0$$

where

RX = revenue expenditure on the service head net of adjustments

i = effective interest rate

d^* = depreciation rate

K_0 = aggregate capital expenditure at the beginning of the period

Z_0 = sum of loans and equity investment at the beginning of the period

Adjustments in deriving RX relate to transfer to funds which are deducted and transfer from funds which are added. Transfers to individuals are also not counted, although these are separately compiled. Expenditure on running secretariat social and economic services are also not counted as these relate to general administration, and are also not decomposable among different heads of services.

Receipts are:

$$R = RR + (I + D)$$

where

RR = revenue receipts

I = interest receipts

D = dividends

Subsidy is defined as: $S = C - R$

Other parameters are effective interest rate and depreciation rate. These are estimated separately for the central government and each state government. Table A1 gives the estimated parameters. The effective interest rate is obtained by dividing the interest payment by outstanding debt at the beginning of the concerned year.

Estimating Depreciation Costs

Estimation of depreciation costs should take into account, the fact that capital stock in the finance accounts presents an accumulation of past investments at different prices prevailing in different years in the past.

The depreciation rate is to be calculated with reference to the stock of capital at the beginning of the year. This stock of capital is the sum of nominal investments in previous years. Since these are additions of nominal figures, all at different prices, the calculation of depreciation rate has to take this into account. The methodology used for this purpose is explained below.

Let the life of a capital asset be T years. The rate of depreciation would be $(1/T)$ per year for the asset to be written off. For example, if $T = 50$ (years), $1/T = .02$. Let the current year be $T + 1$. The past years under consideration are from 1 to T. Let nominal investments in these years be written as

$$I_1, I_2, \dots, I_T$$

Assuming an investment growth rate of z , we have

$$\begin{aligned} I_2 &= (1 + z) I_1 \\ \hline I_T &= (1 + z)^{T-1} I_1 \end{aligned}$$

Thus,

$$I_1 = I_T / (1 + z)^{T-1}$$

Correspondingly,

$$\begin{aligned} I_1 &= I_T / (1 + z)^{T-1} \\ I_2 &= I_T / (1 + z)^{T-2} \\ \hline I_{T-1} &= I_T / (1 + z) \\ I_T &= I_T \end{aligned}$$

If the long-term rate of inflation is 'i', a nominal amount of 1 in year 1, is $(1 + i)^{T-1}$ in terms of the prices of the T_{th} year.

Then, the sum of I_1 , etc., in terms of the prices of the T_{th} year can be written as

$$\begin{aligned} &I_T \left(\frac{1 + i}{1 + z} \right)^{T-1} + I_T \left(\frac{1 + i}{1 + z} \right)^{T-2} + \dots + I_T \\ &= I_T [w^{T-1} + w^{T-2} + \dots + 1] \end{aligned}$$

where

$$w = \left(\frac{1 + i}{1 + z} \right)$$

Let, $K_T = (I_T + I_{T-1} + \dots + I_1)$ indicate aggregate capital expenditure obtained by summing investments measured in the prices of the respective years in which they were made. We can write:

$$\begin{aligned}
K_T &= I_T + \frac{I_T}{(1+z)} + \dots + \frac{I_T}{(1+z)^{T-1}} \\
&= I_T \left[1 + \left(\frac{1}{1+z} \right) + \dots + \left(\frac{1}{1+z} \right)^{T-1} \right] \\
&= I_T [1 + x + \dots + (x)^{T-1}]
\end{aligned}$$

where

$$x = 1/(1+z)$$

or

$$I_T = K_T / (1 + x + \dots + x^{T-1})$$

Depreciation for one year in terms of the prices of year T is given by

$$\begin{aligned}
&= \left(\frac{1}{T} \right) I_T (1 + w + w^2 + \dots + w^{T-1}) \\
&= \left(\frac{1}{T} \right) K_T \frac{(1 + w + w^2 + \dots + w^{T-1})}{(1 + x + \dots + x^{T-1})}
\end{aligned}$$

Depreciation in terms of prices of year (T + 1), i.e., the current year, can be obtained by multiplying the above expression further by (1 + i). Thus, if K_T (i.e., outstanding accumulated capital stock in nominal terms) is to be used as the base, the depreciation rate on this should be

$$\left(\frac{1}{T} \right) \left(\frac{1 + w + w^2 + \dots + w^{T-1}}{1 + x + x^2 + \dots + x^{T-1}} \right) (1 + i)$$

We will refer to this expression as the adjusted depreciation rate (ADR). By simulating with alternative values of parameters (i, z) the following features regarding the impact of changes in the parameters on the depreciation rate can be derived.

- i. The higher inflation rate, the higher is the depreciation rate, for any given rate of growth of investment.
- ii. The higher investment growth rate, the lower is the depreciation rate for any given inflation rate.

One more adjustment has been made. After investments are made the stock of capital does not always start yielding service immediately. Roughly 1/3rd of capital stock for three years immediately preceding the reference year is not counted and depreciation rate accordingly is adjusted.

Estimation Parameters

The important parameters relate to the effective interest rates and the depreciation rates. The effective interest rate for the centre is estimated to be 10.17 percent for 1998-99. For the states, the effective interest rates are given in Appendix Table A1. These range between 9.47 to 14.42 percent. In the case of states where the effective rate was above 14.5, we have taken a three-year average because sometimes lumpy interest payments are involved representing past arrears. In the calculation of depreciation rate, we require a long-term growth rate for budgetary capital formation and the inflation rate for capital goods. The inflation rate for capital goods is calculated on the basis of implicit price deflator for gross domestic capital formation. Figures for gross capital formation for the centre and the states as given in Economic Survey 2000-01 for the period 1950-51 to 1997-98 were used. The average inflation rate for gross capital formation is put at 8.605 and the depreciation rate used for the centre is 5.64 and that for the states 4.72 percent per annum. Given that these are based on a number of assumptions at different stages, we have also looked at the sensitivity of subsidy estimates with respect to changes in the depreciation rate.

Some Limitations

There are several features and limitations of the estimation methodology which arise from various assumptions made or procedures followed at different steps. In particular, it may be noted that tax expenditures are not included in the estimates. Average life of an asset is assumed to be fifty years. Estimates are based on actual prices even if these are administered and not on the basis of market prices which would prevail in the absence of regulations. Subsidies arising from administered price regimes, or off-budget subsidies, are also not captured here. However, this study separately considers some of the implications of off-budget and cross-subsidies.

Chapter 3

CENTRAL BUDGETARY SUBSIDIES: MAGNITUDES AND TRENDS

Introduction

Central budgetary subsidies are estimated and classified into social and economic categories, which are then sub-divided into merit and non-merit groups.

In this chapter, we provide estimates of central budgetary subsidies for 1998-99. These estimates, covering both the explicit and implicit budgetary subsidies, are obtained by using the methodology described in chapter 2. The 1998-99 estimates are compared with those of selected earlier years where broadly comparable estimates are available. The salary revisions, made effective from January 1, 1996, have had a major impact in increasing costs of government services. The 1998-99 expenditure figures contained not only the revised salaries but also some arrear payments. The arrears were deducted from the revenue expenditure figures, head-wise, before the subsidy amounts are calculated. A two-way classification of subsidies into social and economic, and merit and non-merit, is presented. The merit category is further divided into Merit I and Merit II. This chapter also provides an analysis of the cost-structure of major budgetary heads. Trends in explicit subsidies of the central budget are separately analysed over a longer period since 1971-72 in the last section.

Central Budgetary Subsidies: Broad Magnitudes

Aggregate central budgetary subsidies in 1998-99 are estimated to be Rs. 79828 crore, amounting to 4.59 percent of GDP, and constituting 53.40 percent of the net revenue receipts of the centre, which is the highest draft of subsidies on revenue receipts recorded so far.

Explicit and implicit subsidies, are estimated at Rs. 79828 crore for 1998-99. This amounts to 4.59 percent of GDP at current market prices and 53.40 percent of net revenue receipts of the central government. Table 3.1 provides the broad aggregates of the different categories of subsidies. Social service subsidies in the central budget amounted to Rs. 14908 crore whereas subsidies in economic services are estimated at Rs. 64920 crore. The share of subsidies in economic services was 81.3 percent in total subsidies. The scheme of classification of merit and non-merit subsidies was discussed earlier. Merit subsidies amounted to only Rs. 19728 crore, whereas a much larger share, amounting to Rs. 60100 crore has gone to non-merit subsidies. This accounted for 75.3 percent of the total subsidies. Also, in 1998-99, subsidies amounted to nearly 70.4 percent of fiscal deficit. Thus, almost all of the borrowing appears to have been exhausted by the provision of non-merit subsidies.

Table 3.1: Central Budgetary Subsidies: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GDP	Fiscal Deficit
Social Services	15665	14908	4.83	9.97	0.86	13.15
Merit	8377	8283	2.33	5.54	0.48	7.31
Non-Merit	7288	6625	9.10	4.43	0.38	5.85
Economic Services	106716	64920	39.17	43.43	3.73	57.27
Merit	12123	11445	5.70	7.66	0.66	10.10
Non-Merit	94593	53475	43.47	35.77	3.07	47.18
Merit	20500	19728	3.77	13.20	1.13	17.40
Non-Merit	101881	60100	41.01	40.20	3.45	53.02
Total	122381	79828	34.77	53.40	4.59	70.43
Memo Items						
GDP 1998-99 (at Current Prices)	1740935					
Revenue Receipts (Net to Union Government)	149485					
Fiscal Deficit	113349					

Source (Basic Data): Finance Accounts of the Union Government and National Income Accounts, CSO.

Central Subsidies: An Inter-Temporal Comparison

The central subsidies increased from 4.25 percent of GDP in 1994-95 to 4.59 percent in 1998-99. The increase is much larger compared to 1996-97 when the central subsidies on the basis of comparable methodology were 3.49 percent of GDP. Four reasons account for the inordinate increase in subsidies in 1998-99 in the last few years: (i) the impact of salary revisions in the wake of the recommendations of the Fifth Central Pay Commission; (ii) the degeneration of railways from a surplus sector into a subsidy sector; (iii) large increase in explicit subsidies of the centre; and (iv) increase in other input costs unaccompanied by any improvement in recovery rates.

Comprehensive estimates of central budgetary subsidies using a broadly similar methodology are now available for six years in the time span of 1987-88 to 1998-99. For the centre, four previous studies provide estimates for five years. The first in the series was that by Mundle and Rao (1992). Subsequent studies are by Tiwari (1996), Srivastava and Sen, *et al.* (1997), and Srivastava and Amar Nath (2001). Using the present study, in all, estimates for six years have become available. These years are 1987-88, 1992-93, 1994-95, 1995-96, 1996-97 and 1998-99.

Table 3.2 shows a time profile of estimated central budgetary subsidies for these six years over the eleven-year period from 1987-88 to 1998-99, as estimated in different studies from time to time. Because of differences in the methodology of estimation, the estimates are not directly comparable. However, in broad terms, a similar approach of measuring budgetary

subsidies in a comprehensive way was used in these studies. There is a greater comparability in the last three estimates. In 1987-88, central budgetary subsidies were estimated to be 4.53 percent of GDP. In 1992-93, these increased to 4.92 percent of GDP. One major factor for this increase may have been the salary revisions following the recommendations of the Fourth Central Pay Commission. It would be evident that since 1994-95, subsidies in the central budget fell to 3.49 percent of GDP in 1996-97. After this, these show a sudden upward movement, rising from a level of 3.49 percent of GDP in 1996-97 to 4.59 percent in 1998-99. This takes it back beyond the level of 1987-88, indicating that attempts to contain subsidy amounts appear to have yielded little or no result over the eleven-year period under consideration.

Table 3.2: A Comparison of Budgetary Subsidies: Selected Years

Year	Subsidies	Revenue Receipts	Fiscal Deficit	(Rs. crore)			
				GDP at Market Prices	Subsidies as Percentage of		
					Revenue Receipts	GDP	Fiscal Deficit
1987-88 (M-R)	16065	37037	27044	354343	43.38	4.53	59.40
1992-93 (Tiwari)	36829	74128	40173	748367	49.68	4.92	91.68
1994-95 (NIPFP)	43089	91083	57703	1012770	47.31	4.25	74.67
1995-96 (NIPFP)	42941	110130	60243	1188012	38.99	3.61	71.28
1996-97 (NIPFP)	47781	126279	66733	1368208	37.84	3.49	71.60
1998-99 (NIPFP)	79828	149485	113348	1740935	53.40	4.59	70.43

Sources: 1. Mundle and Rao (1992), Tiwari, A.C. (1996), Srivastava, D.K., *et.al.* (1997), Srivastava and Amar Nath (2001). Revenue Receipts and Fiscal Deficit: Receipts Budget of the Central Government.
2. GDP: Central Statistical Organisation and Economic Survey 2001-02.

A closer comparison of subsidy magnitudes between 1996-97 and 1998-99 further establishes the importance of salary revisions as a major factor that accounts for the upward surge in the volume of subsidies. Table 3.3 compares subsidy estimates for 1998-99 with those of 1996-97 (Srivastava and Amar Nath, 2001). In these two cases, the methodologies adopted for the estimation of subsidies are similar and, therefore, the results are by and large comparable. In this study, central budgetary subsidies were estimated at Rs. 47781 crore for 1996-97 which increased to Rs. 79828 crore in 1998-99. Thus, in a span of two years, subsidies of the central budget appear to have increased by 32047 crore (also see, Table A7). There are three possible reasons, which are discussed in detail later, but are briefly mentioned here. First, the explicit subsidies (food, fertiliser, etc.) increased by a margin of Rs. 8094 crore from a figure of Rs. 15499 crore in 1996-97 to Rs. 23593 crore in 1998-99 (Table A2). Secondly, railways, which was a surplus sector in 1996-97 became a subsidy sector in 1998-

99 with subsidies in this sector amounting to a little more than Rs. 4000 crore. Thirdly, salary revisions in the wake of the recommendations of the Fifth Central Pay Commission hiked up all current expenditures. The residual must be explained by increased cost of other inputs including petroleum products.

Table 3.3: Subsidy Estimates 1998-99 and 1996-97: A Comparison

	(Rs. crore)			
	1998-99	1996-97	Difference	Difference as Percentage of 1996-97
			1998-99/ 1996-97	1996-97
Social Services of which	14908	8953	5955	66.51
General Education	5006	2666	2340	87.80
Medical and Public Health	1481	917	564	61.52
Information and Broadcasting	1670	732	939	128.34
Economic Services of which	64920	38828	26092	67.20
Agr., Rural Dev. & Allied Activities	19188	12739	6450	50.63
Energy	7812	4274	3538	82.79
Industry and Minerals	17103	11629	5474	47.07
Transport	8298	3199	5099	159.39
Postal	1557	812	744	91.61
Social and Economic Services	79828	47781	32047	67.07

Source: As in Table 3.1.

In 1996-97, railways was surplus sector (Srivastava and Amar Nath, 2001). The estimated surplus was Rs. 4624 crore. In 1998-99, railways became a subsidy sector, the estimated subsidy being Rs. 4021 crore. This indicates a down-turn of Rs. 8645 crore. The aggregate recovery rate in the case of the centre is shown to be 13.98 percent if railways is not included. The recovery rate in social services is 4.83 percent of total cost. A comparison of recovery rates between 1996-97 and 1998-99 should be done by excluding railways in 1998-99 while calculating the aggregate recovery rate. The recovery rate in economic services excluding railways is 15.96 percent. In terms of the merit and non-merit categories, the recovery rates in the merit category are lower at 2.33 percent for social services, and 5.70 percent for economic services (Table 3.4).

For social services, subsidies in 1996-97 were Rs. 8953 crore which increased to Rs. 14908 crore in 1998-99, thereby implying an increase of 66.51 percent (Table 3.3). The main increases occurred in general education and information and broadcasting.

The average increase in subsidy estimates for economic services, comparing the 1998-99 magnitudes with the 1996-97 magnitudes works out to 67.20 percent. A sharp increase of subsidy amounts is indicated in the energy sector, transport and in postal services. In the case of energy, the increase over the two periods is 82.79 percent. The large increase in postal services reflects the large salary intensity of this sector. This sector has experienced a 92

percent increase in the 1998-99 subsidy levels over those of 1996-97. In the transport sector the increase was even higher at 159.39 percent.

Classification into Merit and Non-Merit Categories

Non-Merit Subsidies Exhaust the whole of Fiscal Deficit

As already discussed in Chapter 1, subsidies have been divided into two main categories, merit and non-merit. The merit subsidies have been further divided into Merit I and Merit II groups. Table 3.4 provides group-wise totals of the subsidies. Table A4 gives details according to major heads of the merit and non-merit classification in the social services. Table A5 provides the head-wise subsidy estimates divided into merit and non-merit categories for the economic services. The share of non-merit subsidy is Rs. 60100 crore in a total of 79828 crore. This amounts to approximately 75 percent of the total subsidies. Merit I subsidies are estimated at Rs. 4006 crore which is only about 5 percent of the total subsidies. Merit II subsidies account for Rs. 15722 crore which is about 20 percent of the total subsidies. The pattern shown by the recovery rate indicates that Merit I group has an average recovery rate of 1.63 percent whereas the Merit II group has an average recovery rate of 4.30 percent. The non-merit group shows an average recovery rate of 41.01 percent if railways is included. This provides the basis for working out the scope of additional recoveries by looking at the difference between category-wise defined subsidy rates and the actual subsidy rates.

Table 3.4: Classification of Subsidies: Merit and Non-Merit Categories

Service	Cost			Receipts	(Rs. crore)	
	Current	Capital	Total		Subsidy	Recovery Rate (Percent)
Social Services						
Merit I	3567	285	3852	66	3786	1.72
Merit II	4324	201	4525	27	4498	0.61
Total Merit	7891	486	8377	94	8283	2.33
Non-Merit	6434	854	7288	663	6625	9.10
Total Social Services	14325	1340	15665	757	14908	4.83
Economic Services						
Merit I	219	2	220	0	220	0.00
Merit II	8717	3186	11903	678	11225	5.70
Total Merit	8936	3188	12123	678	11445	5.70
Non-Merit	67907	26686	94593	41118	53475	43.47
Total Economic Services	76842	29874	106716	41797	64920	39.17
Social and Economic Services						
Merit I	3785	287	4072	66	4006	1.63
Merit II	13041	3387	16428	706	15722	4.30
Total Merit	16827	3674	20500	772	19728	5.92
Non-Merit	74340	27541	101881	41781	60100	41.01
Total Subsidy	91167	31214	122381	42553	79828	34.77

As indicated in Table A4, among the social services, the Merit I group comprises elementary education, primary health centres, prevention and control of diseases, welfare of SC, ST and other backward classes, and social welfare and nutrition. Except for social welfare and nutrition, in all the other categories, receipts are virtually zero. In the Merit II group of social services, secondary and higher education, technical education, family welfare and urban development are included. In these cases also, the receipts are fairly small. The recovery rate for the Merit I group as a whole is higher than for the Merit II group under social services. In the non-merit social services, the recovery rate is above 9 percent and the volume of subsidy is Rs. 6625 crore. The aggregate volume of subsidies under the non-merit services in the social category, however, is less than the sum of the Merit I and Merit II group subsidies.

Among the economic services, the Merit I group consists of soil and water conservation and ecology and environment. In both cases, recoveries are nil and the total cost translates into subsidies. Merit II group of economic services accounts for a much larger share. The total volume of subsidies in this group is Rs. 11225 crore. However, the non-merit group subsidies in the economic services account for a much larger volume of subsidies. It is nearly 5 times as large as the subsidies in the Merit II group. The total volume of non-merit subsidies in the economic services is Rs. 53475 crore. However, in this group, the average recovery rate is 43.47 percent of the total costs excluding the surplus sectors, but including railways.

Central Subsidies According to Major Heads

Economic sector subsidies are nearly five and half times as large as those of the social sector. Heads arranged in diminishing order of size of subsidies are: agriculture and allied services, industry and minerals, energy, general economic services, and transport.

Broad category-wise aggregates of estimated subsidies are given in Table 3.1. In Table 3.5, subsidy estimates according to major heads are indicated. In the social services, centre's participation is limited. Most of the social sector expenditures pertain either to the Union Territories that figure in the central budget or meant for departmental transfers to the state governments. In the education sector, subsidy estimates are upto minor heads. The total amount of subsidy in general education was Rs. 5006 crore, and in technical education, sports, art and culture, it was Rs. 1340 crore. Except for information and broadcasting where the recovery rate is Rs. 24.61 percent, in most other instances in the social services, the recovery rates are close to zero. Housing, information and broadcasting and social welfare

and nutrition are some of the other important heads claiming relatively larger subsidies within the social services group. The overall recovery rate in social services is 4.83 percent.

Table 3.5: Central Budgetary Subsidies: 1998-99

Social and Economic Services	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	14325	1340	15665	757	14908	4.83
General Education	4978	33	5011	5	5006	0.09
<i>Elementary Education</i>	2307	7	2314	0	2314	0.01
<i>Secondary Education</i>	1056	11	1067	0	1067	0.03
<i>Univ. and Higher Education</i>	1472	6	1478	1	1478	0.06
<i>Other General Education</i>	142	8	151	3	147	2.24
Technical Education, Sports, Art and Culture	1267	83	1350	10	1340	0.72
Medical and Public Health	1434	89	1523	42	1481	2.77
<i>Public Health</i>	298	14	312	9	303	2.88
<i>Medical</i>	1136	75	1211	33	1178	2.74
Family Welfare	313	5	318	13	304	4.13
Water Supply and Sanitation	613	48	661	9	652	1.41
Housing	1751	495	2246	64	2182	2.84
Urban Development	73	88	161	0	161	0.03
Information and Broadcasting	1990	225	2216	545	1670	24.61
Welfare of SCs, STs and other BCs	84	216	300	0	300	0.00
Labour and Employment	773	0	773	2	771	0.29
Social Welfare and Nutrition	1044	51	1095	66	1029	6.03
Other Social Services	4	7	11	0	11	1.08
Economic Services	76842	29874	106716	41797	64920	39.17
Agr., Rural Dev. & Allied Activities	17691	2043	19735	546	19188	2.77
Irrigation and Flood Control	241	46	287	10	276	3.61
Energy	2746	10136	12882	5069	7812	39.35
Industry and Minerals	10323	9612	19935	2833	17103	14.21
Transport	32041	7239	39280	30982	8298	78.87
Postal	3173	107	3279	1723	1557	52.53
Science, Technology and Environment	2843	421	3264	38	3226	1.17
General Economic Services	7784	270	8054	595	7459	7.39
Social and Economic Services	91167	31214	122381	42553	79828	34.77
Surplus Sectors	17674	1489	19162	28112	-8949	
Petroleum	0	837	837	9445	-8608	
Total Communications	17674	652	18325	18667	-341	
<i>Telecommunication</i>	9245	574	9819	17867	-8049	
<i>Dividends to General Revenues</i>	252	0	252	0	252	
<i>Appropriation from Telecommunications Surplus</i>	7646	0	7646	0	7646	
<i>Satellite Systems</i>	505	50	555	0	555	
<i>Other Communication Services</i>	26	28	54	799	-746	

Source: As in Table 3.1.

For economic services, the estimated subsidy is Rs. 60899 crore if railways is excluded. This gives a recovery rate for economic services of 15.96 percent. As already noted, railways used to be surplus sector in the earlier studies. It has now emerged for the first time as a subsidy sector where the estimated subsidy amounted to Rs. 4021 crore. In the economic services, agriculture and allied activities, and industries and minerals account for the largest portions of subsidies followed by energy. The transport and postal departments also have large subsidies.

In the economic services, centre's role in irrigation and flood control is limited and subsidies in this sector amount to only Rs. 276 crore. The entire current expenditure and a large portion of capital expenditure on irrigation remains unrecovered. In the case of the power sector, total receipts are more than total current expenditure and it is primarily the annualised capital costs that remain unrecovered. As already noted, the industry and minerals sector accounts for the second largest component of subsidies in the economic services. The overall recovery rate here is only 14.21 percent of the total costs. In the residual category of general economic services subsidies amounted to Rs. 7459 crore which provides a recovery rate of only 7.39 percent. Petroleum and telecommunications are two important surplus sectors in which not only the costs are fully recovered but a substantial surplus is generated.

Table 3.6 gives the relative shares of different services/heads in total subsidies. The social services account for about 19 percent of the total subsidies and the remaining 81 percent is accounted for by the economic services. Subsidies that account for more than 1 percent of the total subsidies have been depicted in Chart 3.1 in descending order of importance. Education as a whole shares 6.27 percent of the subsidies whereas technical education, sports, art and culture account for 1.68 percent. Medical and public health have a share of 1.86 percent and family welfare has a share of 0.38 percent. Thus, education and health together have a share of about 10 percent of total subsidies. These are the cases, where due to the high degree of externalities, subsidies are most justified.

Structure of Costs

Current costs dominate total costs in both social and economic services, but more so in social services. The energy sector is a notable exception where the capital costs have a much larger share.

An analysis of the structure of costs can help identify cases where current costs are relatively more important when compared to the annualised capital costs. This will help shed further light into the causes of increase in subsidies. Table 3.7 provides the share of current costs vis-à-vis the annualised capital costs. In the case of social services, the share of current costs is 91.44 percent whereas in the case of economic services, it is 64.89 percent. However,

within the economic services, the share of current costs is relatively high for agriculture and allied activities and postal services. For the postal services, current costs are as high as 97 percent. For railways also, the share of current costs is nearly 87 percent. Both postal services and railways are highly salary intensive sectors.

Table 3.6: Relative Share of Individual Services in Total Subsidies

Services/Heads	(Percent)
	Relative Share in Total Subsidies
Social Services	18.68
General Education	6.27
<i>Elementary Education</i>	2.90
<i>Secondary Education</i>	1.34
<i>University and Higher Education</i>	1.85
<i>Other General Education</i>	0.18
Technical Education, Sports, Art and Culture	1.68
Medical and Public Health	1.86
<i>Public Health</i>	0.38
<i>Medical</i>	1.48
Family Welfare	0.38
Water Supply and Sanitation	0.82
Housing	2.73
Urban Development	0.20
Information and Broadcasting	2.09
Welfare of SCs, STs and Other BCs	0.38
Labour and Employment	0.97
Social Welfare and Nutrition	1.29
Other Social Services	0.01
Economic Services	81.32
Agriculture, Rural Development & Allied Activities	24.04
Irrigation and Flood Control	0.35
Energy	9.79
Industry and Minerals	21.42
Transport	10.40
Postal	1.95
Science, Technology and Environment	4.04
General Economic Services	9.34
Social and Economic Services	100.00

Source: As in Table 3.1.

In the energy sector, the share of current costs is limited to only 21.32 percent. The very high increase in subsidy in this sector between 1996-97 and 1998-99, therefore, should be explained in terms of factors affecting the capital component of costs (Table A6).

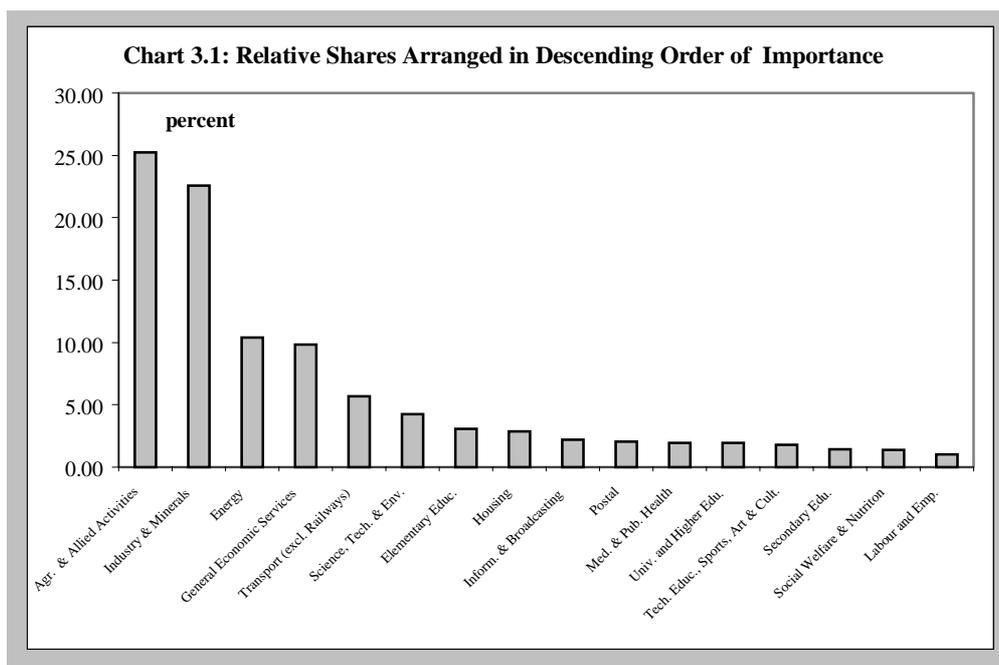


Table 3.7: Structure of Costs: Selected Heads

Social and Economic Services	1998-99				
	Cost (Rs. crore)			Share in Total (Percent)	
	Current	Capital	Total	Current	Capital
Social Services	14325	1340	15665	91.44	8.56
General Education	4978	33	5011	99.34	0.66
Medical and Public Health	1434	89	1523	94.14	5.86
Information and Broadcasting	1990	225	2216	89.83	10.17
Economic Services	47017	25444	72461	64.89	35.11
Agriculture Rural Development & Allied Activities	17691	2043	19735	89.65	10.35
Energy	2746	10136	12882	21.32	78.68
Industry and Minerals	10323	9612	19935	51.78	48.22
Transport (excluding Railways)	2216	2809	5025	44.10	55.90
Postal	3173	107	3279	96.75	3.25
Social and Economic Services	61342	26784	88126	69.61	30.39
Railways	29825	4430	34255	87.07	12.93
Social and Economic Services (including Railways)	91167	31214	122381	74.49	25.51

Subsidisation of Public Sector Undertakings

Subsidies to the public sector undertakings are only one-eighth of the total central budgetary subsidies.

Subsidisation of public sector undertakings may be studied through the Finance Accounts as well as through the Central Public Enterprises Survey. Using the Finance

Accounts, we have identified expenditures relating to public sector undertakings in the various major heads. Recoveries are in the form of dividends and interest. Table 3.8 provides the relevant details. If surplus sectors are excluded, the total subsidies for the public sector undertakings amount to Rs. 10979 crore of which, as expected, the economic services account for the bulk. In the economic services, the main public sector subsidisation is seen in four sectors, namely, energy, industry and minerals, transport, and agriculture and allied activities. The recovery rates are generally higher in these cases as compared to direct departmental expenditures. For public enterprises in the social services, the recovery rate is 23.70 percent, and for the economic services, it is slightly higher at 28.03 percent. The surplus sectors mainly relate to petroleum and communications.

Table 3.8: Subsidies in the Public Sector Undertakings Arranged According to Broad Heads

Social and Economic Services	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	2.50	371.60	374.10	88.67	311.53	23.70
Technical Education	0.00	0.13	0.13	0.25	-0.12	196.66
Medical and Public Health	0.00	0.14	0.14	0.00	0.14	0.00
Family Welfare	0.00	2.15	2.15	0.30	1.86	13.88
Water Supply and Sanitation	0.00	20.00	20.00	8.72	11.29	43.57
Housing	2.50	123.26	125.76	12.94	112.82	10.29
Urban Development	0.00	20.98	20.98	0.00	20.98	0.00
Information and Publicity	0.00	3.64	3.64	1.70	1.94	46.67
Welfare of SCs, STs and other BCs	0.00	201.30	201.30	0.00	201.30	0.00
Economic Services	218.01	14602.53	14820.53	4153.58	10666.95	28.03
Agr., Rural Dev. & Allied Activities	-0.21	694.54	694.33	75.03	619.31	10.81
Irrigation and Flood Control	10.50	11.91	22.41	2.50	19.91	11.13
Energy	0.00	6757.01	6757.01	1364.69	5392.32	20.20
Industry and Minerals	7.05	6097.23	6104.28	2142.26	3962.02	35.09
Indian Railways, commercial lines	0.00	61.87	61.87	0.00	61.87	0.00
Transport (excluding Railways)	200.66	963.44	1164.10	568.99	595.11	48.88
Science, Technology and Environment	0.00	16.53	16.53	0.12	16.41	0.70
Social and Economic Services	220.51	14974.13	15194.63	4242.25	10978.49	27.92
Surplus Sectors (Social and Economic)	0.43	742.13	742.56	1418.59	-676.03	191.04
Social Services	0.09	26.01	26.10	64.77	-38.67	248.13
<i>Social Security and Welfare</i>	<i>0.09</i>	<i>26.01</i>	<i>26.10</i>	<i>64.77</i>	<i>-38.67</i>	<i>248.13</i>
Economic Services	0.34	716.12	716.46	1353.82	-637.36	188.96
<i>Petroleum</i>	<i>0.34</i>	<i>585.58</i>	<i>585.92</i>	<i>974.92</i>	<i>-389.01</i>	<i>166.39</i>
<i>Total Communication</i>	<i>0.00</i>	<i>50.69</i>	<i>50.69</i>	<i>147.96</i>	<i>-97.27</i>	<i>291.88</i>
Telecommunication	0.00	42.36	42.36	123.27	-80.91	291.02
Other Communication services	0.00	8.33	8.33	24.69	-16.35	296.26
<i>General Economic Services</i>	<i>0.00</i>	<i>79.85</i>	<i>79.85</i>	<i>230.94</i>	<i>-151.09</i>	<i>289.21</i>

Source: As in Table 3.1.

Transfers to Individuals

Transfers to individuals amounting to less than 2 percent of GDP are mainly in rural employment and social security and welfare.

We had excluded identified transfers to individuals from the subsidy estimates. Transfers may be interpreted as the converse of direct taxes just as subsidies are the converse of indirect taxes. The total transfers in the two groups amounted to Rs. 4351.40 crore in 1998-99 of which the social services accounted for only 208.33 crore. Most of this expenditure was in social security and welfare schemes. A very small part comprised scholarships. In the economic services the bulk of transfer payments relates to rural employment. Table 3.9 provides the details of transfers to individuals according to heads.

Table 3.9: Transfers to Individuals

	(Rs. crore)
Social Services	208.33
General Education	0.81
Technical Education	0.04
Medical and Public Health	-0.33
Family Welfare	0.04
Social Security and Welfare	207.99
Relief on Account of Natural Calamities	-0.22
Economic Services	4143.07
Crop Husbandry	0.04
Rural Employment	3691.39
Telecommunication	451.64
Social and Economic Services	4351.40

Source: As in Table 3.1.

Explicit Subsidies in the Central Budget

Explicit subsidies rose sharply in the latter half of the nineties.

Explicit subsidies of the central budget are included in the subsidy estimates already presented. However, since the explicit subsidies are frequently discussed, we consider these separately.

Table 3.10 gives growth rates of the major central explicit subsidies for selected periods. The main explicit subsidies relate to food, fertiliser, and interest. Looking at the decadal trend growth rates, a fall is visible in most cases in the nineties as compared to the earlier decades. Looking within the nineties, however, the growth rates increased in the case of fertilisers and interest subsidies in the latter half. Interest subsidies have been more than a thousand crore of rupees in 1996-97, 1998-99 and 1999-00 (Table A2).

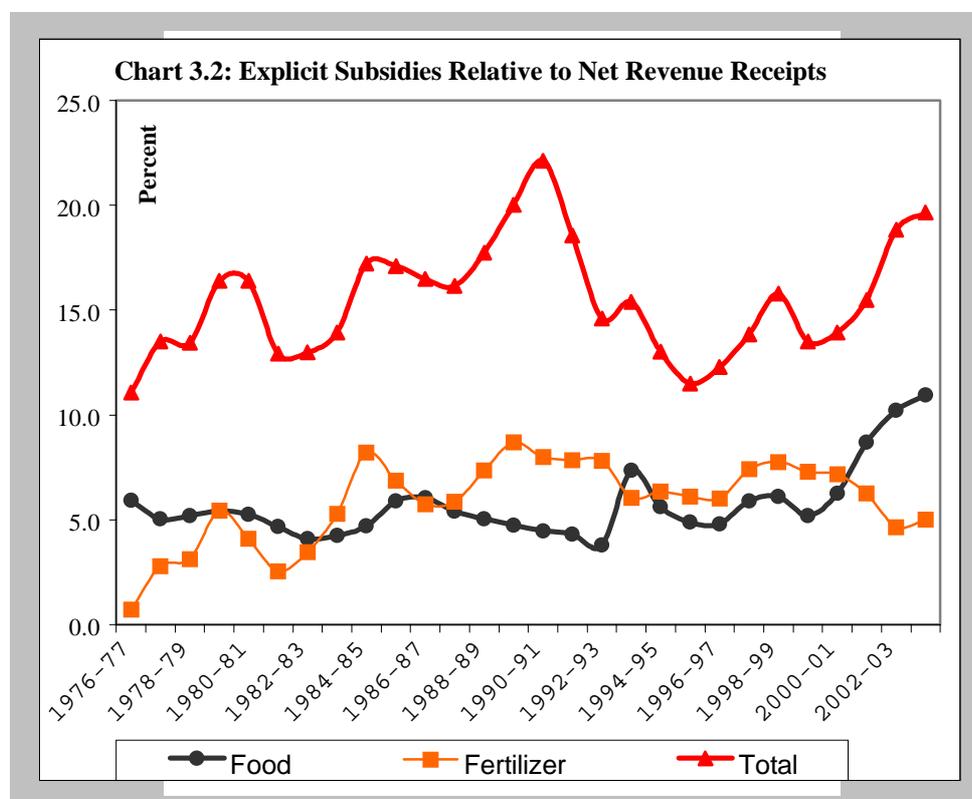
Table 3.10: Explicit Subsidies of the Centre: Period-Wise Trend Growth Rates

Period	(Percent)			
	Food Subsidies	Fertiliser Subsidies	Interest Subsidies	Total Subsidies*
1971-80	32.26		39.98	38.50
1980-90	18.67	29.66	17.46	21.06
1990-00	16.91	12.84	17.52	9.19
1991-95	23.74	4.28	-34.57	-1.04
1995-00	16.53	19.46	112.84	18.99
2000-04	32.71	-3.72	31.34	24.84

Source (Basic Data): *Central Budgetary Documents*, various issues.

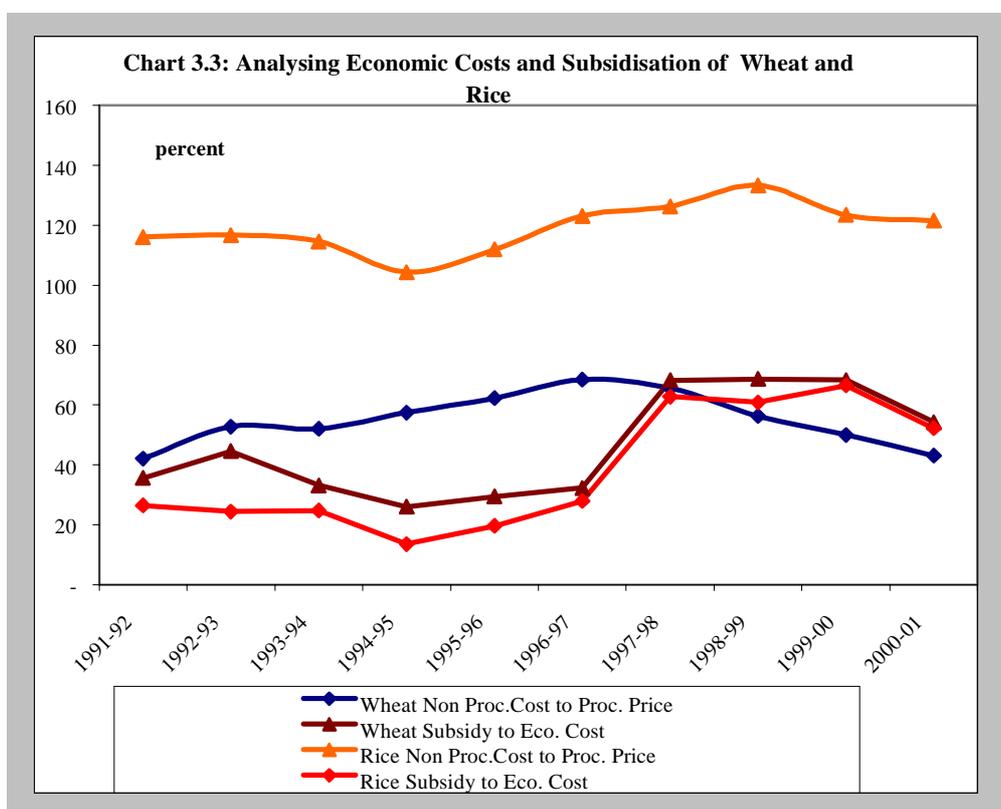
Note: * Total subsidies include petroleum subsidy, grants to NAFED for MIS/PPS, export subsidies, subsidy on railways, debt relief to farmers and others.

Long-term trends of the explicit Central subsidies as percentage to GDP are shown in Table A2. Explicit subsidies account for about 2 percent of the gross domestic product in 2002-03 and 2003-04(BE). Aggregate explicit subsidies relative to net revenue receipts peaked in the year 1990-91, fell upto 1999-00 (except for the year 1998-99), and rose again thereafter (Chart 3.2).



Some of the better known subsidies like those for food and fertilisers have a significant component that subsidises only inefficiencies. For food, subsidy is the difference between economic cost and Food Corporation of India's (FCI) average sales realisation. The economic cost consists of two elements: (i) cost of procurement, and (ii) cost of FCI operations involving handling, storage and transportation. Economic costs for wheat have grown at a TGR of 8.46 percent, the procurement price at a TGR of 8.29 percent, and FCI's operational costs at a TGR of 8.76 percent (see Table A3). In fact, the operational costs nearly tripled between 1991-92 and 1997-98. Since then, for wheat, the operational costs marginally came down. For rice, however, these have continued to increase the overall TGR being 10.17 percent. The economic cost consists of two components, procurement price and FCI's operational cost. Both represent inefficiencies in some ways. High procurement price leads to excess buffer stocks while states may not be lifting the foodgrains for their PDS. At the same time, there are higher costs for unnecessarily carrying these extra stocks, which are also subjected to waste. FCI's operational cost for wheat increased from 42 percent of procurement price in 1991-92 to more than 68 percent by 1996-97. After that, spurts in the rise of procurement price were mainly responsible for the additional economic cost. In the case of rice, the FCI's operational costs were 116 percent of the procurement price in 1991-92 and they increased to more than 133 percent by 1998-99. Chart 3.3 indicates the pattern of growth of procurement prices and operational costs for wheat and rice.

Table 3.11 indicates that food subsidies have grown very sharply, in fact, by more than 200 percent in a period of just five years from 1997-98, and more so, since 2000-01. It



showed an annual growth of 27.8 percent in 2000-01 and 46 percent in 2001-02 compared to the respective previous years. It was in 2001-02 that food subsidies overtook fertiliser subsidies. The increase in the volume of food subsidy is not due to a corresponding increase in the subsidisation of the consumer. Rather, it is accounted for by increased subsidisation of the wheat and rice farmers and the subsidisation of operational inefficiencies of the FCI. The economic cost of wheat and rice (Tables 3.12 and 3.13) has increased sharply due to increases in the procurement price. The procurement price for wheat per quintal was Rs. 275 in 1991-92. It became Rs. 580 in 2000-01 implying an average annual growth rate which was much higher than the average inflation rate. The quantum of procurement by FCI has continued to increase as a result of which the non-procurement costs of FCI which includes transport, storage, handling, processing, and other operational and maintenance costs also increased. The increase in unit cost was about 200 percent over the period 1991-92 to 1997-98. In the case of rice, the growth in the economic cost is also extremely high, rising from Rs. 267 per quintal in 1991-92 to Rs. 670 per quintal in 2000-01. These 'other' costs became more than 120 percent of the procurement costs after the mid-nineties. The unit price of PDS supply for respective beneficiary categories has been linked to the economic cost of the FCI. It is equal to the economic cost for the APL category, and to half of the economic cost for the BPL category. As the economic costs increased both due to high procurement costs and high carrying costs, the APL category has nearly gone out of the PDS coverage because market availability has often been at cheaper rates. Even for the BPL category, the difference may not be much except in remote areas. This has resulted in poor offtakes as shown in Tables 3.14 and 3.15. In the case of wheat, the offtake as percentage of allocation went down from a peak of 85 percent in 1992-93 to a low of 35 percent in 2000-01 (Table 3.16). In the case of rice too, the offtake went down from a peak of 90 percent in 1991-92 to 47 percent in 2001-02. This trend shows the operation of a vicious circle. As accumulated stocks increased, the carrying costs to FCI for the excess stock also increased. This being loaded on the economic costs of the current year, the economic costs went up, and the offtake dwindled further increasing the stock of the FCI.

Table 3.11: Food and Fertiliser Subsidies in the Nineties

Years	Food	Fertiliser	Annual Growth (%)	
	Rs. Crore		Food	Fertiliser
1990-91	2450	4389	-1.1	-3.4
1991-92	2850	5185	16.3	18.1
1992-93	2800	5796	-1.8	11.8
1993-94	5537	4562	97.8	-21.3
1994-95	5100	5769	-7.9	26.5
1995-96	5377	6735	5.4	16.7
1996-97	6066	7578	12.8	12.5
1997-98	7900	9918	30.2	30.9
1998-99	9100	11596	15.2	16.9
1999-00	9434	13244	3.7	14.2
2000-01	12060	13811	27.8	4.3
2001-02	17499	12595	46.0	-13.5
2002-03 (RE)	24200	11009	38.3	-12.6
2003-04 (BE)	27800	12720	14.9	15.5

Source (Basic Data): *Central Budget Documents, 2003-04* and earlier issues.

Table 3.12: Procurement and Other Costs: Wheat

Years	Economic Cost	Procurement Price	(Rs. Per Quintal)	
			Excess of Economic Cost Over Procurement Price	Non-Procurement Cost as % of Procurement Price
1991-92	390.8	275.0	115.8	42.1
1992-93	504.1	330.0	174.1	52.8
1993-94	532.0	350.0	182.0	52.0
1994-95	551.2	350.0	201.2	57.5
1995-96	584.0	360.0	224.0	62.2
1996-97	640.2	380.0	260.2	68.5
1997-98	786.4	475.0	311.4	65.5
1998-99	797.2	510.0	287.2	56.3
1999-00	887.5	550.0	337.5	61.4
2000-01	858.3	580.0	278.3	48.0
2001-02	871.3	610.0	261.3	42.8

Source (Basic Data): *Economic Survey, 2002-03* and earlier issues.

Table 3.13: Procurement and Other Costs: Rice

(Rs. Per Quintal)				
Years	Economic Cost	Procurement Price	Excess of Economic Cost Over Procurement Cost	Non-Procurement Cost as % of Procurement Price
1991-92	497.0	230.0	267.0	116.1
1992-93	585.3	270.0	315.3	116.8
1993-94	665.1	310.0	355.1	114.5
1994-95	694.7	340.0	354.7	104.3
1995-96	762.8	360.0	402.8	111.9
1996-97	847.7	380.0	467.7	123.1
1997-98	939.3	415.0	524.3	126.3
1998-99	1026.7	440.0	586.7	133.3
1999-00	1074.8	490.0	584.8	119.3
2000-01	1180.5	510.0	670.5	131.5
2001-02	1204.3	530.0	674.3	127.2

Source (Basic Data): *Economic Survey, 2002-03* and earlier issues.

In January 2002, the excess of stock as compared to the minimum norm was about 286 percent in the case of wheat, and 205 percent in the case of rice (Tables 3.14 and 3.15). At the beginning of the nineties, as far as wheat is concerned, actual stock was less than the minimum norm, and for rice it was only marginally higher. The sharp increase in the stocks with the FCI in recent years is directly the outcome of falling offtakes. For wheat, the offtake was 8.83 million tonnes in 1991-92 (Table 3.16). This volume has come down to 4.07 million tonnes in 2000-01. As percentage of allocation, the wheat offtake has declined sharply after 1998-99, falling from 78.64 percent of allocation to 35.18 percent 2000-01. Offtake as percentage of actual stock is 18 percent in 2001-02. In the case of rice also the offtake has gone down in terms of volume from a peak of 11.31 million tonnes in 1999-00 to 7.97 million tonnes in 2000-01. It has gone down further in 2002-03 to 7.39 million tonnes. Offtake as percentage of actual stock in the case of rice in 2001-02 is only a little above 31 percent.

Further subsidies are also characterised by lack of adequate targeting. Several studies [e.g. Gulati (1990), Mazumdar (1993)] have indicated that nearly half of the fertiliser subsidy is appropriated by the industry. Of the remaining half, the benefits are available to both rich and poor farmers, but the richer farmers, because of their greater purchasing power, appropriate larger benefits.

Table 3.14: Foodgrain Stocks Relative to Buffer Stock Norms: Wheat

(Million Tonnes)

Beginning of January	Minimum Norm	Actual Stock	Excess	Excess as % of Minimum Norm
1992	7.7	5.3	-2.4	-31.2
1993	7.7	3.3	-4.4	-57.1
1994	7.7	10.8	3.1	40.3
1995	7.7	12.9	5.2	67.5
1996	7.7	13.1	5.4	70.1
1997	7.7	7.1	-0.6	-7.8
1998	7.7	6.8	-0.9	-11.7
1999	8.4	12.7	4.3	51.2
2000	8.4	17.2	8.8	104.8
2001	8.4	25.0	16.6	197.6
2002	8.4	32.4	24.0	285.7
2003	8.4	28.8	20.4	242.9

Source (Basic Data): *Economic Survey, 2002-03* and earlier issues.

Note: 1998 onwards, figures are provisional.

Table 3.15: Foodgrain Stocks Relative to Buffer Stock Norms: Rice

(Million Tonnes)

Beginning of January	Minimum Norm	Actual Stock	Excess	Excess as % of Minimum Norm
1992	7.7	8.6	0.9	11.7
1993	7.7	8.5	0.8	10.4
1994	7.7	11.2	3.5	45.5
1995	7.7	17.4	9.7	126.0
1996	7.7	15.4	7.7	100.0
1997	7.7	12.9	5.2	67.5
1998	7.7	11.5	3.8	49.4
1999	8.4	11.7	3.3	39.3
2000	8.4	14.2	5.8	69.1
2001	8.4	20.7	12.3	146.4
2002	8.4	25.6	17.2	204.8
2003	8.4	19.4	11.0	131.0

Source (Basic Data): *Economic Survey, 2002-03* and earlier issues.

Note: 1998 onwards, figures are provisional.

Table 3.16: Foodgrains Allocation and Offtake Under PDS

(Million Tonnes)

Years	Wheat Allocation	Offtake	Offtake as % of Allocation	Offtake as % of Actual Stock	Rice Allocation	Offtake	Offtake as % of Allocation	Offtake as % of Actual Stock
1991-92	10.56	8.83	83.62	166.60	11.36	10.17	89.52	118.26
1992-93	9.25	7.85	84.86	237.88	11.48	9.55	83.19	112.35
1993-94	9.56	5.91	61.82	54.72	12.41	8.87	71.47	79.20
1994-95	10.80	4.83	44.72	37.44	13.32	8.03	60.29	46.15
1995-96	11.31	5.29	46.77	40.38	14.62	9.46	64.71	61.43
1996-97	10.72	8.52	79.48	120.00	15.10	11.14	73.77	86.36
1997-98	10.11	7.08	70.03	104.12	12.83	9.90	77.16	86.09
1998-99	10.11	7.95	78.64	62.60	12.94	10.74	83.00	91.79
1999-00	10.37	5.76	55.54	33.49	13.89	11.31	81.43	79.65
2000-01	11.57	4.07	35.18	16.28	16.26	7.97	49.02	38.50
2001-02	13.14	5.68	43.23	17.53	17.23	8.16	47.36	31.88
2002-03*	29.45	6.12	20.78	21.25	27.35	7.39	27.02	38.09

Source (Basic Data): *Economic Survey, 2002-03* and earlier issues.

Note: * Upto December

Poor targeting of the food subsidy has often been highlighted in the literature. For example, in Jha (1994), in respect of targeting through the Public Distribution System (PDS), a distinction was made between exclusion and inclusion errors, this has been discussed further in chapter 7. Jha found that the exclusion error for different commodities in the PDS ranged between 30 to 90 percent and was higher than the inclusion error which ranged from 30 to 60 percent. Targeting is bad also because of a clear urban bias in the PDS and because of the remoteness of many backward areas. Further, it is not only the number of poor covered by the PDS but also the lower magnitude of the benefit derived by the poor which indicates inadequate targeting. Jha had observed: “per capita subsidy to the poorest consumers is much below the average. The aggregate subsidy is only about Rs. 2.50 per capita per month – a meagre five percent of the mean expenditure of a person in the poorest decile”.

Attempts were made in recent years to improve PDS targeting through a Targeted Public Distribution System (TPDS). States have also now made a distinction between consumers above and below poverty line (APL/BPL) by using distinctly coloured cards. The central government has introduced a differentiation between the extent of subsidy for APL and BPL beneficiaries which is reflected in the PDS retail prices of the commodity. However, most of the APL quota is not being lifted. It is the BPL quota which may be getting distributed among the poor and non-poor alike due to lack of effective identification and implementation. The Expenditure Reforms Commission in its recent Report (July, 2000) observed, citing a major independent survey that “in rural India, 17 percent do not own ration cards” and that “18 percent of the below poverty households do not hold ration cards”.

In the case of food subsidies, greater decentralisation can lead to efficiencies in carrying and transportation costs, and delivery and targeting mechanism. It will facilitate greater inter-state and inter-crop variation in the structure of support prices. A well-designed two-tier intervention can increase efficiencies and reduce subsidies. While satisfying the core objective, which is to make food available to BPL population at subsidised rates, food subsidies should be delinked from the target of supporting farmers. Buffer stocks may be maintained at the central and state levels. For any deficit state, there will be an option to purchase the required supply from its own stocks, central stocks, the stocks of other states, and the global market. All purchases and sales should be handled by open market operations – buying at times when prices are low and selling when market supply is less. States can decide their own mix of items for the buffer stocks. Central assistance to the states should be relative to the share of BPL population. In such an arrangement, the centre will be required to maintain a very small level of strategic buffer stocks.

States can maintain their own buffer stocks, the norms for which can be determined relative to the share of BPL population in those states. The states should themselves perform the purchasing, stocking, and distribution functions at minimum costs – being able to buy from other states, as well as, internationally. As the unit economic costs are reduced and resources are devoted to better targeting, the volume of subsidy can be reduced while the objective of food subsidy is satisfied.

In this two-tier system, centre's responsibility should be focused on the following:

- (i) Maintain optimal buffer stock for strategic intervention;
- (ii) Oversee the operation and delivery of food subsidy to PDS population in respective states;
- (iii) Maintain an integrated countrywide market for food free from inter-state trade barriers;
- (iv) Facilitate exports and imports of foodgrains without any barriers;
- (v) Maintain an information system for anticipating food related crises; and
- (vi) Provide earmarked subsidies to states according to their share in the BPL population.

The states would individually have the responsibility of maintaining state level buffer stocks, undertaking open market purchases and sales of foodgrains, and distribution through the PDS to BPL population. It may be mentioned that the recently submitted report of the Committee headed by Abhijit Sen (2002) looking into the issues concerning long-term foodgrain policy also emphasised efficiencies that can come from decentralisation although their recommendations cover a much wider ground on foodgrains policy.

Chapter 4

STATES' BUDGETARY SUBSIDIES: ESTIMATES AND IMPLICATIONS

States' Subsidies: Category-Wise Aggregates

Budgetary subsidies of the state governments amounted to 8.96 percent (8.47 percent with adjustment for salary arrears) of the GDP and about 96 percent of their revenue receipts.

State governments' subsidies amounted to Rs. 155923 crores which constituted 11.11 percent of their combined GSDP at market prices and 8.96 percent of GDP at market prices. There were only a few sectors where surplus was generated. The all-state subsidies almost totally exhausted the aggregate revenue receipts of the states as these amounted to 90 percent of the revenue receipts.

Table 4.1 gives a broad classification of the state subsidies according to social and economic services and according to merit and non-merit categories where the merit category is divided further into Merit I and Merit II groups. As percentage of the all-state GSDP, social services accounted for 5.42, percent and economic services 5.68 percent. Thus, the two sectors account for almost similar volumes of subsidies with that of social services sector being a little less than that of the economic services. Between merit and non-merit groups, the share of merit subsidies is somewhat higher than those for non-merit subsidies. The merit subsidies amounted to 5.90 per cent of aggregate GSDP whereas merit subsidies accounted for 5.21 percent of GSDP.

Table 4.1: Subsidy Estimates: All States: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	77983	76135	2.37	44.06	5.42	104.78
Merit I	30220	29957	0.87	17.34	2.13	41.23
Merit II	26381	25942	1.67	15.01	1.85	35.70
Non-Merit	21382	20236	5.32	11.71	1.44	27.85
Economic Services	85931	79789	7.15	46.17	5.68	109.81
Merit I	1282	1273	0.68	0.74	0.09	1.75
Merit II	27410	25643	6.45	14.84	1.83	35.29
Non-Merit	57239	52873	7.84	30.60	3.77	72.77
Merit	85294	82815	2.91	47.92	5.90	113.98
Non-Merit	78621	73109	7.01	42.31	5.21	100.62
Total	163914	155923	4.88	90.23	11.11	214.59

Source (Basic Data): *Finance Accounts of States*.

Memo Items: GSDP 1998-99 (at current prices) Rs. 1403512 crore; Revenue Receipts Rs. 172804 crore; Fiscal Deficit Rs. 72660 crore.

The aggregate recovery rate is dismally low at 4.88 percent of the costs. The recoveries in social services provide a recovery rate only of 2.37 percent whereas that of economic services stands at 7.15 percent. The merit and non-merit group recovery rates are 2.91 percent and 7.01 percent respectively.

In the case of states also an adjustment is required for salary arrears which were paid in 1998-99 in the wake of the states revising salaries following the recommendations of the Fifth Central Pay Commission. These arrears pertain partly to 1996-97 and partly to 1997-98. Depending on the date of implementation the actual payments of arrears were spread out in 1997-98, 1998-99, and 1999-00 or even later. The Finance Accounts do not provide data for salaries separately. Although, we prepared estimates for the state level subsidies in order to obtain an idea as to what the subsidy volume would amount to after salary arrears are taken out, these estimates have been kept separate (given in Annexure 2). The requisite data were not readily available and were compiled from several sources.

Annexure 2 indicates various qualifications with which these estimates should be read. Using these parameters, the state subsidies amount to Rs. 147396 crore which is 8.47 percent of the GDP at market prices, i.e., it lowers the subsidy estimates by about half a percentage point of GDP. We have not used these estimates for disaggregated analysis of subsidies.

Comparison with Earlier Studies

Relative to the GDP, aggregate budgetary subsidies of the state governments have fallen in 1998-99 as compared to the earlier available estimates for 1994-95. The recovery rate has also fallen. This can only be explained by a fall in expenditure (relative to GSDP), revenue and capital, allocated to social and economic services in the state budgets.

Compared to the 1994-95 results used in NIPFP (1997) there is a fall in the aggregate amount of subsidies relative to GDP which amounted to 9.26 percent of the GDP at market prices when the same 1993-94 base series of GDP is used for comparison. However, the aggregate recovery rate also has fallen from 5.58 to 4.88. The fall in the volume of subsidies accompanied by a fall also in the recovery rate can only be explained by the fall in the total costs. These amounted to 9.83 percent of GDP in 1994-95 and to 9.32 percent in 1998-99. The lower expenditure in the provision of services is in spite of the higher salary expenditures. It is due to a fall both in capital expenditure and the non-salary revenue expenditure associated with these services. It, therefore, implies a fall in the quality and coverage of services rather than improvement through better recovery rates. It is indicative of

subsidy reduction through the expenditure side rather than through the higher mobilisation of non-tax revenues.

An idea about the overall trends in the movement of the subsidy bill relative to key fiscal and economic parameters may be obtained by a comparison with selected earlier studies for which estimates are available. However, it should be noted that because of differences in the methodology these comparisons are broadly indicative of the general trends. Table 4.2 provides information with respect to four years for which such information is available, namely, 1987-88, 1992-93, 1994-95 and 1998-99. Looking at the ratio of total estimated subsidies with respect to GDP at current market prices, it would appear that the subsidy bill had continued to rise until 1994-95 from 7.41 percent in 1987-88 to 7.82 percent in 1992-93 rising to a maximum of 9.26 percent in 1994-95. Since then it had declined to 8.96 percent. As percentage of fiscal deficit and revenue receipts, the profile of changes is also indicated in Table 4.2. As percentage of fiscal deficit, the same trend is visible but as percentage of revenue receipts subsidies had the highest share in 1998-99. This is because of lower growth of revenue receipts which fell relative to GDP.

Table 4.2: A Comparison of Budgetary Subsidies of the States: Selected Years

Year	Estimated Subsidies	Fiscal Deficit	GDP (at Market Prices)	Revenue Receipts	Subsidies as Percentage of		
					GDPmp	Fiscal Deficit	Revenue Receipts
1987-88 (M-R)	26259	10988	354343	42167	7.41	238.98	62.27
1992-93 (Tiwari)	58544	20000	748367	87091	7.82	292.72	67.22
1994-95 (NIPFP)	93754	26673	1012770	118174	9.26	351.49	79.34
1998-99 (NIPFP)	155923	72660	1740935	172414	8.96*	214.59	90.44

Source: Mundle and Rao (1992), Tiwari. A.C. (1996), Srivastava, D. K., *et. al.* (1997), Srivastava and Amar Nath (2001), Fiscal Deficit and Revenue Receipts, Indian Public Finance Statistics, GDP (at market prices), Central Statistical Organisation and Economic Survey, 2001-02.

Notes: * 8.47 percent with adjustment for salary arrears.
The slight difference between percentage figures with respect to revenue receipts as compared to Table 4.1 is because their revenue receipts are aggregated from the Finance Accounts of individual states for 1998-99.

Sectoral Composition of State Subsidies

Agriculture and irrigation sectors account for the largest share in the state subsidies, followed by elementary education, energy, secondary education and medical and public health.

Table 4.3 and Chart 4.1 indicates that maximum share of state budgetary subsidies goes to agriculture, rural development and allied activities (16.28), followed by irrigation and flood control (15.09) leaving out the residual category of other subsidies. The next few heads in order of importance are elementary education (10.54), energy (9.69), secondary education (9.07), medical and public health (7.86) and transport (5.89). Important among other sectors claiming budgetary subsidies are other education including technical education (4.69), water supply and sanitation (4.54), industry & minerals (3.21) and housing (1.25). Together these eleven broad heads account for 88 percent of the state budgetary subsidies. It is clear, therefore, that for rationalisation and reduction of subsidies maximum effort should be made in the context of agriculture and irrigation and energy and transport. The education sector considered together accounts for a little less than 25 percent of the total state budgetary subsidies. In their case while attempt should be made to increase the service level, subsidies need to be rationalised by better targeting to support better quality and spread of education.

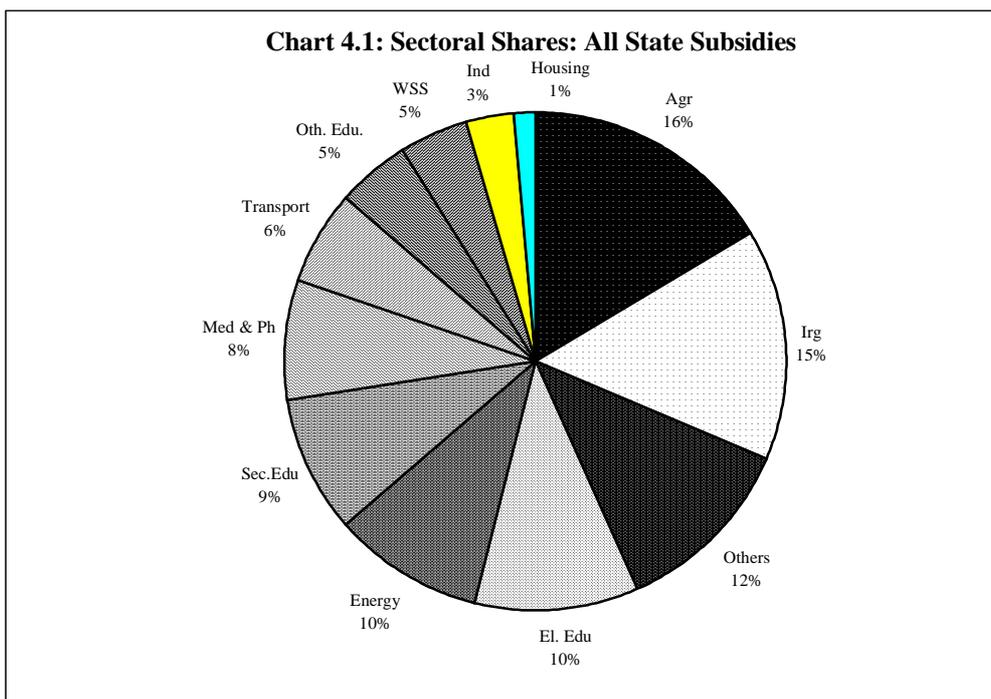
Table 4.3: Sectoral Shares of All State Subsidies: Arranged in Descending Order

Sector/Head	Amount (Rs. Crore)	Share (Percent)
Agriculture, Rural Development & Allied Activities	25380	16.28
Irrigation & Flood Control	23525	15.09
Other Subsidies	18661	11.97
Elementary Education	16291	10.45
Energy	15115	9.69
Secondary Education	14147	9.07
Medical & Public Health	12259	7.86
Transport	9191	5.89
Other Education incl. Technical Education	7319	4.69
Water Supply & Sanitation	7082	4.54
Industry & Minerals	4999	3.21
Housing	1954	1.25
Total	155923	100.00

Source: As in Table 4.1.

Subsidy Pattern Across General Category States

Relative to their GSDPs, the highest subsidies are visible in the low income states. But the average recovery rate is the lowest for the middle income states.



For the purpose of identifying whether there is any distinct pattern across different categories of states, we have divided the 25 states (existing in 1998-99) into five broad categories. The general category states have been divided into three groups relating to high, middle and low income (per capita GSDP) states. In this category Group A consists of Goa, Maharashtra, Punjab, Haryana and Gujarat. Group B consists of Tamil Nadu, Andhra Pradesh, Karnataka, Kerala and West Bengal. The Group C states consist of Madhya Pradesh, Rajasthan, Orissa, Uttar Pradesh and Bihar. The special category states have also been divided into two broad groups. In their case, the grouping is done according to the size of the population. In Group D, three states are included, namely, Assam, Jammu & Kashmir and Himachal Pradesh. The remaining seven special category states are included in Group E. State-wise subsidy estimates are given in Annexure Tables S1 to S25.

The group-wise subsidy estimates along with corresponding costs, recovery rates and relationship with GSDP are indicated in Table 4.4 (for groups A, B and C) and Table 4.5 (for groups D and E). The group wise subsidies relative to total GSDP of the respective groups show remarkable similarity. For Group A subsidies amount to 10.15 percent, for Group B 10.43 percent and for Group C 10.85 percent. Thus, the Group C subsidies account for somewhat higher proportion of their GSDP. On the other hand, a comparison of group wise recovery rates indicates that the highest recovery rate was there in Group A, followed by Group C, and the lowest recovery rate is evinced in the case of middle income states.

Table 4.4: Subsidy Estimates: Groups A, B and C: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Group A						
Social Services	19721	19152	2.88	40.87	4.60	98.87
Merit I	6913	6835	1.12	14.59	1.64	35.29
Merit II	7178	7079	1.38	15.11	1.70	36.55
Non-Merit	5630	5238	6.96	11.18	1.26	27.04
Economic Services	25302	23135	8.57	49.37	5.55	119.43
Merit I	486	485	0.13	1.04	0.12	2.51
Merit II	4910	4681	4.66	9.99	1.12	24.17
Non-Merit	19906	17968	9.74	38.34	4.31	92.76
Merit	19487	19081	2.08	40.72	4.58	98.51
Non-Merit	25536	23206	9.13	49.52	5.57	119.80
Total	45023	42287	6.08	90.24	10.15	218.31
Group B						
Social Services	28111	27408	2.50	48.65	5.60	115.57
Merit I	11569	11460	0.95	20.34	2.34	48.32
Merit II	9317	9138	1.93	16.22	1.87	38.53
Non-Merit	7224	6810	5.72	12.09	1.39	28.71
Economic Services	25299	23677	6.41	42.03	4.84	99.84
Merit I	216	208	3.76	0.37	0.04	0.88
Merit II	9125	8627	5.46	15.31	1.76	36.38
Non-Merit	15958	14842	6.99	26.35	3.03	62.58
Merit	30228	29433	2.63	52.25	6.01	124.10
Non-Merit	23181	21652	6.60	38.44	4.42	91.30
Total	53410	51085	4.35	90.68	10.43	215.40
Group C						
Social Services	22882	22379	2.20	43.75	5.14	79.96
Merit I	8912	8846	0.75	17.29	2.03	31.61
Merit II	7778	7626	1.96	14.91	1.75	27.25
Non-Merit	6191	5908	4.47	11.55	1.36	21.11
Economic Services	26524	24840	6.35	48.56	5.71	88.75
Merit I	410	410	0.00	0.80	0.09	1.46
Merit II	9979	9061	9.19	17.71	2.08	32.38
Non-Merit	16136	15368	5.58	30.04	3.53	54.91
Merit	27079	25943	4.20	50.71	5.96	92.69
Non-Merit	22327	21276	4.71	41.59	4.89	76.02
Total	49406	47219	4.43	92.31	10.85	168.71

Sources (Basic Data): *Finance Accounts of States*.

GSDP – CSO released as on 13.11.2001. For Goa and Sikkim figures for 1998-99 are obtained by projecting forward 1997-98 figures on the basis of TGR.

Memo Items: Group A: GSDP 1998-99 (at current prices) Rs. 416661 crore; Revenue Receipts Rs. 46861 crore; Fiscal Deficit Rs. 19370 crore.

Group B: GSDP 1998-99 (at current prices) Rs. 489612 crore; Revenue Receipts Rs. 56336 crore; Fiscal Deficit Rs. 23716 crore.

Group C: GSDP 1998-99 (at current prices) Rs. 435243 crore; Revenue Receipts Rs. 51154 crore; Fiscal Deficit Rs. 27988 crore.

Subsidy Pattern Across Special Category States

For the special category states, subsidies relative to their GSDPs are extremely high amounting to more than 22 percent for the larger SC states and more than 34 percent for the smaller special category states.

The Group D and Group E profiles given in Table 4.5 indicate that subsidies account for a very high proportion of their GSDP. In the case of Group D, subsidies amount to 22 percent of their GSDP, whereas in the case of Group E these amount to 34 percent. This reflects their extremely low incomes. Among all groups, the recovery rate is lowest in the case of Group D states where it is just a little above 3 percent.

Table 4.5: Subsidy Estimates: Groups D and E: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipt	GSDP	Fiscal Deficit
Group D						
Social Services	4880	4818	1.28	42.53	10.27	158.73
Merit I	1905	1898	0.41	16.75	4.05	62.52
Merit II	1450	1443	0.45	12.74	3.08	47.56
Non-Merit	1525	1477	3.14	13.04	3.15	48.66
Economic Services	5955	5434	8.75	47.97	11.59	179.03
Merit I	101	101	0.00	0.89	0.22	3.33
Merit II	2075	1984	4.37	17.52	4.23	65.38
Non-Merit	3779	3348	11.40	29.56	7.14	110.32
Merit	5532	5426	1.90	47.90	11.57	178.78
Non-Merit	5304	4825	9.02	42.60	10.29	158.97
Total	10835	10252	5.39	90.50	21.86	337.76
Group E						
Social Services	2390	2378	0.48	33.38	15.75	276.82
Merit I	920	919	0.18	12.90	6.08	106.93
Merit II	658	656	0.29	9.20	4.34	76.33
Non-Merit	812	804	0.98	11.28	5.32	93.56
Economic Services	2850	2703	5.12	37.94	17.89	314.58
Merit I	69	69	0.00	0.97	0.46	8.06
Merit II	1321	1288	2.47	18.08	8.53	149.93
Non-Merit	1460	1345	7.73	18.88	8.91	156.59
Merit	2968	2932	1.22	41.15	19.41	341.25
Non-Merit	2272	2149	5.40	30.17	14.23	250.14
Total	5240	5081	3.03	71.32	33.64	591.40

Source (Basic Data): *Finance Accounts of States*.

Memo Items: Group D: GSDP 1998-99 (at current prices) Rs. 46892 crore; Revenue Receipts Rs. 11328 crore; Fiscal Deficit Rs. 3035 crore.

Group E: GSDP 1998-99 (at current prices) Rs. 15104 crore; Revenue Receipts Rs. 7125 crore; Fiscal Deficit Rs. 859 crore.

Per Capita Subsidies: Inter-State Pattern

Per capita state subsidies generally show a regressive pattern: the higher the per capita income of a state, the higher are the per capita subsidies. Per capita subsidies in the special category states are noticeably higher than those in the general states.

a. Social and Economic Services

Table 4.6 shows state-wise per capita subsidies in social and economic services arranged according to groups of states. Within each group, states are arranged in descending

order of their per capita GSDP. Looking at the general category states, it would appear that the highest per capita subsidies are in Group A, followed by Group B. Group C, consisting of the low income states has also the lowest per-capita subsidies. This pattern is common for both social and economic services. Among the special category states, again a pattern is visible where higher income states have higher per capita subsidies. Leaving Assam, all special category states have per capita subsidies higher than the general category states with the exception of Goa.

Table 4.6: State-Wise Per Capita Social and Economic Services Subsidies: 1998-99

States	Total (Rs. crore)		Per Capita (Rupees)	
	Social	Economic	Social	Economic
Goa	407	218	2718	1453
Maharashtra	9218	8773	1028	978
Punjab	2207	2965	953	1280
Haryana	1666	2899	857	1491
Gujarat	5653	8280	1196	1752
Tamil Nadu	6423	4607	1053	755
Kerala	3115	3177	978	997
Karnataka	4485	5346	877	1045
Andhra Pradesh	7709	5942	1038	800
West Bengal	5675	4605	732	594
Rajasthan	4543	4108	870	786
Madhya Pradesh	4382	4899	563	630
Orissa	2071	2640	585	746
Uttar Pradesh	8804	9306	534	564
Bihar	2579	3887	265	399
Himachal Pradesh	1362	726	2106	1122
Jammu & Kashmir	1548	2435	1612	2537
Assam	1908	1608	741	625
Nagaland	361	180	2122	1057
Mizoram	284	328	3129	3605
Sikkim	219	164	4063	3038
Arunachal Pradesh	300	531	2875	5095
Meghalaya	332	147	1427	633
Manipur	371	392	1688	1782
Tripura	511	495	1415	1370

Source: As in Table 4.1.

Note: Population figures for 1998-99 are taken from CSO and interpolated (interpolation using 2001 Census figures). As population figures for Goa, Nagaland, Sikkim and Punjab are not available, they have been derived by using growth rates. In the case of Goa and Nagaland, these are based on GR (1993-94/1997-98), while for Sikkim these are based on GR for 1993-94/1996-97. In the case of Punjab, projections as per 1991 population have been taken due to non-availability of population figures.

b. Merit and Non-Merit Subsidies

Table 4.7 per capita subsidies divided into the merit and non-merit groups. Again certain clear pattern emerge in the comparison of states. In the non-merit category, among the general category states, the highest per capita subsidies are given by the highest per capita income group and the lowest per capita non-merit subsidies are given by the lowest per capita income group. The smaller special category states gave high per capita subsidies both of the merit and non-merit kind. Within the special category states, a general regressive pattern is also visible. The absolute values for merit and non-merit groups is given in Table A8.

Table 4.7: State-Wise Per Capita Merit and Non-Merit Subsidies: 1998-99

States	(Rupees)				
	Merit I	Merit II	Total	Non-Merit	Total
Goa	560	1636	2196	1902	4098
Maharashtra	436	524	961	1046	2006
Punjab	143	840	983	1249	2233
Haryana	216	626	842	1506	2348
Gujarat	544	772	1315	1632	2948
Tamil Nadu	405	659	1064	744	1808
Kerala	304	921	1224	751	1975
Karnataka	412	503	916	1006	1922
Andhra Pradesh	598	511	1109	729	1838
West Bengal	217	573	789	537	1326
Rajasthan	224	560	783	873	1656
Madhya Pradesh	260	389	648	545	1193
Orissa	203	456	658	673	1331
Uttar Pradesh	281	376	657	441	1098
Bihar	73	300	373	291	664
Himachal Pradesh	857	1574	2430	1825	4255
Jammu & Kashmir	469	1043	1512	2636	4148
Assam	386	547	934	433	1366
Nagaland	814	1415	2229	1872	4101
Mizoram	1444	2391	3835	2899	6734
Sikkim	1754	2301	4055	4926	8981
Arunachal Pradesh	948	3360	4308	3662	7970
Meghalaya	565	1282	1847	1117	2964
Manipur	685	1362	2048	1422	3470
Tripura	673	1146	1819	966	2785

Source: As in Table 4.1.

Transfers to Individuals

About two-thirds of the transfer to individuals in the state budgets are in the social sector.

Table 4.8 provides all the transfers to the individuals in the states. These amounted to Rs. 1196.6 crore in which the major share was for the social services accounting for about 67 percent of the total transfers.

Table 4.8: Transfers to Individuals: All States

	Amount (Rs. crore)	Share (Percent)
Social Services	799.83	66.84
Economic Services	396.76	33.16
Total	1196.58	100.00

Source: As in Table 4.1.

Implicit Subsidies to Public Sector

The state public sector has drawn an implicit subsidy amounting to Rs. 9561 crore. The overall recovery rate from the public sector for the budget is dismally low at 1.64 percent.

It can be seen from Table 4.9 that the public sector enterprises in the states accounted for a total subsidy of Rs. 9561 crore. In that, the share of social services was 8.89 percent and that of economic services 91.11 percent. It is surprising to note that among all the public sector units of 25 states, there was only one surplus sector with a contribution of just Rs. 1 crore. The recovery rate is abysmally low at 1.64 percent. The recovery rate of social services was 4.03 percent and that of economic services was 1.39 percent.

Table 4.9: Subsidisation of Public Sector Enterprises: All States

				(Rs. crore)		
	Current	Cost Capital	Total	Receipts	Subsidy	Recovery Rate (Percent)
Subsidy Sectors						
Social Services	368	565	933	38	850	4.03
Economic Services	294	8539	8834	123	8711	1.39
Total	662	9105	9767	160	9561	1.64
Surplus Sectors						
Social Services	0	0	0	1	-1	
Economic Services	0	0	0	0	0	
Total	0	0	0	1	-1	

Source: As in Table 4.1.

Per Capita Subsidies: Irrigation and Power

Looking at per capita subsidies for the general category states in irrigation and power, we notice that there is a clear regressive pattern. For power, the highest per capita budgetary subsidy is in Haryana at Rs. 701.8, followed by Gujarat and Punjab. In the case of irrigation, the highest per capita subsidy is in Gujarat at Rs. 591.1 followed by Maharashtra, Punjab, Karnataka, and Andhra Pradesh.

Table 4.10: Per Capita Budgetary Subsidies on Irrigation and Power: 1998-99

States	(Rupees)	
	Irrigation and Flood Control	Energy
Bihar	117.0	48.7
Orissa	247.3	89.9
Uttar Pradesh	163.3	104.5
Madhya Pradesh	180.4	109.9
Rajasthan	295.3	157.7
West Bengal	102.5	134.8
Andhra Pradesh	347.0	56.7
Karnataka	375.5	208.6
Kerala	148.1	39.5
Tamil Nadu	100.2	40.7
Gujarat	591.1	456.4
Haryana	327.9	701.8
Maharashtra	449.2	116.0
Punjab	404.4	425.9

Source: As in Table 4.1.

Subsidising Education and Health: Some Observations

Per capita subsidies in education and health show a regressive pattern. In comparative terms, low subsidies are available to residents of low income states and vice versa.

We have selected two critical social services, viz., education and health, to examine their inter-state pattern. Table 4.11 provides the inter-state profile of state subsidies on education in per capita terms. Expenditure on education is broadly divided into two categories: general education and technical education including sports, art and culture. General education is further divided into elementary education, secondary education, university and higher education and other general education. States are arranged in descending order of per capita income with respect to the two broad categories of states, viz., non-special and special category states. Looking at the general education per capita subsidies, the emergent pattern clearly shows that these subsidies are much less for the low income states as compared to the high income states. For example, for general education, per capita subsidy in Bihar was only Rs. 100 as compared to Rs. 538 for Maharashtra and Rs. 617 for Gujarat. In the case of elementary education, per capita subsidy in Bihar was only Rs. 15 and in Orissa Rs. 25 as compared to Rs. 261 in Maharashtra and Rs. 357 in Gujarat. There are some significant exceptions to this general pattern in both high and low income groups. For example, in Punjab and Haryana the per capita subsidies on elementary education were as low as Rs. 11 and Rs. 34, respectively, whereas these were Rs. 196 in Uttar Pradesh and Rs. 138 in Rajasthan. The regressive pattern of education subsidies is also clearly visible in the case of secondary education, and university and higher education.

Table 4.11: State-Wise Per Capita Education Subsidies: 1998-99

States	General Education	Elementary Education	Secondary Education	University and Higher Education	Other General Education	Technical Education, sports, Art and Culture
Goa	1221	380	692	132	19	191
Maharashtra	538	261	215	55	7	37
Punjab	496	11	405	71	9	48
Haryana	355	34	255	60	6	33
Gujarat	617	357	205	50	5	27
Tamil Nadu	409	112	229	46	22	30
Kerala	465	180	181	96	8	33
Karnataka	461	243	150	60	8	25
Andhra Pradesh	394	284	38	67	5	33
West Bengal	373	124	192	47	11	19
Rajasthan	364	138	184	36	6	11
Madhya Pradesh	139	37	70	30	2	15
Orissa	199	25	119	52	3	15
Uttar Pradesh	329	196	102	25	6	12
Bihar	100	15	50	32	3	6
Himachal Pradesh	1009	588	331	69	22	50
Jammu & Kashmir	625	319	241	51	14	50
Assam	508	318	140	45	5	20
Nagaland	788	488	217	45	38	64
Mizoram	1143	647	290	104	102	75
Sikkim	1570	1318	197	44	10	72
Arunachal Pradesh	1320	645	261	92	322	54
Meghalaya	644	386	175	71	11	42
Manipur	835	372	273	149	41	99
Tripura	699	346	269	34	50	39

Table 4.12 provides the profile of per capita subsidies on medical and public health services. This is further divided into four categories, viz., urban health services, rural health services, public health services and other services. Urban health services relate to both allopathy and other systems of medicine. Rural health services included allopathy, other systems of medicine as well as primary health centres. Public health is a separate head and other services include medical education, training and research, and general health services. Once again the regressive pattern of subsidies, as noted for education becomes visible. For example, the per capita subsidy on medical and public health in Bihar is Rs. 56 as compared to Rs. 196 for Punjab and Rs. 207 for Tamil Nadu. For urban health services, per capita expenditure for Uttar Pradesh was Rs. 21 only and that for Bihar Rs. 26. In comparison per capita subsidy on urban health services was Rs. 118 for Gujarat and Rs. 141 for Tamil Nadu. Although the pattern is the same for rural health services, the range of variation is less in this case. However, some of the richer states like Maharashtra and Karnataka spend very little on rural health subsidies in per capita terms.

Table 4.12: State-Wise Per Capita Medical and Public Health Subsidies: 1998-99

States	(Rupees)				
	Medical and Public Health Services	Urban Health Services	Rural Health Services	Public Health Services	Other Services
Goa	721	458	89	37	137
Maharashtra	142	78	2	46	16
Punjab	196	111	40	18	27
Haryana	143	53	37	26	28
Gujarat	177	118	16	27	16
Tamil Nadu	207	141	21	28	17
Kerala	199	134	26	15	23
Karnataka	128	84	1	9	35
Andhra Pradesh	153	101	21	20	12
West Bengal	128	73	26	18	11
Rajasthan	154	88	36	14	16
Madhya Pradesh	105	55	24	18	7
Orissa	107	53	27	17	9
Uttar Pradesh	64	21	24	13	7
Bihar	56	26	17	6	7
Himachal Pradesh	331	84	154	45	49
Jammu & Kashmir	297	223	0	48	25
Assam	79	30	26	13	10
Nagaland	372	278	53	40	1
Mizoram	387	138	139	84	26
Sikkim	827	647	118	46	16
Arunachal Pradesh	529	28	323	94	85
Meghalaya	183	88	35	48	14
Manipur	168	50	47	46	25
Tripura	138	73	36	11	18

A comparison between rural and urban health services indicates that, in per capita terms, subsidies on urban health services are far larger than in rural health services. This of course does not mean that urban health services are accessed only by the urban people. In fact, people from rural areas regularly access the urban health services. However, it does indicate that the difference in the provision of services in the location where the respective population reside. It also means that rural population has to spend additional private costs in order to access the urban health subsidies.

Chapter 5

ALL INDIA SUBSIDIES: CENTRE AND STATE GOVERNMENTS

An estimate of all India budgetary subsidies is obtained by adding together the subsidies of the central government and those of all the state governments. In this chapter, the magnitude and composition of these subsidies for 1998-99 are considered and relevant comparisons are made with the estimates for selected earlier years for which roughly comparable estimates are available from earlier studies.

Aggregate All India Subsidies

Aggregate budgetary subsidies of central and state governments are estimated to be 13.41 percent of GDP at market prices, and 85.8 percent of the combined revenue receipts of the centre and the states. If adjustment for salary arrears for the states is taken into account, the aggregate subsidy bill would be just below 13 percent of GDP.

Table 5.1 gives the profile of central and state budgetary subsidies for 1998-99 along with the recovery rates for the main categories of subsidies. Total subsidies in 1998-99 amounted to Rs. 235752 crore, which amounts to 13.54 percent of GDP at market prices. Relative to the revenue receipts of the central and the state governments (net of intergovernmental transfers in the revenue account), these subsidies amounted to 85.8 percent, and these also were nearly one and half times the combined fiscal deficit. The recovery rate for social services was 2.78 percent and that for economic services was 24.88 percent, if railways are included in the subsidy sectors. However, as already noted in the discussion in chapter 3 pertaining to central subsidies, the railways moved from being a surplus sector to a subsidy sector in 1998-99 as compared to 1994-95. For a proper comparison with the earlier studies excluding railways, the aggregate recovery rate comes out to be 8.06 percent.

Comparison with Earlier Studies

Aggregate subsidies of the Centre and the states as percentage of GDP have virtually remain unchanged over the period 1994-95 to 1998-99. Although central subsidies increased as percentage of GDP, the state subsidies fell.

Table 5.2 provides the comparison with earlier estimates for selected years and highlights some of the main features of changes that have taken place over time. In making these comparisons some important points need to be kept in mind. First, there are some important modifications in the methodology between different sets of estimates. Secondly, as compared to the 1994-95 study, the classification of merit and non-merit goods has also

changed. In particular, the merit category has been divided into Merit I and Merit II categories. In the Merit II category some items from what was earlier the non-merit group have been brought in. In particular, all education other than elementary education is now placed under Merit II category, whereas earlier these were in the non-merit group. Elementary education is in Merit I group.

Table 5.1: Subsidy Estimates: Centre and All States: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GDP	Fiscal Deficit
Social Services	93648	91043	2.78	33.13	5.23	58.45
Merit I	34072	33743	0.97	12.28	1.94	21.66
Merit II	30906	30439	1.51	11.08	1.75	19.54
Non-Merit	28670	26861	6.28	9.78	1.54	17.25
Economic Services	192647	144709	24.88	52.67	8.31	92.90
Merit I	1502	1494	0.58	0.54	0.09	0.96
Merit II	39313	36867	6.22	13.42	2.12	23.67
Non-Merit	151832	106348	29.96	38.70	6.11	68.28
Merit	105794	102543	3.07	37.32	5.84	65.83
Non-Merit	180502	133209	26.22	48.48	7.65	85.52
Total	286296	235752	17.68	85.80	13.54	151.36

Sources: 1. Finance Accounts of Central and State Governments.

2. Revenue deficit and fiscal deficit, India Public Finance Statistics 2000-01. 2. GDP-CSO.

Memo Items: GDP 1998-99 (at current prices) Rs. 1740935 crore; revenue receipts Rs. 274769 crore, fiscal deficit Rs. 155760.

Table 5.2: A Comparison of Budgetary Subsidies in India: Selected Years (Centre and States)

Year	Estimated Subsidies	Fiscal Deficit	GDP (at Market Prices)	Revenue Receipts	Subsidies as Percentage of		
					GDPmp	Fiscal Deficit	Revenue Receipts
1987-88 (M-R)	42324	32182	354343	66838	11.90	131.51	63.32
1992-93 (Tiwari)	95373	50726	748367	135422	12.74	188.02	70.43
1994-95 (NIPFP)	136844	70062	1012770	178012	13.51	195.32	76.87
1998-99 (NIPFP)	235752	155760	1740935	274769	13.54*	151.36	85.80

Sources: Mundle and Rao (1992), Tiwari, A.C. (1996), Srivastava, D. K., *et. al.* (1997), Srivastava and Amar Nath (2001). Combined fiscal deficit data taken from Indian Public Finance Statistics.

Note: * 13.05 percent after taking into account adjustment for salary arrears for the states also.

Table 5.2 indicates that, in the aggregate, subsidies as percentage of GDP have remained around 13.5 percent between 1994-95 and 1998-99. As proportion of revenue receipts, subsidies continued to rise. They now take up about 86 percent of the revenue receipts. This is primarily because revenue receipts themselves have fallen as percentage of GDP. The relevant consideration is that subsidies should have also been reduced in the wake

of the falling revenue receipts. Since these were financed more by additional borrowing, the ratio of subsidies to fiscal deficit has actually fallen because of the larger fiscal deficit.

Aggregate Subsidies: Relative Shares of the Centre and the States

The relative share of centre is about one-third of the total subsidies, and that of the states, two-thirds.

The relative shares of different categories of subsidies in the all India subsidies are given in Table 5.3. Centre is responsible for about 34 percent of subsidies whereas the states account for a little above 66 percent. As compared to the 1994-95 results, the central subsidies are about 3 percentage points higher in the total subsidies.

Table 5.3: Share of the Centre and the States in All India Subsidies

	(Rs. crore)		
	Social	Economic	Total
Centre	14908	64920	79828
States	76135	79789	155924
Total	91043	144709	235752
	(Percent)		
As Percentage of Aggregate Subsidies			
Centre	6.32	27.54	33.86
States	32.29	33.84	66.14
Total	38.62	61.38	100.00

Source: As in Table 5.1.

The share of social sector subsidies is 38.6 percent whereas that of economic sector subsidies is 61.4 percent. Most of the social sector subsidies come from the state budgets. The states provide more of subsidies in the economic services also, but the difference between the centre and states is much less in this case. The share of centre is 27.54 percent while that of states is 33.84 percent of the total all India subsidies. These two shares add up to 61.4 percent to provide the share of economic services in the total subsidies.

Merit and Non-Merit Categories: Relative Shares

The non-merit subsidies amount to about 56.5 percent of total subsidies. The Merit I category has the lowest share.

The non-merit subsidies amount to about 56.5 percent of total subsidies. In the earlier (NIPFP, 1997) study, the share of non-merit subsidies came out to be a little above 76 percent. The reported change, however, does not lead to any improvement in subsidy regime. Rather, it is due to classification change whereby non-elementary education has been put into Merit II category apart from certain other goods/services. Both the centre and the states are responsible for providing most of the subsidies placed in the non-merit category, although the

share of the states is somewhat higher. The share of the states is considerably higher in the case of the merit categories for both I and II groups. The relevant percentages are given in Table 5.4.

Table 5.4: Merit and Non-Merit Categories: Relative Shares

	(Rs. crore)				
	Merit I	Merit II	Total Merit	Non-Merit	Total
Centre	4006	15722	19728	60100	79828
States	31230	51585	82815	73109	155924
Total	35236	67307	102543	133209	235752
As Percentage of Aggregate Subsidies					(Percent)
Centre	1.70	6.67	8.37	25.49	33.86
States	13.25	21.88	35.13	31.01	66.14
Total	14.95	28.55	43.50	56.50	100.00

Source: As in Table 5.1.

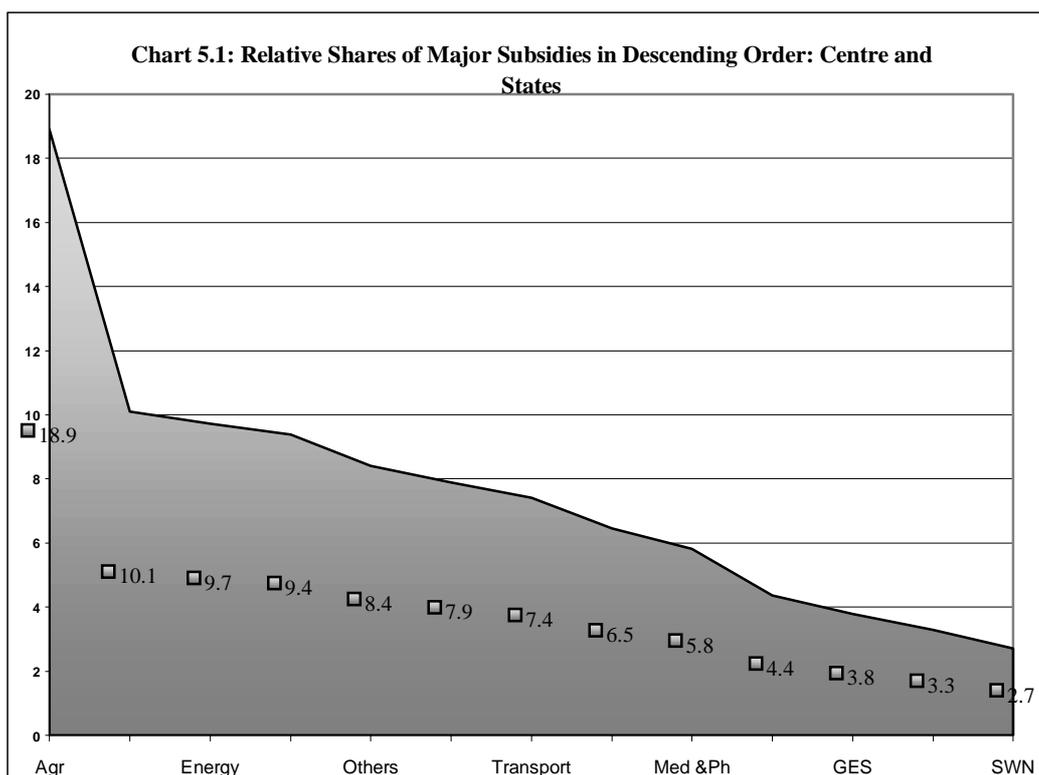
Sectoral Shares

Agriculture, irrigation, energy, and industry and minerals have the highest shares in that order, followed by elementary education.

The sectors which claim relatively larger shares of subsidies are delineated in Table 5.5. Agriculture and rural development and allied activities have the largest claim on total subsidy bill followed by irrigation and flood control, energy, and industry and minerals. After these four sectors which are part of economic services comes elementary education which has a share of about 8 percent. Next in importance is transport which has a share of 7.42 percent. All the remaining services are in the social sector. These main heads along with their relative shares are also shown in Chart 5.1.

**Table 5.5: Relative Share of Major Sectors in All India Subsidies
(in Descending Order)**

Sector/Head	Amount (Rs. crore)	Share (Percent)
Agriculture, Rural Development & Allied Activities	44568	18.90
Irrigation & Flood Control	23802	10.10
Energy	22927	9.73
Industry & Minerals	22101	9.37
Other Subsidies	19820	8.41
Elementary Education	18606	7.89
Transport	17490	7.42
Secondary Education	15214	6.45
Medical & Public Health	13740	5.83
Other Education including Technical Education	10286	4.36
General Economic Services	8937	3.79
Water Supply & Sanitation	7734	3.28
Social Welfare and Nutrition	6391	2.71
Housing	4136	1.75
Total	235752	100.00



A subsidy reform strategy needs to focus first on these sectors which claim relatively larger shares in the overall subsidy bill. Among these agriculture, irrigation, energy, transport, etc., are sectors which offer considerable scope for reducing the volume of subsidies. In the case of education and health, there may be need to increase the service level by more expenditures, while recovering a larger part of it by increase in user charges. In these sectors, the same subsidy bill should support a higher level of services.

Transfers to Individuals

Transfers to individuals, considering the centre and the states together, amounted to Rs. 5547.98 crore (Table 5.6). Most of this was in the category of economic services, accounting for a share of about 82 percent and majority of these are listed under the head rural development.

Table 5.6: Transfers to Individuals: Centre and States

	Amount (Rs. crore)	Share (Percent)
Social Services	1008.16	18.17
Economic Services	4539.83	81.83
Total	5547.98	100.00

Source: As in Table 5.1.

Public Sector Subsidies

The total amount of subsidy in public sector undertakings at the all India level is Rs. 20540 crore for the year 1998-99 (Table 5.7), of which social services account for 6 percent and economic services for 94 percent. The total recovery rate is about 18 percent, while for social services it is about 9 percent and for economic services it is a little above 18 percent. The surplus sectors are mainly in the central domain. In economic services, the surplus sectors are in petroleum, communications and general economic services. The total surplus in these sectors is of the order of Rs. 677 crore.

Table 5.7: Subsidisation of Public Sector: Centre and States

	(Rs. crore)			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Subsidy Sectors						
Social Services	370	937	1307	126	1162	9.66
Economic Services	512	23142	23655	4276	19378	18.08
Total	883	24079	24961	4403	20540	17.64
Surplus Sectors						
Social Services	0	26	27	66	-44	
Economic Services	0	716	716	1354	-637	
Total	0	743	743	1420	-677	

Source: As in Table 5.1.

The profile of subsidies, considering the centre and the states together, indicates the urgent need to focus on the central subsidies which have grown in recent years relatively more than the state subsidies. The sectors that need immediate attention are agriculture, irrigation, energy, industry, minerals, and transport. In the next chapter, we consider some of the relevant policy issues. The state subsidies, although showing a marginal fall relative to GDP, also need to be reformed both because the volume of subsidies is large, and because the recovery rates are extremely low and have fallen since 1994-95.

Chapter 6

SUBSIDISING SERVICES: POLICY ISSUES

This chapter discusses some critical policy issues concerning the subsidy regime in India. The discussion pertains to cross-subsidies, off-budget subsidies, power and fertiliser subsidies, and targeting and delivery mechanisms in administering subsidies.

Cross-Subsidies: Regulated Price Structures

Cross-subsidies arise in the context of regulated price structures which distinguish between prices according to use/products for the same group of goods/services.

It is often possible to distinguish between classes of consumers for a good or a range of goods. For example, a distinction can be made between commercial and domestic users of electricity. Similarly, within the broad group of petroleum products a distinction may be made between kerosene and diesel vis-a-vis petrol and turbine fuel. If a particular sector with one or more products is subjected to an administered price regime, it is possible to charge some consumers (product-wise or use-wise) a price which is more than cost so as to finance a subsidy given to other consumers by charging them a price which is less than cost. Such intra-sectoral financing of a subsidy involves cross-subsidisation. In such cases, if a net subsidy is still left after cross-subsidisation, it will be a charge on the general budget. Some instances of important cross-subsidisation in India relate to power and petroleum products which are discussed below.

Petroleum Subsidies: From Off-Budget to Budgetary Subsidies

Off-budget subsidies also arise due to administered prices. These have the potential of having budgetary implications if deficits and surpluses are not balanced over time.

An important example of off-budgetary subsidies relates to guarantees extended by governments for borrowing by the public sector enterprises. These generate contingent liabilities for the budget, in case the concerned public sector enterprises default on servicing the debt which has been guaranteed by the government. Considering the performance of the public sector enterprises, the risk of defaults is very high, which makes servicing of debt a budgetary liability in the nature of subsidisation of the concerned enterprises, in case the guaranteed loans are defaulted.

Until recently an important example of off-budget subsidy pertained to the petroleum sector. This sector had an administered price regime which was coordinated by the Oil Coordination Committee (OCC) set up in July 1975. The OCC supervised a number of Oil Pool Accounts of which four main accounts are Crude Oil Price Equalisation (COPE) Account, Cost and Freight Adjustment (C&F) Account, Freight Surcharge Pool (FSP), and Product Price Adjustment (PPA) Account. Important petroleum products categories are: Kerosene (SKO, domestic), LPG (domestic), High Speed Diesel (HSD), Naptha, Fertiliser (Fuel Oil), fertiliser, Light Sulphur Heavy Stock (LSHS), and Aviation Turbine Fuel (ATF).

The administrative price mechanism (APM) in the petroleum sector has been dismantled from April 1, 2002. During the APM regime, the producers were assured normative operating expenses plus a 15 percent post-tax return on their capital employed. The refineries were assured a norm-based acquisition cost of crude, normative operating costs which include capacity utilisation norms, and a 12 percent post-tax return on their net-worth. There were several components of the consumer prices comprising the ex-refinery price, marketing margins, surcharges, freight and excise duties, sales tax, and other local levies. Consumer prices were worked out through an ad-hoc Product Price Adjustment (PPA) mechanism, where selected products were subsidised. The price for the same product also varied depending on the end use. Differences between inflows and outflows in the Oil Pool Account led to surpluses or deficits.

The main items that were cross-subsidised are kerosene and liquified petroleum gas (LPG). The basic ceiling selling price of kerosene (domestic), is about 30 percent of its international price. It was also considerably lower than the domestic cost of production/supply. With inadequate targeting, much of subsidised kerosene leaks to unintended beneficiaries/uses. Estimates in 1996 indicate that only 70 percent of the kerosene (domestic) distributed through this mechanism reached to the poorer sections of society (Economic Survey, 2001). Kerosene is also widely used for adulteration of motor spirit (MS) and HSD, which has aggravated the problem of environmental pollution.

The subsidy regime worked on a cross-subsidy principle where some prices were kept at more than average cost, which then cross-subsidised others which were kept at less than average cost. However, when the two sides did not match, the difference spilled over into the oil pool account. If the oil pool account gets into deficit, it means that cross-subsidy is not enough to cover the subsidy being provided to selected oil products. The deficit on the oil pool account in one period has to be covered by surplus in another period. If this does not happen, some part of the oil pool deficit may become a budgetary liability in future, although in a current period the subsidy may be off-budget. The overall logic of cross-subsidisation was 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-subsidies therefore mitigate the extent of deficit on the oil pool account. 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.

The estimated subsidies of the petroleum products for selected years in the APM period are given in Table 6.1. These subsidies were as large as Rs. 18440 crore in 1996-97, Rs. 17853 crore in 1999-00 and Rs. 23130 crore in 2000-01, indicating that even the off-budget subsidies in this sector amounted to a little less than one percent of GDP.

Table 6.1: Subsidies of Petroleum Products

	(Rs. crore)				
	1994-95	1995-96	1996-97	1999-00	2000-01
Kerosene (PDS)	3740	4190	6350	8123	7360
LPG (Domestic)	1410	1630	1950	4730	6640
Diesel	430	2180	8340	5000	9130
Other Products	980	1360	1800		
Total	6560	9360	18440	17853	23130

Source: For 1999-00 and 2000-01, Economic Survey 2000-01 and 2001-02, p. 138 and p. 173, respectively. For 1994-95 to 1996-97, Srivastava, D. K., *et. al.* (1997), *Government Subsidies in India*, NIPFP, August, p. 85.

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.

The Oil Industry Restructuring Group, which was set up in 1995, was entrusted with drawing up a road map for the complete deregulation of the petroleum sector to overcome these inefficiencies. The following recommendations were made by the Group for complete dismantling of APM in a phased manner [for details see Sihag and Sen (2001)]:

- Phase – I (1996-98): Rationalisation of retention margin of refineries, deregulation of natural gas pricing, decanalisation of furnace oil and bitumen; partial deregulation of the marketing sector, with freedom to appoint dealers and distributors, removal of the subsidy on HSD and reduction of the subsidy on kerosene, LPG and input for fertiliser.

- Phase – II (1998-2000): Pricing of indigenous crude on the basis of average f.o.b. price of imported crude; rationalisation of royalty and cess; further deregulation of the marketing sector, further reduction of subsidy on kerosene, LPG and input for fertiliser.
- Phase – III (2000-02): Complete deregulation, including ATF, HSD and MS; and the subsidy on PDS kerosene and domestic LPG to be transferred to the general budget.

In a Resolution dated the 21st November, 1997, the Government of India had notified the details of a phased programme of dismantling of Administered Price Mechanism (APM) for petroleum products. Accordingly

- i. effective from 1st April, 1998, the consumer prices of all products (excepting motor spirit, high speed diesel, aviation turbine fuel, kerosene for public distribution system and LPG for domestic cooking) were decontrolled;
- ii. from 1.4.2001 the prices of aviation turbine fuel were decontrolled; and
- iii. from 1st April 2002, consumer prices of motor spirit and high speed diesel will be market determined.

This leaves only kerosene for public distribution and LPG for domestic use. In their cases, the subsidies are to be specified on a flat rate basis. These are to be borne by the Consolidated Fund of India, thereby shifting the off-budget subsidies to the budget. In the budget for 2002-03, these subsidies have been estimated at 15 percent for PDS kerosene and 33 percent for LPG for cooking. These subsidies are likely to be phased out in 3 to 5 years. Freight subsidy for PDS kerosene and cooking LPG for supplies to far-flung areas including the Northeast is also being borne by the central budget.

The Oil Pool account was wound up with effect from April 1, 2002. On the 30th March 2002, Government of India issued special bonds for the oil companies at 6.96 percent for a period of 7 years to partially take care of their outstanding dues. The total amount was Rs. 9000 crore. From April 1, 2002 subsidies on PDS (kerosene) and domestic LPG were provided on a flat rate basis and were explicitly financed and were explicitly shown in the budget. Consequent to these changes, subsidies for LPG and kerosene, amounted to Rs. 6265 crore in 2002-03 (RE) and Rs. 8116 in 2003-04 (BE). It has been stated that these subsidies will be withdrawn in a period of 3 to 5 years.

Pricing of Power: Role of Cross-Subsidies

Power is another sector, where considerable cross-subsidisation is generated by regulated tariff structures.

The flexibility of State Electricity Boards (SEBs) in fixing electricity tariffs is constrained by the state governments. Only recently, some state governments have set up Electricity Regulatory Authorities to oversee the fixation of tariffs and make recommendations as an independent body. For purposes of tariffs, in general, six categories of users have been distinguished and differential tariffs have been applied. These categories are agriculture, irrigation, domestic, industrial, commercial, bulk sales (outside state) and railway traction. Subsidies are introduced in the power sector both through cross subsidisation among the different categories of consumers and budgetary support. Budgetary support becomes necessary because the SEBs have to show a three percent return on net fixed assets as stipulated in the Electricity (Supply) Act, 1948. But if they do not have the flexibility in increasing the tariff rates to ensure this statutory rate of return, the concerned state governments have to provide necessary budgetary support.

As mentioned earlier, cross-subsidisation arises when some categories of consumers have to pay a tariff which is more than the average tariff, and some categories, pay less than the average tariff. In particular, the subsidising categories are industry and commerce and the subsidised categories are agriculture and domestic users. However, even after cross subsidisation, budgetary support is needed when average cost is more than the average tariff.

The unit cost of supply depends on various factors affecting the supply and distribution of power. For an SEB, there could be three main sources of electricity: (i) own generation, (ii) purchase from the central grid, and (iii) purchase from private sources and other SEBs. The average cost in own generation depends on the mix of thermal and hydel electricity generating capacities. In general, hydel electricity tends to be cheaper than the thermal and other varieties. In the case of thermal generation, the distance from the source of coal and other inputs is quite important. Low plant load factors, large distances from which coal is to be brought, and the availability and quality of inputs determine the unit cost at the generation level. But beyond generation, transmission and distribution of power through the cable network of the state also is a significant source of inefficiency and high unit cost. Large distances to which electricity is to be carried from the source of generation/supply, and poor quality and maintenance of transmission lines add to the unit costs. The most significant reason for high unit costs, however, is transmission and distribution (T&D) loss. Apart from the technically unavoidable losses, most of the T&D loss is due to theft. Another important reason for high cost is over-employment in the SEBs. In most SEBs, there is surplus employment. Since the salary cost is also to be loaded in the total cost, the average cost has become unduly high.

Two major sources of inefficiency in the power sector are excessive transmission and distribution (T&D) losses and excess staffing in the State Electricity Boards (SEBs). Transmission and distribution losses in general have increased over 1999-00 (Table 6.2). For states considered together, average T&D losses increased from 20 percent in 1994-95 to 23.7 percent in 1999-00.

While in Bihar, Gujarat, Haryana, Punjab and Tamil Nadu, a marginal reduction in the T&D losses is evident from Table 6.2. In states like Andhra Pradesh and Karnataka there has been considerable increase within a span of 5 years. For example in Andhra Pradesh, the T&D losses went up from 19 percent to 31.4 percent implying a deterioration of more than 65 percent as compared to the 1994-95 level. In Karnataka also, the T&D losses went up from 19 percent in 1994-95 to 30 percent in 1999-00 implying a deterioration of more than 57 percent relative to the 1994-95 level. It has been noticed that the T&D losses compiled by the Planning Commission understate the real T&D losses as part of these are shown as supply to agriculture.

Table 6.2: Transmission and Distribution Losses as Percentage of Availability

States	1994-95	1999-00	Deterioration % Points	% to 1994- 95
Andhra Pradesh	19	31.4	-12.4	-65.26
Assam	25	37.0	-12.0	-48.00
Bihar	24	23.0	1.0	4.17
Delhi	NA	47.0		
Gujarat	20	19.6	0.4	2.00
Haryana	29	27.0	2.0	6.90
Himachal Pradesh	17	17.6	-0.6	-3.53
Jammu & Kashmir	47	47.0	0.0	0.00
Karnataka	19	30.0	-11.0	-57.89
Kerala	20	21.1	-1.1	-5.50
Madhya Pradesh	20	20.7	-0.7	-3.50
Maharashtra	15	17.0	-2.0	-13.33
Meghalaya	19	20.4	-1.4	-7.37
Punjab	18	16.8	1.2	6.67
Rajasthan	25	29.5	-4.5	-18.00
Tamil Nadu	17	16.7	0.3	1.76
Uttar Pradesh	23	25.5	-2.5	-10.87
West Bengal	21	28.0	-7.0	-33.33
Average	20	23.7	-3.7	

Source: Planning Commission, 1995 and 2001.

The second major source of inefficiency is excessive staffing by the SEBs. Table 6.3 gives a comparison of the number of employees in the SEBs per thousand of consumers in different states. One positive feature is that the general movement has been towards reducing the number of staff in many of the states. However, while the average for all the states is still

nine employees per thousand of consumers, states like Assam, Bihar, Jammu & Kashmir, Meghalaya, Punjab and West Bengal have much higher employee to consumer ratios.

The Electricity Bill 2001, with its objective of changing the ground rules can also bring out a major restructuring of the electricity sector. However, the passing of the Bill has been inordinately delayed. The ground rules require to be changed, opening up the sector for open access and private sector participation in all segments. These changes will themselves lead to efficiency-inducing and cost reducing effects. Reducing T&D losses as well as labour cost would automatically reduce the implicit subsidies.

Table 6.3: Number of Employees Per Thousand Consumers

States	1994-95	1999-00	Change % Points	% to 1994- 95
Andhra Pradesh	8.6	5.7	2.9	33.5
Assam	32.7	22.9	9.8	29.8
Bihar	23.1	16.1	7.0	30.3
Delhi	12.2	9.8	2.4	20.0
Gujarat	8.1	7.4	0.7	8.6
Haryana	15.7	9.0	6.7	42.9
Himachal Pradesh	11.0	12.1	-1.1	-9.6
Jammu & Kashmir	26.1	26.6	-0.5	-1.9
Karnataka	7.0	5.1	1.9	27.0
Kerala	5.7	5.1	0.7	11.4
Madhya Pradesh	12.7	11.1	1.6	12.9
Maharashtra	11.0	9.0	2.0	18.5
Meghalaya	44.1	32.9	11.2	25.4
Punjab	16.9	16.9	0.0	0.0
Rajasthan	14.0	11.4	2.6	18.9
Tamil Nadu	9.2	7.1	2.1	22.9
Uttar Pradesh	16.6	10.8	5.8	34.9
West Bengal	19.6	12.0	7.6	38.9
Average	12.0	9.1	2.9	23.8

Source: Planning Commission, 1995 and 2001.

The power sector suffers from considerable defaults on due payments from one entity to another. Often, the SEBs do not pay their dues to Central power entities, or electricity duty to the state governments. State governments, in turn, have stopped paying the full subventions to the SEBs, consistent with 3 percent returns on net worth. Many state government departments, local bodies, educational institutions do not pay their dues to SEBs fully or partially. Theft is much prevalent by industry, especially small and medium ones.

The consumers' willingness to pay higher tariffs depends much on the quality and regularity of supply. With inefficient transmission lines and shortage of supply, electricity supply becomes irregular as well as subject to high voltage fluctuations. With an assured supply and with reasonable quality, consumers may be willing to pay higher average tariffs

consistent with efficient costs. Without these, there is usually a general resistance to tariff hikes in the electricity sector. To protect the interests of the consumers and the SEBs, many states are now establishing State Electricity Regulation Commissions who will have the responsibility of determining the tariff structure under Chapter 6, section (29) of the Electricity Regulations Act, 1998.

In the agricultural sector, which is the main recipient of the subsidies, many systems of pricing prevail. In some cases, a fixed tariff for connection, and in some cases, metered tariff is charged. The metered tariff rate may be constant or may vary according to slabs of consumption. A fixed tariff rate is based on capacity of pump sets. There are also two-part tariffs, which is a combination of fixed and metered rates. In some states, like Punjab and Tamil Nadu, free or near free electricity is provided to the farmers. Because of lack of full metering, the agricultural sector becomes the residual category. As such, the correct consumption of power in agriculture is not always available, some of the consumption of the other sectors and T&D losses of other sectors may be attributed to agriculture thereby overstating the figure of power subsidy in agriculture. Not only to check T&D losses and improve revenues, but also to induce consumers to respond better to market signals, proper metering is necessary in all sectors including the agricultural sector.

In the annual report on the working of the State Electricity Boards and the State Electricity Departments brought out by the Planning Commission, estimates of the extent of cross-subsidisation mainly the commercial and industrial sectors are provided. According to their 2001 estimates, cross-subsidisation has increased from Rs.1296 crore in 1990-91 to Rs. 7641 crore in 1998-99 (Provisional Estimates). This constituted 28.2 percent of the subsidy provided to the agriculture and domestic sectors in 1998-99 as compared to 22.9 percent in 1990-91. Table 6.4 provides the estimated cross subsidies from other sectors to agriculture and domestic sectors over the period 1992-93 to 2000-01. It would appear that in the earlier part of this period, the extent to which cross subsidies played a role in the overall subsidies has ranged between 39 to 42 percent. Although this is significantly higher than the figure of about 23 percent in 1990-91, most of the increase in the cross-subsidisation occurred in the early 1990s. Since then, cross-subsidies have been showing a downward trend as proportion of total electricity subsidies to agriculture and domestic sector.

Table 6.4: Electricity: Estimates of Cross-Subsidies

Year	Cross-Subsidy (Rs. crore)	Cross-Subsidy as Percentage of Subsidy for Agriculture & Domestic Sectors
1992-93	3911.0	41.7
1993-94	4522.5	40.8
1994-95	5379.2	39.9
1995-96	6333.7	37.6
1996-97	7778.9	39.0
1997-98	9010.9	39.2
1998-99	7641.4	28.2
1999-00 (RE)	8247.3	25.3
2000-01 (Annual Plan)	7606.0	20.8

Source: Government of India, Planning Commission: Annual Report on the Working of State Electricity Boards and Electricity Departments, June, 2001.

Fertilisers: Case of Inefficiency Promoting Subsidies

Fertiliser subsidies promote inefficiencies and are ill targeted. These need to be reformed. Subsidisation should emerge at the end of the process for income support to small and marginal farmers.

The fertilizer industry has three main components, namely, urea, di-ammonium phosphate (DAP) and muriate of potash (MOP). Among these, the production of urea has been under the retention price scheme (RPS). The RPS was meant to ensure that subject to some capacity utilisation norms, the production units are assured a return of 12 percent on capital employed. The difference between the retention price plus freight and dealers' margin and price charged from the farmer accounts for the subsidy on urea. On DAP production, there is a flat rate subsidy. The MOP is mostly imported and on this also, a subsidy is provided on a flat rate.

The fertiliser subsidy has three adverse consequences. First, it protects inefficiency in the production units because production units are assured of a substantial return on capital even if they compromised on some of the norms and operate at a sub-optimal level. Secondly, the subsidies disturb the desirable ratios between the three types of fertilisers: Nitrogenous (N), Phosphate (P), and Potash (K). Thirdly, these are provided universally to all farmers and the incidence of their benefit is in proportion of the extent of their use, which would normally favour richer farmers because of their higher purchasing capacity not only to buy the fertiliser but also other complementary inputs. In addition, these constitute a heavy cost on the budget, and whether financed by taxation or borrowing, it leads to additional distortions.

The optimal combination in the use of the three types of fertilisers, viz., Nitrogenous fertilisers (N), Phosphatic fertilisers (P), and Potash (K) is considered to be 4:2:1 in India as a whole, although the optimal combination may change from year to year and crop to crop. The actual NPK ratios as prevalent in selected years since 1960-61 are given in Table 6.5.

Table 6.5: Consumption of Fertilisers

Years	(000 ¹ tonnes of nutrients)		
	N	P	K
1960-61	7.2	1.8	1.0
1970-71	6.5	2.0	1.0
1980-81	5.9	1.9	1.0
1990-91	6.0	2.4	1.0
1995-96	8.5	2.5	1.0
1996-97	10.0	2.9	1.0
1997-98	7.9	2.9	1.0
1998-99	8.5	3.1	1.0
1999-00	6.9	2.9	1.0
2000-01	7.0	2.7	1.0
2001-02*	6.5	2.7	1.0

Source (Basic Data): *Economic Survey 2001-02*.

Note: * Upto November 2002.

In a recent work, Gulati and Narayanan (2000) have shown that the share of budgetary subsidies going to the farmers has been on the average about 66.54 percent over the period 1981-82 and 1999-2000 and the rest was the share of the industry. In a number of years including 1999-00, the share of fertiliser subsidy for the farmers was less than 50 percent (for example 1983-84, 1985-87, and 1999-00). On the issue of inefficiency of urea plants, they have worked out the viability of different plants at different international urea prices. According to them, at a price of \$90/MT almost the whole of urea industry (almost 98 percent) would be rendered economically unviable. Even at \$160/MT almost 50 percent would become unviable.

Mazumdar (1993) has decomposed the fertiliser subsidy between industry and farmers, over the period 1981-82 to 1989-90. His results indicated that the share of subsidy to the farm sector has been rising over the years. His results also bring out the volatility in the distribution of the fertiliser subsidy between farmers and the industry due to the fluctuations in international prices when year-wise data are used. A longer term perspective indicated that the share of farmers in the fertiliser subsidy during the eighties was about 50 percent.

In the context of fertiliser related reform, the C.H. Hanumantha Rao Committee (1998) had made certain important recommendations comprising (i) deregulation of fertiliser industry, (ii) discontinuation of RPS for urea plants, (iii) new pricing methodology based on

long run marginal cost of fertiliser for abolition, and (iv) setting up of a fertiliser policy planning board. One may also consider freeing of the urea import which would force fertiliser units towards greater efficiency and selection of low cost inputs and technologies.

The Expenditure Reforms Commission (ERC) sets out three objectives of reforms in the fertiliser sector: (i) to bring fertiliser prices charged to farmers to the import parity price, (ii) to protect the real income of small farmers while dismantling the existing regime of fertiliser subsidies, and (iii) to induce balanced use of the three main fertilisers so as to correct the NPK ratio which is heavily tilted in favour of the use of urea. The Expenditure Reforms Commission also considered that the dismantling of subsidy regime should not be sudden and that producers as well as farmers should have sufficient time to adjust.

In the context of urea, the Commission suggested a phased dismantling of the present retention price scheme. The first step is to replace the unit-wise determination of the retention price to a group-wise application. Five groups identified by them were as follows: Pre-1992 gas based units, Post-1992 gas based units, Naphtha based units, FO-LSHS based units, and Mixed feed stock units.

The Commission suggested a urea concession scheme in place of the retention price scheme and fixed amount of concessions to each of these groups. They further suggested the dismantling of the distribution controlling mechanism. However, the maximum retail price arrangement is to be continued and the concession for each group is to be calibrated so as to enable the units to sell at a stipulated maximum retail price. In the second stage, the concessions are reduced so as to reflect the possibility of reasonable improvement in feedstock usage efficiencies and reduction in capital related charges. In the third phase, all gas based plants are supposed to modernise and switch over to LNG. For plants which do not switch over to LNG, only that level of concession would be provided which they would have been entitled to if they had switched over to LNG. In the fourth phase, industry is decontrolled. The ERC was of the view that the urea price should be re-determined every six months, and accordingly prices of potassic and phosphatic (K&P) fertilisers are adjusted to ensure the desired NPK balance.

In our view, the fertiliser industry is a clear case where government should not interfere with market signals because of a variety of choices and substitution possibilities that exist in the production and supply processes as well as in the use of fertilisers. The country has the option to import fertilisers or their feedstock. The same fertiliser can be produced by using alternative processes and inputs. There is also the option of setting up processing plants abroad in countries where feed stocks are available. The farmers have the choice to utilise fertilisers of different types in different proportions. Given this large choice matrix and

substitution possibilities, the best option is to decontrol the sector completely so that market prices based on scarcity values can give the correct signals and the industry as well as users can adjust to it. Government intervention results in inefficient choices at all stages. It has been subsidising inefficient production of fertilisers for a long time.

Further, the case for subsidising inputs in general is very weak. In the case of fertilisers, most of the grounds on which such subsidies were justified earlier have lost relevance. Its pursuit has promoted inefficiencies in fertiliser production as well as use. A five-year period could be considered for adjustment aimed at moving away from the current regime of fertiliser subsidisation. The retention price scheme should be given up and replaced by fixed per unit amount of subsidy which may initially provide for a group-wise differential. In the event, the recently announced new scheme (February 14, 2003) regarding urea policy outlines reform of the fertiliser support regime. The proposed changes would take effect in several stages. The urea producing units are divided into six groups. Group-wise norms are being specified, and units that are cost outliers in terms of deviation from the group average will be identified. While some allowance will be made for the outliers in Stage I, it will not be allowed in Stage II. Separate cost norms will be determined for feedstock, fuel, purchased power, and water.

The basic objective, after the input subsidies and other controls are done away with, which may yet remain relevant is to protect the small farmers from being outpriced. The Expenditure Reform Commission had estimated that if 105 million farmers are to be subsidised by an open system for 80 kgs. of urea per family, it will cost Rs. 2016 crore as subsidy directed towards the farmers. The subsidy targeted towards farmers would be more effective and smaller in volume. However, even this would continue to subsidise inputs. Subsidisation should emerge at the end of the process for income support to small and marginal farmers. The financing of purchase of inputs should be handled by developing a framework for credit facilities for the farmers, especially the small and marginal farmers. This should cater to purchases of all relevant inputs rather than just fertilisers.

Targeting and Delivery Mechanisms

Better targeting is the key to lowering the volume of subsidy while continuing to satisfy the objectives of subsidisation.

Subsidies are delivered through various mechanisms. The efficiency of delivery mechanism is critical to improving the incidence profile of subsidies towards the intended beneficiaries. In the case of food subsidy, the main budgetary support comes from the central budget. Subsidy mainly goes to the FCI whereas the main intended beneficiaries are the ration card holders under different categories. Foodgrains are lifted by the state governments

and distributed to the PDS shops. Much of the subsidy is absorbed to cover the inefficiency of the FCI operations, and some are leaked out in the PDS system before the benefit accrues to the consumers.

Examination of alternative delivery mechanisms is therefore very important. The delivery mechanism should be cost-efficient, and it should maximise the delivery to the intended beneficiary. An alternative delivery mechanism in the case of both food and fertiliser could be a coupon system. An experiment with the coupon system in Andhra Pradesh with respect to the food subsidy indicates that delivery has improved and costs have gone down by 10 percent.

In a study by Jha (1991), two types of targeting ratios were conceptualised and estimated. The first target ratio (TR1) measured as to how far the PDS caters to the poor vis-a-vis the non-poor and the second ratio (TR2) measured the extent to which the poor are covered by the PDS. Thus, $(100 - TR1)$ indicates inclusion error, i.e., coverage of the non-poor who ought to be excluded but are included, and $(100 - TR2)$ indicates exclusion error, i.e., the percentage of those who ought to be included but are excluded from the PDS. According to estimates given in Jha (1991) for TR1, i.e., the number of poor among all beneficiaries, the coverage of poor was only a little more than 50 percent for rice, and even less for wheat. For all the PDS commodities, urban targeting appeared a little better as compared to the rural areas. For TR2, i.e., the proportion of PDS using poor to all poor, the ratios were relatively lower as compared to TR1. Only about 43 percent among the poor were PDS users for rice in rural as well as urban areas, whereas for wheat, the coverage of poor by the PDS was even less, being 30 percent in rural and 37 percent in urban areas. In a later study, Jha (1994, p. 19) observed that the probability of committing exclusion error (range: 30–90% = $100 - TR2$) is higher than that of inclusion error (range: 30–60% = $100 - TR1$). In terms of the inter-commodity profile for the exclusion error, the number of poor utilising the PDS among all poor is the highest for sugar followed by kerosene indicating that targeting is best for these commodities. Howes and Jha (1992), have observed that the average accessibility of ration shops in rural areas, measured in terms of crowding in ration shops and their distance from residences is less than 60 percent of the accessibility in urban areas. It is clear that better targeting is the key to reducing the volume of subsidy while deriving more benefits out of it.

The discussion in this chapter points to the need for greater transparency in the subsidy regime. This requires making subsidies as explicit as possible and minimising subsidies that are generated through administered price regimes and those that are kept off-budget. Targeting assumes particular importance so that while subsidies are made explicit, their budgetary burden is kept under control.

One more aspect which requires consideration is that subsidies should be treated as short-term measures. They cannot be considered as an all-time phenomenon. Their operation as well as utility should be frequently reviewed and those that have either outlived or those that are being misused should be weeded out. An important principle to be kept in mind is that consumers do not hesitate to pay provided the quality of service is good, supply regular and dependable.

Chapter 7

BUDGETARY SUBSIDIES IN INDIA: SUMMARY AND SUGGESTED REFORMS

Budgetary subsidies, interpreted as unrecovered costs of publicly provided private goods and services, claim a significant portion of resources, but remain hidden as only a small portion of these are explicitly shown as subsidies in the budget documents. With a view to making an assessment of their size, and examining their relevance and impact, a Discussion Paper on Subsidies was brought out by the Ministry of Finance, Government of India in May 1997. This paper had critiqued the budgetary subsidies in India as unduly large, non-transparent, largely input-based, poorly targeted, generally regressive, and inducing waste and misallocation of resources. The 1997 study provided subsidy estimates for 1994-95.

The present study updates these estimates for 1998-99, and highlights continuing concerns with the size, relevance and effects of the central and state budgetary subsidies. These estimates, along with three sets of previous estimates pertaining to 1987-88, 1992-93, and 1994-95, which are roughly comparable in terms of approach and methodology, provide an idea as to the continually deteriorating profile of subsidies in spite of various reforms. As a proportion of the combined revenue receipts of the centre and states, subsidies have continually grown, from 63.3 per cent in 1987-88, 70.4 per cent in 1992-93, 76.9 per cent in 1994-95, to 85.8 per cent in 1998-99. Relative to GDP, the combined budgetary subsidies of the centre and states were at 13.51 per cent in 1994-95 and 13.54 per cent in 1998-99. The increase appears to be sharper with respect to revenue receipts, because receipts have themselves fallen relative to GDP over the period under reference.

In this study, in order to segregate subsidies that may be considered desirable and justifiable *vis-à-vis* those that are not, publicly provided services are divided into three categories, *viz.*, Merit I, Merit II, and Non-Merit. This distinction is an extension of the classification of Merit and non-Merit services introduced in the 1997 Discussion paper. Here, the merit category is further sub-divided into Merit I and Merit II. The Merit I category contains services like elementary education, and primary and preventive health care deserving a high degree of subsidisation, which may even be to the extent of 90 percent or more. Services like higher education are placed in Merit II category where also subsidisation may be justified but to a lesser extent. As per the 1998-99 estimates, the non-Merit services continue to claim a relatively larger share of the overall subsidies, at 56.5 percent of the combined subsidies of the centre and states, whereas Merit I and Merit II account for 15.0 and 28.5 percent of the estimated subsidies, respectively.

Considering the centre and states together, it is clear that subsidies for economic services are by far the larger at 61.4 percent of the total estimated subsidies in 1998-99 as compared to the social services, which claimed only 38.6 percent.

Trends in Central Subsidies

Central budgetary subsidies have grown over the years. The economic sector subsidies are nearly five and half times as large as those of the social services.

In the last few years, central budgetary subsidies have increased sharply. This is true of explicit as well as implicit subsidies. Total central budgetary subsidies amounted to 4.59 percent of GDP in 1998-99, and state budgetary subsidies amounted to 8.96 percent of GDP. The share of centre in the total subsidies has gone up from 31.5 percent in 1994-95 to 33.9 percent in 1998-99, i.e. an increase of 2.4 percentage points. For the central subsidies, in both social and economic services, current costs dominate, but by a much larger margin in social services. In social services, current costs account for 91.4 percent of total costs, whereas in economic services their share is 64.9 percent. Only in a few sectors, the share of capital costs is high: for example, 78.7 percent in energy, 55.9 percent in transport, and 48.2 percent in industry and minerals.

Four reasons account for the inordinate increase in the central budgetary subsidies, viz. (i) the impact of salary revisions in the wake of the recommendations of the Fifth Central Pay Commission; (ii) the degeneration of railways from a surplus sector into a subsidy sector; (iii) an increase in the share of explicit subsidies of the centre; and (iv) increase in other input costs unaccompanied by any improvement in recovery rates. The explicit subsidies, especially in food and fertiliser, rose sharply in the latter half of the nineties.

In the case of central subsidies, economic sector subsidies are nearly five and half times as large as those of the social sector. Economic sectors arranged in diminishing order of the size of subsidies are: agriculture and allied services (24.4 percent), industry and minerals (21.4 percent), transport (10.4 percent), and energy (9.8 percent).

Trends in State Subsidies

Aggregate budgetary subsidies of the state government have fallen since 1994-95. The recovery rates have also come down. The per capita state subsidies have shown a regressive pattern.

The 1998-99 estimates indicate that budgetary subsidies of the state governments amounted to 8.96 per cent of the Gross Domestic Product (GDP) and about 90 percent of their revenue receipts. After adjustment for salary arrears paid in 1998-99, the state budgetary subsidies are estimated at 8.47 percent of the GDP. Relative to the GDP, aggregate budgetary subsidies of the state governments have fallen in 1998-99 as compared to the earlier available estimates for 1994-95. The recovery rate has also fallen. This is due to a fall in expenditure relative to GDP, revenue and capital, allocated to the economic services in the state budgets.

Agriculture and irrigation sectors account for the largest share in the state subsidies at 16.3 percent, followed by elementary education (10.5 percent), energy (9.7 percent), secondary education (9.1 percent), and medical and public health (7.9 percent).

Per capita state subsidies generally show a regressive pattern: the higher the per capita income of a state, the higher are the per capita subsidies. Per capita subsidies in education and health also show a regressive pattern where, in comparative terms, low subsidies are available to residents of low income states and *vice versa*. Per capita subsidies in the special category states are noticeably higher than those in the general states. The states' public sector has drawn an implicit subsidy amounting to Rs. 9561 crore. The overall recovery rate in the state level public sector is dismally low at 1.64 percent of the costs.

Reforming Subsidies: Approach and Suggestions

Subsidy reforms should aim at limiting their volume relative to revenue receipts, focusing these to only Merit I and Merit II categories, targeting beneficiaries, making the system transparent and explicit, and avoiding multiple subsidies to serve a single objective. Subsidy reforms should focus on selected sectors in the first instance to obtain maximum results.

Budgetary subsidies provide the interface between the two sides of the budget, *viz.*, expenditures and non-tax revenues. Policy reforms affecting subsidies will have to address both these budgetary dimensions. The main objectives that should guide the formulation of a subsidy reform strategy may be listed as: lower volume, higher recoveries, better service focus, improved targeting, removal of inefficiencies, and promoting budgetary transparency.

The case of justified subsidisation through budgetary support is limited to Merit goods and services. These services are characterised by positive externalities where social benefits are more than private benefits. Among these, the Merit I services like elementary education and primary health deserve a high degree of subsidisation because of large positive externalities. Merit II services like secondary and higher education, other health services, and water supply and sanitation would also require budgetary subsidisation albeit of a lower

order. Although in different cases, the extent of subsidisation relative to costs may differ, a subsidisation of 90 percent or above may be justified for Merit I and 40 to 60 percent for Merit II services.

A significant portion of the present budgetary support for services is unwarranted as it does not pertain to services with high social benefits relative to private benefits, and therefore, pertains to the non-Merit category. Most of this unwarranted subsidisation is harmful to the economy. It pre-empted budgetary resources which could be allocated to socially more relevant purposes like health and education. Such subsidisation also distorts the structure of prices as in the case of power, thereby making domestic industry uncompetitive relative to the rest of world. The inter-state pattern of the budgetary subsidies also indicates that these are highly regressive. Many inputs like fertilisers, irrigation water, and power are subsidised where the benefit finally gets distributed according to the pattern of consumption of final goods which benefits the richer sections of the society. Subsidies often become detrimental to the environment damaging the fertility of the soil, as in the case of fertilisers where overuse of urea was induced by a high degree of subsidisation. An important weakness of the present subsidy regime is that it ends up subsidising inefficiencies – like the inefficiencies of the SEBs, State Irrigation Departments, the Food Corporation of India or the public sector at large, especially in the states.

Subsidy reforms should aim at (i) reducing their volume relative to revenue receipts of the central and the state governments, (ii) limiting these to only Merit I and Merit II categories while eliminating the non-Merit subsidies, (iii) administering subsidies more directly to the targeted beneficiaries, thereby eliminating input-subsidies and focusing more on transfers as compared to price subsidies, (iv) making these subsidies transparent by showing them explicitly in the budget, and (v) avoiding multiple subsidies to serve the same policy objective.

Costs of service provision and/or low negligible recoveries through user charges are the two critical sides of subsidisation. Unit costs need to be reduced, wherever desirable and viable. Surplus employment and other operational inefficiencies must be reduced.

Subsidy reforms, in the first instance, need to focus on selected sectors, which would yield maximum results and for those services for which there is considerable scope for higher recovery in the non-Merit category. In the case of centre, the immediate focus of reform should be on food and fertiliser subsidies, and for states, it is important to attend to power and irrigation subsidies, while reforming the overall subsidy regime. The following are the sectors, where subsidy reforms, should focus in the first instance.

Social Services	Economic Services
Centre	
Education	Agriculture (food) Subsidies (fertiliser/public enterprises) Railways
States	
Education	Agriculture
Health	Irrigation
	Industries
	Power
	Transport

Reforming Subsidies: Specific Measures

Food Subsidy

In the long-run, a properly decentralised two-tier intervention for food subsidisation should be developed and Centre should maintain only optimal buffer stock for strategic market intervention and for exigencies. Food subsidies should be delinked from policies to support agricultural incomes.

The subsidy to food, administered through the central budget, subsidises not only the consumption of food, but also the farmers (producers) of wheat and rice, and the operational inefficiencies of the Food Corporation of India (FCI). The inefficiencies include costs of carrying excess food stocks and inefficiencies in procurement, transportation, processing, and storage operations of the FCI. Procurement and inefficiency costs have risen sharply in recent years, and the element of consumer subsidy has shrunk resulting in poor offtakes, leaving larger stocks with the FCI to carry forward, which entails additional cost as well as wastage of increasing stock of foodgrains. A reform of food subsidy would require both short-term and long-run measures.

As a first step, it would be appropriate to consider abolishing the Above Poverty Line (APL) category altogether as its subsidisation is both undesirable and redundant in view of market prices often being lower than the economic cost of the FCI. At the same time, the benefit to Below Poverty Line (BPL) category should be increased both by increasing their entitlement and coverage of population. The latter may require undertaking a fresh survey where the poverty line is uplifted and exclusion errors of the previous survey, if any, are rectified. This will eliminate the more serious of the targeting errors, known as type I or exclusion error, where the deserving are missed out. The price for BPL category can also be reduced as percent of economic cost. Other measures in the short-run would include:

- (i) The Minimum Support Price (MSP) for wheat and rice should be determined not just on a cost plus formula but also linking it to the position of existing stocks. The increase in MSP should be moderated according to the extent of excess of stocks over prescribed norms.
- (ii) The budget allocation by the central and the state governments for rural infrastructure construction, and other labour-intensive infrastructure should be increased, so that targets of reducing poverty and increasing the demand for food at the lowest income levels can be achieved simultaneously.
- (iii) Exports of foodgrains should be facilitated so that excess stock and the carrying costs can be reduced.
- (iv) MSP should be differentiated according to surplus and deficit states – lower MSP being offered in surplus states.

In the longer-run, a properly decentralised two-tier intervention for food subsidisation should be developed. The centre should maintain minimum buffer stock for strategic market intervention and emergency purposes. The responsibility of procuring, storing, processing, and distribution should be largely handled by the state governments. This will eliminate the process of implicit inter-state transfer of resources to farmers of specific crops and eliminate operational inefficiencies arising from over-centralisation. The centre can determine total amount of subsidy on the basis of the number of poor and the prevailing market prices and allocate to the states according to the number of poor and intensity of poverty. The centre can have a supervisory role and should ensure unfettered inter-state domestic trade in foodgrains. States on the other hand, should integrate the dimension of access to food within the context of an overall poverty reduction programme. The whole issue of supporting agricultural incomes should be tackled by a separate policy instrument.

Fertiliser Subsidies

In a period of five years, fertiliser subsidies in their present form should be done away with and proper exit policy formulated for inefficient units. A limited amount of subsidies targeted to marginal poor farmers could be linked to actual purchases through a reimbursement system.

A large part of fertiliser subsidies is used up in subsidising the inefficiencies of the fertiliser industry. The present unit-wise retention price scheme implies that the more inefficient the industrial unit, the larger is the extent of its subsidisation. Similarly, the richer the farmer, and the more he can provide for complementary inputs to fertiliser, the larger is his use of fertiliser and its subsidy. Overuse of urea, induced by the subsidies, also does long-term damage to the fertility of the soil and environmental degradation.

In this case also, subsidy reforms would require a short-run and medium-term perspective. In the short-run, both the unit-wise fixation of subsidy and the use of the Retention Price Scheme (RPS) should be given up. Instead of RPS, subsidy should be a specific nominal amount per metric tonne of output. Unit-wise differentials should be replaced by a group-wise scheme of concessions.

In a period of five years, fertiliser subsidies should be done away with in their present form. This would require setting up a proper exit policy for some of the inefficient units. These units should be facilitated to move to alternative technologies or to close down.

While the farmer would then be exposed to open market prices, greater efficiency would drive down the average cost. However, one segment of farmers may still need additional protection, viz., the poor farmers with small landholdings. For all farmers, proper credit facilities would need to be developed, but for the poorer farmers, some subsidies can be administered linked to actual purchases through a reimbursement system subject to entitlement limits.

Irrigation Subsidies

A significant portion of irrigation subsidies goes to finance excess staff in the irrigation departments. There is a need to drastically prune the existing staff, reduce costs, and augment recoveries to cover at least the operation and maintenance costs.

While food and fertiliser subsidies emanate primarily from the central budget, irrigation and power subsidies are part of the state budgets. Irrigation claims a little more than 15 percent of the total subsidies implicit in the state budgets. A significant portion of this subsidy actually subsidises only the excess staffing in the irrigation departments. The rest is due to extremely low user charges. Per capita subsidies are also large in the richer states like Gujarat, Maharashtra, and Punjab relative to those in Bihar or Uttar Pradesh. In almost all states, recoveries are extremely poor relative to costs. Apart from excess staffing, there is also considerable waste of water and water logging in many areas causing long-term damage to the soil. Staff is considerably in excess of requirements for maintenance and routine operations. Some of them can be utilised by increasing investment in the sector. The remaining staff would need to be redeployed or put through a properly designed retirement/redeployment scheme. It is important to induce discipline in water usage through better pricing, while bringing the costs down by eliminating inefficiencies.

Strategies for reducing irrigation subsidies would include: (i) re-deployment of staff to other sectors, (ii) introduction of Voluntary Retirement Schemes (VRS), and ensuring that when staff retires, vacant posts are not filled up and no new posts are created in this sector even on the plan side, (iii) fresh investment aimed at increasing irrigation coverage so that the ultimate irrigation potential is realised while average and marginal costs are reduced, and (iv) increase in user charges so as to recover at least the operation and maintenance costs (O&M). The O&M costs would be reduced after the excessive staffing costs are eliminated.

Power Subsidies

Power subsidies largely subsidise inefficiencies. There is a need to reduce T&D losses, make subsidies more explicit, overhaul the Electricity Act and drastically prune staff strength in the SEBs.

Power is subsidised for agricultural and domestic consumers through two sources: (i) state support to State Electricity Boards (SEBs) in the form of subventions or write off of loans or interest, etc., and (ii) cross-subsidisation by charging higher prices from industrial and commercial consumers. Subsidies that remain unrecovered after these are carried forward as losses by the SEBs or remain as unpaid dues of the SEBs to central undertakings or state governments. Power subsidies largely subsidise inefficiencies. Two main sources of inefficiency are: (i) transmission and distribution losses which include, apart from technical losses, a large portion of theft, and (ii) over-employment of personnel whose contribution at the margin in the provision of service may be zero. The power sector is characterised by shortages, poor quality and frequent breakdowns. Both industry and agriculture suffer on this account. Cross-subsidisation makes power costlier for industry and commerce rendering them uncompetitive. Power subsidies are also highly regressive with higher per capita subsidies in richer states as compared to the poorer states.

The reform of power subsidies should be viewed in both a short-run and long-run perspective. The following measures are suggested in the short-term:

- (i) T&D losses should be reduced by meterisation of electricity supply upto bulk level consumers in rural areas and individual meterisation for farmers with large holdings. Energy audit should help to identify areaswise pockets of losses in urban as well as rural areas.
- (ii) The power subsidy should be administered explicitly by making the farmers pay the regular tariff and claim the subsidy from State's Department of Agriculture. A change of this nature in Kerala has reduced not only the subsidy bill but also the wastage of power, as farmers become conscious of payments made by them to the Electricity Authority.
- (iii) The Electricity Act has to be overhauled as soon as possible so as to allow open access to distribution and transmission companies from any source and ending the

implicit monopoly and monopsony features of the present Act. Entry of private enterprises should be permitted in all the segments.

- (iv) Staff strength of the Electricity Boards should be drastically pruned by introducing VRS and CRS after the SEB has identified its efficient workers.

In the long-run, average cost of supplying power has to be reduced by increasing the proportion of cheaper electricity from hydel sources in the overall mix of power supply. Costs will also be reduced when private enterprises are enabled to participate in all the activities, viz., generation, transmission and distribution, and there is greater competition in the sector.

Subsidisation of Agriculture

Input subsidisation should be avoided, support to agriculture incomes and food subsidisation should be delinked, and the two policy objectives should be served by separate policy instruments.

In reforming the subsidy regime, the issue of subsidising agriculture should be considered as a whole. Agriculture claims subsidies through the subsidisation of inputs like fertilizers, power, and irrigation. In addition, it has a share in the food subsidies, where the minimum support price mechanism subsidises the farmers of wheat and rice. Much of this subsidisation leaks out to subsidise industrial inefficiencies as in the case of power and fertilizers, or inefficiencies of the government or public sector, as in the case of irrigation and power. Even in those subsidies that filter down to the farmers, it is the richer farmers who are able to take the larger benefits. These undesirable features arise because of the method of administering the subsidy through inputs.

The correct method for supporting agriculture is to identify the justifiable objectives of subsidization of agriculture and subsidise the potential beneficiary as directly as possible. The main objective of supporting agriculture, apart from making food available to BPL population at reasonable prices, should be to protect the farmers against excessive volatility in incomes, and to support the poorer farmers in terms of ensuring a minimum income, and credit support enabling the purchase of inputs at the right time. But subsidies should not be designed to support just a few selected crops, especially in times of sustained excess supply and availability of the global market to overcome any temporary shortages. The farmers should be allowed to respond to the market signals reflecting demand and supply imbalances, formulate short and medium term expectations, and accordingly select their cropping patterns. The best strategy is to achieve the two policy targets stated above by using no more than two policy instruments. The food subsidy for BPL population is best administered through a decentralised, limited and targeted PDS system as already discussed. Volatility and

income support to farmers should not be limited just to farmers of wheat and rice. This is best tackled by developing insurance and credit policies with support for selected crops. The selection of crops for support may be different for different periods and different states, depending on surplus/deficit profiles of outputs of different crops in different states.

Interventions through limited purchases/releases from strategic but small buffer stocks and imports designed to moderate excessive price/income fluctuations, but not meant for completely obliterating the market signals, would be helpful. These, supplemented by support to insurance services in the sector covering crop failures as well as excessive price crashes should protect farmers of all types against income fluctuations. The poorer farmers should be given subsidies and credit facilities for the purchase of inputs, without interfering with prices which should reflect economic and efficiency costs. The overall environment should be characterized by unfettered movement of produce throughout the country and access to global markets both for inputs and outputs. The input costs will be reduced through greater competition as well as by reducing inefficiencies in government operations. The only segment where government needs to invest is irrigation and new technology where the private sector is not likely to have a significant role. But here again resources can be released by drastically pruning the excess irrigation staff.

Social Sector Subsidies

Subsidies for only Merit I and Merit II categories are justified. Elementary education, primary and preventive health care are deserving cases, and even in these cases, subsidies should be administered to the intended beneficiary as far as possible.

We have classified elementary education as a Merit I good deserving a high degree of subsidisation. Further support may be needed in rural areas and small to medium towns and urban peripheries where private sector would not extensively participate. A distinction needs to be made between subsidisation and participation by the government in actual production. Subsidisation is possible even if children study in private schools which are run under regulation. However, the subsidy is better administered to the identified child rather than to the school. But the fee structure in the schools should be regulated. However, in rural areas, remote areas, and urban peripheries, government may necessarily have to participate in running the schools. In these cases, even 95 to 100 percent subsidisations may be justifiable but monitoring mechanisms are needed to ensure adequate quality and regular attendance.

Secondary and higher education are classified in our analysis as Merit II good deserving subsidisation on an average to the extent of 60 percent. However, a much higher subsidy can be given to children from poorer families through scholarships. Loans should be

made available to all categories of students through specialised institutions for educational loans. The degree of subsidisation should be differentiated according to disciplines and types of institutions. Professional disciplines should be given much less subsidisation and institutions should be asked to raise funds through professional fees and through consultancy and research services.

Primary and preventive health care has been categorised as Merit I service deserving of 90 to 100 percent subsidisation, and curative health services as non-merit good where full cost should be recovered. But in this case also partial subsidisation could be provided to the BPL families. The entire sector should be served by extending insurance services so that unanticipated health care needs even for the better off can be taken care of.

In our analysis soil and water conservation is taken as Merit I and inland water transport is taken as Merit II, but water supply in general is taken as a service where costs should be recovered. But even in this case there could be partial subsidisation for making water available to the poorer sections of the society. Sometimes due to lack of supply or poor quality of water, the poor may be made to pay much more in terms of medical costs. It would be better for the consumers to pay at least that cost of water supply which are calculated on the basis of cost norms and force the supply agencies to overcome inefficiencies and reduce average costs.

Subsidisation of the Public Sector

As public sector falls under the non-merit category, subsidisation should be discouraged.

Public sector enterprises with few exceptions are involved in providing a variety of goods and services which it is easy to classify as non-Merit goods. The public sector gets implicitly subsidised by the budgetary resources of the centre and the state governments because it does not give adequate return on the investments of these governments in the form of equity and loans. The difference between the opportunity cost of capital, i.e., the interest at which government borrows and the return that it gets on its investment from the public sector accounts for the implicit subsidisation of the public sector. The average return on the public sector investments for states considered together is only 1.64 percent as against interest rates on their past debt ranging on average between 11-13 percent. Almost 90 percent of public enterprises in the states have become unviable and require to be privatised or closed down. Governments will be better off by supporting VRS/CRS programmes which may otherwise be funded by the sale of assets of the enterprise including land. In many cases land may have sufficient value to fund the entire requisite VRS programme of a unit. Necessary changes in

land related laws should be brought out by the state governments if this becomes a constraint in the disposal of land owned by public sector enterprises.

Managing User Charges

User charges can be better linked to costs and more easily managed when inefficiency costs are minimised, quality of services is improved, automatic cost-linked revision mechanisms are put in place, and new institutions are brought forth to look after the interests of the consumers as well as the service providers.

Users cannot be persuaded to pay higher costs unless they are assured of reasonable quality of services provided by the public authorities. The term quality can be used in a broad sense covering multiple attributes of services: accessibility, reasonable waiting period, regularity, and adequacy. For example, quality provision of power means regular supply of electricity without frequent breakdowns or stoppages, and without undue voltage fluctuations. In health services, quality means access of service with minimum waiting time, availability of medicines, cleanliness of hospitals, etc. Cost recovery is closely linked to the quality of services. On the other hand, quality deteriorates without adequate finances. This creates a vicious circle. Unless adequate quality is assured, people would not be willing to pay and unless they pay, quality cannot be maintained.

a. Implication of Inefficiency Costs

A large component of costs in the public provision of private goods can be attributed to various inefficiencies. An important source of these inefficiencies is surplus employment in the concerned sectors. Surplus employment in the government sector can be judged according as whether the withdrawal of some people would actually lead to a fall in the level of service. For example, in many states, in both the electricity and transport sectors, there is considerable over-employment. Users may be willing to pay efficient costs, but it is difficult to persuade them to also pay for governmental inefficiencies. Government's participation in providing services is attended by several types of inefficiencies. Apart from direct costs like those due to overstaffing, poor maintenance of assets, procedural delays, delays in taking critical decisions, there are other systemic inefficiencies. Subsidy interventions by the government distort market prices and often lead to sub-optimal use of inputs in the economy, thereby raising overall costs in the system. Since inefficiency is neither a public good nor a merit good, tax payers cannot be asked to pay for cost-escalation due to inefficiencies in the public provision of private goods. Nor is there a case for passing it on to the user. The user is entitled to the supply of a service/good at the lowest possible cost. Since the taxpayers cannot be burdened with inefficiency costs incidental to the public provision of private goods, the only acceptable alternative is to minimise these inefficiencies. For this, the sources of

inefficiencies need to be identified and their costs need to be worked out in micro level studies.

b. Dynamics of Costs and User Charges

Many of the input costs continuously increase, driven by market forces. Salaries of government employees are also periodically revised, apart from its DA component being linked with inflation. However, tariffs and user charges tend to be rigid in nominal terms. Most fees have lost any semblance of connection with the input costs. Once the desirable extent of subsidisation has been worked out, the relevant proportion between unit costs and cost recovery should be maintained. The extent of subsidisation should not be allowed to increase by default because of non-revision of the nominal levels of fees, tariffs, and user charges.

The rigidity leading to non-revision of user charges comes from the absence of suitable institutional mechanisms which could deal with the related issues of quality, inefficiency, increase in costs, and extent of subsidisation according to service categories. Any increase in user charges requires explicit public decision by legislative/executive authorities who are very reluctant to increase user charges. Necessary institutional mechanism would involve setting up of autonomous bodies who can undertake objective and independent deliberations and make recommendations to the government with regular periodicity with a view to protecting both the consumers' interest and the need to cover costs. These bodies should also evaluate the quality of service, and quantify the inefficiencies in the public provision of private goods.

c. Institutional Changes and User Charges

The link between quality of service, unit costs, both capital and current, and provision of user charges cannot be handled by the existing arrangements where it is the responsibility of the concerned departments to monitor costs or introduce revisions in tariffs or user charges. It is required that the nexus between these three aspects of publicly provided services should be examined on a continuing basis by one or more autonomous organisations which can take care of the users as well as the service providers. For power and irrigation, it is useful to set up separate Regulatory and Rates Authorities, while all other services could be brought in the purview of a User Charges Commission in each state. In the power sector, most states have set up autonomous Electricity Regulatory Authorities, who are required to make recommendations periodically about tariff revisions embracing different categories of consumers.

In the irrigation sector, water users' associations have been constituted in several states. A Water Rates Commission may examine issues about irrigation water rates, surplus staff in the irrigation sector, structure of costs, especially operation and maintenance costs. Such a body can draw on informational inputs provided by the water users' associations in various states.

Apart from separate bodies for power and irrigation at the state level, there can be one body to deal with all other user charges. Such a body should determine the structure of fees of schools, and in higher technical education institutions. It should also look into the quality of education, structure of costs, targeting of educational subsidies and related issues before it comes up with any recommendations. The health sector also requires specialised attention. Several states have formed citizens committees. Again, the monitoring of quality and accessibility of health services, and the structure of costs and cost-recoveries should be undertaken by an independent authority on a periodic basis.

Targeting Subsidies: Alternative Delivery Mechanisms

Untargeted subsidies waste scarce resources and distort the incidence profile of fiscal intervention.

Untargeted subsidies waste scarce resources and distort the incidence profile of fiscal intervention which consists both of tax and subsidy policies. Properly targeted subsidies economise on budgetary resources. Since, the beneficiary of a subsidy is reached through a commodity market, the incidence of the benefit of a subsidy becomes difficult to control. The problem is further accentuated, if these are administered through inputs. Many subsidies in India are administered through inputs like fertilisers, power, and irrigation water. Even when a final good like food is involved, the subsidy regime remains poorly targeted. The same is true of educational and medical subsidies. It is because of these reasons that the distributional pattern of subsidies shows a regressive pattern. The benefits of many subsidies in agriculture, industries, and other sectors are distributed according to the pattern of consumption of the concerned products which reflects the pattern of income. Thus, segments of population with a higher purchasing power are able to get relatively larger benefits. Subsidies lead to lower prices and price reduction has a substitution effect (increasing the demand for the subsidised good, the price of which has gone down, relative to others) and an income effect (increasing the demand for the concerned good as also that of others). It is because of the income effect, that the targeting of subsidies becomes absolutely essential. If the demand of a subsidised good is inelastic with respect to price/income, any income effect through subsidisation would lead to an increase in demand for goods other than the subsidised good.

Even when subsidies are targeted, the targeted beneficiary may not be able to access the subsidy because private costs may be involved to access public services. The deprivation of the poor in accessing untargeted subsidies because of private costs is quite extensive. For example, subsidies in higher education can hardly be accessed by students under low income category who have been pushed out of the system at some early stage, and who are unable to compete in entrance examinations not having invested in private school education or private tuition at an earlier stage of education. Similarly, utilisation of specialised health services in city centres is far more difficult for rural residents who have to incur private costs in order to access the public subsidies. Subsidy reforms would require not only better targeting but also ensuring better access for the targeted beneficiaries.

The following steps would need to be taken as part of the operational strategy to reform the subsidy regime:

- i. Each Department/Ministry/Enterprise should prepare a comparative picture of per unit costs and per unit receipts for all chargeable services;
- ii. Each unit should prepare a plan for reducing staff strength, by putting limit on fresh recruitment and developing a scheme for redeployment of staff, and introduction of voluntary and sometimes compulsory, retirement schemes;
- iii. Strategies of private provision of publicly provided private goods by sub-contracting, unbundling of public sector activities, and privatisation should be continually explored;
- iv. A mechanism for automatic (or linked to an index of cost) upward revision of fees and user charges should be introduced as guided by User Charges Commission or similar bodies;
- v. New public enterprises should not normally be set up any more; and
- vi. There should be a periodic review as to the utility of continuing a subsidy and a decision should be taken even at the initial stage of its introduction as to the life of the subsidy.

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Table A1: Estimated Effective Interest Rates: 1998-99

States	Effective Interest Rate
Andhra Pradesh	11.4400
Arunachal Pradesh	12.6090
Assam	11.3300
Bihar	11.1440
Goa	9.9943
Gujarat	14.4176
Haryana	13.0645
Himachal Pradesh	12.1473
Jammu & Kashmir	11.3484
Karnataka	12.5213
Kerala	11.2391
Madhya Pradesh	11.4400
Maharashtra*	13.6930
Manipur	9.4709
Meghalaya	10.8069
Mizoram	10.0195
Nagaland	11.5335
Orissa	11.9728
Punjab	13.4576
Rajasthan	13.6522
Sikkim	13.2602
Tamil Nadu	13.0298
Tripura	12.4105
Uttar Pradesh	13.7890
West Bengal	13.2689

Note: * Three-year average for 1995 to 1998.

Table A2: Explicit Subsidies in Central Budget

Years	Food	Fertilizer	Petroleum Subsidy	Grants to NAFED for MIS/PPS	Export	Subsidy on Railways	Interest Subsidy*	Debt Relief to Farmers	Assistance to Fertiliser Promotion	Others	(Rs. crore)	
											Total	Total as Percentage to GDP
1971-72	47				54		5			34	140	0.286
1977-73	117				62		12			14	205	0.380
1973-74	251				66		20			24	361	0.550
1974-75	295				80		30			14	419	0.541
1975-76	250				149		47			24	470	0.564
1976-77	506	60			241		66			74	947	1.055
1977-78	480	266			324		88			129	1287	1.267
1978-79	570	342			375		59			129	1475	1.339
1979-80	600	603			361	56	92			109	1821	1.507
1980-81	650	505			399	69	253			152	2028	1.411
1981-82	700	381			477	78	102			203	1941	1.151
1982-83	711	603			477	97	217			157	2262	1.202
1983-84	835	1042			463	93	118			198	2749	1.252
1984-85	1101	1928			518	100	135			256	4038	1.645
1985-86	1650	1924			603	128	271			220	4796	1.725
1986-87	2000	1898			785	144	229			395	5451	1.752
1987-88	2000	2164			962	174	393			287	5980	1.688
1988-89	2200	3201			1386	207	406			332	7732	1.834
1989-90	2476	4542			2014	233	881			328	10474	2.154
1990-91	2450	4389			2742	283	379			1915	12158	2.138
1991-92	2850	5185			1758	312	316	1425		407	12253	1.876
1992-93	2800	5796					113	1500	340	275	10824	1.446
1993-94	5537	4562					113	500	517	376	11605	1.351
1994-95	5100	5769					76	341		568	11854	1.170
1995-96	5377	6735			100		34			420	12666	1.066
1996-97	6066	7578					1222			633	15499	1.133
1997-98	7900	9918			20		78			624	18540	1.218
1998-99	9100	11596			105		1434			1358	23593	1.355
1999-00	9434	13244			50		1371			388	24487	1.264
2000-01	12060	13800			40		111			827	26838	1.275
2001-02	17499	12595		353	8		210			542	31207	1.359
2002-03 (RE)	24200	11009	6265	300			765			2079	44618	1.820
2003-04 (BE)	27800	12720	8116	294			179			798	49907	1.819
TGR	16.8	19.7					9.7			12.7	17.6	

Sources: 1. Budget Documents, Expenditure Budget, Vol. 1 (various issues).

2. GDP at market prices – 1993-94 series: Economic Survey 2002-03. GDP calculated for 2003-04 (BE).

Notes: * Does not include subsidy to Shipping Development Fund Committee which was treated as grant in the economic classification in the absence of the details available then (upto 1977-78) and states and Union Territories for Janata Cloth in the handloom sector which is treated as grant to states in the economic classification.

1. From 2001-02 onwards the budget presents subsidy magnitudes with a modified classification.

2. TGR for food, interest subsidy, others and total refers to the period 1971-72 to 2001-02, while for fertilizer the period is from 1976-77 to 2001-02.

Table A3: Subsidising Wheat and Rice through the Central Government: Inter-Temporal Pattern

(Rs. Per Quintal)							
Year	Economic Cost	Procurement Price	Excess of Economic Cost Over Procurement Price	Non-Procurement Cost as Percentage of Procurement Price	FCI's/Average Sales Realisation	Consumer Subsidy	Subsidy as Percentage of Economic Cost
Wheat							
<i>Below Poverty line</i>							
1991-92	390.79	275.00	115.79	42.11	251.68	139.11	35.60
1992-93	504.10	330.00	174.10	52.76	279.36	224.74	44.58
1993-94	532.03	350.00	182.03	52.01	355.88	176.15	33.11
1994-95	551.17	350.00	201.17	57.48	407.89	143.28	26.00
1995-96	583.95	360.00	223.95	62.21	411.94	172.01	29.46
1996-97	640.16	380.00	260.16	68.46	433.20	206.96	32.33
1997-98	786.35	475.00	311.35	65.55	250.00	536.35	68.21
1998-99	797.16	510.00	287.16	56.31	249.57	547.59	68.69
1999-00	824.74	550.00	274.74	49.95	261.29	563.45	68.32
2000-01	830.00	580.00	250.00	43.10	415.00	450.00	54.22
TGR	8.46	8.29	8.76		0.51	17.65	
<i>Above Poverty Line</i>							
1997-98	786.35	475.00	311.35	65.55	450.00	336.35	42.77
1998-99	797.16	510.00	287.16	56.31	449.57	347.59	43.60
1999-00	824.74	550.00	274.74	49.95	693.29	131.45	15.94
Rice#							
<i>Below Poverty line</i>							
1991-92	497.04	230.00	267.04	116.10	365.58	131.46	26.45
1992-93	585.27	270.00	315.27	116.77	442.40	142.87	24.41
1993-94	665.10	310.00	355.10	114.55	500.42	164.68	24.76
1994-95	694.71	340.00	354.71	104.33	600.75	93.96	13.53
1995-96	762.82	360.00	402.82	111.89	613.34	149.48	19.60
1996-97	847.69	380.00	467.69	123.08	610.57	237.12	27.97
1997-98	939.33	415.00	524.33	126.34	450.00	589.33	62.74
1998-99	1,026.67	440.00	586.67	133.33	401.81	624.86	60.86
1999-00	1,095.03	490.00	605.03	123.48	366.77	728.26	66.51
2000-01	1,130.00	510.00	620.00	121.57	565.00	590.00	52.21
TGR	9.49	8.69	10.17		0.39	25.56	
<i>Above Poverty Line</i>							
1997-98	939.33	415.00	524.33	126.34	673.68	265.65	28.28
1998-99	1,026.67	440.00	586.67	133.33	751.81	274.86	26.77
1999-00	1,095.03	490.00	605.03	123.48	921.77	173.26	15.82

Source (Basic Data): *Economic Survey 2000-01 and earlier issues.*

Note: # Procurement price of paddy is for common variety.

Table A4: Classification of Central Subsidies in Social Services: Merit and Non-Merit

Service	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
<i>Social Services: Merit I</i>	3567	285.1	3851.8	66.20	3786	1.72
Elementary Education	2307	7.1	2314.4	0.13	2314	0.01
Primary Health Centres	5	0.3	5.3	0.00	5	0.00
Prevention and Control of Diseases	126	10.7	136.7	0.00	137	0.00
Welfare of SCs, STs and other BCs	84	215.9	300.3	0.00	300	0.00
Social Welfare and Nutrition	1044	51.1	1095.2	66.07	1029	6.03
<i>Social Services: Merit II</i>	4324	200.8	4525.0	27.48	4498	0.61
Secondary Education	1056	11.2	1067.2	0.33	1067	0.03
Univ. and Higher Education	1472	6.1	1478.4	0.85	1478	0.06
Adult Education	68	0.0	67.9	0.00	68	0.00
Language Development	37	0.0	36.9	0.00	37	0.00
General	38	8.5	46.1	3.38	43	7.33
Technical Education	822	12.0	833.6	1.34	832	0.16
Sports and Youth Services	164	22.4	186.8	0.18	187	0.10
Art and Culture	281	48.5	329.6	8.23	321	2.50
Family Welfare	313	4.6	317.5	13.13	304	4.13
Urban Development	73	87.6	161.0	0.04	161	0.03
<i>Social Services: Non-Merit</i>	6434	854.4	7288.2	662.91	6625	9.10
Urban Health Services-Allopathy	441	49.2	490.0	30.30	460	6.18
Urban Health Services-Other System of Med.	11	0.0	11.5	0.00	11	0.00
Rural Health Services – Allopathy (excluding PHCs)	12	6.3	17.9	1.80	16	10.06
Rural Health Services-Other System of Med.	0	0.0	0.4	0.00	0	0.00
Medical Education, Training and Research	684	14.3	698.7	0.00	699	0.00
Public Health (excl. prev. & cont. of diseases)	146	3.1	149.2	8.99	140	6.02
General	8	5.3	13.6	1.09	12	8.02
Water Supply and Sanitation	613	48.1	661.4	9.33	652	1.41
Housing	1751	495.2	2245.7	63.85	2182	2.84
Information and Publicity	159	15.0	174.5	29.57	145	16.95
Broadcasting	1831	210.3	2041.1	515.65	1525	25.26
Labour and Employment	773	0.0	773.0	2.21	771	0.29
Other Social Services	4	7.5	11.2	0.12	11	1.08
<i>Merit</i>	7891	485.9	8376.8	93.68	8283	2.33
<i>Non-Merit</i>	6434	854.4	7288.2	662.91	6625	9.10
<i>Total Social Services</i>	14325	1340.3	15665.0	756.59	14908	4.83

Table A5: Classification of Central Subsidies in Economic Services: Merit and Non-Merit

Service	(Rs. crore)			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
<i>Economic Services: Merit I</i>	219	1.6	220.4	0.00	220	0.00
Soil and Water Conservation	40	1.6	41.3	0.00	41	0.00
Ecology and Environment	179	0.0	179.1	0.00	179	0.00
<i>Economic Services: Merit II</i>	8717	3186.0	11903.1	678.50	11225	5.70
Forestry	182	12.9	195.1	25.49	170	13.06
Agricultural Research and Education	982	0.6	982.5	0.00	983	0.00
Other Agricultural Programmes	19	4.7	23.5	7.69	16	32.77
Special Programmes for rural Development	941	0.0	941.4	0.00	941	0.00
Land Reforms	1	0.0	1.2	0.00	1	0.00
Other Rural Development Programmes	539	2.0	541.2	1.73	539	0.32
Special Programmes for North-Eastern Areas	64	305.3	369.4	9.69	360	2.62
MPs Local Area Development	790	0.0	789.6	0.00	790	0.00
Command Area Development	2	2.0	4.0	1.90	2	47.81
Flood Control and Drainage	59	12.4	71.2	0.00	71	0.00
Non-Conventional Energy	134	53.2	187.5	19.01	168	10.14
Village and Small Industries	837	208.2	1045.2	15.24	1030	1.46
Ports and Light Houses	376	239.9	616.1	470.64	145	76.39
Roads and Bridges	779	1841.3	2620.7	78.80	2542	3.01
Inland Water Transport	40	40.3	80.7	10.00	71	12.40
Atomic Energy Research	636	172.7	808.3	21.35	787	2.64
Space Research	713	195.1	908.2	0.00	908	0.00
Oceanographic Research	104	11.3	115.4	0.00	115	0.00
Other Scientific Research	1212	41.7	1253.2	16.97	1236	1.35
Census Surveys and Statistics	202	0.0	201.7	0.00	202	0.00
Meteorology	105	42.3	147.0	0.00	147	0.00
<i>Economic Services: Non-Merit</i>	67907	26686.5	94593.0	41118.01	53475	43.47
Crop Husbandry	4200	503.6	4703.7	31.80	4672	0.68
Animal Husbandry	42	8.0	50.4	6.74	44	13.38
Dairy Development	163	94.3	257.1	163.54	94	63.61
Fisheries	42	26.1	68.0	2.68	65	3.95
Plantations	149	11.9	161.1	8.19	153	5.09
Food Storage and Warehousing	9499	465.7	9964.2	55.55	9909	0.56
Agricultural Financial Institutions	17	450.8	468.1	74.51	394	15.92
Co-operation	21	155.8	177.0	158.77	18	89.70
Major and Medium Irrigation	96	27.8	123.7	7.11	117	5.75
Minor Irrigation	84	3.6	88.0	1.34	87	1.53
Power	2483	7299.5	9782.5	4601.38	5181	47.04
Coal and Lignite	128	2783.1	2911.6	448.99	2463	15.42
Industries	8978	7893.1	16871.2	2027.97	14843	12.02
Non-Ferrous Mining and Metal Industries	245	751.3	996.2	152.38	844	15.30
Other Industries	75	118.5	193.9	235.45	-42	121.43
Other Outlays on Industries	188	641.1	829.0	401.82	427	48.47
Railways	29825	4430.4	34255.3	30233.95	4021	88.26
Shipping	167	287.5	454.7	132.15	323	29.06
Civil Aviation	177	168.8	345.5	8.60	337	2.49
Road Transport	54	146.6	200.8	47.60	153	23.71
Other Transport Services	622	84.2	706.3	0.00	706	0.00
Postal	3173	106.6	3279.3	1722.57	1557	52.53
Tourism	117	56.6	173.9	13.54	160	7.78
Foreign Trade and Export Promotion	744	68.6	812.1	122.99	689	15.14
Civil Supplies	122	0.0	122.3	0.26	122	0.21
Other General Economic Services	6494	102.9	6597.1	458.12	6139	6.94
<i>Merit</i>	8936	3187.6	12123.4	678.50	11445	5.70
<i>Non-Merit</i>	67907	26686.5	94593.0	41118.01	53475	43.47
<i>Total Economic Services</i>	76842	29874.1	106716.4	41796.51	64920	39.17
Social and Economic Services						
Total Merit I	3785	286.7	4072.2	66.20	4006	1.63
Total Merit II	13041	3386.8	16428.1	705.98	15722	4.30
Total Merit	16827	3673.5	20500.2	772.18	19728	3.77
Total Non-Merit	74340	27540.8	101881.2	41780.92	60100	41.01
Total Subsidy	91167	31214.4	122381.4	42553.10	79828	34.77

Table A6: Central Budgetary Subsidies: Structure of Costs

Social and Economic Services	(Rs. crore)				
	Cost			Share in Total (Percent)	
	Current	Capital	Total	Current	Capital
Social Services	14325	1340	15665	91.44	8.56
General Education	4978	33	5011	99.34	0.66
<i>Elementary Education</i>	2307	7	2314	99.69	0.31
<i>Secondary Education</i>	1056	11	1067	98.95	1.05
<i>University and Higher Education</i>	1472	6	1478	99.59	0.41
<i>Other General Education</i>	142	8	151	94.39	5.61
Technical Education, Sports, Art and Culture	1267	83	1350	93.87	6.13
Medical and Public Health	1434	89	1523	94.14	5.86
<i>Public Health</i>	298	14	312	95.59	4.41
<i>Medical</i>	1136	75	1211	93.77	6.23
Family Welfare	313	5	318	98.55	1.45
Water Supply and Sanitation	613	48	661	92.72	7.28
Housing	1751	495	2246	77.95	22.05
Urban Development	73	88	161	45.58	54.42
Information and Broadcasting	1990	225	2216	89.83	10.17
Welfare of SCs, STs and other BCs	84	216	300	28.09	71.91
Labour and Employment	773	0	773	100.00	0.00
Social Welfare and Nutrition	1044	51	1095	95.34	4.66
Other Social Services	4	7	11	33.33	66.67
Economic Services	76842	29874	106716	72.01	27.99
Agr., Rural Dev. & Allied Activities	17691	2043	19735	89.65	10.35
Irrigation and Flood Control	241	46	287	84.03	15.97
Energy	2746	10136	12882	21.32	78.68
Industry and Minerals	10323	9612	19935	51.78	48.22
Transport	32041	7239	39280	81.57	18.43
Postal	3173	107	3279	96.75	3.25
Science, Technology and Environment	2843	421	3264	87.11	12.89
General Economic Services	7784	270	8054	96.64	3.36
Social and Economic Services	91167	31214	122381	74.49	25.51
Surplus Sectors	17674	1489	19162	92.23	7.77
Petroleum	0	837	837	0.00	100.00
Total Communications	17674	652	18325	96.44	3.56
<i>Telecommunication</i>	9245	574	9819	94.15	5.85
<i>Dividends to General Revenues</i>	252	0	252	100.00	0.00
<i>Appropriation from Telecommunications Surplus</i>	7646	0	7646	100.00	0.00
<i>Satellite Systems</i>	505	50	555	90.99	9.01
<i>Other Communication Services</i>	26	28	54	48.57	51.43

Table A7: Subsidy Estimates 1998-99 and 1996-97: A Comparison

	(Rs. crore)			
	1998-99	1996-97	Difference	Difference as
			1998-99/ 1996-97	Percentage of 1996-97
Social Services	14908	8953	5955	66.51
<i>General Education</i>	5006	2666	2340	87.80
<i>Elementary</i>	2314	1092	1223	112.01
<i>Secondary</i>	1067	685	382	55.79
<i>University and Higher Education</i>	1478	754	723	95.91
<i>Other General Education</i>	147	135	12	9.13
Technical Education, Sports, Art and Culture	1340	892	448	50.25
Medical and Public Health	1481	917	564	61.52
<i>Public Health</i>	303	150	153	102.01
<i>Medical</i>	1178	767	411	53.60
Family Welfare	304	228	77	33.68
Water Supply and Sanitation	652	379	273	72.00
Housing	2182	1441	741	51.46
Urban Development	161	132	29	22.12
Information and Broadcasting	1670	732	939	128.34
Welfare of SCs, STs and other BCs	300	194	106	54.53
Labour and Employment	771	536	235	43.73
Social Welfare and Nutrition	1029	830	199	23.98
Other Social Services	11	7	4	54.06
Economic Services	60899	38466	22433	58.32
Agr., Rural Dev. & Allied Activities	19188	12739	6450	50.63
Irrigation and Flood Control	276	233	44	18.89
Energy	7812	4274	3538	82.79
Industry and Minerals	17103	11629	5474	47.07
Transport (excl. Railways)	4277	3199	1078	33.72
Postal	1557	812	744	91.61
Science, Technology and Environment	3226	2498	728	29.15
General Economic Services	7459	3083	4376	141.95
Social and Economic Services*	75807	47419	28388	59.87
Railways and Surplus Sectors	-4587	-6054	1468	-24.25
Railways	4021	-4624	8646	-186.96
Petroleum	-8608	-1430	-7178	501.87
Total Communications	-341	-1540	1198	-77.83
Telecommunication	-8049	-631	-7418	1176.02
Dividends to General Revenues	252	0	252	
Appropriation from Telecommunications	7646	0	7646	
Surplus				
Satellite Systems	555	362	193	53.51
Other Communication Services	-746	-1270	525	-41.32

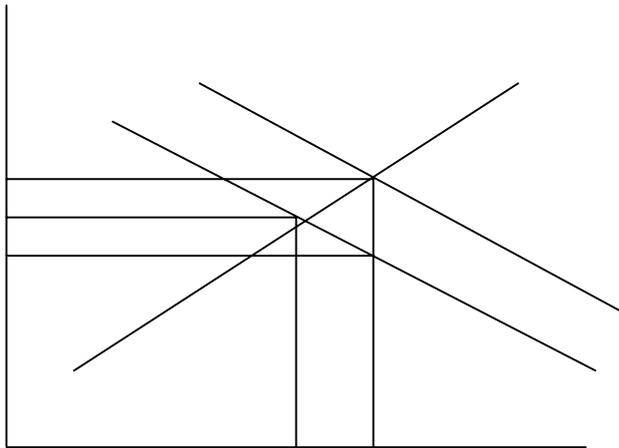
Note: * For comparability, satellite systems are taken out from postal services and put together with telecommunications.

Table A8: State-Wise Merit and Non-Merit Subsidies: 1998-99

States	(Rs. crore)				
	Merit I	Merit II	Total	Non-Merit	Total
Goa	85	249	335	290	625
Maharashtra	3912	4702	8614	9377	17991
Punjab	332	1946	2278	2894	5172
Haryana	420	1217	1637	2929	4566
Gujarat	2570	3647	6217	7716	13933
Tamil Nadu	2469	4022	6491	4539	11030
Kerala	967	2933	3900	2391	6291
Karnataka	2110	2575	4684	5147	9832
Andhra Pradesh	4443	3796	8239	5413	13652
West Bengal	1679	4439	6118	4162	10280
Rajasthan	1169	2923	4093	4559	8651
Madhya Pradesh	2020	3024	5044	4236	9281
Orissa	717	1613	2330	2381	4711
Uttar Pradesh	4642	6201	10843	7267	18110
Bihar	708	2926	3633	2833	6466
Himachal Pradesh	554	1018	1572	1181	2753
Jammu & Kashmir	450	1002	1452	2531	3983
Assam	994	1408	2402	1114	3516
Nagaland	139	242	382	320	702
Mizoram	131	217	348	263	612
Sikkim	93	122	216	262	478
Arunachal Pradesh	99	350	449	382	831
Meghalaya	132	298	430	260	689
Manipur	151	299	450	312	762
Tripura	243	414	657	349	1006

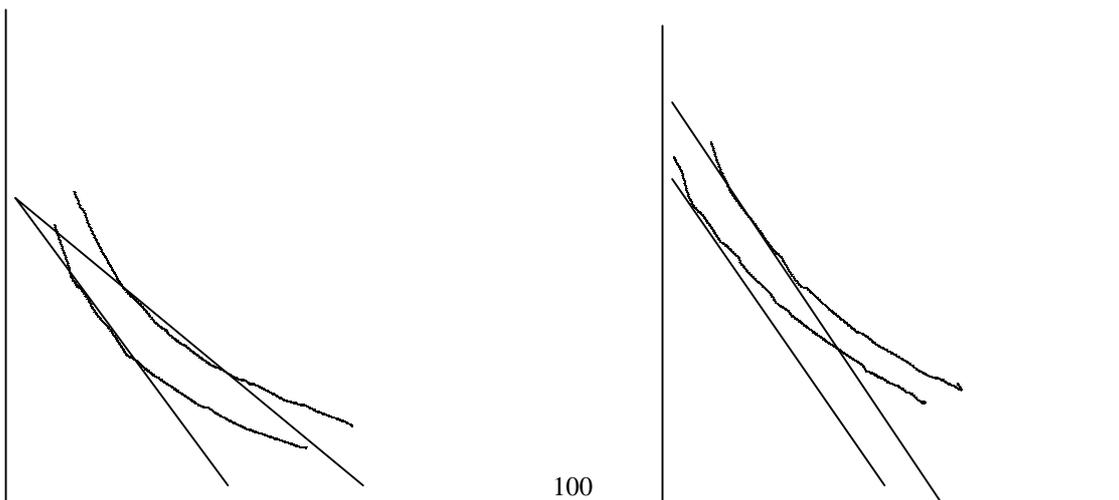
Annexure 1: Subsidies and Externalities

Subsidies are justified in the presence of positive externalities, which implies that the social demand curve lies above the private curve as indicated in figure 1.1. Given the supply curve S , market equilibrium is at a price-quantity combination of (p_0, q_0) . However, this is sub-optimal with reference to the social demand curve (D_s), which requires that the quantity should be increased to q^* . In order to induce the consumers to demand q^* price will need to be lowered to p_1 . However, in order also to induce the suppliers to provide q^* , they will need to be given a price p_2 . This implies that per unit subsidy $p_1 p_2$ will need to be injected into the system so that the suppliers obtain op_2 , consumer pay op_1 and the government pays $p_1 p_2$. The total subsidy bill then would be $p_1 p_2 o q^*$.



Subsidies and Transfers

Looked at from the viewpoint of individual consumer, the difference between a price subsidy and an income transfer can be indicated by a set of indifference curve and price/budget lines. This is depicted in figures 1.2 and 1.3. The price line $B_0 A_0$ shifts to $B_0 A_1$ after subsidisation of commodity. Consumers' equilibrium shifts from M to N indicating that the quantity consumed of commodity A has increased. However, since the price subsidy will also have an income effect there will be an increase in the consumption of the remaining goods represented by B . In the case of an income transfer, the price line shifts from $B_0 A_0$ to $B_1 A_1$. This will also involve a shift of consumption point from M_1 to N_1 . However, although the consumption of A and B will increase, the increase in the consumption of A will be less than the previous case where a price subsidy was introduced for the same distance $A_0 A_1$. This is indicated in figure 1.3.



Annexure 2: Subsidy Estimates for States with Adjustment for Arrears of Salary Paid in 1998-99

The state government after having accepted to revise salaries of their employees in the wake of the recommendations of the Fifth Central Pay Commission, paid out arrears of salary in 1997-98, 1998-99, 1999-00, and later for any spillovers. The salary arrears pertain to the period between the date with effect from which the revised salaries were to be paid (in most cases 1.1.1996) and the date from which the revised salaries were paid. The date of notification of the revision of salaries has been different in different states.

Since the arrears of salary in 1998-99 pertain to 1997-98 or part of 1996-97, these should be taken out from the costs in the calculation of subsidies for 1998-99. However, this adjustment is extremely difficult because of paucity of the relevant data on salary arrears. In the adjustment process several steps are involved. First, we need to work out the total amount of arrears paid in 1998 which belonged to the earlier years for each state. Secondly, this amount should be distributed into various heads for which head-wise subsidies are being calculated. The Finance Accounts do not give data for payment of salaries according to the major heads. In fact, the Finance Account do not give any salary related data. The states also have not been able to provide details of the arrears that they paid out. Our estimates are based on several pieces of information gathered from different sources, and therefore, we have not used this adjustment for the main analysis of state subsidies.

For working out the total amount of arrears, we used information given by some states and also information available with the Finance Commission. In many cases, states themselves do not have an accurate picture of the arrears paid. Often, even if the arrears bills were prepared in 1998-99, the payments were held up because of technical lacuna and actual payments were made later. For dividing the total arrears into major heads, we compiled salary data from the budgets of selected groups of states (separately for general and special category) and divided the total arrears according to the share of salary of major heads in the total salaries. The exercise could be done at an aggregate level and division into merit and non-merit heads was not possible. The all state profile of subsidies adjusted for salary arrears is given in Table AN1.

Table AN1: Subsidy Estimates with Adjustment for Salary Arrears: All States: 1998-99*

Social and Economic Services	Cost		Receipts	Subsidy	Recovery Rate (Percent)	
	Current	Capital				Total
Social Services	67676	6068	73744	1849	71895	2.51
General Education	31942	367	32309	316	31993	0.98
Techn. Edu., Sports, Art and Culture	1901	314	2216	75	2141	3.37
Medical and Public Health	11940	639	12579	423	12156	3.36
Family Welfare	1757	134	1891	18	1873	0.93
Water Supply and Sanitation	5140	2198	7337	436	6901	5.94
Housing	1117	980	2097	155	1942	7.37
Urban Development	2081	598	2679	87	2592	3.25
Information and Broadcasting	303	21	324	11	312	3.45
Welfare of SCs, STs and other BCs	5182	654	5836	2	5834	0.04
Labour and Employment	961	0	961	102	859	10.64
Social Welfare and Nutrition	5242	118	5360	198	5162	3.69
Other Social Services	109	46	155	26	129	16.60
Economic Services	43057	38585	81642	6141	75501	7.52
Agr., Rural Dev. & Allied Activities	19995	4526	24521	2816	21705	11.48
Irrigation and Flood Control	9585	14132	23717	552	23164	2.33
Energy	5760	10757	16517	1482	15035	8.97
Industry and Minerals	1874	3270	5143	217	4926	4.23
Transport	4322	5636	9959	804	9154	8.08
Science, Technology and Environment	97	6	103	1	102	0.61
General Economic Services	1424	258	1683	268	1414	15.95
Social and Economic Services	110733	44653	155386	7989	147396	5.14
Total Surplus Sectors**	716	265	981	4495	-3514	
Total Net of Surplus	111448	44918	156366	12484	143882	7.98

Notes: * Adjusted for salary arrears.

** Contains surplus sectors/heads.

Annexure 3: Gazette Notification

Ministry of Petroleum & Natural Gas
Resolution
New Delhi, the 28th March, 2002
No. P-20029/22-2001-PP.

The Government of India, Ministry of Petroleum and Natural Gas vide Resolution No. P-20012/29-97-PP dated 21st November 1997 had notified the details of phased programme of dismantling of administered pricing mechanism (APM). As a result, the consumer prices of all products except motor spirit (MS), high speed diesel (HSD), aviation turbine fuel (ATF), kerosene for public distribution (PDS kerosene) and LPG used for domestic cooking (domestic LPG) were decontrolled with effect from 1st April 1998. As a follow up of the aforesaid decision, the Government vide Ministry of Petroleum & Natural Gas Resolution No. 20018/2/2000-PP dated 30th March 2001 decontrolled the pricing of aviation turbine fuel (ATF) with effect from 1st April 2001.

2. Pursuant to the decisions contained in the aforesaid Resolution of November 1997, the Government have now decided to dismantle the APM in the hydrocarbon sector with effect from 1st April 2002. The details of the decisions are given below:-

- (i) Consumer prices of motor spirit (MS) and high speed diesel (HSD) will be market determined with effect from 1st April 2002. Consequently, the pricing of petroleum products, except for PDS kerosene and domestic LPG will be market determined with effect from 1st April 2002.
- (ii) The subsidies on PDS kerosene and domestic LPG will be borne by the Consolidated Fund of India from 1st April 2002. These subsidies will be on a specified flat rate basis, scheme for which will be notified separately. These subsidies will be phased out in the next 3 to 5 years.
- (iii) Freight subsidy will continue to be provided for supplies of PDS kerosene and domestic LPG to far flung areas, scheme for which will be notified separately. The freight subsidy will be borne by the Consolidated Fund of India with effect from 1st April 2002.
- (iv) The price of indigenous crude oil of Oil and Natural Gas Corporation Ltd. and Oil India Ltd. will be market determined with effect from 1st April 2002.
- (v) The oil pool accounts will be wound up with effect from 1st April 2002. The cumulative outstandings of the oil companies against the pool account will be liquidated in the following manner.
 - (a) The Government will issue bonds to the extent of 80 percent of the amount equivalent to the provisional amount of the settled outstandings of the oil companies upto 31st March 2002:

- (b) The pending claims relating to the APM period, including the updation of costs and margins for the fiscal year 2001-02, will be finalized as expeditiously as possible. The C&AG will be requested to do a special audit of the oil pool accounts. The whole of the balance amount due to the oil companies will be liquidated by issuing bonds for the remaining amount after the audit.
- (c) The contingent liabilities under the pending litigations, pertaining to the APM period, will be settled from the Government budget as and when such litigations are finally decided.
- (vi) The Oil Coordination Committee will be would up with effect from 1st April 2002.
- (vii) A cell, by the name “Petroleum Planning and Analysis Cell”, will be created under the Ministry of Petroleum & Natural Gas effective 1st April 2002 to assist the Ministry. The expenditure on this Cell will be borne by the Oil Industry Development Board (OIDB).
- (viii) The new entrants, including private sector, will be allowed to market transportation fuels namely, motor spirit, high speed diesel and aviation turbine fuel as per the guidelines contained in the Ministry of Petroleum and Natural Gas Resolution No. P-23015/1/2001-Mkt. Dated 8th March 2002.
- (ix) Regulatory mechanism will be set up to oversee the functioning of the downstream petroleum sector.

Table S1(a): Subsidy Estimates: Andhra Pradesh: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	7794	7709	1.08	54.06	6.82	135.12
Merit I	4423	4416	0.15	30.97	3.91	77.40
Merit II	1440	1406	2.30	9.86	1.24	24.65
Non-Merit	1931	1887	2.32	13.23	1.67	33.07
Economic Services	6350	5942	6.41	41.67	5.25	104.15
Merit I	26	26	0.00	0.19	0.02	0.46
Merit II	2551	2390	6.32	16.76	2.11	41.89
Non-Merit	3772	3526	6.52	24.73	3.12	61.80
Merit	8440	8239	2.38	57.78	7.29	144.40
Non-Merit	5703	5413	5.10	37.96	4.79	94.86
Total	14143	13652	3.48	95.74	12.07	239.27

Memo Items: GSDP 1998-99 (at current prices) Rs. 113091 crore; Revenue Receipts Rs. 14260 crore; Fiscal deficit Rs. 5706 crore.

Table S1(b): Subsidy Estimates: Selected Heads: Andhra Pradesh: 1998-99

Social and Economic Services	(Rs crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	7438	356	7794	84	7709	1.08
General Education of which	2943	11	2954	28	2925	0.96
Elementary Education	2111	3	2114	5	2109	0.25
Secondary Education	295	4	298	19	279	6.43
Univ. and Higher Education	499	4	502	3	499	0.68
Other General Education	39	0	39	1	39	1.36
Technical Education, Sports, Art and Culture	245	9	254	8	246	3.15
Medical and Public Health of which	1148	15	1162	24	1139	2.02
Public Health	147	1	148	1	147	0.88
Medical	1000	14	1014	22	992	2.19
Family Welfare	190	7	197	0	197	0.03
Water Supply and Sanitation	677	41	718	4	715	0.49
Housing	166	47	213	3	210	1.59
Urban Development	144	6	149	2	147	1.32
Information and Broadcasting	50	3	52	0	52	0.13
Welfare of SCs, STs and other BCs	796	191	986	0	986	0.00
Labour and Employment	53	0	53	13	41	23.66
Social Welfare and Nutrition	1027	21	1047	1	1046	0.10
Other Social Services	0	7	7	2	5	24.05
Economic Services	3949	2401	6350	407	5942	6.41
Agr., Rural Dev. & Allied Activities	2053	118	2171	137	2034	6.33
Irrigation and Flood Control	1229	1322	2552	8	2544	0.30
Energy	59	559	618	202	416	32.64
Industry and Minerals*	159	145	304	6	298	2.13
Transport	368	250	617	43	574	6.98
Science, Technology and Environment	9	0	9	0	9	0.01
General Economic Services*	72	6	78	11	67	14.05
Social and Economic Services	11386	2757	14143	491	13652	3.48
Total Surplus Sectors	28	195	223	298	-75	
Non-Ferrous Mining and Metal Industries	6	195	201	272	-72	
Civil Supplies	23	0	23	26	-3	
Total Net of Surplus	11414	2952	14366	789	13577	5.49

Note: * Contains surplus sectors/heads which are separately shown.

Table S2(a): Subsidy Estimates: Arunachal Pradesh: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	302	300	0.55	32.47	20.56	537.92
Merit I	88	88	0.00	9.50	6.01	157.34
Merit II	81	81	0.95	8.73	5.53	144.65
Non-Merit	132	132	0.53	14.24	9.02	235.94
Economic Services	284	531	6.38	57.54	36.44	953.18
Merit I	11	11	0.00	1.21	0.77	20.11
Merit II	283	270	4.79	29.21	18.50	483.88
Non-Merit	273	250	8.29	27.11	17.17	449.19
Merit	464	449	3.13	48.65	30.81	805.97
Non-Merit	405	382	5.76	41.36	26.19	685.13
Total	869	831	4.36	90.01	57.00	1491.10

Memo Items: GSDP 1998-99 (at current prices) Rs. 1458 crore; Revenue Receipts Rs. 924 crore; Fiscal Deficit Rs. 56 crore.

Table S2(b): Subsidy Estimates of Selected Heads: Arunachal Pradesh: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	223	78	302	2	300	0.55
General Education	111	28	138	1	138	0.55
<i>Elementary Education</i>	<i>67</i>	<i>0</i>	<i>67</i>	<i>0</i>	<i>67</i>	<i>0.00</i>
<i>Secondary Education</i>	<i>27</i>	<i>0</i>	<i>27</i>	<i>0</i>	<i>27</i>	<i>0.00</i>
<i>Univ. and Higher Education</i>	<i>10</i>	<i>0</i>	<i>10</i>	<i>0</i>	<i>10</i>	<i>0.00</i>
<i>Other General Education</i>	<i>7</i>	<i>28</i>	<i>34</i>	<i>1</i>	<i>34</i>	<i>2.23</i>
Technical Edu., Sports, Art and Culture	5	1	6	0	6	0.06
Medical and Public Health <i>of which</i>	48	7	55	0	55	0.47
<i>Public Health</i>	<i>10</i>	<i>0</i>	<i>10</i>	<i>0</i>	<i>10</i>	<i>0.29</i>
<i>Medical</i>	<i>39</i>	<i>7</i>	<i>46</i>	<i>0</i>	<i>45</i>	<i>0.50</i>
Family Welfare	2	0	2	0	2	0.01
Water Supply and Sanitation	38	13	51	0	51	0.52
Housing	2	27	29	0	29	0.30
Urban Development	0	2	2	0	2	0.00
Information and Broadcasting	2	0	3	0	2	2.72
Welfare of SCs, STs and other BCs	0	0	0	0	0	
Labour and Employment	4	0	4	0	4	0.43
Social Welfare and Nutrition	11	0	11	0	11	1.66
Other Social Services	0	0	0	0	0	0.00
Economic Services	266	303	569	39	530	6.93
Agr., Rural Dev. & Allied Activities	168	24	192	16	176	8.32
Irrigation and Flood Control	17	6	24	0	24	0.02
Energy	8	105	113	12	101	10.96
Industry and Minerals*	14	3	17	1	17	3.25
Transport	46	162	208	5	202	2.63
Science, Technology and Environment	0	0	0	0	0	0.07
General Economic Services	12	2	14	0	14	2.00
Social and Economic Services	489	382	871	41	829	4.72
Total Surplus Sectors	0	1	1	5	-4	
Non-Ferrous Mining and Metal Industries	0	1	1	3	-2	
Other Industries	0	0	0	2	-1	
Total Net of Surplus	489	383	872	46	826	5.25

Note: * Contains surplus sectors/heads which are separately shown.

Table S3(a): Subsidy Estimates: Assam: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	1917	1908	0.48	42.33	7.82	564.13
Merit I	980	980	0.05	21.74	4.02	289.71
Merit II	613	611	0.32	13.56	2.50	180.70
Non-Merit	324	317	2.09	7.03	1.30	93.72
Economic Services	1947	1608	17.42	35.68	6.59	475.50
Merit I	15	15	0.00	0.32	0.06	4.29
Merit II	828	797	3.72	17.68	3.27	235.67
Non-Merit	1105	797	27.92	17.67	3.26	235.54
Merit	2436	2402	1.36	53.30	9.85	710.36
Non-Merit	1429	1114	22.07	24.71	4.56	329.27
Total	3865	3516	9.02	78.01	14.41	1039.63

Memo Items: GSDP 1998-99 (at current prices) Rs. 24401 crore; Revenue Receipts Rs. 4507 crore; Fiscal Deficit Rs. 338.2 crore.

Table S3(b): Subsidy Estimates: Selected Heads: Assam: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	1819	98	1917	9	1908	0.48
General Education <i>of which</i>	1301	7	1308	2	1306	0.15
<i>Elementary Education</i>	813	4	817	0	817	0.00
<i>Secondary Education</i>	361	1	362	2	360	0.53
<i>Univ. and Higher Education</i>	116	1	117	0	117	0.00
<i>Other General Education</i>	12	0	12	0	12	0.00
Techn. Edu., Sports, Art and Culture	44	8	52	0	52	0.00
Medical and Public Health <i>of which</i>	175	32	207	4	203	1.71
<i>Public Health</i>	28	0	28	0	28	0.00
<i>Medical</i>	148	32	179	4	176	1.97
Family Welfare	40	3	43	0	43	0.03
Water Supply and Sanitation	123	3	126	0	126	0.37
Housing	4	22	26	1	25	4.86
Urban Development	11	17	28	0	28	0.08
Information and Broadcasting	7	0	7	0	7	0.81
Welfare of SCs, STs and other BCs	53	3	56	0	56	0.00
Labour and Employment	22	0	22	1	21	5.76
Social Welfare and Nutrition	39	2	41	0	41	1.14
Other Social Services	0	1	1	0	1	21.37
Economic Services	1097	851	1947	339	1608	17.42
Agr., Rural Dev. & Allied Activities	449	66	516	14	502	2.71
Irrigation and Flood Control	91	288	379	0	379	0.05
Energy*	302	219	522	303	219	58.06
Industry and Minerals*	73	72	145	1	144	0.85
Transport	165	203	368	20	349	5.33
Science, Technology and Environment	1	0	1	0	1	31.20
General Economic Services	15	2	17	1	16	7.35
Social and Economic Services	2916	949	3865	349	3516	9.02
Total Surplus Sectors	17	0	17	44	-26	
Coal and Lignite	0	0	0	4	-4	
Industries (2852)	17	0	17	30	-13	
Other Industries	0	0	0	9	-9	
Total Net of Surplus	2933	949	3882	392	3490	10.10

Note: * Contains surplus sectors/heads which are separately shown.

Table S4(a): Subsidy Estimates: Bihar: 1998-99

	Cost	Subsidy	Recovery	Subsidy as Percentage of		
	(Rs. crore)	(Rs. crore)	Rate (Percent)	Revenue Receipts	GSDP	Fiscal Deficit
Social Services	2643	2579	2.40	27.74	3.89	70.49
Merit I	729	697	4.32	7.50	1.05	19.05
Merit II	1156	1144	1.11	12.30	1.73	31.26
Non-Merit	758	738	2.53	7.94	1.11	20.18
Economic Services	3976	3887	2.24	41.81	5.87	106.23
Merit I	10	10	0.00	0.11	0.02	0.28
Merit II	1812	1782	1.62	19.17	2.69	48.71
Non-Merit	2154	2094	2.76	22.53	3.16	57.24
Merit	3707	3633	1.99	39.09	5.48	99.30
Non-Merit	2911	2833	2.70	30.47	4.28	77.42
Total	6619	6466	2.30	69.56	9.76	176.72

Memo Items: GSDP 1998-99 (at current prices) Rs. 66253 crore; Revenue Receipts Rs. 9296 crore; Fiscal Deficit Rs. 3659 crore.

Table S4(b): Subsidy Estimates: Selected Heads: Bihar: 1998-99

Social and Economic Services	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	2346	297	2643	63.48	2579.21	2.40
General Education* of which	969	22	991	18	973	1.85
Elementary Education	138	11	149	7	142	4.72
Secondary Education	498	4	502	11	491	2.10
Univ. and Higher Education	311	2	313	0	313	0.02
Other General Education*	23	5	28	1	27	2.70
Techn. Edu., Sports, Art and Culture	48	9	57	1	57	1.08
Medical and Public Health of which	536	20	556	14	542	2.53
Public Health	45	0	45	0	45	0.00
Medical	491	20	511	14	496	2.75
Family Welfare	195	5	199	1	199	0.44
Water Supply and Sanitation	166	162	328	2	326	0.64
Housing	1	27	28	1	27	4.22
Urban Development	29	29	57	0	57	0.03
Information and Broadcasting	12	0	12	0	12	0.38
Welfare of SCs, STs and other BCs	159	22	181	0	181	0.00
Labour and Employment	41	0	41	2	39	4.31
Social Welfare and Nutrition	191	1	191	24	167	12.79
Other Social Services*						
Economic Services	2216	1760	3976	89	3887	2.24
Agr., Rural Dev. & Allied Activities	1310	242	1552	29	1522	1.88
Irrigation and Flood Control	357	895	1253	43	1210	3.40
Energy	164	345	509	5	504	0.98
Industry and Minerals*	40	101	140	1	139	0.70
Transport	304	166	470	8	462	1.78
Science, Technology and Environment	0	0	0	0	0	0.00
General Economic Services	41	11	52	3	50	5.11
Social and Economic Services	4561	2057	6619	152	6466	2.30
Total Surplus Sectors	14	3	18	756	-738	
Adult Education	2	0	2	3	-1	
Other Social Services	0	1	1	12	-11	
Non-Ferrous Mining and Metal Industries	11	3	14	741	-727	
Total Net of Surplus	4576	2061	6636	908	5728	13.69

Note: * Contains surplus sectors/heads which are separately shown.

Table S5(a): Subsidy Estimates: Goa: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of Revenue Receipts	GSDP	Fiscal Deficit
Social Services	456	407	10.65	35.49	8.18	151.31
Merit I	84	84	0.08	7.30	1.68	31.11
Merit II	166	164	1.09	14.32	3.30	61.03
Non-Merit	206	159	22.66	13.88	3.20	59.17
Economic Services	231	218	5.90	18.97	4.37	80.87
Merit I	2	2	0.00	0.15	0.03	0.63
Merit II	95	85	9.96	7.43	1.71	31.66
Non-Merit	135	131	3.13	11.40	2.63	48.59
Merit	346	335	3.27	29.19	6.73	124.43
Non-Merit	341	290	14.93	25.28	5.83	107.76
Total	687	625	9.05	54.46	12.55	232.19

Memo Items: GSDP 1998-99 (at current prices) Rs. 4977 crore; Revenue Receipts Rs. 1147 crore; Fiscal Deficit Rs. 269 crore.

Table S5(b): Subsidy Estimates: Selected Heads: Goa: 1998-99

Social and Economic Services	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	390	65	456	49	407	10.65
General Education <i>of which</i>	179	5	183	1	183	0.28
<i>Elementary Education</i>	55	2	57	0	57	0.10
<i>Secondary Education</i>	102	2	104	0	104	0.12
<i>Univ. and Higher Education</i>	19	1	20	0	20	1.17
<i>Other General Education</i>	3	0	3	0	3	3.45
Techn. Edu., Sports, Art and Culture	22	8	30	1	29	3.66
Medical and Public Health <i>of which</i>	99	13	112	4	108	3.96
<i>Public Health</i>	4	0	4	0	4	0.00
<i>Medical</i>	96	13	109	4	104	4.10
Family Welfare	2	0	2	0	2	0.00
Water Supply and Sanitation	56	34	91	41	49	45.44
Housing	2	4	7	1	6	10.05
Urban Development	7	0	8	0	7	3.49
Information and Broadcasting	2	0	2	0	2	0.13
Welfare of SCs, STs and other BCs	0	0	1	0	1	0.10
Labour and Employment	8	0	8	0	8	3.96
Social Welfare and Nutrition	12	0	12	0	12	0.07
Other Social Services	0	0	0	0	0	0.00
Economic Services	94	137	231	14	218	5.90
Agr., Rural Dev. & Allied Activities	37	14	51	3	47	6.81
Irrigation and Flood Control	14	57	71	0	71	0.55
Energy*	0	0	0	0	0	1.75
Industry and Minerals*	4	12	16	0	16	2.89
Transport	32	50	82	8	74	10.14
Science, Technology and Environment	0	0	0	0	0	0.00
General Economic Services	6	5	11	1	10	9.32
Social and Economic Services	484	203	687	62	625	9.05
Total Surplus Sectors	226	24	250	271	-21	
Power	226	24	249	259	-10	
Non-Ferrous Mining and Metal Industries	0	0	0	12	-12	
Total Net of Surplus	711	226	937	333	603	35.59

Note: * Contains surplus sectors/heads which are separately shown.

Table S6(a): Subsidy Estimates: Gujarat: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of Revenue Receipts	GSDP	Fiscal Deficit
Social Services	5740	5653	1.52	44.36	5.36	100.61
Merit I	2507	2495	0.50	19.58	2.37	44.39
Merit II	1718	1689	1.69	13.25	1.60	30.05
Non-Merit	1516	1470	3.03	11.53	1.39	26.16
Economic Services	8486	8280	2.43	64.97	7.85	147.35
Merit I	76	76	0.00	0.59	0.07	1.35
Merit II	1983	1958	1.25	15.37	1.86	34.85
Non-Merit	6427	6246	2.83	49.01	5.92	111.15
Merit	6283	6217	1.06	48.79	5.90	110.64
Non-Merit	7943	7716	2.87	60.55	7.32	137.31
Total	14227	13933	2.07	109.34	13.21	247.95

Memo Items: GSDP 1998-99 (at current prices) Rs. 105443 crore; Revenue Receipts Rs. 12743 crore; Fiscal Deficit Rs. 5619 crore.

Table S6(b): Subsidy Estimates: Selected Heads: Gujarat: 1998-99

Social and Economic Services	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	5313	428	5740	87	5653	1.52
General Education <i>of which</i>	2932	6	2938	16	2922	0.54
<i>Elementary Education</i>	1695	2	1697	10	1687	0.56
<i>Secondary Education</i>	971	2	972	4	969	0.38
<i>Univ. and Higher Education</i>	239	1	240	5	235	2.18
<i>Other General Education*</i>	27	1	28	-3	31	-9.43
Techn. Edu., Sports, Art and Culture	118	18	136	8	128	6.15
Medical and Public Health <i>of which</i>	864	13	877	39	838	4.41
<i>Public Health</i>	88	0	88	0	88	0.00
<i>Medical</i>	776	12	789	39	750	4.90
Family Welfare	117	1	118	1	118	0.45
Water Supply and Sanitation	193	226	419	1	418	0.14
Housing	173	90	263	6	256	2.44
Urban Development	178	43	221	7	214	3.25
Information and Broadcasting	21	1	22	1	21	3.84
Welfare of SCs, STs and other BCs	357	25	382	0	382	0.00
Labour and Employment	97	0	97	6	91	6.30
Social Welfare and Nutrition	263	5	268	3	265	1.07
Other Social Services*						
Economic Services	5276	3210	8486	207	8280	2.43
Agr., Rural Dev. & Allied Activities*	1175	571	1746	42	1705	2.39
Irrigation and Flood Control	1521	1457	2978	135	2843	4.53
Energy	1647	551	2198	3	2195	0.13
Industry and Minerals*	220	326	547	11	536	1.94
Transport	608	297	905	5	900	0.51
Science, Technology and Environment	3	0	3	0	3	0.96
General Economic Services	102	7	109	12	98	10.76
Social and Economic Services	10589	3638	14227	294	13933	2.07
Total Surplus Sectors	16	12	28	517	-489	
General (Education)	1	0	1	7	-5	
Other Social Services	2	9	11	14	-2	
Other Special Area Programme	0	1	1	13	-13	
Non-Ferrous Mining and Metal Industries	13	1	15	483	-469	
Total Net of Surplus	10605	3649	14255	811	13444	5.69

Note: * Contains surplus sectors/heads which are separately shown.

Table S7(a): Subsidy Estimates: Haryana: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of Revenue Receipts	GSDP	Fiscal Deficit
Social Services	1738	1666	4.11	30.42	3.88	74.38
Merit I	413	393	4.95	7.17	0.91	17.53
Merit II	743	738	0.62	13.47	1.72	32.94
Non-Merit	582	536	7.98	9.78	1.25	23.91
Economic Services	3332	2899	12.98	52.92	6.75	129.42
Merit I	28	28	0.00	0.51	0.06	1.24
Merit II	501	479	4.51	8.74	1.12	21.37
Non-Merit	2803	2393	14.62	43.68	5.57	106.81
Merit	1685	1637	2.83	29.88	3.81	73.08
Non-Merit	3385	2929	13.48	53.45	6.82	130.72
Total	5070	4566	9.94	83.34	10.63	203.80

Memo Items: GSDP 1998-99 (at current prices) Rs.42941 crore; Revenue Receipts Rs. 5479 crore; Fiscal Deficit Rs. 2240 crore.

Table S7(b): Subsidy Estimates: Selected Heads: Haryana: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	1567	171	1738	72	1666	4.11
General Education <i>of which</i>	700	8	708	17	691	2.37
<i>Elementary Education</i>	79	2	81	15	66	18.11
<i>Secondary Education</i>	496	2	498	2	497	0.35
<i>Univ. and Higher Education</i>	114	4	118	0	118	0.38
<i>Other General Education</i>	10	0	11	0	11	-0.13
Techn. Edu., Sports, Art and Culture	51	16	66	2	64	3.37
Medical and Public Health <i>of which</i>	276	19	295	17	278	5.83
<i>Public Health</i>	43	0	43	0	43	0.00
<i>Medical</i>	233	19	252	17	235	6.83
Family Welfare	43	6	49	0	49	0.36
Water Supply and Sanitation	183	84	266	21	245	7.88
Housing	6	24	30	4	26	12.14
Urban Development*						
Information and Broadcasting	13	0	13	1	12	7.24
Welfare of SCs, STs and other BCs	22	9	31	0	31	0.03
Labour and Employment	55	0	55	3	52	5.40
Social Welfare and Nutrition	218	2	220	6	214	2.65
Other Social Services	1	4	5	1	4	15.04
Economic Services	2113	1219	3332	432	2899	12.98
Agr., Rural Dev. & Allied Activities*	390	61	451	35	416	7.74
Irrigation and Flood Control	299	413	712	61	650	8.59
Energy	848	544	1391	0	1391	0.02
Industry and Minerals*	21	69	89	3	86	3.62
Transport	546	126	672	331	341	49.25
Science, Technology and Environment	3	0	3	0	3	0.01
General Economic Services	6	8	14	2	12	14.68
Social and Economic Services	3680	1390	5070	504	4566	9.94
Total Surplus Sectors	65	-21	44	129	-84	
Urban Development	43	3	45	59	-14	
Food Storage and Warehousing	4	-23	-18	0	-19	
Other Agricultural Programmes	1	-1	0	3	-4	
Non-Ferrous Mining and Metal Industries	18	0	18	66	-48	
Total Net of Surplus	3745	1369	5114	633	4481	12.37

Note: * Contains surplus sectors/heads which are separately shown.

Table S8(a): Subsidy Estimates: Himachal Pradesh: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	1411	1362	3.41	58.93	13.73	83.17
Merit I	535	529	1.49	22.88	5.33	32.29
Merit II	358	354	1.18	15.30	3.57	21.59
Non-Merit	517	480	7.23	20.75	4.84	29.29
Economic Services	736	726	1.62	31.40	7.32	44.32
Merit I	25	25	0.00	1.09	0.25	1.54
Merit II	677	664	1.92	28.73	6.70	40.55
Non-Merit	711	701	1.40	30.31	7.06	42.79
Merit	1596	1572	1.49	68.00	15.85	95.98
Non-Merit	1228	1181	3.85	51.07	11.90	72.08
Total	2824	2753	2.52	119.06	27.75	168.05

Memo Items: GSDP 1998-99 (at current prices) Rs. 9920 crore; Revenue Receipts Rs. 2312 crore; Fiscal Deficit Rs. 1638 crore.

Table S8(b): Subsidy Estimates of Selected Heads: Himachal Pradesh: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	1227	183	1411	48	1362	3.41
General Education	651	11	662	9	653	1.41
<i>Elementary Education</i>	383	3	386	6	380	1.49
<i>Secondary Education</i>	213	3	216	2	214	1.02
<i>Univ. and Higher Education</i>	43	2	45	1	44	1.99
<i>Other General Education</i>	12	3	15	0	14	3.16
Technical Education, Sports, Art and Culture	23	10	33	0	32	1.24
Medical and Public Health of which	204	14	218	4	214	1.67
<i>Public Health</i>	29	0	29	0	29	0.02
<i>Medical</i>	175	14	189	4	185	1.92
Family Welfare	30	6	36	0	36	0.19
Water Supply and Sanitation	170	113	283	4	278	1.55
Housing	36	21	57	29	28	50.49
Urban Development	11	2	13	0	13	1.45
Information and Broadcasting	7	0	7	0	7	1.08
Welfare of SCs, STs and other BCs	11	4	15	0	15	0.00
Labour and Employment	13	0	13	0	12	2.05
Social Welfare and Nutrition	71	1	73	1	72	1.01
Other Social Services	0	1	1	0	1	3.18
Economic Services	833	580	1413	23	1390	1.62
Agr., Rural Dev. & Allied Activities	472	40	513	19	494	3.68
Irrigation and Flood Control	47	46	93	0	93	0.19
Energy	76	248	324	1	323	0.17
Industry and Minerals*	15	20	36	0	35	0.88
Transport	209	217	427	2	424	0.53
Science, Technology and Environment	2	0	2	0	2	0.00
General Economic Services	11	9	20	1	20	3.73
Social and Economic Services	2060	764	2824	71	2753	2.52
Total Surplus Sectors	45	6	51	93	-42	
Industries	42	6	49	55	-7	
Non-Ferrous Mining and Metal Industries	3	0	3	38	-35	
Total Net of Surplus	2105	770	2875	164	2711	5.71

Note: * Contains surplus sectors/heads which are separately shown.

Table S9(a): Subsidy Estimates: Jammu & Kashmir: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	1553	1548	0.33	34.32	12.31	146.13
Merit I	390	389	0.09	8.62	3.09	36.71
Merit II	479	479	0.08	10.62	3.81	45.20
Non-Merit	684	680	0.55	15.08	5.41	64.22
Economic Services	2025	2435	6.13	54.01	19.37	229.98
Merit I	61	61	0.00	1.36	0.49	5.80
Merit II	570	523	8.21	11.60	4.16	49.39
Non-Merit	1963	1851	5.72	41.05	14.72	174.78
Merit	1500	1452	3.21	32.20	11.55	137.10
Non-Merit	2647	2531	4.38	56.13	20.13	239.00
Total	4147	3983	3.96	88.33	31.68	376.11

Memo Items: GSDP 1998-99 (at current prices) Rs. 12571 crore; Revenue Receipts Rs. 4509 crore; Fiscal Deficit Rs. 1059 crore.

Table S9(b): Subsidy Estimates of Selected Heads: Jammu & Kashmir: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	1200	353	1553	5	1548	0.33
General Education	577	23	601	1	600	0.11
<i>Elementary Education</i>	301	5	307	0	306	0.09
<i>Secondary Education</i>	226	6	231	0	231	0.14
<i>Univ. and Higher Education</i>	46	2	49	0	49	0.11
<i>Other General Education</i>	4	10	14	0	14	0.00
Technical Edu., Sports, Art and Culture	42	6	48	0	48	0.06
Medical and Public Health* <i>of which</i>	255	34	288	0	288	0.00
<i>Public Health*</i>	46	0	46	0	46	0.00
<i>Medical</i>	208	33	242	0	242	0.00
Family Welfare	28	1	29	0	29	0.00
Water Supply and Sanitation	139	201	340	3	337	0.91
Housing	20	23	43	0	42	1.00
Urban Development	45	63	108	0	108	0.00
Information and Broadcasting	9	0	9	0	9	0.11
Welfare of SCs, STs and other BCs	11	1	12	0	12	0.29
Labour and Employment	9	0	9	0	9	1.37
Social Welfare and Nutrition	66	-1	65	1	64	0.96
Other Social Services	1	1	2	0	2	3.95
Economic Services	1629	966	2595	160	2435	6.17
Agr., Rural Dev. & Allied Activities*	405	180	585	51	534	8.78
Irrigation and Flood Control	112	83	195	1	194	0.40
Energy	983	413	1396	104	1292	7.45
Industry and Minerals	75	67	142	2	139	1.75
Transport	25	182	207	0	207	0.01
Science, Technology and Environment	5	0	5	0	5	0.00
General Economic Services	24	41	65	0	65	0.72
Social and Economic Services	2829	1319	4147	165	3982	3.98
Total Surplus Sectors	0	0	0	4	-4	
General (Medical and Public Health)	0	0	0	3	-3	
MPs Local Area Development	0	0	0	1	-1	
Total Net of Surplus	2829	1319	4147	169	3978	4.08

Note: * Contains surplus sectors/heads which are separately shown.

Table S10(a): Subsidy Estimates: Karnataka: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of Revenue Receipts	GSDP	Fiscal Deficit
Social Services	4666	4485	3.86	39.94	5.26	144.13
Merit I	2063	2024	1.90	18.02	2.37	65.03
Merit II	1362	1322	2.92	11.77	1.55	42.49
Non-Merit	1241	1140	8.16	10.15	1.34	36.62
Economic Services	5952	5346	10.18	47.61	6.27	171.79
Merit I	91	86	5.65	0.77	0.10	2.76
Merit II	1399	1252	10.50	11.15	1.47	40.25
Non-Merit	4462	4008	10.17	35.69	4.70	128.78
Merit	4915	4684	4.70	41.71	5.49	150.52
Non-Merit	5702	5147	9.74	45.84	6.04	165.40
Total	10618	9832	7.40	87.55	11.53	315.93

Memo Items: GSDP 1998-99 (at current prices) Rs. 85286 crore; Revenue Receipts Rs. 11230 crore; Fiscal Deficit Rs. 3112 crore.

Table S10(b): Subsidy Estimates: Selected Heads: Karnataka: 1998-99

Social and Economic Services	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	4423	243	4666	180	4485	3.86
General Education <i>of which</i>	2365	8	2373	13	2360	0.54
Elementary Education	1243	1	1244	0	1244	0.00
Secondary Education	778	3	781	13	768	1.63
Univ. and Higher Education	305	4	309	0	309	0.08
Other General Education	39	0	39	0	39	-0.06
Techn. Edu., Sports, Art and Culture	125	6	131	5	127	3.63
Medical and Public Health <i>of which</i>	660	28	688	33	655	4.82
Public Health	29	0	29	0	29	0.00
Medical	630	28	658	33	625	5.04
Family Welfare	-5	12	8	1	7	14.00
Water Supply and Sanitation	283	61	344	37	307	10.67
Housing	118	38	156	24	132	15.26
Urban Development	60	33	93	21	72	22.47
Information and Broadcasting	19	1	20	0	19	1.65
Welfare of SCs, STs and other BCs	387	50	437	0	437	0.09
Labour and Employment	44	0	44	6	38	13.42
Social Welfare and Nutrition	348	4	352	39	313	11.01
Other Social Services	18	1	19	1	18	7.20
Economic Services	3459	2493	5952	606	5346	10.18
Agr., Rural Dev. & Allied Activities	1381	108	1489	177	1312	11.88
Irrigation and Flood Control	576	1348	1924	21	1903	1.11
Energy	689	531	1219	163	1057	13.36
Industry and Minerals*	239	223	462	69	393	14.84
Transport	265	277	541	10	531	1.93
Science, Technology and Environment	5	0	5	0	5	0.94
General Economic Services	305	6	311	166	145	53.36
Social and Economic Services	7882	2736	10618	786	9832	7.40
Total Surplus Sectors	5	1	6	107	-101	
Non-Ferrous Mining and Metal Industries	5	1	6	107	-101	
Total Net of Surplus	7886	2737	10624	893	9730	8.41

Note: * Contains surplus sectors/heads which are separately shown.

Table S11(a): Subsidy Estimates: Kerala: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	3190	3115	2.37	43.27	5.52	103.40
Merit I	952	951	0.10	13.22	1.69	31.58
Merit II	1289	1250	3.02	17.36	2.21	41.49
Non-Merit	949	913	3.75	12.69	1.62	30.33
Economic Services	3314	3177	4.15	44.13	5.63	105.46
Merit I	16	16	0.23	0.22	0.03	0.52
Merit II	1712	1683	1.69	23.38	2.98	55.88
Non-Merit	1587	1478	6.85	20.53	2.62	49.06
Merit	3969	3900	1.74	54.18	6.91	129.48
Non-Merit	2536	2391	5.69	33.22	4.24	79.39
Total	6505	6291	3.28	87.40	11.15	208.86

Memo Items: GSDP 1998-99 (at current prices) Rs. 56436 crore; Revenue Receipts Rs. 7198 crore; Fiscal Deficit Rs. 3012 crore.

Table S11(b): Subsidy Estimates: Selected Heads: Kerala: 1998-99

Social and Economic Services	(Rs. crore)			Receipts	Subsidy	Recovery Rate (Percent)
	Cost					
	Current	Capital	Total			
Social Services	2973	218	3191	76	3114	2.39
General Education of which	1483	24	1507	27	1480	1.79
Elementary Education	569	6	575	0	574	0.07
Secondary Education	585	9	595	19	576	3.15
Univ. and Higher Education	306	6	312	8	304	2.50
Other General Education	23	3	26	0	26	0.37
Techn. Edu., Sports, Art and Culture	94	21	114	9	106	7.44
Medical and Public Health* of which	628	27	656	21	634	3.21
Public Health	49	0	49	1	49	1.05
Medical*	579	27	606	21	586	3.39
Family Welfare	75	14	89	0	89	0.08
Water Supply and Sanitation	150	81	231	8	223	3.55
Housing	42	20	62	2	60	3.43
Urban Development	148	5	153	4	149	2.46
Information and Broadcasting	8	0	8	0	8	0.67
Welfare of SCs, STs and other BCs	204	21	225	0	225	0.04
Labour and Employment	58	0	58	4	54	6.37
Social Welfare and Nutrition	80	3	83	0	82	0.60
Other Social Services	3	1	3	0	3	12.87
Economic Services	2164	1151	3314	138	3177	4.15
Agr., Rural Dev. & Allied Activities*	1571	153	1725	51	1674	2.95
Irrigation and Flood Control	147	321	468	7	461	1.54
Energy	22	122	143	20	123	14.11
Industry and Minerals*	132	293	424	24	400	5.59
Transport	217	244	461	22	439	4.84
Science, Technology and Environment	14	0	14	0	14	1.99
General Economic Services	61	18	79	13	66	16.56
Social and Economic Services	5137	1368	6505	214	6291	3.29
Total Surplus Sectors	107	23	130	135	-5	
Medical (General)	0	0	0	1	-1	
Forestry	104	14	118	121	-3	
Non-Ferrous Mining and Metal Industries	2	9	11	13	-1	
Total Net of Surplus	5243	1391	6635	349	6286	5.25

Note: * Contains surplus sectors/heads which are separately shown.

Table S12(a): Subsidy Estimates: Madhya Pradesh: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	4430	4382	1.09	38.62	4.83	106.18
Merit I	1948	1942	0.35	17.11	2.14	47.05
Merit II	1164	1152	1.10	10.15	1.27	27.91
Non-Merit	1317	1289	2.17	11.36	1.42	31.22
Economic Services	5678	4899	13.73	43.18	5.40	118.71
Merit I	78	78	0.00	0.69	0.09	1.90
Merit II	2430	1873	22.93	16.51	2.06	45.38
Non-Merit	3170	2948	7.02	25.98	3.25	71.43
Merit	5621	5044	10.26	44.46	5.56	122.24
Non-Merit	4487	4236	5.59	37.34	4.67	102.66
Total	10108	9281	8.19	81.80	10.23	224.89

Memo Items: GSDP 1998-99 (at current prices) Rs. 90737 crore; Revenue Receipts Rs. 11346 crore; Fiscal Deficit Rs. 4127 crore.

Table S12(b): Subsidy Estimates: Selected Heads: Madhya Pradesh: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	4116	314	4430	48	4382	1.09
General Education of which	1040	53	1093	9	1083	0.87
Elementary Education	265	23	288	0	288	0.00
Secondary Education	533	13	546	1	545	0.16
Univ. and Higher Education	226	12	238	2	236	0.85
Other General Education	16	5	21	7	14	31.48
Techn. Edu., Sports, Art and Culture	96	23	119	1	117	1.23
Medical and Public Health of which	802	25	827	11	816	1.28
Public Health	85	0	85	0	85	0.00
Medical	717	25	741	11	731	1.43
Family Welfare	94	9	102	1	102	0.68
Water Supply and Sanitation	480	26	506	9	497	1.74
Housing	69	42	111	4	107	3.87
Urban Development	92	46	138	1	137	0.86
Information and Broadcasting	22	0	22	0	22	0.49
Welfare of SCs, STs and other BCs	923	56	979	0	979	0.00
Labour and Employment	62	0	62	5	57	7.66
Social Welfare and Nutrition	437	33	470	7	463	1.45
Other Social Services*	0	0	0	0	0	0.00
Economic Services	3428	2250	5678	780	4899	13.73
Agr., Rural Dev. & Allied Activities	2159	289	2448	578	1871	23.59
Irrigation and Flood Control	324	1111	1435	43	1392	2.97
Energy	435	531	966	118	848	12.25
Industry and Minerals*	66	93	160	9	151	5.70
Transport	421	216	637	28	609	4.37
Science, Technology and Environment	2	0	2	0	2	0.00
General Economic Services	21	10	31	4	27	13.01
Social and Economic Services	7545	2564	10108	828	9281	8.19
Total Surplus Sectors	25	5	30	827	-797	
Other Social Services	2	4	6	20	-14	
Non-Ferrous Mining and Metal Industries	23	1	24	807	-782	
Total Net of Surplus	7570	2569	10138	1654	8484	16.32

Note: * Contains surplus sectors/heads which are separately shown.

Table S13(a): Subsidy Estimates: Maharashtra: 1998-99

	Cost	Subsidy	Recovery	Subsidy as Percentage of		
	(Rs. crore)	(Rs. crore)	Rate (Percent)	Revenue Receipts	GSDP	Fiscal Deficit
Social Services	9527	9218	3.25	42.41	4.41	123.53
Merit I	3631	3599	0.89	16.56	1.72	48.23
Merit II	3224	3170	1.68	14.58	1.52	42.48
Non-Merit	2672	2450	8.34	11.27	1.17	32.83
Economic Services	10014	8773	12.39	40.36	4.20	117.56
Merit I	313	313	0.00	1.44	0.15	4.20
Merit II	1694	1532	9.58	7.05	0.73	20.53
Non-Merit	8007	6928	13.47	31.87	3.32	92.84
Merit	8863	8614	2.81	39.63	4.12	115.43
Non-Merit	10679	9377	12.19	43.14	4.49	125.66
Total	19542	17991	7.93	82.77	8.61	241.09

Memo Items: GSDP 1998-99 (at current prices) Rs. 208885 crore; Revenue Receipts Rs. 21737 crore; Fiscal Deficit Rs. 7462 crore.

Table S13(b): Subsidy Estimates: Selected Heads: Maharashtra: 1998-99

Social and Economic Services	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
	(Rs. crore)					
Social Services	9022	506	9528	309	9219	3.25
General Education <i>of which</i>	4840	5	4845	22	4823	0.46
<i>Elementary Education</i>	2347	0	2347	7	2340	0.32
<i>Secondary Education</i>	1929	1	1930	3	1927	0.13
<i>Univ. and Higher Education</i>	491	4	495	2	492	0.43
<i>Other General Education</i>	72	1	73	10	63	13.67
Techn. Edu., Sports, Art and Culture	306	38	344	14	330	4.08
Medical and Public Health <i>of which</i>	1296	56	1352	81	1270	6.03
<i>Public Health</i>	144	0	144	0	144	0.00
<i>Medical</i>	1152	56	1208	81	1127	6.74
Family Welfare	83	1	84	2	82	2.74
Water Supply and Sanitation	713	171	885	95	789	10.79
Housing	241	132	372	21	352	5.59
Urban Development	256	42	298	23	275	7.73
Information and Broadcasting	18	0	18	0	18	1.99
Welfare of SCs, STs and other BCs	538	43	581	0	581	0.00
Labour and Employment	190	0	190	25	165	13.05
Social Welfare and Nutrition	541	18	559	25	534	4.46
Other Social Services*	0	0	0	0	0	0.00
Economic Services	4558	5457	10014	1241	8773	12.39
Agr., Rural Dev. & Allied Activities*	3277	918	4195	952	3244	22.69
Irrigation and Flood Control	1777	2407	4184	53	4131	1.28
Energy	26	1256	1283	215	1067	16.80
Industry and Minerals*	94	170	264	9	255	3.45
Transport	-639	700	61	11	49	18.49
Science, Technology and Environment	5	0	5	0	5	0.00
General Economic Services*	17	5	22	0	22	0.00
Social and Economic Services	13579	5963	19543	1550	17992	7.93
Total Surplus Sectors	16	42	58	327	-268	
Other Social Services	2	39	41	53	-12	
Other Agricultural Programmes	0	0	0	0	-1	
Land Reforms	0	0	0	2	-2	
Special Area Programme, Hill Area	0	0	0	3	-3	
Non-Ferrous Mining and Metal Industries	7	1	8	257	-249	
Other General Economic Services	7	2	9	11	-2	
Total Net of Surplus	13596	6005	19601	1877	17724	9.58

Note: * Contains surplus sectors/heads which are separately shown.

Table S14(a): Subsidy Estimates: Manipur: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	372	371	0.36	41.34	14.65	343.29
Merit I	142	142	0.32	15.81	5.60	131.26
Merit II	139	139	0.11	15.51	5.50	128.81
Non-Merit	91	90	1.00	10.02	3.55	83.23
Economic Services	246	392	3.78	43.66	15.47	362.54
Merit I	9	9	0.03	0.98	0.35	8.16
Merit II	161	160	0.79	17.86	6.33	148.28
Non-Merit	237	223	5.96	24.82	8.79	206.09
Merit	452	450	0.38	50.16	17.77	416.51
Non-Merit	327	312	4.59	34.84	12.35	289.32
Total	779	762	2.15	85.00	30.12	705.83

Memo Items: GSDP 1998-99 (at current prices) Rs. 2531 crore; Revenue Receipts Rs. 897 crore; Fiscal Deficit Rs. 108 crore.

Table S14(b): Subsidy Estimates of Selected Heads: Manipur: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	294	78	372	1	371	0.36
General Education	174	9	184	0	183	0.23
<i>Elementary Education</i>	78	4	82	0	82	0.32
<i>Secondary Education</i>	59	1	60	0	60	0.11
<i>Univ. and Higher Education</i>	32	1	33	0	33	0.27
<i>Other General Education</i>	5	4	9	0	9	0.00
Technical Edu., Sports, Art and Culture	11	11	22	0	22	0.01
Medical and Public Health <i>of which</i>	34	3	37	0	37	0.43
<i>Public Health</i>	10	0	10	0	10	0.00
<i>Medical</i>	24	3	27	0	27	0.59
Family Welfare	7	0	8	0	8	0.02
Water Supply and Sanitation	8	40	48	0	47	0.91
Housing	2	11	13	0	13	2.02
Urban Development	5	3	8	0	8	0.00
Information and Broadcasting	3	0	3	0	3	1.38
Welfare of SCs, STs and other BCs	24	0	24	0	24	0.00
Labour and Employment	3	0	3	0	3	0.50
Social Welfare and Nutrition	23	0	23	0	23	0.09
Other Social Services	0	0	0	0	0	0.86
Economic Services	184	223	407	15	392	3.78
Agr., Rural Dev. & Allied Activities	87	22	109	1	108	1.25
Irrigation and Flood Control	21	64	85	0	85	0.22
Energy	42	56	98	13	85	13.39
Industry and Minerals	16	9	25	0	24	1.74
Transport	12	71	83	0	83	0.30
Science, Technology and Environment	1	0	1	0	1	0.37
General Economic Services	4	1	5	0	5	0.48
Social and Economic Services	478	301	779	17	762	2.15
Total Surplus Sectors	0	0	0	0	0	0.00

Note: * Contains surplus sectors/heads which are separately shown.

Table S15(a): Subsidy Estimates: Meghalaya: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	333	332	0.40	39.86	11.50	225.34
Merit I	114	114	0.12	13.70	3.95	77.46
Merit II	88	88	0.33	10.56	3.05	59.71
Non-Merit	131	130	0.68	15.60	4.50	88.17
Economic Services	151	147	3.26	17.69	5.10	100.00
Merit I	17	17	0.00	2.09	0.60	11.83
Merit II	219	210	3.80	25.24	7.28	142.70
Non-Merit	134	130	2.79	15.60	4.50	88.16
Merit	438	430	2.00	51.60	14.88	291.70
Non-Merit	264	260	1.74	31.19	9.00	176.33
Total	703	689	1.90	82.79	23.88	468.03

Memo Items: GSDP 1998-99 (at current prices) Rs. 2887 crore; Revenue Receipts Rs. 833 crore; Fiscal Deficit Rs. 147 crore.

Table S15(b): Subsidy Estimates of Selected Heads: Meghalaya: 1998-99

Social and Economic Services	(Rs. crore)					
	Current	Cost Capital	Total	Receipts	Subsidy	Recovery Rate (Percent)
Social Services	265	68	333	1	332	0.40
General Education	147	3	150	0	150	0.24
<i>Elementary Education</i>	89	1	90	0	90	0.12
<i>Secondary Education</i>	39	2	41	0	41	0.61
<i>Univ. and Higher Education</i>	16	0	17	0	17	0.00
<i>Other General Education</i>	3	0	3	0	3	0.00
Technical Edu., Sports, Art and Culture	8	1	10	0	10	0.00
Medical and Public Health of which	33	10	43	0	43	0.69
<i>Public Health</i>	9	2	11	0	11	1.34
<i>Medical</i>	24	8	32	0	32	0.46
Family Welfare	9	0	10	0	9	0.30
Water Supply and Sanitation	29	42	72	0	71	0.20
Housing	9	9	19	0	18	1.90
Urban Development	7	2	9	0	9	0.18
Information and Broadcasting	2	0	2	0	2	0.95
Welfare of SCs, STs and other BCs	5	0	5	0	5	0.00
Labour and Employment	4	0	4	0	4	0.28
Social Welfare and Nutrition	10	0	11	0	11	0.43
Other Social Services	0	0	0	0	0	
Economic Services	221	149	370	12	357	3.26
Agr., Rural Dev. & Allied Activities	131	22	153	11	142	7.39
Irrigation and Flood Control	8	9	17	0	17	0.34
Energy	16	14	30	0	30	0.01
Industry and Minerals*	24	15	40	0	40	0.49
Transport	33	86	119	0	119	0.03
Science, Technology and Environment	0	0	0	0	0	0.00
General Economic Services	8	2	11	0	10	3.72
Social and Economic Services	486	217	703	13	689	1.90
Total Surplus Sectors	10	1	10	24	-14	
Non-Ferrous Mining and Metal Industries	10	1	10	22	-12	
Other Industries	0	0	0	1	-1	
Total Net of Surplus	496	217	713	37	676	5.20

Note: * Contains surplus sectors/heads which are separately shown.

Table S16(a): Subsidy Estimates: Mizoram: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	287	284	0.96	36.77	22.82	287.14
Merit I	127	126	0.26	16.35	10.15	127.68
Merit II	74	73	0.18	9.49	5.89	74.14
Non-Merit	87	84	2.61	10.93	6.78	85.31
Economic Services	197	328	4.17	42.37	26.29	330.89
Merit I	5	5	0.00	0.62	0.39	4.85
Merit II	145	144	1.02	18.61	11.55	145.30
Non-Merit	192	179	6.67	23.15	14.36	180.74
Merit	350	348	0.57	45.07	27.97	351.98
Non-Merit	278	263	5.40	34.07	21.14	266.05
Total	629	612	2.71	79.14	49.11	618.03

Memo Items: GSDP 1998-99 (at current prices) Rs. 1246 crore; Revenue Receipts Rs.773 crore; Fiscal Deficit Rs. 99 crore.

Table S16(b): Subsidy Estimates of Selected Heads: Mizoram: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	246	41	287	3	284	0.96
General Education	103	1	104	0	104	0.20
<i>Elementary Education</i>	59	0	59	0	59	0.26
<i>Secondary Education</i>	26	0	26	0	26	0.08
<i>Univ. and Higher Education</i>	9	0	9	0	9	0.03
<i>Other General Education</i>	9	0	9	0	9	0.30
Technical Edu., Sports, Art and Culture	7	0	7	0	7	1.07
Medical and Public Health <i>of which</i>	33	2	35	0	35	0.42
<i>Public Health</i>	7	0	8	0	8	0.00
<i>Medical</i>	26	2	28	0	28	0.54
Family Welfare	5	0	5	0	5	0.00
Water Supply and Sanitation	35	17	52	2	50	3.20
Housing	4	11	15	0	15	2.83
Urban Development	8	9	17	0	17	0.05
Information and Broadcasting	2	0	2	0	2	0.97
Welfare of SCs, STs and other BCs	33	0	33	0	33	0.00
Labour and Employment	1	0	1	0	1	0.01
Social Welfare and Nutrition	15	1	15	0	15	1.39
Other Social Services	0	0	0	0	0	0.00
Economic Services	201	141	342	16	326	4.67
Agr., Rural Dev. & Allied Activities	103	30	133	3	130	2.13
Irrigation and Flood Control	2	1	3	0	3	0.18
Energy*	42	45	88	9	79	9.87
Industry and Minerals*	15	4	19	0	19	0.66
Transport	30	60	90	2	87	2.74
Science, Technology and Environment	0	0	0	0	0	0.00
General Economic Services	9	0	9	0	9	2.32
Social and Economic Services	447	182	629	19	610	2.98
Total Surplus Sectors	0	0	0	2	-1	
Other Industries	0	0	0	2	-1	
Petroleum	0	0	0.00	0.01	-0.01	
Total Net of Surplus	447	183	629	20	609	3.25

Note: * Contains surplus sectors/heads which are separately shown.

Table S17(a): Subsidy Estimates: Nagaland: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	362	361	0.23	36.47	15.13	196.12
Merit I	127	127	0.00	12.81	5.32	68.89
Merit II	81	81	0.15	8.17	3.39	43.94
Non-Merit	154	153	0.46	15.49	6.43	83.29
Economic Services	200	180	6.53	18.17	7.54	97.72
Merit I	13	13	0.00	1.27	0.53	6.84
Merit II	165	161	2.06	16.31	6.76	87.68
Non-Merit	188	167	10.89	16.90	7.01	90.89
Merit	385	382	0.91	38.56	16.00	207.35
Non-Merit	342	320	6.19	32.39	13.44	174.18
Total	727	702	3.39	70.95	29.44	381.53

Memo Items: GSDP 1998-99 (at current prices) Rs. 2385 crore; Revenue Receipts Rs. 989 crore; Fiscal Deficit Rs. 184 crore.

Table S17(b): Subsidy Estimates of Selected Heads: Nagaland: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	286	75	362	1	361	0.23
General Education	128	6	134	0	134	0.00
<i>Elementary Education</i>	81	2	83	0	83	0.00
<i>Secondary Education</i>	35	2	37	0	37	0.00
<i>Univ. and Higher Education</i>	7	1	8	0	8	0.00
<i>Other General Education</i>	5	1	7	0	7	0.00
Technical Edu., Sports, Art and Culture	7	4	11	0	11	1.10
Medical and Public Health <i>of which</i>	52	11	63	0	63	0.04
<i>Public Health</i>	7	0	7	0	7	0.03
<i>Medical</i>	46	11	56	0	56	0.04
Family Welfare	6	0	6	0	6	0.00
Water Supply and Sanitation	27	28	55	0	55	0.32
Housing	16	18	34	0	34	1.37
Urban Development	6	7	13	0	13	0.00
Information and Broadcasting	6	0	7	0	7	0.22
Welfare of SCs, STs and other BCs	10	0	10	0	10	0.00
Labour and Employment	3	0	3	0	3	0.64
Social Welfare and Nutrition	25	0	25	0	25	0.00
Other Social Services	0	0	0	0	0	0.00
Economic Services	221	144	365	24	341	6.53
Agr., Rural Dev. & Allied Activities	124	25	149	4	146	2.50
Irrigation and Flood Control	6	0	6	0	6	0.01
Energy	34	45	79	17	61	21.91
Industry and Minerals	23	17	40	0	39	0.50
Transport	26	56	82	2	80	3.04
Science, Technology and Environment	0	0	0	0	0	0.00
General Economic Services	8	0	9	0	9	2.27
Social and Economic Services	508	219	727	25	702	3.39
Total Surplus Sectors	0	0	0	0	0	0.00

Note: * Contains surplus sectors/heads which are separately shown.

Table S18(a): Subsidy Estimates: Orissa: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	2115	2071	2.09	45.48	5.99	60.60
Merit I	659	650	1.33	14.28	1.88	19.03
Merit II	803	798	0.61	17.52	2.31	23.34
Non-Merit	654	623	4.67	13.68	1.80	18.23
Economic Services	2778	2640	4.99	57.96	7.63	77.23
Merit I	67	67	0.00	1.47	0.19	1.95
Merit II	917	815	11.16	17.89	2.36	23.84
Non-Merit	1794	1758	2.02	38.60	5.08	51.44
Merit	2446	2330	4.74	51.15	6.74	68.16
Non-Merit	2448	2381	2.73	52.28	6.89	69.67
Total	4894	4711	3.74	103.44	13.62	137.83

Memo Items: GSDP 1998-99 (at current prices) Rs. 34579 crore; Revenue Receipts Rs. 4554 crore; Fiscal Deficit Rs. 3418 crore.

Table S18(b): Subsidy Estimates: Selected Heads: Orissa: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	1967	148	2115	44	2071	2.09
General Education <i>of which</i>	694	21	715	12	703	1.65
<i>Elementary Education</i>	87	9	96	8	88	8.59
<i>Secondary Education</i>	416	4	420	0	420	0.00
<i>Univ. and Higher Education</i>	181	5	186	1	185	0.63
<i>Other General Education</i>	10	3	13	2	10	18.33
Techn. Edu., Sports, Art and Culture	49	4	52	1	51	1.56
Medical and Public Health <i>of which</i>	368	18	386	8	378	2.09
<i>Public Health</i>	36	0	36	0	36	0.00
<i>Medical</i>	332	18	350	8	342	2.30
Family Welfare	80	0	80	0	80	0.10
Water Supply and Sanitation	219	41	260	12	248	4.71
Housing	22	46	68	9	59	12.63
Urban Development	44	7	52	1	51	1.00
Information and Broadcasting	11	0	11	0	11	1.13
Welfare of SCs, STs and other BCs	226	8	233	0	233	0.07
Labour and Employment	24	0	24	1	23	3.59
Social Welfare and Nutrition	224	2	226	0	226	0.13
Other Social Services	9	0	9	1	8	7.94
Economic Services	1255	1523	2778	139	2640	4.99
Agr., Rural Dev. & Allied Activities	847	101	948	98	850	10.36
Irrigation and Flood Control	170	719	889	14	875	1.54
Energy	14	311	325	8	318	2.34
Industry and Minerals*	76	126	202	4	198	1.78
Transport	107	259	366	13	353	3.42
Science, Technology and Environment	24	0	24	0	24	0.00
General Economic Services	17	8	25	3	22	12.41
Social and Economic Services	3223	1671	4894	183	4711	3.74
Total Surplus Sectors	14	19	33	314	-281	
Non-Ferrous Mining and Metal Industries	14	19	33	314	-281	
Total Net of Surplus	3236	1691	4927	497	4430	10.09

Note: * Contains surplus sectors/heads which are separately shown.

Table S19(a): Subsidy Estimates: Punjab: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	2259	2207	2.29	38.35	4.06	58.40
Merit I	278	265	4.37	4.61	0.49	7.02
Merit II	1328	1319	0.69	22.91	2.42	34.89
Non-Merit	654	623	4.65	10.83	1.15	16.49
Economic Services	3239	2965	8.45	51.52	5.45	78.46
Merit I	67	67	0.96	1.16	0.12	1.76
Merit II	637	628	1.49	10.90	1.15	16.60
Non-Merit	2535	2271	10.40	39.46	4.17	60.09
Merit	2310	2278	1.36	39.58	4.19	60.28
Non-Merit	3188	2894	9.22	50.29	5.32	76.58
Total	5498	5172	5.92	89.87	9.51	136.86

Memo Items: GSDP 1998-99 (at current prices) Rs. 54414 crore; Revenue Receipts Rs. 5756 crore; Fiscal Deficit Rs. 3779 crore.

Table S19(b): Subsidy Estimates: Selected Heads: Punjab: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	2096	163	2259	52	2207	2.29
General Education <i>of which</i>	1148	8	1156	8	1148	0.68
<i>Elementary Education</i>	27	1	28	2	26	7.54
<i>Secondary Education</i>	941	3	943	4	939	0.46
<i>Univ. and Higher Education</i>	163	2	165	1	163	0.80
<i>Other General Education</i>	18	3	21	0	21	0.27
Techn. Edu., Sports, Art and Culture	88	24	112	1	110	0.92
Medical and Public Health <i>of which</i>	450	20	470	15	454	3.27
<i>Public Health</i>	36	0	36	0	36	0.00
<i>Medical</i>	414	20	434	15	419	3.54
Family Welfare	40	6	46	0	46	0.46
Water Supply and Sanitation	123	4	126	10	117	7.66
Housing	6	54	60	2	58	3.29
Urban Development	15	26	41	2	39	5.50
Information and Broadcasting	12	0	12	0	12	0.57
Welfare of SCs, STs and other BCs	48	12	61	0	61	0.04
Labour and Employment	61	0	61	3	58	4.45
Social Welfare and Nutrition	103	2	105	10	95	9.54
Other Social Services	1	8	9	1	8	6.97
Economic Services	1170	2069	3239	274	2965	8.45
Agr., Rural Dev. & Allied Activities*	399	97	496	28	468	5.59
Irrigation and Flood Control	290	665	955	16	939	1.72
Energy	1	992	993	4	989	0.37
Industry and Minerals*	37	135	172	3	169	1.52
Transport	418	123	541	216	325	39.98
Science, Technology and Environment	1	5	6	0	6	0.08
General Economic Services	24	52	76	7	69	9.09
Social and Economic Services	3266	2232	5498	325	5172	5.92
Total Surplus Sectors	4	-50	-47	18	-65	
Food Storage and Warehousing	0	-48	-48	0	-48	
Other Agricultural Programmes	3	-3	0	15	-14	
Non-Ferrous Mining and Metal Industries	1	0	1	3	-2	
Total Net of Surplus	3270	2182	5451	344	5108	6.31

Note: * Contains surplus sectors/heads which are separately shown.

Table S20(a): Subsidy Estimates: Rajasthan: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	4705	4543	3.45	52.95	6.23	88.19
Merit I	1090	1088	0.19	12.68	1.49	21.12
Merit II	1705	1697	0.48	19.78	2.33	32.94
Non-Merit	1911	1758	7.97	20.50	2.41	34.14
Economic Services	4416	4108	6.97	47.89	5.64	79.76
Merit I	81	81	0.00	0.95	0.11	1.58
Merit II	1260	1227	2.65	14.30	1.68	23.82
Non-Merit	3075	2800	8.93	32.64	3.84	54.36
Merit	4136	4093	1.06	47.70	5.61	79.45
Non-Merit	4985	4559	8.56	53.13	6.25	88.50
Total	9122	8651	5.16	100.84	11.87	167.95

Memo Items: GSDP 1998-99 (at current prices) Rs. 72894 crore; Revenue Receipts Rs. 8579 crore; Fiscal Deficit Rs. 5151 crore.

Table S20(b): Subsidy Estimates: Selected Heads: Rajasthan: 1998-99

Social and Economic Services	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	3995	710	4705	162	4543	3.45
General Education <i>of which</i>	1888	18	1906	6	1901	0.30
Elementary Education	708	12	720	1	719	0.10
Secondary Education	959	3	962	3	959	0.34
Univ. and Higher Education	189	3	191	1	190	0.78
Other General Education	32	1	33	0	33	0.66
Techn. Edu., Sports, Art and Culture	53	10	62	2	60	3.94
Medical and Public Health <i>of which</i>	773	45	819	15	804	1.81
Public Health	60	0	60	0	60	0.00
Medical	714	45	759	15	744	1.95
Family Welfare	157	17	173	0	173	0.10
Water Supply and Sanitation	555	561	1116	124	992	11.10
Housing	41	32	73	4	69	5.15
Urban Development	278	5	283	1	282	0.19
Information and Broadcasting	7	0	8	0	8	0.67
Welfare of SCs, STs and other BCs	76	9	85	0	85	0.01
Labour and Employment	37	0	37	2	35	5.00
Social Welfare and Nutrition	125	4	129	1	128	1.01
Other Social Services	5	9	14	8	6	56.23
Economic Services	2018	2399	4416	308	4108	6.97
Agr., Rural Dev. & Allied Activities*	721	281	1002	49	953	4.86
Irrigation and Flood Control	680	930	1609	42	1567	2.61
Energy	301	727	1028	190	837	18.52
Industry and Minerals*	85	122	207	9	197	4.52
Transport	182	316	498	4	494	0.74
Science, Technology and Environment	5	0	5	0	5	0.00
General Economic Services	44	24	68	14	54	20.62
Social and Economic Services	6013	3109	9122	470	8651	5.16
Total Surplus Sectors	29	36	66	313	-247	
Food Storage and Warehousing	2	2	3	4	-1	
Non-Ferrous Mining and Metal Industries	28	35	63	309	-246	
Total Net of Surplus	6042	3145	9188	783	8404	8.52

Note: * Contains surplus sectors/heads which are separately shown.

Table S21(a): Subsidy Estimates: Sikkim: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	220	219	0.43	15.23	28.04	149.49
Merit I	89	89	0.04	6.15	11.33	60.40
Merit II	28	28	0.31	1.95	3.59	19.12
Non-Merit	104	103	0.80	7.13	13.12	69.97
Economic Services	179	164	6.21	11.39	20.96	111.78
Merit I	5	5	0.00	0.32	0.59	3.17
Merit II	97	94	2.30	6.55	12.06	64.28
Non-Merit	174	159	8.55	11.07	20.37	108.61
Merit	218	216	1.07	14.98	27.57	146.98
Non-Merit	278	262	5.66	18.20	33.49	178.58
Total	496	478	3.64	33.17	61.06	325.56

Memo Items: GSDP 1998-99 (at current prices) Rs. 783 crore; Revenue Receipts Rs. 1441 crore; Fiscal Deficit Rs. 147 crore.

Table S21(b): Subsidy Estimates: Selected Heads: Sikkim: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	173	47	220	1	219	0.43
General Education <i>of which</i>	78	7	85	0	85	0.10
<i>Elementary Education</i>	69	3	71	0	71	0.04
<i>Secondary Education</i>	7	3	11	0	11	0.50
<i>Univ. and Higher Education</i>	2	1	2	0	2	0.00
<i>Other General Education</i>	1	0	1	0	1	0.00
Techn. Edu., Sports, Art and Culture	3	1	4	0	4	0.83
Medical and Public Health <i>of which</i>	35	10	45	0	45	0.93
<i>Public Health</i>	3	0	3	0	2	2.03
<i>Medical</i>	32	10	43	0	42	0.86
Family Welfare	5	0	5	0	5	0.00
Water Supply and Sanitation	10	22	31	0	31	0.48
Housing	24	6	30	0	29	0.51
Urban Development	5	1	6	0	6	0.00
Information and Broadcasting	2	0	2	0	2	4.58
Welfare of SCs, STs and other BCs	5	0	5	0	5	0.00
Labour and Employment	1	0	1	0	1	2.80
Social Welfare and Nutrition	6	0	6	0	6	0.12
Other Social Services	1	0	1	0	1	0.00
Economic Services	152	124	276	17	258	6.21
Agr., Rural Dev. & Allied Activities	61	8	69	2	67	3.04
Irrigation and Flood Control	6	0	6	0	6	0.00
Energy	22	54	76	6	69	8.51
Industry and Minerals	7	9	15	1	15	4.33
Transport	32	51	83	7	75	9.08
Science, Technology and Environment	1	0	1	0	1	0.00
General Economic Services	22	3	26	0	25	1.60
Social and Economic Services	325	171	496	18	478	3.64
Total Surplus Sectors						
Total Net of Surplus	0	0	0	0	0	0.00

Note: * Contains surplus sectors/heads which are separately shown.

Table S22(a): Subsidy Estimates: Tamil Nadu: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	6717	6423	4.37	45.04	5.39	134.45
Merit I	2462	2405	2.30	16.87	2.02	50.35
Merit II	2458	2397	2.48	16.81	2.01	50.17
Non-Merit	1797	1621	9.81	11.36	1.36	33.93
Economic Services	4949	4607	6.90	32.31	3.87	96.45
Merit I	67	64	4.39	0.45	0.05	1.34
Merit II	1751	1625	7.22	11.39	1.36	34.01
Non-Merit	3131	2919	6.78	20.47	2.45	61.10
Merit	6738	6491	3.67	45.52	5.45	135.87
Non-Merit	4928	4539	7.88	31.83	3.81	95.02
Total	11666	11030	5.45	77.35	9.26	230.90

Memo Items: GSDP 1998-99 (at current prices) Rs. 119080 crore; Revenue Receipts Rs. 14261 crore; Fiscal Deficit Rs. 4777 crore.

Table S22(b): Subsidy Estimates: Selected Heads: Tamil Nadu:1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	6211	506	6717	294	6423	4.37
General Education <i>of which</i>	2502	26	2528	31	2497	1.22
Elementary Education	682	1	683	0	682	0.03
Secondary Education	1401	17	1418	23	1395	1.65
Univ. and Higher Education	285	4	290	6	283	2.20
Other General Education	133	4	138	1	137	0.55
Techn. Edu., Sports, Art and Culture	170	19	189	8	181	4.25
Medical and Public Health <i>of which</i>	1278	49	1327	63	1263	4.77
Public Health	133	1	134	0	134	0.00
Medical	1144	48	1193	63	1129	5.30
Family Welfare	192	6	198	0	198	0.05
Water Supply and Sanitation	263	160	423	59	364	14.05
Housing	74	82	157	30	127	18.98
Urban Development	124	102	226	22	204	9.83
Information and Broadcasting	19	7	26	3	22	13.26
Welfare of SCs, STs and other BCs	449	39	488	2	486	0.34
Labour and Employment	92	0	92	19	73	20.15
Social Welfare and Nutrition	1026	9	1035	55	980	5.29
Other Social Services	22	8	30	2	28	6.22
Economic Services	3643	1307	4949	342	4607	6.90
Agr., Rural Dev. & Allied Activities	2018	226	2244	215	2029	9.59
Irrigation and Flood Control	395	224	619	14	606	2.22
Energy	1	269	270	25	246	9.07
Industry and Minerals*	299	223	522	43	479	8.22
Transport	339	358	697	29	668	4.14
Science, Technology and Environment	7	0	7	0	7	0.00
General Economic Services	583	6	589	16	572	2.77
Social and Economic Services	9853	1813	11666	635	11031	5.45
Total Surplus Sectors	4	10	14	104	-91	
Non-Ferrous Mining and Metal Industries	4	10	14	104	-91	
Total Net of Surplus	9857	1823	11680	740	10940	6.33

Note: * Contains surplus sectors/heads which are separately shown.

Table S23(a): Subsidy Estimates: Tripura: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	514	511	0.50	40.30	13.40	432.05
Merit I	234	233	0.04	18.40	6.12	197.22
Merit II	166	166	0.21	13.07	4.34	140.08
Non-Merit	114	112	1.43	8.84	2.94	94.75
Economic Services	273	495	5.44	39.04	12.98	418.52
Merit I	10	10	0.00	0.77	0.26	8.26
Merit II	251	248	0.96	19.59	6.52	210.05
Non-Merit	263	237	9.92	18.67	6.21	200.20
Merit	661	657	0.51	51.82	17.23	555.62
Non-Merit	377	349	7.35	27.51	9.15	294.95
Total	1037	1006	2.99	79.34	26.38	850.57

Memo Items: GSDP 1998-99 (at current prices) Rs. 3814 crore; Revenue Receipts Rs. 1268 crore; Fiscal Deficit Rs. 118 crore.

Table S23(b): Subsidy Estimates of Selected Heads: Tripura: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	435	78	514	3	511	0.50
General Education	247	6	253	0	253	0.14
<i>Elementary Education</i>	<i>124</i>	<i>1</i>	<i>125</i>	<i>0</i>	<i>125</i>	<i>0.04</i>
<i>Secondary Education</i>	<i>93</i>	<i>4</i>	<i>97</i>	<i>0</i>	<i>97</i>	<i>0.09</i>
<i>Univ. and Higher Education</i>	<i>12</i>	<i>1</i>	<i>13</i>	<i>0</i>	<i>12</i>	<i>1.68</i>
<i>Other General Education</i>	<i>18</i>	<i>0</i>	<i>18</i>	<i>0</i>	<i>18</i>	<i>0.00</i>
Technical Edu., Sports, Art and Culture	13	1	14	0	14	0.00
Medical and Public Health <i>of which</i>	45	6	51	1	50	1.27
<i>Public Health</i>	<i>4</i>	<i>0</i>	<i>4</i>	<i>0</i>	<i>4</i>	<i>0.00</i>
<i>Medical</i>	<i>41</i>	<i>6</i>	<i>46</i>	<i>1</i>	<i>46</i>	<i>1.38</i>
Family Welfare	15	0	15	0	15	0.35
Water Supply and Sanitation	6	41	47	1	46	1.34
Housing	1	22	23	0	23	0.94
Urban Development	7	1	9	0	9	0.00
Information and Broadcasting	5	0	5	0	5	0.61
Welfare of SCs, STs and other BCs	61	0	61	0	61	0.00
Labour and Employment	3	0	3	0	3	1.97
Social Welfare and Nutrition	31	2	32	1	32	1.69
Other Social Services	1	0	1	0	1	9.11
Economic Services	295	228	524	28	495	5.44
Agr., Rural Dev. & Allied Activities	197	48	245	4	241	1.75
Irrigation and Flood Control	18	28	46	0	46	0.09
Energy	54	67	122	20	102	16.42
Industry and Minerals	12	14	26	4	22	14.31
Transport	8	70	79	0	79	0.00
Science, Technology and Environment	0	0	1	0	1	0.40
General Economic Services	5	0	5	0	4	9.30
Social and Economic Services	731	307	1037	31	1006	2.99
Total Surplus Sectors	0	0	0	0	0	0.00

Note: * Contains surplus sectors/heads which are separately shown.

Table S24(a): Subsidy Estimates: Uttar Pradesh: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	8989	8804	2.06	50.66	5.16	75.68
Merit I	4487	4469	0.39	25.72	2.62	38.42
Merit II	2950	2836	3.86	16.32	1.66	24.38
Non-Merit	1553	1499	3.44	8.63	0.88	12.89
Economic Services	9675	9306	3.82	53.55	5.45	79.99
Merit I	173	173	0.01	0.99	0.10	1.48
Merit II	3560	3365	5.47	19.36	1.97	28.93
Non-Merit	5943	5768	2.94	33.19	3.38	49.58
Merit	11169	10843	2.92	62.39	6.35	93.21
Non-Merit	7495	7267	3.04	41.82	4.26	62.47
Total	18664	18110	2.97	104.21	10.60	155.68

Memo Items: GSDP 1998-99 (at current prices) Rs. 170780 crore; Revenue Receipts Rs. 17379 crore; Fiscal Deficit Rs. 11633 crore.

Table S24(b): Subsidy Estimates: Selected Heads: Uttar Pradesh: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	8387	602	8989	185	8804	2.06
General Education <i>of which</i>	5468	43	5511	91	5421	1.64
<i>Elementary Education</i>	3225	1	3226	0	3226	0.01
<i>Secondary Education</i>	1754	23	1777	88	1689	4.97
<i>Univ. and Higher Education</i>	398	17	415	2	413	0.48
<i>Other General Education</i>	92	1	92	0	92	0.06
Techn. Edu., Sports, Art and Culture	154	47	201	11	190	5.35
Medical and Public Health <i>of which</i>	968	121	1089	33	1056	3.03
<i>Public Health</i>	192	0	192	0	192	0.00
<i>Medical</i>	776	121	897	33	864	3.68
Family Welfare	209	23	233	11	222	4.63
Water Supply and Sanitation	396	23	419	1	418	0.13
Housing	13	118	131	4	127	3.05
Urban Development	145	87	232	2	230	0.83
Information and Broadcasting	33	3	36	3	33	9.62
Welfare of SCs, STs and other BCs	630	134	764	0	764	0.01
Labour and Employment	107	0	107	12	94	11.64
Social Welfare and Nutrition	264	3	267	17	250	6.42
Other Social Services*	0	0	0	0	0	0.00
Economic Services	4415	5260	9675	369	9306	3.82
Agr., Rural Dev. & Allied Activities*	2531	745	3276	205	3071	6.25
Irrigation and Flood Control	1428	1349	2777	85	2693	3.04
Energy	0	1765	1765	40	1724	2.29
Industry and Minerals*	87	592	679	10	669	1.45
Transport	322	790	1112	23	1089	2.10
Science, Technology and Environment	7	0	7	0	7	0.00
General Economic Services*	40	19	59	7	52	11.14
Social and Economic Services	12802	5862	18664	554	18110	2.97
Total Surplus Sectors	87	-43	45	200	-155	
Other Social Services	2	5	7	40	-33	
Food Storage and Warehousing	65	-66	-1	0	-1	
Non-Ferrous Mining and Metal Industries	7	21	28	146	-118	
Other General Economic Services	14	-2	11	14	-2	
Total Net of Surplus	12889	5819	18709	754	17955	4.03

Note: * Contains surplus sectors/heads which are separately shown.

Table S25(a): Subsidy Estimates: West Bengal: 1998-99

	Cost (Rs. crore)	Subsidy (Rs. crore)	Recovery Rate (Percent)	Subsidy as Percentage of		
				Revenue Receipts	GSDP	Fiscal Deficit
Social Services	5745	5675	1.21	60.46	4.90	79.83
Merit I	1670	1663	0.00	17.72	1.44	23.40
Merit II	2769	2762	0.25	29.43	2.39	38.86
Non-Merit	1306	1250	4.28	13.31	1.08	17.58
Economic Services	3022	4605	2.73	49.06	3.98	64.77
Merit I	16	16	0.00	0.17	0.01	0.22
Merit II	1712	1677	2.02	17.86	1.45	23.59
Non-Merit	3007	2912	3.14	31.03	2.52	40.97
Merit	6166	6118	0.78	65.18	5.29	86.06
Non-Merit	4312	4162	3.49	44.34	3.60	58.54
Total	10479	10280	1.89	109.52	8.88	144.61

Memo Items: GSDP 1998-99 (at current prices) Rs. 115719 crore; Revenue Receipts Rs. 9387 crore; Fiscal Deficit Rs. 7109 crore.

Table S25(b): Subsidy Estimates of Selected Heads: West Bengal: 1998-99

Social and Economic Services	(Rs. crore)					
	Cost			Receipts	Subsidy	Recovery Rate (Percent)
	Current	Capital	Total			
Social Services	5502	242	5745	69	5675	1.21
General Education	2892	6	2899	4	2895	0.13
<i>Elementary Education</i>	962	0	962	0	962	0.00
<i>Secondary Education</i>	1485	1	1486	0	1486	0.00
<i>Univ. and Higher Education</i>	359	4	363	0	363	0.03
<i>Other General Education</i>	86	1	87	4	84	4.25
Technical Education, Sports, Art and Culture	128	19	147	2	145	1.22
Medical and Public Health <i>of which</i>	982	44	1026	35	991	3.43
<i>Public Health</i>	138	1	138	0	138	0.00
<i>Medical</i>	845	43	888	35	853	3.96
Family Welfare	150	16	166	0	166	0.16
Water Supply and Sanitation	279	3	282	1	281	0.41
Housing	35	53	88	7	81	8.49
Urban Development	461	58	520	1	519	0.21
Information and Broadcasting	24	4	29	1	28	2.81
Welfare of SCs, STs and other BCs	156	28	184	0	184	0.00
Labour and Employment	59	0	59	1	58	1.85
Social Welfare and Nutrition	287	5	292	6	286	2.17
Other Social Services	48	6	54	10	43	18.99
Economic Services	2493	2241	4734	129	4605	2.73
Agr., Rural Dev. & Allied Activities	1601	136	1737	91	1646	5.25
Irrigation and Flood Control	410	388	798	9	789	1.18
Energy	52	989	1042	4	1038	0.34
Industry and Minerals*	116	409	525	7	518	1.31
Transport	284	305	589	12	577	2.10
Science, Technology and Environment	0	0	0	0	0	0.00
General Economic Services	29	14	42	6	37	13.24
Social and Economic Services	7995	2483	10479	198	10280	1.89
Total Surplus Sectors	2	1	3	9	-6	
Non-Ferrous Mining and Metal Industries	2	1	3	9	-6	
Total Net of Surplus	7998	2484	10482	207	10274	1.98

Note: * Contains surplus sectors/heads which are separately shown.