Government Subsidies in India

D.K. Srivastava
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ISBN : 81-900518-1-4

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ISBN : 81-900518-1-4

Price : Rs. 285
US $ 15

Cover & layout design by

S.B. Maan, NIPFP

Printed in India at Print Service, New Delhi.

Preface

This work is an updated version of the background study prepared for the discussion paper on ***Government Subsidies in India***, brought out by the Ministry of Finance, Government of India in May, 1997. The main changes in this updated version relate to the use of accounts figures rather than revised estimates in the projections for 1994-95, and separate estimation of subsidies for four special category States which also necessitated some modification in the methodology for arriving at all-State estimates for a common year, for special as well as non-special category States. The revision does not lead to any noticeable change in the overall magnitudes, or subsidy figures taken as percentage of GDP, but the recovery rates turn out to be even lower than the earlier estimates. An abridged version of the foreword to the background study by Dr. P. Shome, the then Director of the Institute, is included here. The magnitudes referred to there have been updated since.

Dr. C. Bhujanga Rao and Mr. H.K. Amarnath have provided substantial help in preparing this updated version. Mr. R. S. Tyagi provided adept secretarial assistance. The camera-ready text for printing was designed and prepared by Mr. S. B. Maan.

Although the study was initially undertaken at the instance of the Ministry of Finance, Government of India, the views expressed here, and any errors, are solely the responsibility of the authors.

August 1, 1997

D. K. Srivastava
Professor-in-Charge

Preface to Background Study

The National Institute of Public Finance and Policy is an autonomous non-profit organisation established for carrying out research, undertaking consultancy work, and imparting training in the field of public finance and policy.

It was at the instance of the Ministry of Finance, following a commitment made by Shri P. Chidambaram, Honourable Minister of Finance in his 1996-97 budget speech to provide a discussion paper on subsidies so as to highlight the visible and hidden subsidies in the system for the purpose of having an informed debate on the subject, that this study was authored by a research team at NIPFP comprising D. K. Srivastava, Tapas K. Sen, and H. Mukhopadhyay with a foreword by Parthasarathi Shome. Additional research inputs were provided by Charu C. Garg, T. S. Rangamannar and C. Bhujanga Rao, and research assistance came from H. K. Amarnath, Gita Bhatnagar and Jagdish Arya. Secretarial assistance was provided by R. S. Tyagi.

The study was completed under considerable pressure of time, in a period of about five months.

The Governing Body of the Institute does not take responsibility for the views expressed in this report. That responsibility belongs to the authors of the report.

Parthasarathi Shome
Director

March, 1997.

Foreword

Subsidies can be a powerful welfare augmenting instrument of fiscal policy. However, their beneficial potential is at its best when they are transparent, well targeted, and suitably designed for practical implementation. In India, although subsidies account for a significant share of government expenditures, only a small part of the subsidies is made explicit in the budget documents. Since substantial subsidies remain implicit in the provision for social and economic services, they easily grow out of control putting further pressure on the fiscal deficit. In addition to having become unduly large in volume, our subsidies are mainly input-based, and are generally inefficiently administered. As a result, it has been difficult to control or comprehend their impact fully, giving rise to concerns about their ramifications for the pattern of income distribution. Problems related to their effects, and the persistent pressure on fiscal deficit caused by them, in turn, undermine the quality of fiscal policy in the economy.

The proliferation of subsidies in India could perhaps be linked to the expanse and growth of governmental activities. Apart from the basic and traditional functions like defence and maintenance of law and order, the government has extended itself into producing a wide range of commodities in competition with the private sector. In many of these activities, the government is unable to recover its costs, giving rise to an undue proliferation of subsidies. A quantification of the extent of unrecovered costs, disaggregated across the spectrum of governmental activities is, therefore, necessary to reform the existing structure of subsidies. Herein lies the objective of this discussion paper. It is to provide an estimate of (i) the aggregate volume of governmental subsidies, (ii) its distribution across services provided by the government and (iii) the extent of subsidisation in different services. Some general observations on the incidence of the major subsidies, and their implications for efficiency, are also made.

In choosing its approach and methodology, the NIPFP research team considered it relevant to distinguish between subsidies on merit goods vis-a-vis other subsidies and to focus on budget-based subsidies. Subsidies flowing towards such vital areas as health, education and environment stand on a footing quite different from those going, for example, to agriculture, industry and transport. In the former case, the justification arises because the benefits of subsidies spread well beyond the immediate beneficiaries.

In general, subsidies are advocated when the social benefits of a particular commodity or service is greater than the sum of the private benefits of the consumers. For example, the private benefits of research and development for the firms involved may not justify a large expenditure by those firms, but the overall technological progress made in the process may have much larger benefits for the economy as a whole. This difference between the social benefits and the sum of private benefits arises due to what economists call "externalities". Other examples of activities involving substantial externalities include inoculation against infectious diseases, environmental protection and a minimum level of education. It should be clear that there would be a gap between the private valuation of the benefits from such goods or services and their true value to society. The normal market pricing will therefore not operate efficiently, and subsidies can provide the necessary corrective in such cases. Thus, the use of subsidies signals society's desire for greater production and/or consumption of the subsidised commodity. Besides, subsidies are often used to redistribute income as also to ensure provision of minimum needs for all.

However, in the context of certain services which do involve large externalities, it is not relevant to consider subsidies. These are known as public goods which are characterised by (a) the inability to exclude anyone from enjoying the benefits of the service and (b) any one person's consumption of the service not affecting the consumption of the same by others. In the case of public goods like national defence, it is difficult to assess the benefits as well as the demand for such services. As a result, normal market pricing mechanism breaks down completely in such cases. Government expenditures on such services are therefore entirely financed through taxes. Thus, the category of goods and services that ideally qualify for subsidies should have two important characteristics: (i) they should give rise to substantial externalities and (ii) it should be possible to price them, even if imperfectly. These are known as 'quasi-public goods' or 'merit goods'.

In practice, not all subsidised goods and services have large externalities. When such subsidies proliferate, they may actually have adverse implications for the efficiency of the overall economic system instead of promoting it. They are often justified on the grounds of being conducive to long run economic growth, or of being redistributive in nature, or as promoting the use of the subsidised commodity. Such claims need to be assessed carefully as they can be based on false or outdated premises and may even be originating from non-economic factors. Also, the costs and benefits of such subsidies need to be weighed against each other. Therefore, a periodic review of the subsidies is necessary to make a judicious selection of the subsidies that promote the maximum enhancement of welfare within the overall budgetary constraints of the government. Further, the method of providing subsidies may allow leakages, causing loss of social welfare and additional budgetary costs. Thus, the administration or delivery mechanisms for the provision of subsidies assumes significance.

A real dent on the fiscal deficit can be made by operating on the voluminous subsidies flowing towards services that should have a low priority for direct participation by the government. The economic cost of unjustifiable subsidies is evinced in their dependence on a high-level of fiscal deficit as a result of which interest-rates also remain high. Consequently, high priority investment and justifiable subsidies are crowded out from the government sector, and investment in general is crowded out from the private sector.

In the context of recovery rates, it may be noted that an increase in user charges would lead to several effects which jointly mitigate the pressure on the fiscal deficit. First, excessive demand for scarce resources would be curtailed, releasing resources for other sectors where their productivity may be higher. This would augment systemic efficiency. Second, the average cost of providing the service would fall in those cases where, because of the extended governmental operations, the costs have become very high. The relative shares in costs reflect a pattern which is almost similar to the pattern of relative shares of subsidies in total subsidies, except that for the economic services, the share of costs in total costs is higher than the share of corresponding subsidies in total subsidies. As such, it is the economic services, especially of the non-merit kind, where effective action towards raising the relevant user charges would have the largest impact in improving the average effective rate. The sectors that ought to be especially targeted for action are: agriculture, irrigation, industries, power, transport and higher education.

Unduly low user prices, reflected in correspondingly low recovery rates, lead to excessive demand for scarce resources. Thus, while power and water may be overused, or even wasted in some sectors, other sectors remain starved of such vital resources leading to supply side bottlenecks and a reduction in the overall efficiency of the system. Subsidies also cause distortions in relative prices leading to a misallocation of resources. Oversubsidisation of diesel and overuse of nitrogenous fertilisers and urea may be cited as examples of distortions in the relative use of a good in a given product range that are induced by subsidies.

In general, subsidies that are administered to final consumption or production are considered to be more desirable since they accrue to the target beneficiaries directly. Subsidies on inputs are easily dispersed to the non-target population, instead. In our subsidy regime, considerable subsidies are introduced through inputs, e.g., feedstock of fertiliser, fertiliser, electricity, diesel and irrigation. Such diffusion inhibits the performance of a subsidy regime. Further, even where subsidies are on final consumption such as food subsidy, targeting remains poor and leakages are extensive. Leakages as well as poor design of subsidy regimes tend to make it difficult to ensure equity objectives. For example, a significant portion of subsidies in higher education is probably appropriated by the middle to high income groups. Health subsidies also seem to exhibit a non-rural and pro-rich bias. Thus our subsidy regime cannot be said to be tangibly progressive and could in fact be regressive.

It is often not realised as to how far our fiscal system depends on 'indirect' intervention. Both indirect taxes and subsidies constitute indirect fiscal intervention. In both cases, the degree of indirectness is higher when it is the inputs that are taxed or subsidised. Together, indirect taxes and subsidies amounted to nearly 27 per cent of GDP in 1994-95. The quality of fiscal intervention is highly compromised with such a heavy dependence of indirect fiscal instruments. In such a context, an effective grip on distributional objectives is weakened and the productive efficiency of the system is compromised due to allocative distortions. A generic problem in our subsidy-regime is that subsidies are generally input-based. As such they diffuse out to final goods in a broad spectrum. The benefits of these subsidies are therefore apportioned among consumers according to their share in the purchases of final goods. Clearly, since the relatively better-off also have the larger shares in final purchases, they appropriate a relatively larger share of the subsidies.

The distributional pattern of the benefits of the subsidies does not appear to be consistent with the equity objectives. The predominant beneficiaries of the food subsidies are urban non-poor. A major portion of fertiliser subsidies accrues to the fertiliser industry. The per capita subsidy on power is much larger in richer States as compared to that for the poorer States. A large amount of subsidies is absorbed by public enterprises. The pattern of inter-State distribution of subsidies on social and economic services indicates much higher levels of per capita subsidies for high income States which progressively fall as we move to the middle and low income States.

Subsidies are inducing a wastage of scarce resources, and are promoting inefficiency. Extremely low recovery rates in sectors relating to irrigation water, electricity and diesel lead to their wasteful use, having been drawn away from other sectors in which their productivity would have been higher. The schemes of retention prices for the fertiliser and petroleum sectors are not designed to encourage efficiency. A significant and increasing portion of food subsidies does not filter through to the consumers but is absorbed in increasing costs of handling and storing foodgrains. Obviously, scrapping inefficiency-promoting subsidies and increasing user charges in the cases of oversubsidisation, would usher a leaner and yet, more effective subsidy regime.

Subsidies may be said to have suffered from three kinds of inefficiencies. First, there is global inefficiency because many subsidised inputs like water and electricity are wasted and sub-optimally utilised. Second, government, when acting as a producer often turns out to be an inefficient economic agent. It is able to produce or provide goods at costs that are usually much higher than the correspondings cost for a comparable private producer. Third, there is the inefficiency of administering subsidies itself. For example, food subsidies may be administered through a better mechanism (e.g., a coupon system) where inefficiencies in procurement, storage and distribution can be avoided.

The case of petroleum subsidies has been examined as an important regulatory subsidy which is not directly a part of the Central budget but arises due to an administered price regime for petroleum products. Petroleum subsidies ensue from an administered price regime governing the sale of petroleum products, and thus provide an important example of an off-budget regulatory subsidy. The interface between the government and the oil industry is managed by the Oil Coordination Committee (set up in July, 1975) which regulates and monitors the production of petroleum products in India,

prepares long term demand estimates, formulates new oil industry projects, assists in reviewing and implementing pricing policies concerning petroleum products, and manages the oil pool accounts. Expert committees appointed by the Central government periodically review the pricing structure. Apart from a huge volume of subsidy, estimated at Rs. 18,440 crore in 1996-97, differential rates of subsidy over the entire range of petroleum products also induce distortions in the relative use of different petroleum products having serious implications for allocative efficiency.

With fiscal deficit targets legitimately being in focus, and tax rates almost lowered into their long-term slots, expenditure levels need to be sustained and restructured, through revenue-buoyancy not only from a broader tax base but also from non-tax revenue, particularly, increased user charges. Increase in user charges will have efficiency effects as well as revenue effects. In particular, wastage of scarce resources like water and power will be discouraged, and they will be drawn into more productive sectors. Revenue will increase and in many cases, the average cost of providing governmental services would also fall.

The study concludes with the position that subsidy reforms should be directed towards (i) reduction of their size, (ii) making them of finite duration, (iii) using them for strict economic objectives, (iv) making them transparent and (v) administering them through final goods, with a view to maximising their reach towards the target population at minimum cost. Recovery rates, even for non-merit services, are very low. An increase in user charges would substantially mitigate pressures on the fiscal deficit. There is clear scope for increasing user charges in areas of education, agriculture, irrigation, industries, power and transport.

Parthasarathi Shome

Contents

List of Tables

Appendix Tables

Concepts, Issues and Methodology of Estimation

1

INTRODUCTION

A subsidy, often viewed as the converse of a tax, is a potent welfare-augmenting instrument of fiscal policy. Derived from the Latin word 'subsidium', meaning 'troops stationed in reserve', a subsidy literally implies coming to assistance from behind. Like an indirect tax, it can alter relative prices and budget constraints and thereby affect decisions concerning production, consumption, and allocation of resources. Subsidies in areas such as education, health and environment merit justification on grounds that their benefits are spread well beyond the immediate recipients, and are shared by the population at large, present and future. For many other subsidies, however, the case is not so clearcut. Arising due to extensive governmental participation in a variety of economic activities, there are many subsidies that shelter inefficiencies or are of doubtful distributional credentials. Subsidies that are ineffective or distortionary need to be weaned out, for an undiscerning, uncontrolled and opaque growth of subsidies can be deleterious for a country's public finances.

In India, as also elsewhere, subsidies now account for a significant part of government expenditures although, like that of an iceberg, only their tip may be visible. It has often been contended that subsidies have spun out of control. The commitment made by the Finance Minister on July 22, 1996 in his budget speech for 1996-97 (Part A, para 29, p. 10) for providing a discussion paper on subsidies which will "list all the subsidies, visible and hidden" for the purpose of having an informed debate on the "overall level of subsidies ... and their appropriate targeting", reflects a keenness to deal squarely with a vital fiscal issue, and shares a similar concern expressed elsewhere in the world in recent years, in individual countries[1] as well as by international institutions.[2] Any programme of fiscal correction would need to recast our extensive subsidy regime with a view to reducing its quantum and increasing its efficacy. Apart from explicit subsidies like those on food,

fertiliser and exports, a substantial portion of subsidies remain hidden in the provision of social and economic services by the Central and the State governments. While, in principle, it may be possible to recover the costs of providing these services from their users, overwhelmingly large portions of these costs remain unrecovered. These implicit subsidies not only cause a considerable draft on the otherwise strained fiscal resources, but may also fail on the anvil of equity and efficiency.

In the context of their economic effects, subsidies have been subjected to an intense debate in India in recent years. Issues like the distortionary effects of agricultural subsidies on the cropping pattern, their impact on inter-regional disparities in development, the sub-optimal use of scarce inputs like water and power induced by subsidies, and whether subsidies lead to systemic inefficiencies have been examined at length. Inadequate targeting of subsidies, particularly the food subsidies, has especially been picked up for discussion. While we make a reference to some of these issues, our major concern in this book is to provide a comprehensive estimate of budget-based subsidies in India. Comparisons of subsidies across countries are often based on national income accounts, where a relatively narrower view of subsidies is taken, and as such subsidies are understated. In the ensuing discussion, a more comprehensive view of subsidies is taken. Attention is focused on bringing out the magnitude of the implicit subsidies, in addition to the explicit ones, so as to form an idea as to how heavy a draft do they constitute on the scarce fiscal resources of the economy. As such, the objective of this study is to provide an estimate of (i) the aggregate volume of governmental subsidies, (ii) its distribution across services and (iii) the extent of subsidisation in different services. Some of the major subsidies in India have been discussed individually, including the distributional pattern of their benefits. The Central and State governments are both covered.

While most subsidies emanate from the budgets, there are others which may be quasi-fiscal, or completely off-budget, arising out of regulations and administered price regimes. In this study, however, the focus is on budget-based subsidies, and our estimates do not include off-budget subsidies, although we do refer to some of these in our subsequent discussions. The outline of this study is as follows. This introductory chapter provides an analytical discussion of subsidies, their meaning, objectives, alternative modes and other related issues including alternative methodologies of estimating subsidies. In Chapter 2, a discussion along with a comprehensive estimate of the Central government subsidies, explicit as well as implicit, is presented. In Chapter 3, a similar discussion and estimation of State government subsidies

are dealt with. A comprehensive estimate of subsidies at the all-India level is put together in Chapter 4. Issues concerning the relative distribution of the benefits of subsidies among different classes of beneficiaries are discussed in Chapter 5. Finally, in Chapter 6 the conclusions are summarised.

SUBSIDY: MEANING AND ECONOMIC RATIONALE

a. Meaning of Subsidy

In defining a subsidy, as with many other concepts, economists have not settled upon a commonly acceptable definition [as noted by Prest (1974)]. 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) observed that "the concept of a subsidy is just too elusive to even attempt to define". The term "subsidy" has been used in the literature in a variety of ways, often implying different meanings and connotations. The dictionary meaning (Concise Oxford) of the term itself is quite helpful: "money granted by State, public body, etc., to keep down the prices of commodities, etc.". The Joint Economic Committee of the U.S. Congress (1972) had defined subsidy as government assistance for which no equivalent compensation is received in return, but the assistance is conditioned "on a particular performance by the recipient".

b. Objectives of Subsidies

Subsidies, by means of creating a wedge between consumer prices and producer costs, lead to changes in demand/supply decisions. Subsidies are often aimed at: (i) inducing higher consumption/production; (ii) offsetting market imperfections including internalisation of externalities; and (iii) achievement of social policy objectives including redistribution of income. If markets do not allocate resources to their most efficient use, subsidies may be used to offset market imperfections. Several examples may be cited. As a result of free riding, there may be under-investment in research and development activities. A subsidy for research and development can correct this underinvestment. Similarly, market interest rates may be above the social rate of return due to market imperfections leading to an underinvestment in socially profitable activities. An interest subsidy may provide the necessary corrective. A subsidy may enable a domestic firm to successfully withstand foreign competition by taking advantage of the economies of scale. Social policy objectives such as the provision of essential goods at fixed and at lower

than market prices can be achieved using subsidies. Subsidies may also substitute for trade barriers, which may have to be withdrawn due to international pressures as a sequel to a country's joining of world trade agreements or economic unions.

c. Forms of Subsidies

A cash payment to producers or consumers is an easily recognisable form of a subsidy. But, it also has many invisible forms. Thus, it may be hidden in reduced tax liabilities, low-interest government loans or government equity participation. If the government procures goods, such as foodgrains, at higher than market prices or if it sells goods at lower than market prices, subsidies are implied. An important form of a subsidy, *viz.*, a regulatory subsidy emerges in the context of government regulation or control of prices and/or quantities. These subsidies often operate off the budget, implying a transfer, such as one from the producers to the consumers, without going through the budgetary process. Some important forms of subsidies are indicated below—

Forms of Subsidies

• Cash subsidies (e.g., food, fertiliser, export)
• Interest or credit subsidies (loans given at lower than market rates)
• Tax subsidies (e.g., tax exemption of medical expenses, deducting mortgage interest payment from taxable income, postponing collection of tax arrears)
• In-kind subsidies (provision of free medical services through government dispensaries, provision of goods to target population in physical form)
• Equity subsidies (investment in equity in State enterprises giving low dividends)
• Procurement subsidies (e.g., purchase of foodgrains at assured higher than market prices)
• Regulatory subsidies (fixation of price/quantity in the case of goods produced by public/private sector)

It is useful to distinguish between (i) budget-based subsidies; (ii) off-budget subsidies; and (iii) subsidies that are initially off-budget but which find their way ultimately into the budget. For example, a public enterprise may be asked to sell its output at an artificially low price and the losses that accrue over a period are offset by budgetary support. A subsidy may implicitly arise when exchange risk is borne by the Central Bank or other

financial institutions on loans that are denominated in foreign currency. In such cases, if the exchange-rate depreciates, the consequent losses will have to be borne by the Central Bank or the concerned financial institutions. These implicit subsidies arise outside the budget, and often remain unnoticed.

d. Transfers and 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 per cent, i.e., the good is supplied free of cost, it should be distinguished from an income-transfer (of an equivalent amount) which need not be spent exclusively on the subsidised good. Just as direct taxes are generally preferred to indirect taxes, transfers may be preferred to subsidies on the ground that (i) any given expenditure of State funds will increase welfare more if it is given as an income-transfer rather than via subsidising the price of some commodities, and (ii) transfer payments can be better targeted at specific income groups as compared to free or subsidised goods.

e. Economic Rationale of a Subsidy

Subsidies are advocated as correctives for market failures. In the presence of externalities or other forms of market failures, the private costs and benefits may not be aligned with the social costs and benefits leading to sub-optimal results. Some examples in which externalities are present may be cited as: 'inoculation' against an infectious disease; a literacy programme, waste disposal, plantation of trees, etc. In these cases, a subsidy is introduced with a view to bringing into alignment the private demand with social demand (for an analytical discussion see Appendix 1).[3]

f. Modes of Administering a Subsidy

A subsidy programme may be administered in a number of ways. Some alternative modes are discussed below.

i. Subsidy to Producers

A subsidy may be given to the producers of a good with the objective of augmenting its consumption. This would result in increasing the supply, thereby enabling a higher consumption of the good. Such subsidies may also be given to offset losses of producers to ensure continued production.

ii. Subsidy to Consumers

A straightforward way of encouraging consumption of a good is by giving the subsidy directly to the consumers, which would result in an increase in demand (at every price level). In general, subsidy to consumers on final goods may be recommended in preference to other modes, as it is easier to monitor the distributional impact of the subsidy in this case.

iii. Subsidy to Producers of Inputs

When a particular good can be produced by using different combinations of inputs, the use of a particular input is encouraged by providing subsidies on such an input being used in the production of the concerned good. This may also lead to lower prices for the consumer, and higher profit margins for the producers. The input subsidy can be provided in the form of cash subsidy to the producers of the input, per unit of output produced, or to the producers of the concerned good per unit of input used.

iv. Production/Sales Through Public Enterprise

Subsidies may be administered through direct intervention in the market by setting up a public enterprise to produce/procure/distribute the goods in question or their inputs at chosen administered prices. The difference in the market price and the actual sale/purchase price leads to the subsidy, while the government has to the sustain the losses incurred by the enterprise.

g. Cross-Subsidies

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 certain 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.

h. Subsidy Targeting

When subsidies are recommended because of market failures or other social objectives, they can be distributed among individuals according to a set of selected criteria, e.g., (i) merit, (ii) income-level, (iii) social group, etc. Usually such discrimination itself is administratively costly. Two types of errors arise if proper targeting is not done, i.e., exclusion errors and inclusion errors. In the former case, some of those who deserve to receive a subsidy get excluded, and in the latter case, some of those who do not deserve to receive subsidy get included in the subsidy programme.

i. Effects of Subsidies

Economic effects of subsidies can be broadly grouped into (i) allocative effects, (ii) redistributive effects, (iii) fiscal effects and (iv) trade effects. Allocative effects relate to the sectoral allocation of resources. Subsidies help draw more resources towards the subsidised sector. Redistributive effects, as between producers and consumers, and as between rural and urban population, or between rich and poor population, generally depend upon the elasticities of demand of the relevant groups for the subsidised good as well as the elasticity of supply of the same good, and the mode of administering the subsidy. Subsidies have obvious fiscal effects since a large part of subsidies emanate from the budget. They directly increase fiscal deficits. Subsidies may also indirectly affect the budget adversely by drawing resources away from tax-yielding sectors towards sectors that may have a low tax-revenue potential. Often, a regulated price, which is substantially lower than the market clearing price, may reduce domestic supply and lead to an increase in imports. On the other hand, subsidies to domestic producers may enable them to offer internationally competitive prices, reducing imports or raising exports.

Subsidies may also lead to perverse or unintended economic effects. They would result in inefficient resource allocation if imposed on a competitive market or where market imperfections do not justify a subsidy, by diverting economic resources away from areas where their marginal

productivity would be higher. Generalised subsidies waste resources; further they may have perverse distributional effects endowing greater benefits on the better-off people. For example, a price control may lead to lower production and shortages and thus generate parallel markets resulting in profits to operators in such markets and economic rents to privileged people who have access to the distribution of the good concerned at the controlled price.

Subsidies have a tendency to self-perpetuate. They create vested interests and acquire political hues. Also, it is difficult to control the incidence of a subsidy since their effects are transmitted through the mechanism of the market, which often has imperfections other than those addressed by the subsidy.

j. Subsidies and Tax Expenditures

Often, tax exemptions and concessions are given to selected industries, sectors, regions, and sources of income, etc., so as to reduce the tax burden for these relative to other comparable categories. These concessions amount to first raising the tax from the concerned sectors at the general tax rates, and then spending it back on the chosen sectors. For this reason, these amounts have been referred to as "tax expenditures". It is often said that tax expenditures should also be taken as subsidies. If tax expenditures pertain to income based taxes, they may be taken as transfers, and if they pertain to commodities, they may be taken as subsidies.

Measurement of tax expenditures require a separate methodology. To our knowledge, no attempt has so far been made to estimate the extent of tax expenditures in the Indian context. We have also not attempted this exercise. To the extent that there are commodity based exemptions, there is an implicit subsidisation relative to some 'general' tax rate.

Conceptually, if a 'zero tax, zero subsidy' situation is taken as a point of reference, each marketed commodity can be considered in terms of a 'net tax' that is levied on it. To account for inter-industry linkages, and input taxation/subsidisation, effective tax/subsidy rates can be worked out using an input-output framework. Such an exercise has not been attempted here. Here, subsidy estimates refer not to commodities, but to sectors. Subsidies are estimated in an ex-post sense, as costs that were incurred but could not be recovered. The level of aggregation is generally the major heads in the budgetary classification, unless otherwise indicated. In particular, in the identification of merit/non-merit services, sub-aggregates within a major head

have sometimes been considered.

k. Inefficiency Costs in Governmental Provision of Services

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. In this study, unrecovered costs include excess costs relating to governmental inefficiency. For one thing, it is very difficult to work out what the service costs would be if the provision came from an efficient source. Secondly, if a society chooses a very large role for the government, including production, procurement and distribution in activities where the private sector could have easily participated, the society would then have to bear the inefficiency costs associated with governmental operations. Governmental participation comes as a composite good and inefficiency is part of that composition. Alternatively, the government can reduce the volume of subsidies and still ensure the same level of provision of a service by subsidising private production/provision rather than directly taking up many of the concerned activities on itself.

SUBSIDY ISSUES IN INDIA

Subsidies have proliferated in India for several reasons. In particular, this proliferation can be traced to (i) the expanse of governmental activities, (ii) relatively weak determination of governments to recover costs from the respective users of the services, even when this may be desirable on economic grounds, and (iii) generally low efficiency levels of governmental activities. Concern has been shown for the impact of burgeoning subsidies on the fiscal deficit of the system, the distributional impact of these subsidies, and their influence on the productive efficiency of the system as a whole. In the context of their economic effects, subsidies have been subjected to an intense debate in India in recent years. Some of the major issues that have emerged in the literature are indicated below:

- whether the magnitude and incidence of subsidies, explicit and implicit, have spun out of control; their burden on government finances being unbearable, and their cost being felt in terms of a decline of real public investment in agriculture and

irrigation [Shetty (1990), Narayan (1987)];

- whether agricultural subsidies distort the cropping pattern and lead to inter-regional disparities in development [Subba Rao (1984), Gulati (1989)];

- whether general subsidies on scarce inputs like water and power have distorted their optimal allocation [Rao and Mundle (1992)];

- whether subsidies basically cover only inefficiencies in the provision of governmental services, i.e., are we only subsidising governmental inefficiency [Sirohi (1984), Gupta (1996)];

- whether subsidies (like food subsidies) have a predominant urban bias [George (1988), Parikh and Suryanarayana (1989), Quizon and Binswanger (1984)];

- whether subsidies are mistargeted [Asha (1986), Jha (1991), Parikh (1993, 1997)];

- whether subsidies have a deleterious effect on general economic growth on sectors not covered by subsidies [Sirohi, *et.al.* (1984)];

- whether agricultural subsidies are biased against small and marginal farmers [Hanumantha Rao (1983), Singh and Chand (1986)];

- how should government services be priced or recovery rates determined [Sisodia (1992)];

- whether inputs subsidies in agriculture have outlived their aim and are no more sustainable [Gulati and Sharma (1995), Bhujanga Rao (1997)]; and

- what is the impact of subsidies on the quality of environment and ecology [Ratna Reddy and Deshpande (1992)].

It may be noted that discussions on subsidies in India have centred, by and large, around the explicit subsidies provided by the government. Elsewhere, especially in the context of international comparisons, attention has been focused on subsidy estimates prepared in the context of national income accounts. In both these cases, the perspective provided on subsidies is narrower than warranted. Our major concern in this study is to provide a comprehensive estimate of budget-based subsidies in India.

Approaches to Estimation of Subsidies

Measurement of the magnitude of subsidies is not a straightforward exercise. Different approaches and conventions appear to have evolved in this context. Differences in methodologies arise with respect to (i) source of information (Budgets or National Accounts or other sources), (ii) coverage of transactions (cash subsidies only or subsidies implicit in soft loans, government guarantees; budget-based subsidies only or also extra-budgetary subsidies; gross cost to government or only net costs), (iii) sectoral coverage (agriculture, manufacturing, etc.) and (iv) measurement basis (focus on recipients of subsidies or ultimate beneficiaries). Two major conventions in the estimation of subsidies relate to measurement through (i) the budgets and (ii) the National Accounts.

a. Budget-Based Approach

Budgetary cost of subsidies is usually defined as budget outlays on a service net of cost recovery through user charges, etc. It is commonly recognised that entries in the budget under the head of 'subsidies' would give a very incomplete picture of subsidies. 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 cost of public services, at least for those public goods (services) where the principle of non-rivalry and non-excludability is not applicable. 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., in the context of subsidies, although subsidies may arise even in the process of producing a pure public good. For example, in the case of defence expenditure, there may be a procurement subsidy in the purchase of defence goods.

Estimation of costs involves estimation of both variable (recurring or current) costs and fixed costs. Provision for revenue expenditure, under the relevant head is usually taken as the variable cost. Thus, subsidy (S) may be defined as the excess of cost, variable or recurring (C1), and annualised capital cost (C2) over the recoveries (R) in the form of user charges, or dividend or interest received, etc. Thus,

$$S = (C1 + C2) - R$$

Correspondingly, the subsidy rate and the recovery rate may be defined as

$$s = S/C \text{ and } r = R/C, \text{ where } C = C1 + C2, \text{ and } (s + r) = 1$$

The estimate of subsidies in this manner would provide a comprehensive budget-based view of subsidies in which both explicit and implicit subsidies would be included. It may be recalled that since many subsidies arise outside the budget (e.g., regulatory subsidies, subsidies administered through public accounts with a locus outside the budget), the budget-based approach also does not fully cover all the subsidies in the system.

b. Subsidies Based on National Income Accounts

In national income accounts, 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. They 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 methodology adopted by the Central Statistical Organisation (CSO) for national income accounting in India, subsidies include grants on current account which private industries, public corporations and government enterprises receive from the government. These may take the form of direct payments to producers or differentials between the buying and selling prices of government trading organisations. Thus, subsidies are transfers which add

to the incomes of the producers from current productions. The grants may, for example, be based on the amount of value of commodities produced, exported or consumed, the labour and capital employed in production or the manner in which production is organised and carried on. Under certain circumstances subsidies include the grants made by government to public corporations in the form of compensation for operating losses. This would be the case when the loss is clearly the consequence of the policy of the government to maintain prices at a level at which the proceeds of public industry will not cover the current cost of production.

c. International Practices

For cross-country comparisons, two major data sources are available, *viz.*, Government Finance Statistics (IMF), and the System of National Accounts (UN). The former is referred to as GFS estimates, and the latter, as SNA estimates. In both cases, subsidies have been defined as "unrequited government payments to producers for current operations plus the losses on sales of departmental enterprises". As such, their definition is narrow, referring only to cash or observed subsidies. Their information relates to recipients rather than beneficiaries. Further, their coverage is limited to payments to producers whereas payments to consumers are not covered. In their system, all payments to consumers are clubbed together under transfer to households. A transfer that involves a subsidy (e.g., expenditure on food coupons) is not distinguished from another transfer (e.g., pension payments) that is not a subsidy. There are also clear differences between the two. First, while GFA data are cash-based, SNA data are compiled on an accrual basis. Secondly, GFS data largely relate to the Central governments, while the SNA data relate to the general government. Large differences are, in fact, observed between GFS and SNA estimates of subsidy; the former are the larger figures mostly because they relate to combined subsidy and transfer payments. In an alternative method (e.g., Webb, *et.al.*, 1990), subsidies are estimated as producer and consumer subsidy equivalents (PSEs and CSEs) with reference to specific commodities. These concepts measure the value of transfers from government to producers and consumers. This method captures transfers that come out of government budget and transfers from price distortions. In this method PSE for a good is calculated as (q) $(p_d - p_w)$ + D + I, where q = quantity, p_d = domestic market price, p_w = world market price, D = direct subsidy payments and I = indirect marketing support and other non-cash benefits.

d. Methodology for Estimation of Subsidies in India

A comprehensive estimation of subsidies should include both explicit and implicit subsidies which may be calculated as the unrecovered cost in the provision of a governmental service. The coverage of services would however exclude pure public goods, because they are commonly consumed by all population. These goods are not excludable and cannot be priced according to the extent of consumption. In our analysis, the coverage is limited to social and economic services. However, the estimation would include subsidies implicit in government investment in public enterprises in the form of equity and loans.

The subsidy (S) in a specific service in the present study is obtained by

$$S = RX + (d + i) K_0 + i(Z_0 + L_0) - (RR + I + D)$$

where

RX = revenue expenditure on the service,

L_0 = sum of loans advanced for the service at the beginning of the period,

K_0 = sum of capital expenditure on the service excluding equity investment at the beginning of period,

Z_0 = sum of equity and loans advanced to public enterprises classified within the service category at the beginning of the period,

RR = revenue receipts from the service,

$I+D$ = interest, dividend and other revenue receipts from public enterprises falling within the service category,

d = depreciation rate[4] and

i = interest rate.

In calculating revenue expenditure, net intragovernmental and general purpose intergovernmental transfer have been excluded. Transfer payments to

individuals have also been excluded.[5] Purely administrative expenditures (e.g., secretariat expenses) and expenditures on relief from natural calamities have also been excluded, as they are in the nature of pure public goods.

The interest rate reflects the opportunity cost of government investment, i.e., it reflects the current cost of borrowing for financing capital expenditure. It is estimated as the average rate of interest on internal (including small savings and provident fund) and external debt incurred by the government. The use of the marginal interest-rate would obviously yield somewhat higher estimates of subsidy. Subsidies in different services (social and economic) are aggregated to obtain an estimate of total subsidy. However, certain service categories emerge with surpluses. In these cases, no subsidy is implied. Thus, total subsidy in all services is obtained by aggregating subsidies of the subsidy sectors without setting them off against the surpluses of other sectors. This aggregation procedures relates only to the major heads.

As far as estimating the amount of subsidy in an individual service is concerned, this methodology is the same as suggested in Mundle and Rao (1991) and subsequently used in Tiwari (1996). As noted above, there is however a difference in the aggregation procedure. In particular, we have aggregated subsidy and surplus sectors separately, because setting-off surpluses in some services against subsidies in other sectors, would understate the volume of subsidy and overstate the relevant recovery rate in the concerned sectors. The same is true for aggregation across States. For a given major head, if there is surplus for some States, and subsidy in others, they are not aggregated such that the subsidies are netted against the surpluses. All subsidies and surpluses are aggregated separately. Further, we have considered it appropriate to make a distinction between services where externalities are *prima facie* quite large (called merit goods) and others whether externalities do not constitute the main justification for providing the subsidy, as discussed below.

Services provided by the government are grouped under the broad categories of general, social and economic services. General services consist of (i) organs of State, (ii) fiscal services, (iii) administrative services, (iv) defence services and (v) miscellaneous services. These services can be taken as public goods because they satisfy, in general, the criteria of non-rival consumption and non-excludability. The entitlement to these services is common to all citizens. Since they are to be treated as public goods, they are assumed to be financed through taxes. In terms of the listing of major heads in the Finance Accounts, these general services range from code numbers

2011 to 2079. General services have, therefore, been kept out of the calculation of subsidies.

Important service categories in social services are (i) education consisting of general education (elementary, secondary, university and higher education, etc.), technical education, sports and youth services, and art and culture, (ii) health and family welfare, (iii) water supply, sanitation, housing and urban development, (iv) information and broadcasting, (v) labour and employment and (vi) social welfare and nutrition. Under the heading of economics services, the following are included: (i) agriculture and allied activities, (ii) rural development, (iii) special area programmes, (iv) irrigation and flood control, (v) energy, (vi) industry and minerals, (vii) transport, (viii) communications, (ix) science, technology and environment and (x) general economic services.

In the case of social and economic services, in general, the principle of exclusion can be applied. In the estimation of subsidies, we have conceptually divided these governmental services into three groups:

Group 1: All general services, secretariat expenses in social and economics services, and expenditure on natural calamities are included in this group. Services included in this group are treated as public goods. As such their provision is to be financed out of taxation. These, therefore, cannot be included in the estimation of subsidies.

Group 2: This consists of a list of services, at the level of major or minor budgetary head, which can be considered as merit goods associated with strong externalities. In the case of services included in this group, it is arguable that even though exclusion may be possible, these ought to be treated as merit goods or "near-public goods". In the case of these services, the provision of subsidies is most justified. Near zero recovery rates in these cases only indicate the societal judgement that these may be financed out of tax-revenues. A list of services identified as merit goods is given below.

Merit Social Services: Elementary education, public health, sewerage and sanitation, information and publicity, welfare of SC, ST and OBCs, labour, social welfare and nutrition.

Merit Economic Services: Soil and water conservation, environmental forestry and wildlife, agricultural research and education, flood control and drainage, roads and bridges, space research, oceanographic research, other scientific research, ecology and environment, and meteorology.

Group 3: All the remaining social and economic services are included in Group 3. In these cases, consumption is 'rival' and exclusion is possible. In principle, therefore, cost-recovery is possible through user charges. Even if full cost-recovery may be considered undesirable in some cases, the extent of subsidisation needs to be monitored. These services are included in the estimation of subsidies and have been referred to as "non-merit" services.

It may be noted that the premises on which a distinction between merit and non-merit services is being made rests on the perceived strong externalities associated with the merit services. This does not imply that subsidisation in their case needs to be hundred per cent. The appropriate degree of subsidisation needs to be linked to the extent of externalities in each case. In addition, even if only small recoveries are advocated for these services, the issues relating to the costs of their provision, leakages to non-target beneficiaries, and their effectiveness in attaining the objectives for which they are being provided, need to be examined. At the same time, categorisation of a service into the non-merit category does not imply that there are no externalities associated with them, nor that subsidies should be eliminated completely in each case. But we do need to examine afresh whether these services are oversubsidised.

The distinction between merit and non-merit goods has been made with a view to focusing attention on two different types of issues. In the case of merit services, there is a *prima facie* justification for providing a subsidy. The main issue here is about the quality of subsidy, i.e., about its targeting and efficacy. In the case of non-merit subsidies, the issue of extent of subsidisation is important apart from that of its quality and delivery. There may be cases where subsidisation may be justified on grounds other than those of externalities. Food and non-elementary education may be considered high priority subsidies, whereas subsidies in industries may be considered less desirable. In each case, the appropriate extent of justifiable subsidies would need to be examined. A subsidy reform programme can target low priority non-merit subsidies in the first instance.

Subsidies of the Central Government

2

Subsidies of the Central government are discussed in three parts. In the first part, a comprehensive estimate of budget-based subsidies of the Central government are provided. In part two, subsidies given to Central public enterprises are estimated. In part three, the explicit subsidies of the Central government are discussed. It may be noted that subsidy estimates presented in parts two and three are components of the comprehensive estimates presented in part one.

COMPREHENSIVE ESTIMATION OF BUDGET-BASED SUBSIDIES

a. Aggregate Profile

Estimates of budget-based subsidies for the Central government are presented in Table 2.1. Subsidies are classified into merit and non-merit categories, separately for social and economic services. Services are divided into two parts, *viz.*, sectors where receipts fall short of the costs, implying the existence of subsidies, and sectors where receipts exceed costs. These groups are respectively called subsidy sectors and surplus sectors. Out of a total subsidy of Rs. 43089 crore, the social services account for only about 12 per cent. The bulk of the Central subsidies, therefore, arise in the provision of economic services.

The recovery rates in the social and economic services are extremely low, being 10.4 and 10.6 on average respectively. The surplus sectors generate surpluses amounting to about 10.8 per cent of total subsidies. As far as recovery rates for individual services are concerned, it may be noted that the recovery rates for industries (Annexure 4) is extremely low, being just 9 per cent.

Table 2.1
Central Government Subsidies: 1994-95

(Rs. Crore)

Services	*Total Cost*	*Total Receipts*	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	5633.19	111.28	5521.91	1.98
a. Social Services	1198.07	35.14	1162.93	2.93
b. Economic Services	4435.12	76.14	4358.98	1.72
2. Non-Merit Goods/Services (Subsidy Sectors)	42558.26	4991.14	37567.12	11.73
	4496.32	556.79	3939.53	12.38
a. Social Services	38061.94	4434.35	33627.59	11.65
b. Economic Services				
3. Surplus Sectors (Merit and Non-Merit)	26132.90	30775.73	-4642.83	117.77
Total Subsidies (1 + 2)	48191.45	5102.42	43089.03	10.59
Social Services (Merit and Non-Merit)	5694.39	591.93	5102.46	10.39
Economic Services (Merit and Non-Merit)	42497.06	4510.49	37986.57	10.61
Subsidies Net of Surplus (1 + 2 + 3)	**74324.35**	**35878.15**	**38446.20**	**48.27**

The relative shares of category-wise aggregates (merit, non-merit, social and economic) in the total Central subsidies are given in Table 2.2. It is evident that non-merit economic services constitute the bulk of Central subsidies accounting for more than 78 per cent of the total Central subsidies.

Table 2.2
Relative Shares of Subsidy Aggregates in Total Central Subsidies: 1994-95

(Per Cent)

	Merit	*Non-Merit*	*Total*
Social	2.70	9.14	11.84
Economic	10.12	78.04	88.16
Total	12.82	87.18	100.00

Non-merit subsidies amounted to Rs. 37567 crore of which economic services alone claimed Rs. 33628 crore. Merit subsidies on the other hand, amounted to Rs. 5522 crore of which social and economic services,

respectively accounted for Rs. 1163 crore and Rs. 4359 crore. Some of the main features of the Central government subsidies are indicated below.

i. Subsidies on non-merit goods and services which are less defensible are more than 5 times those on merit goods. This points towards an unduly large and ill-directed subsidy regime.

ii. The biggest subsidies among the merit goods have flown to roads and bridges, elementary education and various scientific research. Among the non-merit goods, the recipients of relatively large subsidies include industries, and agriculture and allied services (Annexure 4).

iii. The bulk of the subsidies on non-merit goods are accounted for by subsidies on economic services, which should be more amenable to economic pricing. Even if one allows for a part of these subsidies being given in the interest of redistribution or provision of minimum needs, a substantial part must be due to inefficiency costs of public provision of services and/or inessential input or output subsidies.

iv. Within economic services falling in the category of non-merit goods, the largest amounts of subsidies are being provided to industries, other economic services (mainly general economic services) and agriculture.

b. Subsidies in Social and Economic Services

Central subsidies pertaining to major heads in social and economic services (merit and non-merit taken together) are given in Table 2.3. The share of social subsidies in total Central subsidies is limited to 12 per cent , nearly half of which [Chart 2.1] pertains to education. The main sectors in the case of economic services are industry, agriculture, power and transport.

The recovery rates in social services are expectedly lower than in economic services, but by a very small margin. The two sectors mainly contributing towards recoveries, in the economic services, are cooperation and power. In other sectors, recovery rates are extremely poor [Chart 2.2].

Table 2.3
Central Government Social and Economic Subsidies: 1994-95

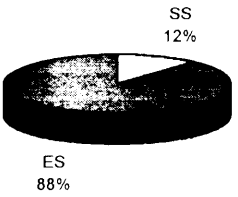
(Rs. Crore)

Services	*Total Cost*	*Total Receipts*	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Subsidy Sectors	**48191.45**	**5102.43**	**43089.02**	**10.59**
i. Social Services	5694.39	591.94	5102.45	10.40
Education, Sports, Arts and Culture	2417.99	6.44	2411.55	0.27
Medical and Family Welfare	885.23	29.45	855.78	3.33
Water supply and Sanitation	130.54	0.38	130.16	0.29
Housing	506.56	71.97	434.59	14.21
Urban Development	102.81	0.03	102.78	0.03
Social Security and Welfare	291.12	0.00	291.12	0.00
Information and Publicity	113.86	23.11	90.75	20.30
Welfare of SC., ST., and OBCs	91.13	0.00	91.13	0.00
Nutrition	6.62	0.00	6.62	0.00
Other Social Services	1148.53	460.56	687.97	40.10
ii. Economic Services	42497.06	4510.49	37986.57	10.61
Agriculture and Allied Activities	8979.64	287.99	8691.65	3.21
Co-operation	140.61	102.18	38.43	72.67
Rural Development	0.80	0.00	0.80	0.00
Special Area Programmes	240.78	0.00	240.78	0.00
Irrigation	179.14	5.28	173.86	2.95
Power	6213.51	2284.57	3928.94	36.77
Industries	11953.35	1075.40	10877.95	9.00
Transport	3448.23	308.32	3139.91	8.94
Civil Supplies	27.90	0.13	27.77	0.47
Space Research	573.99	0.02	573.97	0.00
Oceanographic Research	62.01	0.00	62.01	0.00
Other Scientific Research	787.51	13.56	773.95	1.72
Ecology and Environment	165.97	0.00	165.97	0.00
Meteorology	96.10	0.00	96.10	0.00
Other Economic Services	9627.52	433.04	9194.48	4.50
2. Surplus Sectors (Merit and Non-Merit)	**26132.90**	**30775.73**	**-4642.83**	**117.77**
i. Social Services	0.00	0.00	0.00	0.00
ii. Economic Services	26132.90	30775.73	-4642.83	117.77
3. Subsidies Net of Surplus (1 + 2)	**74324.35**	**35878.16**	**38446.19**	**48.27**

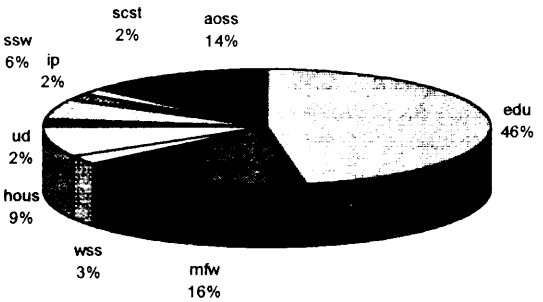
Surpluses arise only in the economic services. Of the total subsidies, surplus generated in the economic services account for about 10.8 per cent, implying that nearly 89 per cent of the Central subsidies must be financed by the taxpayers or non-(direct) users of the services.

Chart 2.1

Relative Shares of Social and Economic Subsidies in Total Subsidies



Relative Shares of Major Social Services in Total Social Subsidies



Relative Shares of Economic Subsidies in Total Economic Subsidies

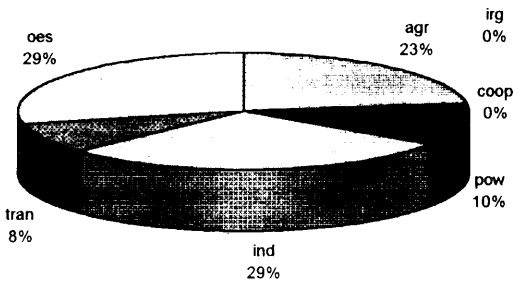
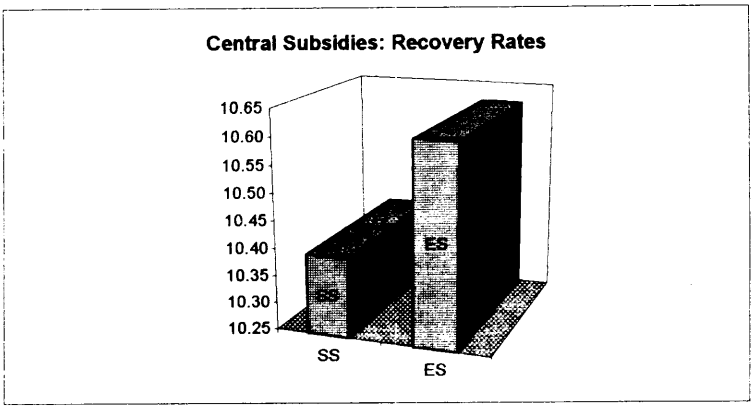


Chart 2.2


Central Subsidies: Recovery Rates
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10.55
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10.45
10.40
10.35
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ES
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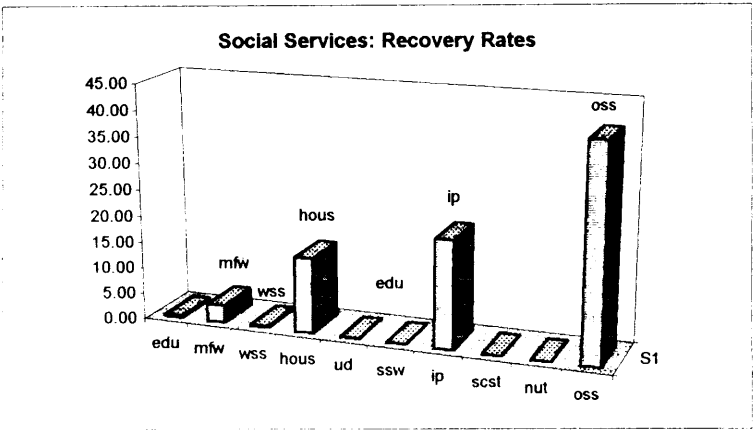
Social Services: Recovery Rates
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40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
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ud
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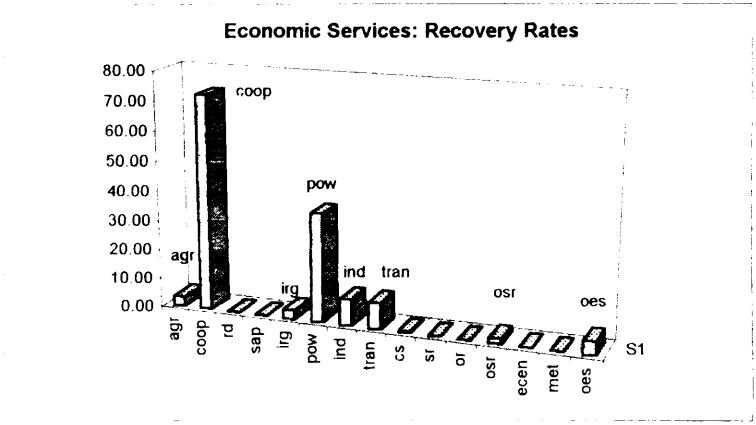
S1


Economic Services: Recovery Rates
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c. Comparisons With Previous Studies

The results of the present study may be compared with those of two previous studies on estimation of subsidies in India, *viz.*, Mundle and Rao (1991) and Tiwari (1996) [Table 2.4]. Although the assumptions regarding the interest and depreciation rates themselves account for some of the differences, the general pattern indicated is that while the recovery rate declined from 1987-88 upto 1992-93, it appears to have picked up in the reform years. The comparisons are made when the surpluses are adjusted with the subsidies in presenting an aggregate picture. A distinction between subsidy sectors and surplus sectors was not made in the earlier two studies. When this distinction is made, the recovery rate in the economic services in the subsidy sectors is almost as low as that in the social services.

Table 2.4
Subsidies in Central Government Social and Economic Services: A Comparison With Previous Studies

Year	*Category*	*Rs. Crore*			*Recovery Rate (%)*
		Total Cost	*Total Receipts*	*Subsidies/ Surplus (-)*	
1987-88 (M-R)	Social	2522	222	2300	8.82
	Economic	28496	14731	13765	51.70
1992-93 (TIW)	Social	4535	521	4014	11.49
	Economic	59988	27173	32815	45.30
1994-95 Present Study	Social	5694	592	5102	10.40
	Economic (Subsidy)	42497	4510	37987	10.61
	Economic (Surplus)	26133	30776	-4643	117.77
	Net Subsidies	74324	35878	38446	48.27

Parameters (Per Cent Per Annum)

	Interest Rate	*Nominal Depreciation Rate*
M-R	6.04	9.4
TIW	8.06	12.0
Present Study	9.60	11.0

Notes: M-R refers to the Mundle and Rao (1991) study and
TIW refers to the Tiwari (1996) study.

The Tiwari study for 1992-93 estimated a total of Central subsidies worth Rs. 36,829 crore, when surpluses and subsidies are aggregated

together. This was 5.87 per cent of GDP. In the Mundle and Rao study, the comparable figure for subsidies was 5.46 per cent of GDP. In our estimates, when subsidies are considered independent of the surpluses (as they ought to be), the total amount of social and economic subsidies emanating from the Central budget amount to Rs. 43089 crore, representing 4.52 per cent of GDP. When surpluses are adjusted against the subsidies to provide a figure comparable with the earlier studies, the amount of net subsidies becomes Rs. 38446 crore, which is 4.03 per cent of GDP. Either way, it seems that the Central government subsidies have fallen as percentage of GDP as compared to the 1987-88 and 1992-93 figures. Compared to 1987-88, the overall recovery rate in 1994-95 was lower, although it was higher than in 1992-93. The fact that the volume of subsidies in 1994-95 was lower than in 1987-88 as percentage of GDP implies that the government expenditures at the Centre were lower as a percentage of GDP in 1994-95 as compared to 1987-88. It may be noted that the earlier studies did not make a distinction between merit and non-merit services, therefore, a comparison is only possible with respect to aggregate subsidies belonging to both categories.

Subsidy to Central Public Enterprises

Subsidies to Central public enterprises have been estimated separately. This does not represent a subsidy additional to the one presented in the comprehensive estimate, but is, in fact, included there. The estimates are based on enterprise-wise data taken from the Public Enterprises Survey. This survey covers 246 enterprises (as on March 31, 1995) which are included in the Fourth Schedule to the Rules of Procedure and Conduct of Business in Lok Sabha. In particular, they do not include departmentally run public undertakings and banking institutions. The paid-up capital in these public enterprises comes primarily from the Central government with some equity participation by State governments, holding companies, foreign collaborators, public financial institutions and workers. Similarly, loans to these enterprises are given by the Central government, as also by the State governments, financial institutions including banks and mutual funds and other domestic and foreign sources. The share of Central government in the total equity of these enterprises is much higher (96 per cent) as compared to its share in total loans (26.4 per cent).

Subsidies are estimated as the excess of imputed return on the equity held and loans given by the Central government to these enterprises over actual receipts in the form of dividends and interest. On both equity and

loans, the expected rate of return is taken to be the opportunity cost of funds to the government taken here as the average rate of interest of government borrowing. Thus, for any enterprise, the imputed subsidy (S) is given by:

$$S = i(E_o + L_o) - (D + I)$$

where

E_o = Total equity held by the Central government at the beginning of the period,

L_o = Total loans advanced by the Central government to the public enterprise upto the beginning of the period,

D = Dividends received from the public enterprise in the financial year,

I = Interest received from the public enterprise in the financial year and

i = Average interest rate (= 9.6 per cent per annum).

Subsidy is calculated in this manner for each enterprise. They are aggregated according to cognate groups. For aggregation, enterprises that receive a subsidy and those that emerge with a surplus are aggregated separately. Total subsidies to the Central government public enterprises are taken as the sum of subsidies in each group of enterprises (without setting off the surpluses). For 1994-95, this comes to Rs. 4273 crore excluding units relating to industrial development, technical consultancy services and financial services, and to Rs. 4667 crore including these categories. These results are given in Table 2.5. These results are not comparable with the results of the two previous studies [Mundle and Rao (1991) and Tiwari (1996)] because of the difference in the methodology and the data source.

Every cognate group has some enterprises that receive a subsidy except telecommunication services, where all units show a surplus. On the other hand, there are four groups where no unit is able to show a surplus *viz.*,coal and lignite, power, agro-based goods and tourist services. In the remaining groups, there are some subsidy units and some surplus units. In some of these groups, e.g., minerals and metals, textiles and trading and marketing services, there are large subsidies relative to the surpluses generated by a few units.

Table 2.5
Subsidy to Public Enterprises (1994-95) - Government of India

(Rs. Crore)

Sectors	*Central Govt. Inv. (Equity + Loans + Wkg. Cap.)*	*Imputed Cost of Capital [(2) x 9.6%]*	*Receipts from PSUs (Dividend + Interest)*	*Recovery Rate (%) Columns [(4)/(3)]*	*Subsidy to Units Columns [(3)-(4), (3) > (4)]*	*Surplus in Units Columns [(3)-(4), (3) < (4)]*	*Net Subsidy or Surplus Columns [(6) + (7)]*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
Steel	11393	1094	226	20.68	868	0	868
Mineral & Metals	3911	375	169	45.06	223	-17	206
Coal & Lignite	11798	1133	28	2.40	1105	0	1105
Power	17629	1692	618	36.51	1075	0	1075
Petroleum	3196	307	536	174.62	28	-257	-229
Fertilizers	5077	487	637	130.61	120	-269	-149
Chemicals & Pharmaceuticals	1183	114	117	103.23	50	-54	-4
Heavy Engineering	1522	146	216	147.86	17	-87	-70
Medium & Light Engineering	1122	108	73	67.49	57	-21	35
Transport Equipment	2085	200	271	135.53	57	-128	-71
Consumer Goods	2561	246	216	87.99	82	-52	30
Agro-Based Goods	62	6	1	23.61	5	0	5
Textiles	3600	346	42	12.02	330	-26	304
Trading & Marketing	2474	238	100	42.07	166	-28	138
Transportation	2667	256	384	149.91	32	-160	-128
Contract & Construction	979	94	73	77.31	57	-36	21
Tourist Services	78	7	6	78.04	2	0	2
Telecommunication	722	69	93	134.35	0	-24	-24
Total*	**72057**	**6918**	**3805**	**55.00**	**4273**	**-1160**	**3113**
Industrial Devt. & Tech. Const.	3559	342	138	40.37	266	-62	204
Financial Services	5597	537	408	76.03	129	0	129
All Units	**52468**	**7796**	**4351**	**55.81**	**4667**	**-1222**	**3446**

Source: *Public Enterprises Survey, 1993-94 and 1994-95*, Department of Public Enterprises, Ministry of Industry, Government of India.

Note: * Excludes enterprises under construction, financial units, industrial development and finance units and Section 25 units.

Subsidies estimated in this manner do not take into account any budgetary support for writing off any losses of the public enterprises fully or partially except when the support is in the form of loans. They also do not take into account any revenue receipts other than those in the form of dividend or interest, and any expenditures other than investment in the form of loan or equity. A comparison of group-wise figures for retained profit/loss for the concerned year (1994-95) indicates that heavy subsidies are involved even in those sectors which are generating profits in the aggregate, e.g., steel, mineral and metals, coal and lignite, power, and chemicals and pharmaceuticals. In these cases, the government may insist upon declaration of higher dividends. On the other hand, there are some groups with losses, *viz.*, fertilisers, heavy engineering, medium and light engineering, consumer goods, textiles, and contract and construction. Units in these groups may be receiving direct budgetary support (for meeting losses or writing off previous loans/interest due) which is not reflected in the estimation of subsidies here.

The group-wise rates of return (aggregate receipts/total government investment) can be decomposed into the relative contribution from returns on equity and those on loans. Thus,

$$r = (D + I)/(E_o + L_o) = w(D/E_o) + (1 - w)(I/L_o)$$

where

$$w = E_o/(E_o + L_o).$$

The average rate of return on government equity investment is 2.47 per cent per annum (2.36 when industrial development and technical consultancy units and units providing financial services are also included). On the other hand, the return on loans is much higher, being 10.69 per cent (10.83 for the larger group). These results are given in Table 2.6. In columns 6 and 7, the relative contribution of returns on equity (dividends) and that on loans (interest) are given. In spite of a lower investment in the form of loans relative to that in the form of equity, the contribution of interest is much higher than that of dividends in the overall rate of return. It would appear that the government should consider the relative merits of the forms of investment in the public sector enterprises apart from the overall size of investment.

Table 2.6
Return on Government Investments in Public Enterprises (1994-95) - Government of India

(Per Cent)

Sectors	*Dividend/ Equity*	*Interest/ Loans#*	*Share of Equity in Total Investment*	*Aggregate Rate of Return*	*Weighted Return on Equity@*	*Weighted Return on Loans$*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
Steel	2.09	1.07	90.04	1.98	1.88	0.11
Mineral & Metals	3.04	13.06	87.18	4.33	2.65	1.67
Coal & Lignite	0.00	0.68	66.09	0.23	0.00	0.23
Power	0.99	12.24	77.63	3.50	0.77	2.74
Petroleum	20.72	12.27	53.16	16.76	11.01	5.75
Fertilizers	2.56	25.47	56.45	12.54	1.45	11.09
Chemicals & Pharmaceuticals	11.98	8.51	40.35	9.91	4.83	5.08
Heavy Engineering	3.92	23.87	48.49	14.19	1.90	12.30
Medium & Light Engineering	1.85	13.57	60.50	6.48	1.12	5.36
Transport Equipment	2.43	20.44	41.24	13.01	1.00	12.01
Consumer Goods	0.08	16.38	48.67	8.45	0.04	8.41
Agro-Based Goods	0.63	10.12	82.72	2.27	0.52	1.75
Textiles	0.00	1.34	14.19	1.15	0.00	1.15
Trading & Marketing Services	2.41	5.48	47.02	4.04	1.13	2.91
Transportation Services	6.77	18.56	35.36	14.39	2.39	12.00
Contract & Construction Services	0.31	12.37	41.04	7.42	0.13	7.30
Tourist Services	8.40	1.40	87.07	7.49	7.31	0.18
Telecommunication Services	13.10	12.25	75.94	12.90	9.95	2.95
Average of Above Units*	**2.47**	**10.69**	**65.78**	**5.28**	**1.62**	**3.66**
Industrial Devt. and Tech. Const.	0.66	20.39	83.68	3.88	0.55	3.33
Financial Services	2.34	10.25	37.31	7.30	0.87	6.43
All Units	**2.36**	**10.83**	**64.61**	**5.36**	**1.52**	**3.83**

Notes: # Including investments in working capital.
@ Column (2) x Column (4)
$ Column (3) x [1 - Column (4)]
* Weighted average by taking ratios of the denominators and numerators summed separately

EXPLICIT SUBSIDIES OF THE CENTRE

Important among the explicit subsidies administered through the Central government budget are food and fertiliser subsidies, and until recently, export subsidies. The list of explicit Central subsidies, however, is much longer. It includes, among others, interest subsidies, on controlled cloth, and for railways, imported cotton and vegetable oil, new industrial units in backward areas, maintenance of river dredging, and crop insurance. The overall trends in the explicit subsidies of the Central government, and some of the major explicit subsidies are discussed below.

a. Overall Trends

The aggregate explicit subsidies of the Central government have increased from Rs. 140 crore in 1971-72 to Rs. 16694 crore in 1996-97 (RE) (Table 2.7). This represents an average growth of about 20 per cent per annum. At constant 1980-81 prices, total explicit subsidies of the Centre (Annexure 2) have risen from Rs. 312.36 crore in 1971-72 to Rs. 4398.37 crore in 1996-97 (RE), reaching a peak figure of Rs. 5454.71 crore in 1990-91. The average growth during the period 1971-72 to 1996-97 for explicit Central subsidies in real terms thus works out to a little more than 10 per cent per annum, which is much higher than the growth rate of the economy during the period.

The relative importance of different explicit subsidies has changed over the years. For example, food subsidies accounted for about 70 per cent of total Central explicit subsidies in 1974-75 (Annexure 3). Since then, its relative share steadily fell reaching its lowest percentage share (20.15) in 1990-91. From this time onwards, it has risen steadily reaching a figure of 40 per cent in 1995-96. The profile of relative shares of the major explicit subsidies of the Centre indicates that export subsidies have been on the decline except for a spurt in the late eighties, whereas the relative share of the food subsidies has been rising although in a cyclical pattern (Chart 2.4), and the food subsidies had become relatively less important from the late seventies until the beginning of the eighties.

The growth pattern of the major subsidies has been summarised in Table 2.8. Since there are clear and different patterns in the time profile of the three major explicit subsidies (as shown in Charts 2.3 and 2.4), growth rates are estimated using a linear spline function for estimating growth in a kinked time profile (Table 2.8). For food subsidy, however, one average subsidy growth rate for the entire period from 1971-72 to 1996-97 has been

Table 2.7
Explicit Subsidies in the Central Budget

(Rs. Crore)

Year	*Food Subsidy*	*Fertiliser Subsidy*	*Assistance for Export Promotion and Market Development*	*Subsidy on Railways*	*Interest Subsidy**	*Others*	*Grand Total*
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
1971-72	47	0	54	0	5	34	140
1972-73	117	0	62	0	12	14	205
1973-74	251	0	66	0	20	24	361
1974-75	295	0	80	0	30	14	419
1975-76	250	0	149	0	47	24	470
1976-77	506	60	241	0	66	74	947
1977-78	480	266	324	0	88	129	1287
1978-79	570	342	375	0	59	129	1475
1979-80	600	603	361	56	92	109	1821
1980-81	650	505	399	69	253	152	2028
1981-82	700	381	477	78	102	203	1941
1982-83	711	603	477	97	217	157	2262
1983-84	835	1042	463	93	118	198	2749
1984-85	1101	1928	518	100	135	256	4038
1985-86	1650	1924	603	128	271	220	4796
1986-87	2000	1898	785	144	229	395	5451
1987-88	2000	2164	962	174	393	287	5980
1988-89	2200	3201	1386	207	406	332	7732
1989-90	2476	4542	2014	233	881	328	10474
1990-91	2450	4389	2742	283	379	1915	12158
1991-92	2850	5185	1758	312	316	1832	12253
1992-93	2800	5796	818	353	113	2115	11995
1993-94	5537	4562	665	412	113	1393	12682
1994-95	5100	5769	658	420	76	909	12932
1995-96	5377	6735	16	418	34	725	13305
1996-97 (RE)	6066	7767	400	466	1257	738	16694

Source: *Indian Economic Statistics and Budget Documents.*

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

estimated. The fertiliser subsidy growth rate has been estimated with a kink at 1981-82, upto which the average annual growth rate was 38.46 per cent. It fell to 16.57 per cent from this point in the next sub-period. For export subsidies, two intermediate kinks at 1986-87 and 1990-91 are indicated. After the latter point, there is a very sharp decline in these subsidies.

Table 2.8
Explicit Subsidies of the Centre: Profile of Growth Rates*

Period	*Food*	*Fertiliser*	*Exports*
1971-72 to 1996-97	17.06		
1976-77 to 1981-82		38.46 (I)	
1981-82 to 1996-97		16.57 (II)	
1971-72 to 1986-87			17.42 (I)
1986-87 to 1990-91			21.90 (II)
1990-91 to 1996-97			-33.93 (III)
Comments		I > II	II ≥ I > III

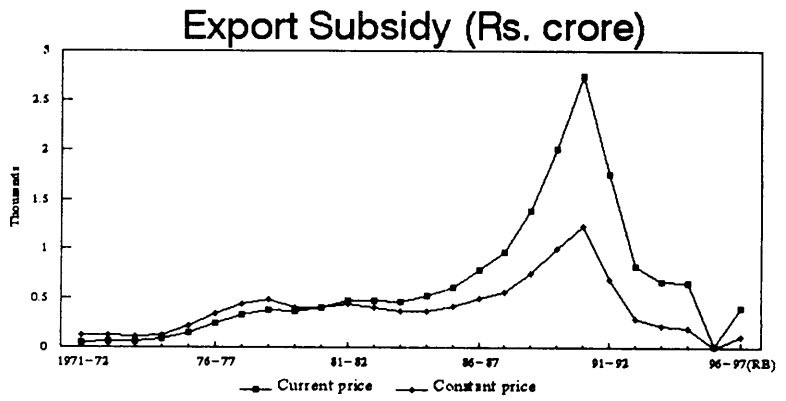
Notes: * Kinked exponential growth rates.
1. I > II or I > III implies that the growth rate in period I is significantly greater than the growth rates in period II or III. II ≥ I implies that these two growth rates are not significantly different.

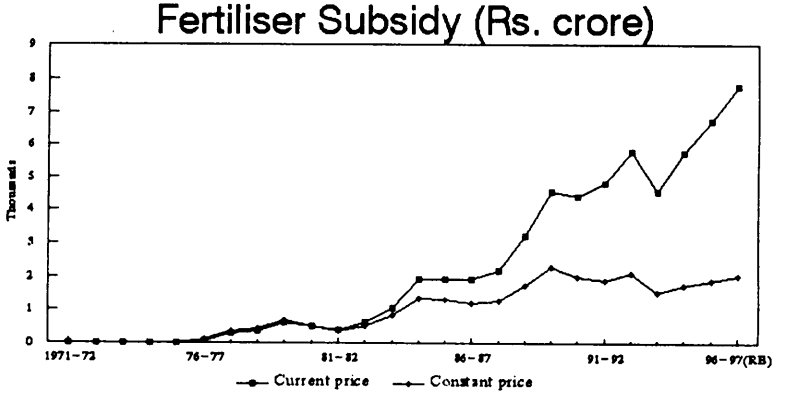
As percentage of GDP, explicit Central government subsidies were just about 0.30 per cent in 1971-72. They continued to increase steadily reaching a peak figure of 2.38 in 1989-90. After this, i.e., during the reform years, the explicit subsidies as a proportion of GDP have continued to decline. Growth rates of some of the important explicit subsidies of the Centre are profiled in Table 2.8.

b. Food Subsidy

Food subsidy is administered in the following manner. The Food Corporation of India (FCI) purchases foodgrains at procurement prices fixed by the government and places them in a Central pool. Releases from this pool are made for (i) sale through the Public Distribution System (PDS), (ii) revamped PDS/Integrated Tribal Development Projects and (iii) rural employment programme and other relief schemes, at issue prices fixed by the Government. The difference between the two prices, *viz.*, procurement and issue prices, is reimbursed to the Corporation as food subsidy. Reimbursement is also made for the carrying cost of buffer stock which includes handling, storage, interest and administrative charges. The provision for food subsidy[6] also includes sugar subsidy.

Chart 2.3
Time Profile of Major Central Government Subsidies





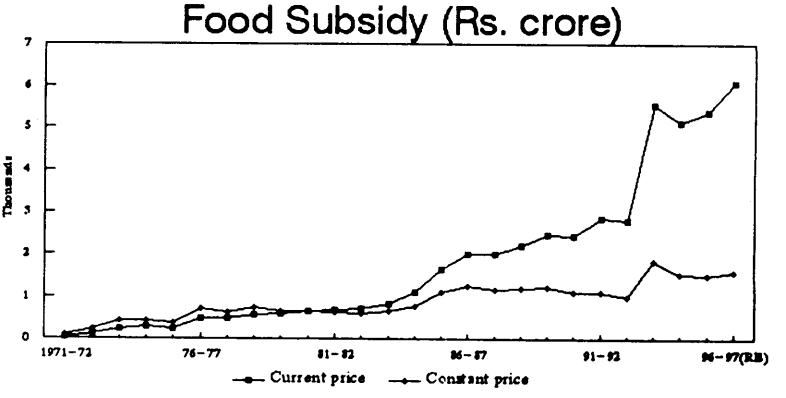
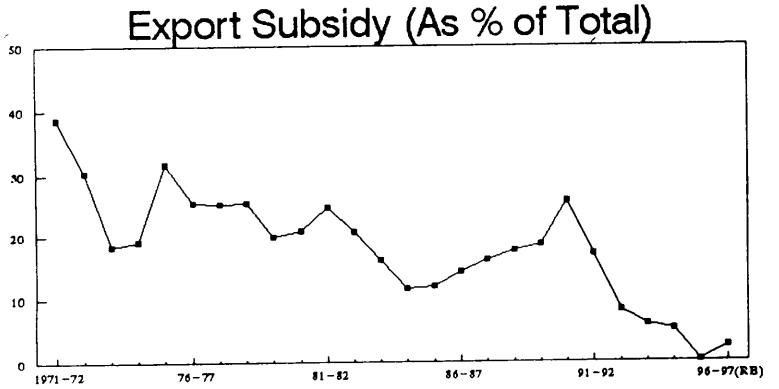
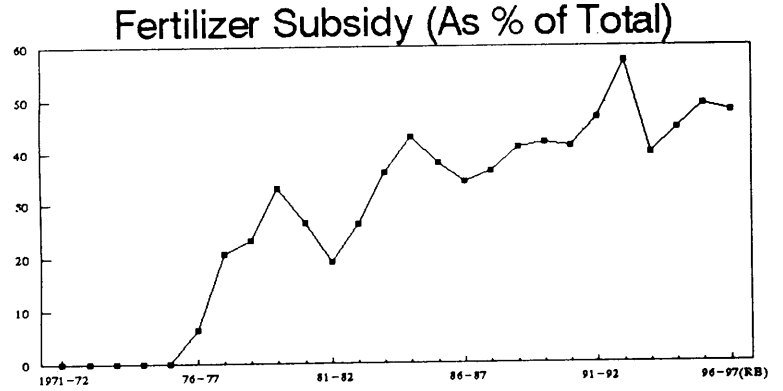
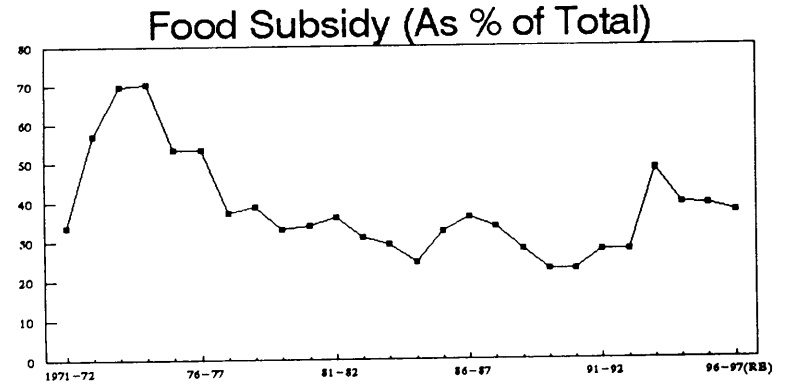


Chart 2.4
Share of Major Central Government Subsidies in Total Explicit Subsidies







The difference between procurement price and market price which the farmers would otherwise have obtained would determine the farmers' share in food subsidy. The rest can be considered as having two components, *viz.*, (i) consumer subsidy and (ii) subsidy pertaining to the carrying cost of buffer stock. The amount of consumer subsidy depends on the volume of foodgrains distributed through the PDS and the rate of subsidy which, in turn, depends on the difference between market and issue prices and the handling charges of the FCI. The handling charges have steadily increased over the years. In 1974-75, this cost was Rs. 145.7 per tonne. By 1993-94, it had become Rs. 1,800 per tonne [FCI reports; also George (1996)]. The share of consumer subsidy in aggregate food subsidy had gradually increased to a level of 90 per cent by 1989-90. But subsequently it declined to 72 per cent in 1993-94, because of an increase in the carrying cost of buffer stock [see, George (1996)] of which interest payments are a major component. The actual costs of FCI exceed the corresponding norms by a substantial margin. As per an appraisal by the Comptroller and Auditor General of India (CAG), against a distribution cost norm of Rs. 64 per quintal for wheat and Rs. 70.60 for rice, the actual distribution costs in 1993-94 were Rs. 117 and Rs. 124 per quintal, respectively. Erratic movements in the procurement and issue prices have also contributed towards a significant rise in subsidy for the PDS.

The primary objective of food subsidies is to facilitate and ensure subsistence of the economically weaker sections of the society, through a low-priced supply of essential foodgrains. In this context, the management of food subsidies through the PDS has been considered to be poorly targeted and wasteful. A large proportion of poor are not covered by the PDS. Further, the PDS is characterised by extensive leakages and a clear urban bias. In the case of wheat, only 32 per cent of rural poor and 36.7 per cent of urban poor were covered by the scheme. For rice, these percentages were 41.8 per cent for rural and 19.1 per cent for urban areas. Relative distribution of the benefits of food subsidies is reviewed in greater detail in Chapter 5.

A noticeable feature in the operation of the PDS in recent years has been a marked decline in the off-take by the States from their allocation. In the aggregate, roughly 11-12 million tonnes of rice and 9-10 million tonnes of wheat have been allocated to the States. However, the actual off-take has been much lower. As percentage of allocation, the off-take for wheat has been less than fifty per cent in some years as given in Table 2.9.

It is clear that the off-take from the PDS allocation has been declining in recent years. This may reflect a narrowing down of the differential between the market and the PDS prices, and a better availability of foodgrains in the free market.

Table 2.9
Foodgrains Allocation and Off-Take Under PDS

Year	*Wheat*			*Rice*		
	Allocation	*Off-Take*	*Off-Take as Percentage of Allocation*	*Allocation*	*Off-Take*	*Off-Take as Percentage of Allocation*
1990-91	9.50	7.08	74.5	9.61	7.87	81.9
1991-92	10.36	8.83	85.2	11.36	10.17	89.5
1992-93	9.25	7.47	80.8	11.48	9.55	83.2
1993-94	9.57	6.15	64.3	12.41	9.07	73.1
1994-95	10.80	5.11	47.3	13.32	8.01	60.1
1995-96 (P)	11.31	5.29	46.8	14.61	9.46	64.8

Source: *Economic Survey, 1995-96.*

A further revamping of the PDS is now being undertaken. In this scheme, now being called the Targeted PDS (TPDS), 10 kilograms of foodgrains (wheat and rice) would be supplied to a family (of five) per month at half the regular PDS price. It is estimated that six crore families below the poverty line would be covered by this scheme. The estimated annual cost of running this scheme at current price levels would be around Rs. 2,000 crore. In order to get an allocation under the scheme, each State will have to prepare a list of the qualifying beneficiaries. While the States would be induced to lift this part of their allocation, some of it may substitute for the off-take of the regular quota. There may now be additional leakages, to the benefit of the shops running the PDS and the supervisory staff monitoring it.

The government should examine alternative systems of administering its food subsidy programme. In particular, it should examine the viability of administering food subsidies through a 'food coupon' system. The coupon may be issued periodically (quarterly/ six-monthly) to qualifying beneficiaries to supplement their purchases of specified items from the free market. The sellers are then reimbursed by the government for the coupons on which actual purchases have been made. The system can start on a trial basis in any

State which volunteers for it and in the Union Territories. Countries where a food coupon scheme has been launched have reported much better targeting, reduction in leakages, and substantial reduction in the magnitude of food subsidy. In effect, much of the malaise of the present system can be remedied at one stroke, by leaning on the market rather than physically running an extensive system of procurement, storage, transportation and distribution, all of which have lapsed into excessive costs and inefficiency. Although a buffer stock would still be maintained, it would be of a smaller quantum and meant primarily for strategic interventions in the market to keep prices stable and at desired levels. Another possibility is to use 'self-selection' to the extent feasible. For example, subsidies may be confined to coarse varieties of rice or "inferior" foodgrains consumed mainly by the poor.

To summarise, the basic flaws of our food subsidy programme may be listed as:

- it is unduly costly;
- the PDS is poorly targeted; in particular, it is pro-urban, and does not cover a significant proportion of the poor;
- the magnitude of subsidy actually enjoyed by the poor is very small;
- there are extensive leakages;
- the operation of procurement, storage, transportation and distribution is quite costly, and has become more inefficient over time; and
- the off-take by the States from their respective allocations is quite inadequate and has been falling in recent times.

A complete overhaul of the system of administering the food subsidy programme of the government is called for.

c. Fertiliser Subsidy

Fertiliser subsidies[7] relate to indigenous as well as imported fertilisers. For indigenous urea, a retention price (price paid to the industry) scheme has been in operation since 1977. This scheme aims at making urea available to farmers at reasonable prices while giving the domestic producers also a reasonable rate of return on their investment. The retention price is

determined for each plant. It is revised quarterly to take account of increase in costs of inputs. Subsidy is calculated as the difference between the retention price so fixed less the distribution margin and the statutorily controlled consumers' price. The magnitude of the subsidy thus depends on the two prices (consumers' and retention) and the quantity of production. A freight subsidy for moving fertilisers from factory to delivery points is also allowed for.

Subsidy is also provided for the import of fertilisers. Mainly three types of fertilisers are imported, *viz.*, Urea, Di-ammonium Phosphate (DAP) and Muriate of Potash (MOP). Only nitrogenous fertilisers are under price control and subsidy is given on imported urea. In addition, there is a scheme for providing subsidies pertaining to decontrolled fertilisers. The prices of phosphatic and potassic fertilisers were decontrolled in August, 1992. At the same time, a scheme was introduced to provide a subsidy to manufacturers/ agencies for the concessional sale of decontrolled fertilisers to farmers. The concessions presently being given are as under:

(i) Rs. 3000 per tonne for Di-ammonium Phosphate (DAP)

(ii) Rs. 1500 per tonne for Muriate of Potash (MOP)

(iii) Rs. 500 per tonne for Single Super Phosphate (SSP).

A concession of Rs. 1500 per tonne is given for the imported DAP to keep its price comparable to indigenous DAP, while giving the latter also an edge.

The burden of the fertiliser subsidy is considerable. A reduction in the use of fertilisers may have serious adverse impact on agricultural output. In one study [Sidhu and Sidhu (1991)], it was estimated that a 30 per cent hike in the real price of fertilisers would lead to a 18 per cent decline in fertiliser consumption, which in turn would lead to a 5.4 per cent fall in the foodgrain production. In a general equilibrium framework, [Parikh and Suryanarayana (1992)], it was worked out that fertiliser subsidy does increase the welfare of the poor, and withdrawal of fertiliser subsidy releases funds for making investment in irrigation and in other productive activities, which finally augments growth.

d. Export Subsidy

Export subsidy, i.e., use of cash assistance for the promotion of exports has been in vogue in India till the launching of Trade Reform Policies during 1991-92. The available incentives were primarily (i) duty drawback, (ii) cash

compensatory support and (iii) import replenishment. Under the drawback scheme, import duties paid on inputs used in export products are refunded in full, or upto 90 per cent if the imported article is re-exported. Similarly, excise duty on input is also refunded. Under the scheme of cash compensatory support (CCS), assistance is provided for the export of specific non-traditional products to make Indian goods competitive in the international markets. This is provided mainly to compensate for unrefunded taxes paid on export goods and the inputs going into their manufacture.

Two major problems regarding the operation of export incentive schemes have often been highlighted,[8] *viz.*, (i) that many domestic inputs were over-valued either due to an over-valued exchange rate or high rates of effective protection and if 'value-added' in export activity was estimated at an appropriate price, it may not have received any effective export subsidy; and (ii) that although expenditure incurred by the government on export incentives had gone up significantly, the comparative advantage did not register any substantial improvement. The Committee on Export Strategy (1980), headed by Shri Prakash Tandon had earlier recommended a rationalisation of the structure of export subsidies and a reduction of their volume. As already noted, export subsidies have been drastically reduced in recent years.

e. Other Subsidies

There is a wide range of other subsidies explicitly provided for in the Central budget. Interest subsidies arise when concessions in the prescribed rate of interest on sanctioned loans are given or when exemption from payment of interest on the loans is given. Railway subsidies arise due to concessions given in the payment of dividend to General Revenues on a number of items. Exchange loss subsidies relate to compensation for exchange loss involved in the repayment of foreign lines of credit by financing institutions such as HDFC, IDBI, ICICI, and National Housing Bank which are involved in repayment of foreign lines of credit. Handloom subsidies relate to continuing schemes of special rebate on handloom cloth and subsidy on dhotis and sarees produced in the handloom sector. Some subsidies arise when loans to public enterprises are written off.

In conclusion, it may be noted that explicit subsidies in the budget of the Central government accounted for only about 30 per cent of total Central subsidies in 1994-95. As such, a much better idea about subsidies is obtained when the remaining 70 per cent of the implicit subsidies are also considered. It was indicated that when a comprehensive view of the Central subsidies is

taken, it is the subsidies on economic services of the non-merit kind that dominate the scenario. Recovery rates of less than ten per cent in these cases indicate oversubsidisation by a wide margin, and highlight the considerable potential for raising recovery rates and thereby mitigating the draft on fiscal deficit that originates from maintaining subsidies at such unduly high levels.

Subsidies of the State Governments

3

Subsidies provided by the State governments have been estimated for 15 major States for 1993-94. As explained earlier, the major data source is the Finance Accounts of the respective States. This was not available for 1994-95 for an adequate number of States, forcing us to carry out the analysis for the major States for the year 1993-94. For these States, the requisite data were available in suitable detail. In discussing the State level subsidies, a distinction between merit and non-merit subsidies, as grouped under social and economic services, is maintained. After considering the aggregate subsidies for the fifteen selected States, major subsidies are discussed separately. In each case, their inter-State pattern is also discussed. For this purpose, States are arranged in ascending order of per capita net SDP (i.e., Bihar first, Goa last) at current prices in 1993-94. The analysis for the major States is subsequently supplemented by a study of four special category States. In their cases also, estimates of subsidies have been prepared. The year of reference for them, however, is 1994-95.

STATE SUBSIDIES: AGGREGATES FOR SELECTED STATES

In the estimation of the State level subsidies, the interest rates that have been used relate to the average effective interest rates for individual States with respect to internal debt, loans from the Central government and provident funds. The computed average effective interest rates used in this study are given in Annexure 6. The depreciation rate remains unchanged from that used for the estimation of Central subsidies except that the inflation element has been slightly modified because of change in the year under study (1993-94 instead of 1994-95). Table 3.1 summarises the results obtained.

Total subsidies for the 15 States in 1993-94 work out to Rs. 73100 crore. Net of surplus, this amounts to Rs. 69375 crore. The extent of subsidisation at the State level is clearly much higher than that at the Central level and the recovery rates are correspondingly lower.

Subsidies in social services, merit and non-merit taken together, and those in economic services, each constitute roughly half of the total State subsidies. The proportion of merit subsidies, as expected, is much higher in the social services relative to that in the economic services.

TABLE 3.1
Subsidies Given by 15 Selected States: 1993-94

(Rs. Crore)

Services	*Total Subsidies Given by 15 States*			
	Total Cost	*Total Receipts*	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	21207.79	203.99	21003.80	0.96
a. Social Services	14920.67	102.94	14817.73	0.69
b. Economic Services	6287.12	101.05	6186.07	1.61
2. Non-Merit Goods/Services (Subsidy Sectors)	56399.46	4303.47	52095.99	7.63
a. Social Services	20925.14	551.49	20373.66	2.64
b. Economic Services	35474.32	3751.98	31722.34	10.58
3. Total Subsidies (Merit and Non-Merit)	**77607.26**	**4507.46**	**73099.79**	**5.81**
a. Social Services [1(a) + 2(a)]	**35845.81**	**654.43**	**35191.38**	**1.83**
b. Economic Services [1(b) + 2(b)]	**41761.44**	**3853.03**	**37908.41**	**9.23**
4. Surplus Sectors (Merit and Non-Merit)	-118.10	3606.63	-3724.73	N.C.
a. Social Services	55.46	288.07	-232.60	N.C.
b. Economic Services	-173.57	3318.56	-3492.13	N.C.
5. Subsidies Net of Surplus (3 + 4)	**77489.15**	**8114.09**	**69375.06**	**10.47**

The overall recovery rate for social and economic services taken together is only 5.81 per cent of the total cost. The average recovery rate in merit goods is less than 1 per cent. But a recovery rate of 7.63 per cent for non-merit goods is also extremely low. The recovery rate for social services, merit and non-merit categories taken together, is less than 2 per cent while the corresponding rate for economic services is just above 9 per cent.

STATE-WISE SUBSIDIES: TOTAL AND PER CAPITA

Aggregate subsidies given by the States in the provision of social and economic services, as divided between the merit and non-merit categories, are given in Table 3.2. In general, non-merit subsidies are estimated to be more than double of the merit subsidies. As percentage of the total, non-merit subsidies range from 66.64 (Madhya Pradesh) to 78.29 (Punjab).

Table 3.2
State Subsidies: Merit and Non-Merit: 1993-94

State	*Total Subsidies (Rs. Crore)*	*Merit Subsidies (Rs. Crore)*	*Percentage of Total (Per Cent)*	*Non-Merit Subsidies (Rs. Crore)*	*Percentage of Total (Per Cent)*
Bihar	5255.00	1609.30	30.62	3645.71	69.38
Orissa	2795.08	912.68	32.65	1882.40	67.35
Uttar Pradesh	9287.42	2490.03	26.81	6797.39	73.19
Rajasthan	4373.16	1229.71	28.12	3143.45	71.88
Madhya Pradesh	5773.70	1926.31	33.36	3847.39	66.64
Kerala	3013.97	987.10	32.75	2026.87	67.25
West Bengal	4605.84	1154.78	25.07	3451.06	74.93
Andhra Pradesh	6024.09	1712.20	28.42	4311.88	71.58
Karnataka	4839.18	1340.53	27.70	3498.65	72.30
Tamil Nadu	6332.89	1916.32	30.26	4416.58	69.74
Gujarat	6155.21	1699.41	27.61	4455.81	72.39
Haryana	2006.51	513.49	25.59	1493.02	74.41
Maharashtra	9607.41	2849.55	29.66	6757.87	70.34
Punjab	2702.86	586.69	21.71	2116.16	78.29
Goa	327.47	75.72	23.12	251.75	76.88
All States	**73099.79**	**21003.80**	**28.73**	**52095.99**	**71.27**

Corresponding State-wise per capita subsidies are given in Table 3.3. States have been arranged in ascending order of income.

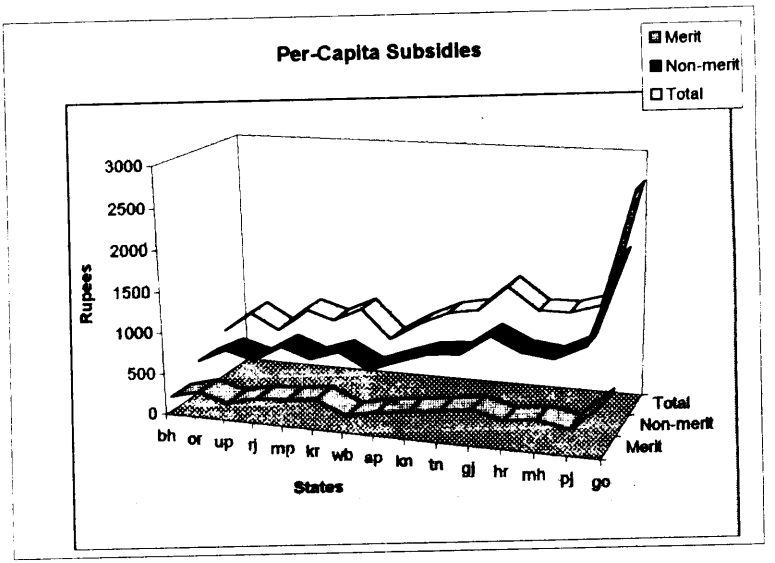
It will be noticed that the lowest per capita subsidy is provided by the poorest State, and the highest per capita subsidy is given by the highest per capita income (NSDP) State, *viz.*, Goa. Subject to some exceptions, there is clearly a tendency for per capita subsidies to rise, as per capita incomes rise. This indicates that the larger fiscal capacity of the richer States translates into a higher provision of subsidies. Among the poorer States, Orissa and Rajasthan give relatively larger subsidies; and at the threshold of the middle to high income States, Gujarat gives relatively higher levels of per capita subsidy. The inter-State pattern of per capita subsidies (total, merit, and non-merit) is exhibited in Chart 3.1.

Table 3.3
State-Wise Per Capita Subsidies: 1993-94

(Rupees)

State	*Total*	*Merit*	*Non-Merit*
Bihar	574.65	175.98	398.67
Orissa	841.69	274.84	566.85
Uttar Pradesh	637.47	170.91	466.56
Rajasthan	939.98	264.32	675.66
Madhya Pradesh	827.76	276.17	551.59
Kerala	998.76	327.10	671.66
West Bengal	647.11	162.24	484.87
Andhra Pradesh	865.07	245.88	619.19
Karnataka	1033.07	286.18	746.90
Tamil Nadu	1104.72	334.28	770.43
Gujarat	1422.12	392.64	1029.48
Haryana	1151.14	294.59	856.55
Maharashtra	1156.96	343.15	813.81
Punjab	1269.13	275.48	993.64
Goa	2661.48	615.44	2046.05

Chart 3.1



In order to study the relationship between per capita subsidy and per capita income, the former variable has been regressed on the latter for total, merit, and non-merit categories. Variables are taken in their logarithms. The results, summarised in Table 3.4, indicate a statistically significant coefficient for elasticity in each case. While for the aggregate, the income elasticity of per capita subsidy is 0.77, it is closer to unity for non-merit subsidy, thus implying that in this case, a one per cent increase in per capita income is associated with a 0.84 per cent increase in per capita subsidy.

Table 3.4
Income Elasticity of Per Capita Subsidies

Variables	*Intercept**	*Coefficient**	$\bar{R}^2$
Total	0.073 (0.061)	0.770 (5.708)	0.69
Merit	0.527 (0.364)	0.575 (3.537)	0.45
Non-Merit	-0.902 -(0.775)	0.842 (6.429)	0.74

Note: * Figures in parantheses refer to t-values.

PROFILE OF RECOVERY RATES

The recovery rates for all services (Table 3.5) considered together vary between the States in the range of 1.65 (Orissa) to 26.77 (Goa). The lower income States exhibit, in general, very low recovery rates. The richer States are able to provide relatively high per capita subsidies (as noted earlier) mainly because their per capita expenditures on social and economic services are higher. There is a positive correlation between the overall recovery rate and the level of per capita subsidy. Given that per capita SDP sets some sort of a limit on expenditures and overall subsidies, an increase in the per capita subsidies on merit goods can be achieved in the short run, it appears, only through better recovery in non-merit goods. An all-round increase in per capita subsidies can probably take place with an increase in per capita income and, ironically, high recoveries.

Variation in the recovery rates, as far as merit goods is concerned, is in a narrow band. The recovery rates in this group is uniformly low. The range of variation in non-merit social goods is also limited with the lowest

figure being 1.15 for Bihar to the highest being 7.3 for Goa. The widest variations in the inter-State comparison of recovery rates are evinced in the case of non-merit economic services. Here a positive relationship between higher per capita income and higher recovery rate is quite easily discernible, Rajasthan and Gujarat being two exceptions.

Table 3.5
Profile of Recovery Rates

State	*Sectors/Services*				
	All	*Merit*	*Non-Merit*	*Non-Merit Social*	*Non-Merit Economic*
Bihar	2.29	0.73	2.96	1.15	3.83
Orissa	1.65	1.29	1.83	2.49	1.49
Uttar Pradesh	3.23	1.35	3.90	1.50	5.28
Rajasthan	10.59	0.79	13.92	3.93	21.26
Madhya Pradesh	5.34	0.86	7.43	2.66	9.65
Kerala	2.49	0.98	3.21	2.35	4.23
West Bengal	3.43	1.22	4.15	1.29	7.60
Andhra Pradesh	8.11	0.97	10.67	2.56	14.59
Karnataka	5.18	0.57	6.84	2.66	9.00
Tamil Nadu	4.02	1.39	5.11	2.51	7.37
Gujarat	2.21	0.54	2.83	2.71	2.87
Haryana	14.19	1.97	17.72	3.82	23.34
Maharashtra	9.99	0.62	13.44	4.53	18.24
Punjab	7.67	0.78	9.42	2.00	13.72
Goa	26.77	2.73	31.84	7.30	52.74

The recovery rates for the main aggregates of goods/services are given in Table 3.5. The inter-State profile of recovery rates, according to the main groups of goods/services is also depicted in Chart 3.2, where, except for merit goods, the general upward pattern of recovery rates, as per capita incomes rise, is discernible.

In order to explore whether this relationship is statistically significant, we have regressed recovery rates, category-wise, on per capita SDP (except for the case of merit goods) in a logarithmic form. The results are summarised in Table 3.6.

It may be noted that all the elasticity coefficients are significantly different from zero. For non-merit services, the elasticity is more than unity, primarily because it is significantly higher than unity in the case of non-merit economic services.

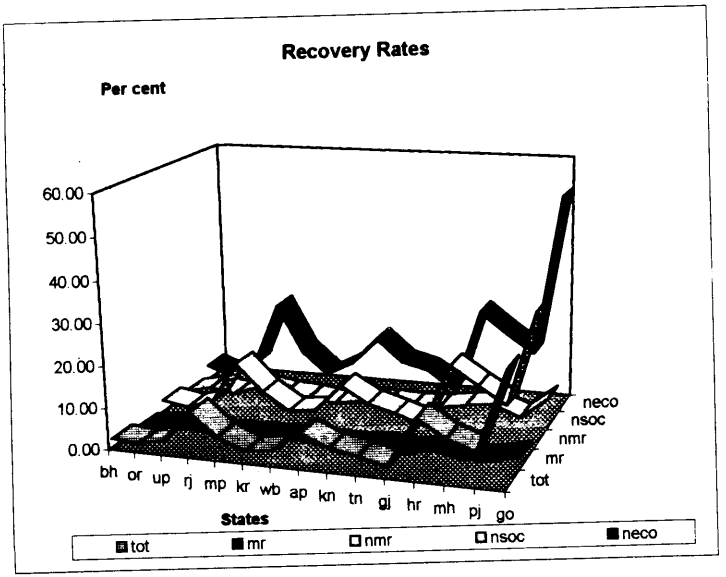
Table 3.6
Estimates of Income Elasticity of Recovery Rates

Group of Goods/Services	*Intercept**	*Coefficient**	$\bar{R}^2$
All Services	-9.935 -(2.896)	0.386 (3.383)	0.427
Non-Merit Services (Total)	-9.654 -(2.728)	1.301 (3.267)	0.409
Non-Merit Social Services	-5.792 -(2.665)	0.760 (3.106)	0.382
Non-Merit Economic Services	-10.577 -(2.517)	1.438 (3.040)	0.371

Note: * Figures in parantheses refer to t-values.

Thus, the recovery rates in the case of non-merit goods and services are significantly and positively related to the level of per capita income of the States. The high income States also happen to be providing relatively high per capita subsidies. This suggests that the relatively high non-tax revenues, reflected in the higher recovery rates, enable at least partially, the richer States to incur higher expenditures in the provision of social and economic services. States that are desirous of increasing their merit subsidies can bring this about through better recoveries from the non-merit services.

Chart 3.2



INTER-STATE PATTERN OF SURPLUSES

While in most social and economic goods/services, the States are unable to recover costs, there are some cases where they are able to generate surpluses. For the fifteen States considered together, the total surplus generated in 1993-94 amounted to Rs. 3724.73 crore which is just about 5 per cent of the amount of subsidies. The surpluses have been generated mainly in the economic services which account for about 94 per cent of the total surplus.

There are some inter-State variations in the surplus profile of the States. This is summarised in Table 3.7.

Apart from Gujarat, no State is able to raise a surplus in social services which is tangibly different from zero. Even in Gujarat, the surpluses are probably a one-off phenomenon, as an examination of basic data reveals a bunching of capital recoveries in the reference year, unlikely to be repeated. In the case of economic services, every State is able to generate some surplus, but a clearcut pattern is not visible. States like Bihar, Uttar Pradesh and Madhya Pradesh have been able to raise relatively high amounts in absolute terms, although relative to their total subsidies, these are very small proportions. Sectoral surpluses as a proportion of total surpluses for different States are summarised in Table 3.7.

Table 3.7
Surplus Profile of States: 1993-94

(Rs. Crore)

State	*Social Services*	*Economic Services*	*Total*	*Surplus as Percentage of Subsidy*
Bihar	0.00	671.05	671.05	12.77
Orissa	0.00	150.86	150.86	5.40
Uttar Pradesh	2.62	945.97	948.58	10.21
Rajasthan	0.00	127.80	127.80	2.92
Madhya Pradesh	4.60	623.98	628.58	10.89
Kerala	0.00	53.23	53.23	1.77
West Bengal	0.00	8.86	8.86	0.19
Andhra Pradesh	2.00	249.09	251.09	4.17
Karnataka	0.00	38.14	38.14	0.79
Tamil Nadu	0.00	49.22	49.22	0.78
Gujarat	213.63	372.49	586.11	9.52
Haryana	1.51	21.26	22.77	1.13
Maharashtra	0.00	144.60	144.60	1.51
Punjab	8.24	26.45	34.69	1.28
Goa	0.00	9.14	9.14	2.79
15 States	**232.60**	**3492.13**	**3724.73**	**5.10**

Since the surpluses generated from within the social and economic services constitute a very small proportion of the subsidies provided in these sectors, it is clear that subsidies are mainly financed by tax revenues or borrowing in the States.

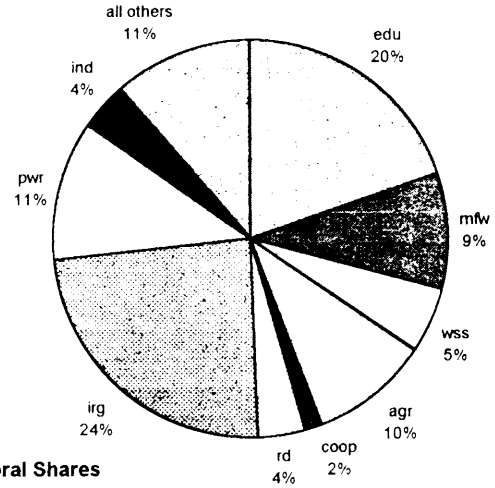
INTER-SECTORAL PATTERN OF NON-MERIT SUBSIDIES

Considering the group of non-merit subsidies, among the social services, taking the 15 selected States together, we find that out of a total subsidy of Rs. 20373.66 crore, nearly half is accounted for by the major head of education, sports, arts and culture. The two other heads with relatively significant shares in non-merit social subsidies are medical and family welfare, and water supply and sanitation. The shares of individual heads under non-merit social and economic services taken together are given in Table 3.8. Irrigation accounts for the highest share (23.84 per cent), followed by education (19.70 per cent), power (11.44 per cent), agriculture (9.50 per cent), and medical and family welfare (9.48 per cent). These relative shares are also highlighted in the associated pie chart (Chart 3.3).

Table 3.8
Non-Merit Subsidies: Sectoral Shares

Sectors	*Subsidy (Rs. Crore)*	*Share (Per Cent)*
Education, Sports, Arts and Culture	10261.63	19.70
Medical and Family Welfare	4938.28	9.48
Water Supply and Sanitation	2790.06	5.36
Agriculture and Allied Activities	4951.28	9.50
Cooperation	806.35	1.55
Rural Development	2080.67	3.99
Irrigation	12420.76	23.84
Power	5957.19	11.44
Industries	1971.08	3.78
All Others	5918.69	11.36
Total	**52095.99**	**100.00**

Chart 3.3



Relative Sectoral Shares

INTER-STATE PATTERN OF SECTOR-WISE PER CAPITA SUBSIDIES

The general pattern that as per capita incomes of a State increase, per capita subsidies also increase, has been taken note of earlier in this chapter. In this section, we focus on selected sectors, and consider the inter-State distributional pattern of the subsidies in respect of individual sectors. For this purpose, the following sectors/services have been selected:

- **Merit subsidies**: elementary education, public health, roads and bridges;
- **Non-merit social services**: education, sports, arts and culture; medical and family welfare; water supply and sanitation; and
- **Non-merit economic services**: agriculture and allied activities; cooperation; rural development; irrigation; power; and industries.

In order to depict the general pattern, States have been arranged in ascending order of per capita income. In the related Charts (3.4, 3.5 and 3.6), per capita subsidy (in rupees) is plotted on the vertical axis. The related figures are given in Table 3.9. West Bengal, exhibiting relatively small subsidies, appears to be an exception in the general pattern of rising per capita subsidies with rising per capita incomes. At the higher income end, Goa seems to be another exception in the opposite manner with very high subsidy levels. But apart from these, the general pattern is quite visible.

Table 3.9
State-Wise Per Capita Merit Services Subsidies: 1993-94

(Rupees)

State	*Per Capita Merit Subsidies*					
	Merit Subsidies	*Social Services*	*Economic Services*	*Elementary Education*	*Public Health*	*Roads and Bridges*
Bihar	175.98	132.88	43.10	110.08	4.05	24.03
Orissa	274.84	185.32	89.51	117.94	8.58	61.42
Uttar Pradesh	170.91	106.75	64.16	76.61	10.03	47.95
Rajasthan	264.32	179.57	84.75	140.70	8.64	62.72
Madhya Pradesh	276.17	207.21	68.96	108.89	10.11	57.94
Kerala	327.10	229.26	97.85	175.29	7.59	63.82
West Bengal	162.24	114.42	47.83	78.68	8.98	24.54
Andhra Pradesh	245.88	191.41	54.46	86.24	13.92	34.40
Karnataka	286.18	219.70	66.48	137.02	6.59	41.03
Tamil Nadu	334.28	262.21	72.08	141.14	13.79	55.42
Gujarat	392.64	289.25	103.39	167.29	15.07	78.96
Haryana	294.59	175.37	119.22	111.41	11.65	65.73
Maharashtra	343.15	227.67	115.48	137.98	32.42	89.43
Punjab	275.48	136.54	138.94	102.51	10.78	63.07
Goa	615.44	331.42	284.01	213.53	23.64	219.26

In the provision of non-merit social services subsidies in per capita terms (Table 3.10), education accounts for the highest per capita provisions in all States, followed by medical and public health. The general upward pattern, as we move to higher per capita income States, is again clearly discernible. Towards the lower income end, Rajasthan and then Kerala appear to provide relatively high per capita subsidies on education as compared to other States that are close to them in per capita terms. In the case of medical and public health, the per capita subsidy in Maharashtra appears to be relatively low as compared to other high income States.

Table 3.10
State-Wise Per Capita Non-Merit Social Services Subsidies: 1993-94

(Rupees)

State	*Per Capita Non-Merit Social Services Subsidies*			
	Social Services	*Education and Allied Services*	*Medical and Public Health*	*Water Supply and Sanitation*
Bihar	131.75	63.73	36.96	23.04
Orissa	190.82	93.27	48.09	25.54
Uttar Pradesh	174.65	86.65	56.70	12.70
Rajasthan	319.24	126.76	73.80	102.56
Madhya Pradesh	183.84	74.64	47.32	39.05
Kerala	368.11	206.23	90.03	46.03
West Bengal	273.25	152.05	62.73	12.96
Andhra Pradesh	220.34	115.97	57.54	26.79
Karnataka	265.98	131.34	74.70	31.15
Tamil Nadu	366.96	162.36	81.74	68.25
Gujarat	270.85	146.89	59.52	39.81
Haryana	288.26	152.33	61.86	43.09
Maharashtra	314.41	177.79	47.31	32.76
Punjab	394.62	228.94	96.62	24.74
Goa	1279.92	593.59	322.35	268.83

Chart 3.4

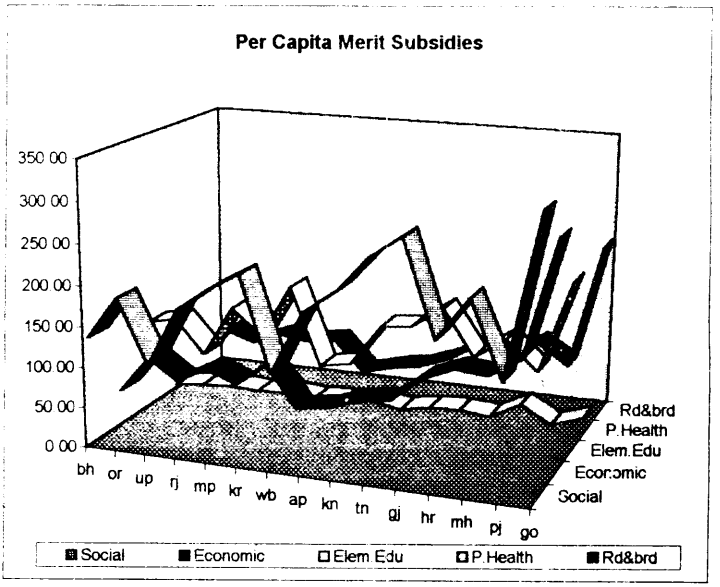


Chart 3.5

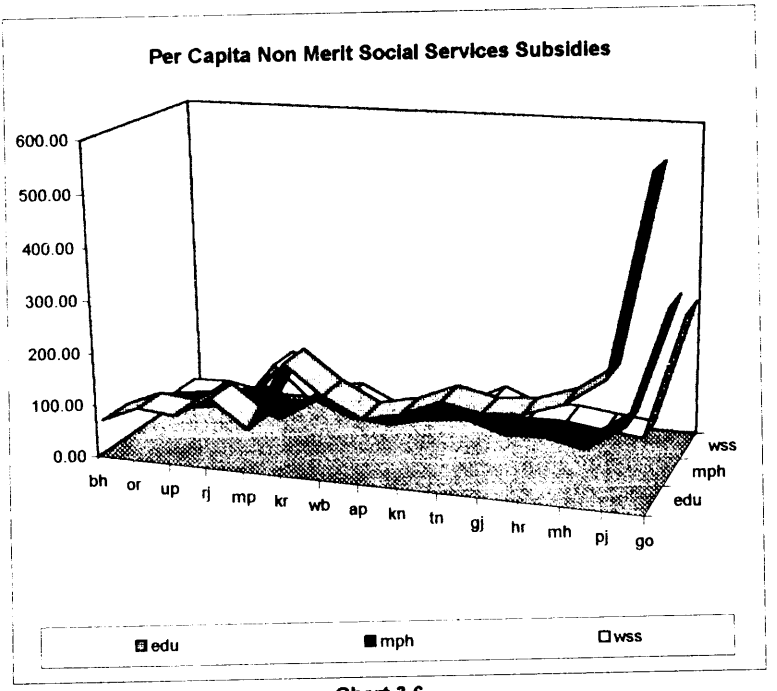
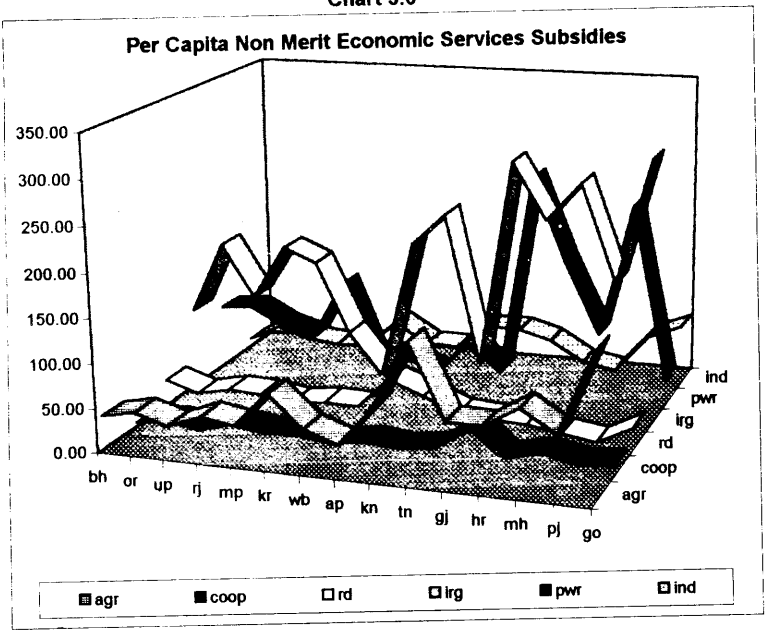


Chart 3.6



For non-merit economic services subsidies, the highest per capita subsidies are claimed by irrigation, followed by power, agriculture and allied activities, and industries (Table 3.11). Of these, the benefits of the first three probably accrue largely to the same sector, *viz.*, agriculture. In general, in the case of non-merit subsidies, the general upward pattern of per capita subsidies with rising per capita incomes, is maintained, although inter-State variations are somewhat larger for some services.

Table 3.11
State-Wise Per Capita Non-Merit Economic Services Subsidies: 1993-94

(Rupees)

State	*Per Capita Non-Merit Economic Services Subsidies*						
	Economic Services	*Agriculture*	*Coopera-tion*	*Rural Development*	*Irrigation*	*Power*	*Industries*
Bihar	266.92	38.11	4.41	29.40	89.91	72.06	8.84
Orissa	376.03	45.66	9.36	16.72	172.75	74.72	27.97
Uttar Pradesh	291.92	34.75	3.78	24.93	113.05	55.27	16.71
Rajasthan	356.42	48.86	14.06	23.49	174.18	43.63	12.17
Madhya Pradesh	367.75	42.40	8.06	17.86	159.56	113.07	14.08
Kerala	303.55	81.49	9.37	21.14	79.06	19.53	45.23
West Bengal	211.62	46.68	3.71	20.26	33.12	29.19	22.89
Andhra Pradesh	398.85	33.60	10.15	54.31	189.02	14.09	22.56
Karnataka	480.92	77.93	5.96	40.36	225.32	52.66	50.70
Tamil Nadu	403.47	152.06	10.87	23.56	58.23	22.69	50.55
Gujarat	758.64	71.36	36.26	21.42	289.52	254.18	40.49
Haryana	568.29	69.97	8.25	19.12	226.17	159.41	17.45
Maharashtra	499.40	93.14	17.93	12.62	270.35	77.48	10.24
Punjab	599.02	69.93	9.80	6.95	162.24	228.36	54.51
Goa	766.13	160.22	12.28	26.77	300.21	31.03	69.81

SUBSIDIES TO PUBLIC ENTERPRISES IN THE STATES

The availability of data with respect to State level public enterprises varies among the States, but even in the best case, the available data are incomplete and not up-to-date. This is primarily due to the delay on the part of many such enterprises in finalising their accounts; the delay stretches upto 15 years or more in some cases and a delay of around five years is rather common. Similarly, the State governments also do not report even the details of dividends and interest received from the non-departmental public enterprises under their control. As such, a detailed analysis of subsidies to public enterprises at the State level becomes rather difficult.[9] However, we have endeavoured to estimate the subsidies received by these enterprises in the 15 selected States for the year 1993-94 to the extent possible, given the data limitations. The results are reported in Table 3.12. The methodology used is exactly the same as in the computation of subsidies to the Centrally owned public enterprises. However, due to lack of disaggregated data, it has not been possible to separate out the subsidised and surplus sectors. The interest rate used as an approximation of the cost of capital is the same as that used for the comprehensive estimates of budget based subsidies, *viz.*, the average effective rate of interest that the State paid on its borrowings (internal debt, loans from the Central government and provident fund).

The results of our calculations indicate that in all the States barring Andhra Pradesh, almost the entire investments imply large subsidies in the absence of dividends or interest payments due to the government. Even in Andhra Pradesh, implicit subsidies are large (about Rs. 90 crore), but at least a non-negligible amount of dividends and interest are received by the State government. The overall recovery rate from investments in public enterprises is 33.63 per cent in Andhra Pradesh; in the other 14 States it ranges from 0.17 per cent in Bihar to 6.48 per cent in Gujarat. It may be pertinent to recall that these recovery rates are really overestimates, since the total costs do not include assistance to these undertakings through revenue account and through capital account (other than equity investments and loans). The aggregate investment (equity and loans) in all the 15 States together was Rs. 16378 crore. The total cost of these investments in terms of interest payable by these States on this amount at their respective average effective rates was Rs. 1842 crore. With a receipt of only Rs. 95 crore, the subsidy works out to Rs. 1747 crore with a recovery rate of only 5.15 per cent for all 15 States together.

Table 3.12
Government Subsidies to Non-Departmental Public Enterprises: States

(Rs. Lakh)

Item\State	*Andhra Pradesh*	*Bihar*	*Goa*	*Gujarat*	*Har-yana*	*Karna-taka*	*Kerala*	*Madhya Pradesh*	*Maha-rashtra*	*Orissa*	*Punjab*	*Rajas-than*	*Tamil Nadu*	*Uttar Pradesh*	*West Bengal*
A. Statutory Corporations															
Amount Invested (Equity + Loans)	17556	9900	2246	38636	120460	48546	8015	16611	15466	12418	15103	74132	381	26722	1595
Cost of Capital Invested	1933	923	1474	4192	14034	5437	929	1659	1820	1376	1701	8266	45	2496	182
Divkdend/Interest received	N.A.	N.A.	17	N.A.	44	202	N.A.	15	120	0	N.A.	387	N.A.	N.A.	26
Implicit Subsidy/Surplus (-)	N.A.	N.A.	1457	N.A.	13990	5236	N.A.	1644	1700	1376	N.A.	7879	N.A.	N.A.	156
B. Government Companies															
Amount Invested (Equity + Loans)	55257	26749	5434	254904	9612	76337	51136	19454	26475	76493	24409	20663	46148	106103	71009
Cost of Capital Invested	6084	2493	3564	27657	1120	8550	5927	1943	3116	8475	2748	2304	5459	9910	8095
Dividend/Interest received	N.A.	N.A.	4	919	26	195	284	44	24	59	N.A.	140	2	266	118
Implicit Subsidy/Surplus (-)	N.A.	N.A.	3560	26738	1094	8355	5643	1899	3092	8416	N.A.	2164	5457	9644	7977
C. Joint Stock Companies															
Amount Invested (Equity + Loans)	3014	388	4	491	267	236	460	165	251	125	141	236	193	12	3042
Cost of Capital Invested	332	36	2	53	31	26	53	16	30	14	16	26	23	1	347
Dividend/Interest received	N.A.	N.A.	0	267	3	24	48	6	14	N.A.	N.A.	2	N.A.	N.A.	N.A.
Implicit Subsidy/Surplus (-)	N.A.	N.A.	2	-214	28	3	5	10	16	N.A.	N.A.	24	N.A.	N.A.	N.A.

Table 3.12 (Contd.)
Government Subsidies to Non-Departmental Public Enterprises: States

(Rs. Lakh)

Item\State	*Andhra Pradesh*	*Bihar*	*Goa*	*Gujarat*	*Har-yana*	*Karna-taka*	*Kerala*	*Madhya Pradesh*	*Maha-rashtra*	*Orissa*	*Punjab*	*Rajas-than*	*Tamil Nadu*	*Uttar Pradesh*	*West Bengal*
D. Cooperative Banks and Societies															
Cost of Capital Invested	5215	1939	1010	931	1448	2507	1926	2680	7350	1955	2609	2271	2633	3396	1365
Dividend/Interest received	17	6	18	940	23	46	59	15	115	1	N.A.	15	78	N.A.	34
Implicit Subsidy/Surplus (-)	5198	1933	991	-9	1425	2461	1867	2665	7235	1954	N.A.	2256	2555	N.A.	1331
E. Total															
Amount Invested (Equity + Loans)	123137	57841	9222	302612	142765	147503	76230	63053	104732	106682	62826	115396	68982	169199	87617
Cost of Capital Invested	13557	5391	6050	32833	16632	16520	8835	6299	12327	11820	7074	12867	8161	15803	9988
Dividend/Interest received	4560	9	39	2126	95	467	391	80	273	60	314	544	80	266	178
Implicit Subsidy/Surplus (-)	8997	5382	6011	30707	16537	16054	8444	6219	12054	11760	6760	12323	8080	15537	9811
Recovery Rate (%)	33.64	0.17	0.64	6.48	0.57	2.83	4.43	1.27	2.21	0.51	4.44	4.23	0.98	1.68	1.78

Table 3.13 has been computed to allow comparisons between States. Gujarat has the largest total investment in these undertakings (breakup of investment into loans and share capital is not available) followed by Haryana and Goa, despite low recovery rates. Orissa and Rajasthan also stand out because of the large investments (relative to their respective SDP) in these undertakings despite their low levels of per capita SDP; the consequent lower availability of public resources really does not allow them such a luxury. The highest subsidy/SDP ratio is observed in Goa (4.19 per cent) while all the other States have ratios below one per cent. Among the rest, relatively high subsidy/SDP ratios are observed in Gujarat (0.93 per cent), Haryana (0.92 per cent) and Orissa (0.75 per cent), while relatively low ratios are seen in Maharashtra (0.13 per cent), Bihar and Madhya Pradesh (both 0.16 per cent).

Table 3.13
Subsidies to Public Enterprises as Ratios of SDP

(Percentage)

State	*Amount Invested*	*Cost of Capital*	*Dividend/ Interest*	*Implicit Subsidy*
High Income States				
Goa	6.43	4.22	0.03	4.19
Gujarat	9.20	1.00	0.06	0.93
Haryana	7.91	0.92	0.01	0.92
Maharashtra	1.15	0.14	0.00	0.13
Punjab	2.42	0.27	0.01	0.26
Middle Income States				
Andhra Pradesh	2.66	0.29	0.10	0.19
Karnataka	4.48	0.50	0.01	0.49
Kerala	4.05	0.47	0.02	0.45
Tamil Nadu	1.64	0.19	0.00	0.19
West Bengal	2.01	0.23	0.00	0.23
Low Income States				
Bihar	1.73	0.16	0.00	0.16
Madhya Pradesh	1.65	0.16	0.00	0.16
Orissa	6.80	0.75	0.00	0.75
Rajasthan	4.75	0.53	0.02	0.51
Uttar Pradesh	2.45	0.23	0.00	0.22
All 15 States	**3.07**	**0.34**	**0.02**	**0.33**

SUBSIDIES IN SPECIAL CATEGORY STATES

Four special category States could be studied with a view to arriving at estimates of subsidies in these States. For this purpose, their Finance Accounts for 1994-95 which have recently become available, were used. These States are Assam, Jammu & Kashmir, Himachal Pradesh and Tripura. The relevant estimates for the main aggregates are summarised below in Table 3.14.

Table 3.14
Special Category States: Estimates of Aggregate Subsidies and Surpluses for Four States: 1994-95

(Rs. Crore)

State		*Total Cost*	*Total Receipts*	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
Assam	(Subsidy sectors)	3611.36	40.55	3570.79	1.12
	(Surplus sectors)	1.63	264.70	-263.08	-
Himachal Pradesh	(Subsidy sectors)	1438.71	83.25	1355.46	5.79
	(Surplus Sectors)	7.12	28.28	-21.16	-
Jammu & Kashmir	(Subsidy sectors)	2687.09	94.44	2592.66	3.51
	(Surplus sectors)	0.01	0.01	0.00	-
Tripura	(Subsidy sectors)	688.56	17.45	671.11	2.53
	(Surplus sectors)	0.37	2.71	-2.34	-

It is apparent that the subsidies are relatively high and the recovery rates are relatively low as compared to the non-special category States. Also, the surpluses are comparatively small. In the case of Assam, the ratio of surplus to subsidy at 7.37 is comparable to the non-special category States.

PROJECTIONS FOR 1994-95

15 Major States

In order to construct a comprehensive profile for government subsidies of the Central and State governments taken together, we need to take the 1993-94 estimates for the 15 States forward to 1994-95, and also add estimates for the special category States that have been left out. This exercise has been done in two parts. First, the 1993-94 estimates for the 15 States are projected for 1994-95 in the following manner.

On the cost side, the annualised component of the fixed cost, consisting of depreciation and interest cost has been computed on an actual basis. This could be done, using 1993-94 Finance Accounts, by adding current investment to the capital stock at the beginning of 1993-94 according to the relevant categories (e.g., physical assets, equity, loans) to arrive at the capital stock figures at the beginning of 1994-95. Then depreciation and interest rates are applied to calculate the fixed cost component of total cost.

In order to work out the variable cost (i.e., revenue expenditure) and revenue receipts, we have derived relevant projection factors using RBI data actuals for 1993-94 and 1994-95 pertaining to the concerned fifteen States for social and economic services as separate aggregate categories. These factors are:

λ_1 = Revenue expenditure 1994-95/Revenue expenditure 1993-94 (for 15 States)

λ_2 = Revenue receipts 1994-95/Revenue receipts 1993-94 (for 15 States)

λ_3 = Interest receipts 1994-95/Interest receipts 1993-94 (for 15 States)

λ_1, λ_2 and λ_3 are calculated separately for social and economic services. This provides projections for cost, receipts and subsidy aggregates for social and economic services. Individual services within social services and economic services are then derived for 1994-95 on a pro-rata basis, i.e., by applying the relevant proportions from 1993-94.

Special Category States

For four special category States, estimates of subsidies have been worked out utilising our methodology on the basis of Finance Accounts data for 1994-95. These States are: Assam, Himachal Pradesh, Jammu & Kashmir and Tripura. Their summary sheets, indicating estimated subsidies are presented in Annexures 22 to 25. The relevant estimates are then blown up for the remaining States by the proportionate size of the budgets of these States relative to the four States included in the sample, where the budget size is measured by aggregate revenue expenditure of these States. Since Delhi is excluded from the Central budget in its Finance Accounts of 1994-95, it is included in this part of the exercise. Together, these steps provide aggregate subsidies for all States.

All State Subsidies

The projected figures for all-State subsidies for 1994-95 are summarised in Table 3.15.

Table 3.15
All-State Government Subsidies: 1994-95

Services	*Total Cost*	*Total Receipts*	*Subsidies*	*Recovery Rate (%)*
Merit Goods/Services	27358.16	251.57	27106.59	0.92
a. Social	18951.71	114.25	18837.46	0.60
b. Economic	8406.45	137.32	8269.13	1.63
Non-Merit Goods/Services	71933.68	5285.83	66647.85	7.35
a. Social	28420.59	610.11	27810.48	2.15
b. Economic	43513.09	4675.72	38837.37	10.75
Merit Plus Non-Merit				
a. Social	47372.30	724.36	46647.94	1.53
b. Economic	51919.54	4813.04	47106.50	9.27
Total Subsidies	**99291.84**	**5537.40**	**93754.44**	**5.58**

These estimates have been used for constructing an all-India profile of subsidies for 1994-95, which is discussed in the next chapter.

Subsidies: An All-India Perspective

4

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

CENTRE AND STATES: AGGREGATE BUDGET-BASED SUBSIDIES

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

a. All-India Profile

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

Table 4.1
All-India Subsidies: 1994-95

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

b. Relative Shares of Centre and States

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

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

Services	*Rs. Crore*			*Per Cent*	
	Centre	*States*	*All-India*	*Share in All-India Subsidies*	
				Centre	*States*
1. Merit Goods/Services (Subsidy Sectors)	5521.91	27106.60	32628.51	16.92	83.08
a. Social Services	1162.93	18837.47	20000.40	5.81	94.19
b. Economic Services	4358.98	8269.13	12628.11	34.52	65.48
2. Non-Merit Goods/Services (Subsidy Sectors)	37567.12	66647.86	104215.00	36.05	63.95
a. Social Services	3939.53	27810.49	31750.02	12.41	87.59
b. Economic Services	33627.59	38837.37	72464.96	46.41	53.59
3. Surplus Sectors (Merit and Non-Merit)	-4642.83	-4818.81	-9461.64	49.07	50.93
Total Subsidies (1 + 2)	**43089.03**	**93754.46**	**136843.50**	**31.49**	**68.51**
Social Services (Merit and Non-Merit)	5102.46	46647.96	51750.07	9.86	90.14
Economic Services (Merit and Non-Merit)	37986.57	47106.50	85093.07	44.64	55.36
Subsidies Net of Surplus (1 + 2 + 3)	**38446.20**	**88935.65**	**127381.86**	**30.18**	**69.82**

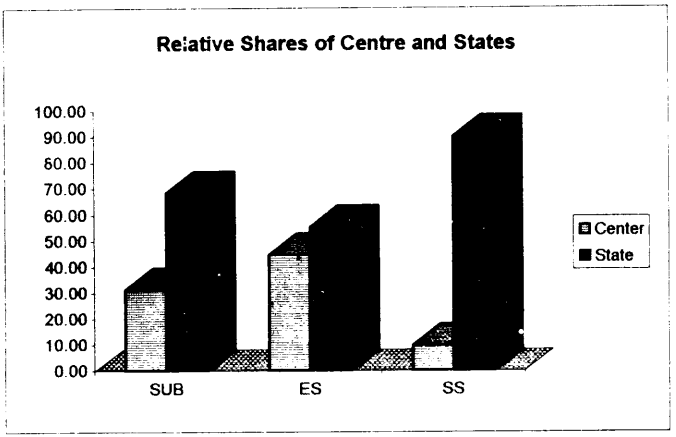
c. Recovery Rates

A profile of recovery rates are shown in Table 4.3.

Table 4.3
Profile of Recovery Rates: 1994-95

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

Chart 4.1


Relative Shares of Centre and States
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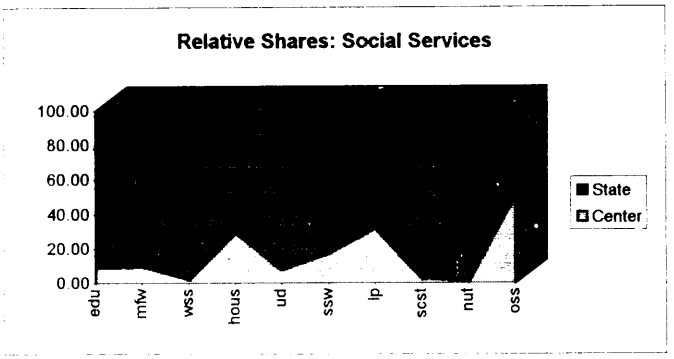
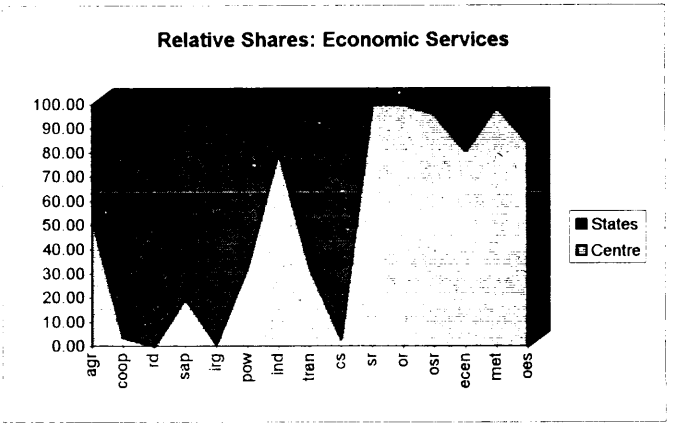
90.00
60.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
SUB
ES
SS
Center
State


Relative Shares: Social Services
100.00
80.00
60.00
40.00
20.00
0.00
edu
mfw
wss
hous
ud
ssw
lp
scst
nut
oss
State
Center


Relative Shares: Economic Services
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
agr
coop
rd
sap
irg
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Centre

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

d. Sectoral Shares

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

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

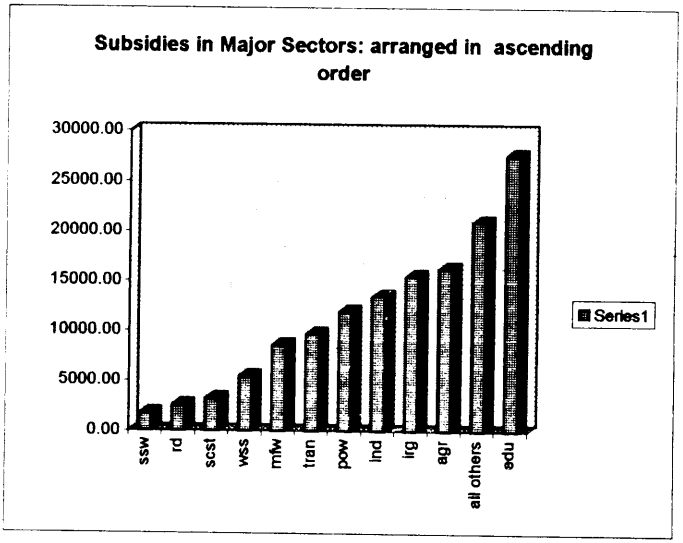
Comparison With Previous Studies

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

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

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

Chart 4.2



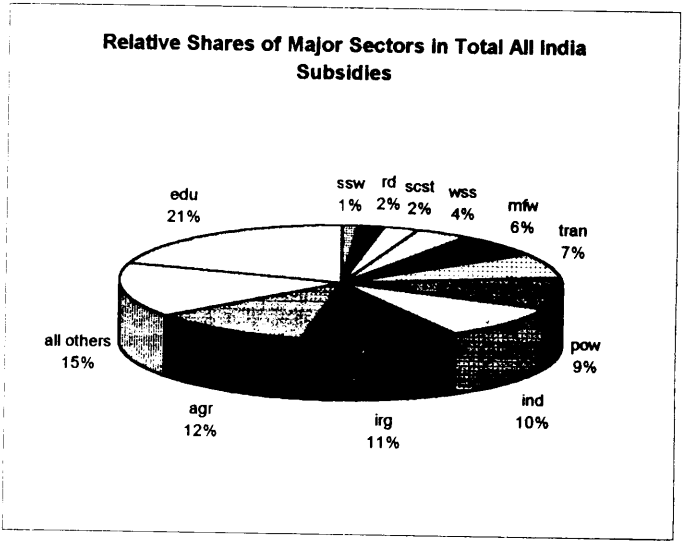
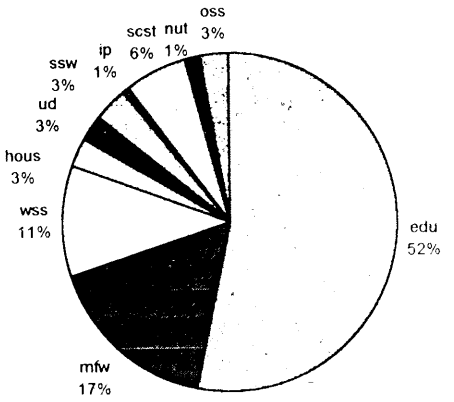
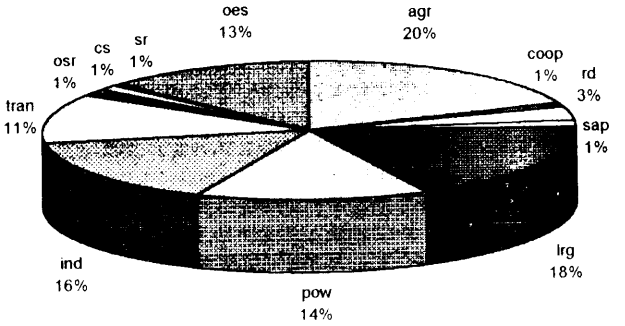


Chart 4.3

Relative Shares of Subsidies: Social Services



Relative Shares of Subsidies: Economic Services



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

ii. The method of sector-wise aggregation of subsidies in this study differs from that of its two predecessors in an important way. In those cases, surpluses in some sectors were adjusted against subsidies in others in the process of aggregating them. In the present exercise, at the level of major budgetary heads, surplus sectors and subsidy sectors are aggregated separately.

iii. Our all-India estimates relate to all States and the Centre, whereas the coverage in the earlier studies were limited to only 14 States, without any adjustment to take into account the remaining States.

iv. In our case, State level subsidies for 15 major States relate to the year 1993-94. Hence, for an all-India perspective for 1994-95, the States' subsidies at an aggregate level are projected for 1994-95. In the Tiwari study, data for two States were not available for 1992-93. As such, in these cases, data for earlier years were used. It is not clear whether the estimated subsidies were correspondingly projected forward.

FISCAL DEFICIT AND AGGREGATE SUBSIDY

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

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

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

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

MAJOR SUBSIDIES IN INDIA: SOME OBSERVATIONS

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

a. Power (Electricity) Subsidies

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

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

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

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

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

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

Table 4.4
Electricity Subsidy for Agriculture and Domestic Sectors

(Rs. Crore)

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

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

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

b. Irrigation Subsidies

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

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

Table 4.5
Estimates of Unrecovered Cost: Irrigation

(Rs. Crore)

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

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

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

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

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

(Rs. Crore)

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

Source: Planning Commission.

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

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

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

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

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

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

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

c. Social Sector Subsidies

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

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

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

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

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

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

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

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

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

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

i. health expenditure is primarily on curative rather than preventive health care; a reversal of these priorities may be more efficient and economical in the long run, and it would also reduce the subsidy burden on the government considerably;

ii. social services, even though highly subsidised, may still be out of reach for the poor, because the component of private costs (transportation, book, medicines, etc.) may be prohibitively high;

iii. a large part of the benefit of higher and technical education which are highly subsidised is appropriated by the better off people, who are more advantageously placed in getting admission into and pursuing these courses;

iv. there is a substantial amount of interdependence between these two sectors; for example, female literacy has been shown to reduce infant mortality; and

v. it cannot always be assumed that the subsidies actually benefit the target groups, even when such groups are defined in a general way. For example, education subsidies may not reach the students or even teachers; possibilities of leakages cannot be ruled out.

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

d. Petroleum Subsidies

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

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

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

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

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

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

a. The difference between the ex-refinery price of petroleum products and the cost of importing them (since there is shortage of these due to limits in the domestic refining capacity) is met out of the C&F account.

b. The difference between the cost of bringing the crude oil to the refineries and the cost built in the retention prices of the refineries is adjusted in the C&F surcharge account.

c. The demurrage on crude/products imports is reimbursed to the oil companies from the pool account.

d. Under-recoveries of some levies of some State governments and local bodies by the oil companies through the price mechanism, are compensated by the pool accounts.

e. Losses due to exchange-rate variations relating to foreign currency loans taken by the oil companies on behalf of the government are also absorbed by this pool accounts.

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

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

Price increases:	w.e.f. 20.3.1990, 25.7.1991, 16.9.1992, 2.2.1994 and 2.7.1996
Surcharge:	Gulf surcharge of 25 per cent w.e.f. 15.10.1990

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

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

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

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

(Rs. Crore)

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

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

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

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

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

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

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

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

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

Table 4.9
Subsidy on Major Petroleum Products

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

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

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

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

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

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

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

Table 4.10
Cross-Subsidy on Major Petroleum Products

(Rs. Crore)

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

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

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

- Price adjustments should be formula-based and automatic, so that no particular government shoulders the blame. These price adjustments should be periodically announced.

- The relativities among different petroleum products should be fixed at a base level. Once these relativities between those products that may be favoured with high subsidy rates (like kerosene and diesel), and

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

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

Benefits of Subsidies: Relative Distribution and Issues of Equity

5

INTRODUCTION

The relative distribution of the benefits of a subsidy may be studied with respect to different groups or classes of beneficiaries such as consumers and producers, as also between different classes of consumers (rich/poor, rural/urban or agricultural/non-agricultural), and producers (private/public/ cooperative). It is also useful to look at the pattern of regional (inter-State) distribution of the benefits of subsidies.

While this analysis can be done with respect to each individual subsidy, it is often relevant to view some of the subsidies as a group (e.g., all agricultural subsidies) if they cover inter-linked stages from production of inputs to the sale of final output. Input subsidies in agriculture influence input prices of agricultural production and thereby also the output prices. Input subsidies generally remain untargeted because they filter through to a range of final outputs, the benefit of which may be derived by the target as well as the non-target population. The scope of targeting a subsidy on a final good is usually greater. A comprehensive analysis of the incidence of subsidies would require a general equilibrium framework with information on use-intensities of different inputs, and demand and supply functions for different final goods.

In this review, important subsidies in India have been considered, at first, individually in respect of the relative distribution of their benefits from an economic class-wise, location-wise (inter-regional) or rural-urban perspective as may be relevant. Some of these are then considered together as a group. The discussion pertains to subsidies relating to: (i) food, (ii) fertiliser, (iii) power, (iv) irrigation, (v) education and (vi) health.

Food Subsidies

The benefits of the food subsidy accruing to the poor depend on:

- the number of poor who actually buy from the public distribution system (PDS);
- the magnitude of benefit derived by the poor through their PDS purchases; and inter alia,
- the extent of leakages in the operation of the PDS.

Targeting of the PDS may be looked at in two ways, *viz.*, (i) the proportion of poor beneficiaries in all beneficiaries and (ii) the proportion of poor beneficiaries using the PDS among all poor. The first target ratio (TR1) indicates as to how far the PDS caters to the poor vis-a-vis the non-poor and the second ratio (TR2) indicates the extent to which the poor are covered by the PDS. The obverse of the first ratio (100–TR1) refers to an inclusion error, i.e., coverage of the non-poor who ought to be excluded but are included while that of the second ratio (100–TR2) indicates exclusion error, i.e., the percentage of those who ought to included but are in fact excluded from the PDS. Estimates of these ratios are provided in a study by Jha (1991) as given in Table 5.1.

For TR1, i.e., the number of poor among all beneficiaries, the coverage of poor is only a little more than 50 per cent for rice, and even less for wheat. For all the PDS commodities, targeting appears to be better in urban areas as compared to the rural areas. For TR2, i.e., the proportion of PDS using poor to all poor, the ratios are relatively lower as compared to TR1. Only about 43 per cent among the poor are PDS users for rice in rural as well as urban areas, whereas for wheat, the coverage of poor by the PDS is even less, being 30 per cent in rural and 37 per cent in urban areas. On the basis of this data set (Table 5.1), Jha (1994, p. 19) observes that the probability of committing exclusion error (range: 30–90% = 100 - TR2) is higher than that of inclusion error (range: 30–60% = 100 - TR1). There is an interesting 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. However, given that the three foodgrains (rice, wheat and jowar) are substitutes for each other and that there are varying preferences for foodgrains even among the poor in different regions, one ought to consider the cumulative coverage of

the poor by the three foodgrains, adjusting for those who may be consuming more than one foodgrain. Assuming the adjustment to be minor, it is possible that TR2 is in fact the highest in the case of foodgrains.

Table 5.1
Targeting of Public Distribution System

Good	*Area*	*Target Ratio TR1*	*Target Ratio TR2*
Rice	Rural	50.53	42.50
	Urban	55.40	42.84
Wheat	Rural	40.34	29.96
	Urban	47.81	37.34
Jowar	Rural	60.08	8.99
	Urban	66.11	2.18
Edible Oils	Rural	49.61	16.13
	Urban	50.20	26.81
Sugar	Rural	40.63	68.37
	Urban	47.70	74.63
Kerosene	Rural	46.03	50.94
	Urban	49.99	61.91

Source: Jha (1991).

Notes: TR1: Number of poor* beneficiaries/Number of all beneficiaries of PDS (per cent).
TR2: Number of poor beneficiaries of PDS/Number of all poor (per cent).
* Lowest 40 per cent of population in terms of total expenditure.

Many studies have taken note of a distinct urban bias in the PDS. The system appears to be geared towards operating in metropolitan and urban areas although there was some effort in the early 1980s for locating shops in rural areas. The issue is not just of having more shops in rural areas but also their effectiveness in terms of actual supply of essential goods particularly in the backward, remote and inaccessible areas. The average accessibility of ration shops in rural areas (Table 5.2), measured in terms of crowding in ration shops and their distance from residences is less than 60 per cent of the accessibility in urban areas (Howes and Jha, 1992) despite giving a 75 per cent relative weight to distance which is more important in rural areas.

Table 5.2
Urban Bias in PDS (Rural/Urban Ratios)

State	*Per Capita PDS Consumption*		*Per Capita Subsidy*	*Accessibility of Ration Shops (1978)*	
	(1978)	(1986-87)	(1986-87)	α = .25	α = .75
Andhra Pradesh	.107	1.349	1.68	.147	.596
Assam	.048	.585	.93	.100	.424
Bihar	.024	.220	.65	.121	.353
Gujarat	.274	1.621	1.19	.138	.626
Haryana	.076	.276	1.15	.144	.502
Himachal Pradesh	.053	2.731	.98	.113	.496
Jammu & Kashmir	.160	.377	.39	.040	.343
Karnataka	.130	.637	1.41	.138	.559
Kerala	1.103	1.199	1.04	.510	.901
Madhya Pradesh	.015	.588	.80	.083	.404
Maharashtra	.292	.877	.64	.129	.791
Orissa	.065	.237	.36	.048	.157
Punjab	.015	.330	.55	.287	1.089
Rajasthan	.120	3.080	1.67	.131	.542
Tamil Nadu	.192	1.057	.64	.308	1.136
Tripura	.355	1.175	1.03	.082	.492
Uttar Pradesh	.015	.518	.24	.093	.332
West Bengal	.170	.320	.43	.138	.528
All India	**.201**	**.697**	**.79**	**.133**	**.563**

Source: Howes and Jha (1992), p. 1027.

Notes: a. If the ratio exceeds 1 there is a rural bias, if it falls short of 1 there is an urban bias and if it equals 1 there is no bias.

b. α is the relative weight given to crowding in ration shops as compared to average distance of these shops from residences. Crowding seems to be similar in both rural and urban areas whereas distances are much longer in the former.

c. While per capita consumption figures relate to foodgrains, subsidy relates to all subsidised items under PDS.

The main conclusions in relation to the targeting of PDS may be stated as:

i. the overall coverage of the poor through the PDS is quite low;

ii. targeting is better in urban areas;

iii. poor are relatively better targeted for sugar and kerosene, than rice or wheat individually. For jowar, the poor utilise the PDS least among

all commodities partly due to its consumption being restricted to some areas; and

iv. the probability of exclusion error is higher than that of inclusion error.

It is important not only to look at the number of poor covered by the PDS, but also at the magnitude of the benefit derived by the poor. Jha (1994, p. 24) writes that the "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 5 per cent of the mean expenditure of a person in the poorest decile".

An estimate of the fraction of total expenditure on PDS that reaches the bottom 20 per cent of the households was made by Parikh (1993). He defines targeting effectiveness as the product of two fractions, *viz.*, (i) the fraction of quantity distributed through PDS that reaches the consumers and (ii) the fraction of quantity that reaches the target group. Using the average of 1986 and 1987 data for amounts distributed through the PDS and the expenditure data from the 42nd round of NSS, Parikh (1993, p. 13) estimated that for every rupee spent on cereal distribution through PDS, less than 20 paise reach the poor, except in Kerala where 26 paise reach the poor. The leakages out of the system are considered to be substantial (roughly 1/3rd of the supply). In the context of the operation of PDS, Reddy and Selvaraju (1992, p. 10) observe that (i) the disparity between the rich and the poor has been widening and (ii) the disparity between poor in the rural sector and the poor in the urban sector has also been widening.

In recent years, some attempts have been made to improve the targeting of the PDS. In June, 1992, a Revamped Public Distribution Scheme (RPDS) was started. It caters to remote tribal, hill and arid area populations that have poor infrastructure. Apart from rice and wheat, additional items like tea, soap, pulses and iodised salt are made available through RPDS in these areas. During 1995-96, this scheme covered 1775 blocks. Other special schemes under the PDS designed for improving its targeting relate to supply of subsidised foodgrains to SC/ST/OBC hostels (since October, 1994), a foodgrains-based employment generation scheme and mid-day meals scheme (since 15 August, 1995). At the State level some distinction between categories of PDS users has been brought about. In Andhra Pradesh a distinction is made through the issue of white and pink cards. Pink card holders were supplied rice at Rs. 2.00 per kilogram (the price has since been raised). In Karnataka, saffron and tricolour cards were introduced. The

tricolour card holders were supplied wheat and rice at prices lower than that for the general category of PDS users. In most other States, however, no distinction is being made between poor and non-poor users of the PDS. In a recent study, Parikh, Dreze and Srinivasan (1996) estimate that regional targeting increases the amount of grain reaching the poor from 25 to 30 per cent.

In the new scheme for PDS announced in January 1997, a distinction between people below and above the poverty line has been proposed, with the proposal of supplying foodgrains (wheat and rice) to the former category at half the rates applicable to the latter subject to quantity restrictions. This may augment the effective reach of the PDS, but will need to be carefully monitored since it opens up possibilities of additional leakages between poor and non-poor categories, also between PDS users and the open market. The incentive to divert the PDS supply to the open market is much greater when the price-differential (between open market and PDS below poverty rate) is larger.

In India, the possibility of administering the food subsidies through a food coupon system has never really been examined even on an experimental basis. It can, however, prove to be a cost-minimising and reach-maximising option as compared to the present leakage-prone, cost-enhancing and mistargeted PDS system.

FERTILISER SUBSIDIES

The direct beneficiaries of the fertiliser subsidies could be divided into two groups, *viz.*, users (i.e., farmers) and the fertiliser industry. The division of the subsidy benefit between these two groups can be worked out by considering the retail price of fertiliser that would prevail in the absence of any government intervention and the existence of free imports. This notional 'free market price' may be defined as P_f. Although it is not possible to estimate this price directly, often the farm gate import price has been taken as a proxy for it. Defining retention price, as P*, the statutorily fixed retail price as P_r and assuming $P^* > P_f > P_r$, and the quantity of fertilisers purchased as Q, with Q_d as its domestically produced component we can write the total fertiliser subsidy, S, as,

$$S = (P^* - P_f)\, Q_d + (P_f - P_r)\, Q$$

The first term represents subsidy to the fertiliser industry and the second term represents subsidy to the consumers of fertilisers. An interesting problem relating to the first term is common to all subsidies linked with retention prices, *viz.*, that there is no incentive to minimise costs. Worse still, profits may be disguised as costs. In either case, subsidies are unduly large.

Using a moving average of import prices, Gulati (1990) estimated that 48 per cent of the fertiliser subsidy went to the farmers and 52 per cent to the industry during the period (1981-82 to 1989-90). In a similar exercise, Mazumdar (1993) has decomposed the fertiliser subsidy between these two groups, over the period 1981-82 to 1989-90 (Table 5.3). His results indicate 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 indicates that the share of farmers in the fertiliser subsidy during the eighties was about 50 per cent.

In addition to a share in the explicit fertiliser subsidy obtained by the domestic units producing fertilisers, the feedstock industry also obtains an implicit subsidy due to the administered prices of petroleum products. The major feedstocks for this industry are Naphtha, Fuel Oil and Natural Gas. The price differential in the case of Naphtha and Fuel Oil between fertiliser - producing and other users in terms of price and concessional excise duty has been quite substantial. The differential price advantage is not so clearcut in the case of natural gas although the excise duty for its use in fertiliser industry is nil.

Table 5.3

Distribution of Fertiliser Subsidy Between Farmers and Industry

Year	*Farm Sector*	*Total Fertiliser Subsidy*	*Share of Farm Sector Subsidy to Total Fertiliser Subsidy*
	(1)	*(2)*	*(3)*
1981-82	301	375	80.3
1982-83	269	604	44.5
1983-84	645	1048	61.7
1984-85	1777	1927	92.2
1985-86	883	1922	45.9
1986-87	810	1897	42.7
1987-88	940	2164	43.4
1988-89	1638	3250	50.4
1989-90	3108	4600	67.6

Source: Mazumdar (1993), p. 104.

A sector-wise distribution of fertiliser subsidy (Parikh and Suryanarayana 1989, p. 50) indicates that the public sector units get about 49.1 per cent of the fertiliser subsidy accruing to the producers which is higher than their share in fertiliser production (42.3 per cent) by 6.8 percentage points. This indicates the extent to which fertiliser subsidy may be protecting production inefficiency in the public sector units. The share of fertiliser subsidy of the units in the cooperative, joint and private sectors are respectively 17.5 per cent, 16.8 per cent and 16.6 per cent, which are less than their corresponding shares in fertiliser production by roughly two percentage points in each case.

Electricity Subsidies

Consumers of electricity in the agricultural and domestic sectors are partially subsidised by other users of electricity, especially the commercial and industrial sectors. Further, an overwhelming part of the electricity subsidy accrues to the agricultural users of electricity. Subsidy to this sector as a percentage of total electricity subsidy in the four years during 1992-93 to 1995-96 was 79.0, 78.6, 77.3, and 76.2 per cent, respectively.

The inter-State distribution of per capita electricity subsidy accruing to the agricultural user has been summarised in Table 5.4. The general pattern is that in the richer States, the per capita subsidy is much larger than the poorer States. If we focus on the 1995-96 data, the average per capita subsidy for the low income States was Rs. 70, whereas the corresponding amount for the high income States was Rs. 395, the latter being almost 5.6 times the former. There are, however, large within-group differences also. For example, among the low income States, the per capita electricity subsidy ranges from as low as Rs. 1.30 to as high as Rs. 180.80. The range of variation is also quite large among the middle income States.

Irrigation

Irrigation subsidies directly benefit the farmers. Some observations can be made in the context of the distribution of this benefit between different segments of the rural population. Total on-farm benefits due to irrigation (subsidies) depend on the area under irrigated farming and incremental income due to irrigation.

Table 5.4
Inter-State Distribution of Per Capita Effective Electricity Subsidy for Agricultural Consumers

(Rupees)

State	*1992-93*	*1993-94*	*1994-95*	*1995-96*
High Income States	**298.9**	**340.0**	**372.3**	**394.5**
Delhi	87.0	97.0	121.0	128.0
Gujarat	376.9	432.3	491.4	502.1
Haryana	350.4	411.5	351.3	359.8
Maharashtra	206.1	225.4	258.8	282.5
Punjab	473.9	533.8	639.0	700.1
Middle Income States	**101.5**	**124.9**	**143.1**	**162.9**
Andhra Pradesh	145.2	181.4	201.0	243.1
Karnataka	161.5	208.8	238.0	248.8
Kerala	7.0	8.4	10.6	12.7
Tamil Nadu	173.6	201.0	236.3	275.0
West Bengal	20.4	25.0	29.7	35.1
Low Income States	**38.5**	**56.9**	**57.9**	**69.6**
Assam	1.2	3.3	4.3	5.2
Bihar	12.0	31.9	34.7	43.1
Himachal Pradesh	2.2	2.4	1.8	2.0
Jammu & Kashmir	47.7	89.0	82.2	100.3
Madhya Pradesh	85.1	140.2	161.4	180.8
Meghalaya	0.7	0.7	1.3	1.3
Orissa	7.4	14.2	16.7	19.9
Rajasthan	101.4	132.7	147.2	175.8
Uttar Pradesh	88.8	97.4	105.2	98.3
Total*	**123.6**	**149.3**	**163.1**	**179.7**

Source: Computed from data given in the Annual Report on the *Working of State Electricity Boards and Electricity Departments*, Planning Commission, Government of India, 1995.

Note: * Total of High, Middle and Low Income States.

The most disadvantaged class in rural population, *viz.*, landless labour, quite clearly gets zero direct benefit out of irrigation subsidy as it does not have any land. However, they may benefit indirectly if increased irrigation leads to improvement in farm income and results in additional employment generation (and/or higher wages) on the farm. On the other hand, if the

farmers start using labour saving devices in the wake of higher incomes, the interest of landless labour would be harmed.

In some studies [Dhawan (1988, p. 215), Shah (1993)], it has been contended that the allocation of public irrigation is neutral between farm classes. Using some case studies of Maharashtra, Tamil Nadu, Punjab and Uttar Pradesh, Dhawan (p. 228) arrives at the general conclusion that "the on-farm benefit from a unit of irrigated area need not rise with the size of a farm holding. In other words, the small farmers can gain, acre for acre, as much benefits from irrigation as do the large farmers". This conclusion is applicable where the small farmers are able to appropriately increase the use of accompanying factors (like chemical fertilisers). In those cases (e.g., Uttar Pradesh and Maharashtra) where an increase in fertiliser use does not accompany additional irrigation, the advantages of irrigation tend to be positively associated with farm size. In such a situation the marginal and smaller farmers would appropriate a less than proportionate share in the irrigation-related benefits including subsidies. Water has a very high marginal productivity when used in conjunction with HYV seeds, chemical fertilisers, power and other related inputs. It is the richer farmers who may derive relatively larger benefits because of their capacity to use these allied inputs.

AGRICULTURAL SUBSIDIES CONSIDERED AS A GROUP

The major input subsidies in the agricultural sector relate to fertiliser feedstock, fertilisers, irrigation, power and agricultural credit, and the output subsidy relates to foodgrains. Using a general equilibrium approach Parikh and Suryanarayana (1989, 1992) have studied the equity and efficiency aspects of agricultural subsidies. On the basis of simulations of their general equilibrium model, they (1992, p. 23) contend.

i. fertiliser subsidy in the form of cheap fertiliser for the farmer does increase the welfare of the poor;

ii. withdrawal of fertiliser subsidy increases growth, but the rural poor remain worse off even after 10 years of such growth (such withdrawal, should therefore be accompanied by programmes such as rural employment schemes which may be a superior policy than continuing with the subsidy); and

iii. withdrawal of fertiliser subsidy, accompanied by additional irrigation, especially if targeted, may also be a superior policy option.

Ratha and Sarma (1992) also utilise a general equilibrium framework to analyse this question. They conclude that (i) abolition of fertiliser subsidies aimed only at a reduction of budget deficit is not desirable; (ii) when wages are not protected, fertiliser subsidy is better than food subsidy and that wage indexation would reverse this result; and (iii) investment in irrigation promotes income distribution and growth objectives better than price subsidies.

In Indian agriculture, inputs are subsidised and output prices are supported. Taking a comprehensive view, it has been argued (e.g., Gulati and Sharma, 1995) that Indian agriculture is not net subsidised. For this purpose an aggregate measure of support (AMS) is estimated either on a product specific basis or for all agricultural production. On the basis of both of these calculations, Gulati and Sharma conclude that Indian agriculture is negatively subsidised, i.e., it is net taxed. This is primarily the result of keeping farm prices below the corresponding international prices. In the Gulati and Sharma study, four major input subsidies were estimated over the period from 1980-81 to 1992-93. These subsidies relate to: irrigation, electricity, fertiliser and credit. It is indicated that input subsidies have increased at a rate of 12.61 per cent per annum at constant 1981-82 prices (9.11 per cent per annum by an alternative method). It is argued by the authors that these input subsidies have outlived their objectives and have became unsustainable. The agricultural sector would be served better if resources are released for higher investment, terms of trade are improved in favour of agriculture, and subsidies, which are short-sighted measures, are effectively curtailed.

A high growth in input subsidies has been accompanied by a stagnation in investment in agriculture during the 1980s. In fact, public sector investment in agriculture has declined significantly during this period. Further, subsidies on irrigation through electricity and canal water causes distortions in the cropping pattern in favour of water-intensive crops (e.g., paddy in Punjab and sugar in Maharashtra). This also has serious implications for inter-class and inter-regional parity. Another serious fallout of input subsidies in agriculture pertains to environmental degradation. Excessive irrigation causes salinity and waterlogging in some areas and overdraft and depletion of ground water in others. Similarly, overuse of nitrogenous fertilisers has damaged the quality of soil. Further, residual and unutilised nitrogen eventually contributes to ground water pollution.

SUBSIDIES IN EDUCATION

An important policy option within the government aided educational sector relates to the relative support to the major subsectors within general education -- primary or elementary, secondary, higher education and others. It is generally acknowledged in the literature that where levels of literacy are low and that of poverty high, primary or elementary education ought to be the focus of government attention in terms of government expenditure and even more so in terms of subsidies. This may be the most efficient policy if the social rate of return from elementary education are taken to be the highest in a society like ours. This policy would also be equitable as it would benefit the poor most, and would also allow the poor to become eligible for whatever subsidies were available at the higher levels of education. In the case of a resource-constrained government, the general prescription thus is to subsidise primary/elementary education and recover costs incurred in the provision of higher education to the extent possible. It needs, however, to be borne in mind that even substantially higher recovery rates per student would not guarantee a lower absolute amount of subsidy in higher education as compared to primary education; there can be large differences in the per pupil cost of providing education at these levels. On the other hand, the number of pupils is likely to be much larger in the case of primary/elementary education than at other levels. We have estimated and looked at the pattern of the per capita subsidies going to the above mentioned subsectors within education from the States.

Table 5.5 clearly shows that, on an average, subsidies to elementary education form about half of the total subsidies on general education. However, this is not true for all individual States. The share of elementary education is the lowest in the high income States and the highest in the low income States (Goa, Punjab and West Bengal actually give higher subsidies to secondary education than primary education). A negative correlation between the level of per capita income and the share of subsidies to elementary education is thus discernible. The simple correlation coefficients of per capita income with per capita subsidies on elementary and secondary education are 0.31 and 0.67 respectively.

There is some degree of direct relationship between the per capita income and per capita subsidies on general education as a whole. This is true even if we exclude Goa, which is in the nature of an outlier. This is probably a result of greater availability of resources as the per capita SDP rises (and not necessarily a greater concern for education) as the ratio of subsidies on

general education to SDP (not reported) show. The averages of this ratio for the high, middle and low income States are 3.45, 3.94 and 4.02 per cent (weighted average for all 15 States: 3.47 per cent) respectively. Given that the level of literacy and other indicators of educational achievement do exhibit a direct relationship with the level of per capita SDP in general, there seems to be a recognition of the need for greater public intervention (in the form of government expenditure/subsidies) in the area of education in the low income States as compared to other States.

Table 5.5
Per Capita Subsidies in General Education

(Rupees)

State	*Total*	*Elementary*	*Secondary*	*University*	*Others*
High Income States					
Goa	657.16	202.09	344.14	94.82	16.11
Gujarat	299.60	167.61	101.09	27.31	3.60
Haryana	246.99	112.25	92.80	38.98	2.96
Maharashtra	290.94	137.22	115.63	31.64	6.45
Punjab	306.82	102.98	156.31	43.37	4.15
Middle Income States					
Andhra Pradesh	194.02	85.67	60.26	44.31	3.77
Karnataka	253.96	136.56	75.88	37.70	3.82
Kerala	357.78	176.33	108.26	69.21	3.98
Tamil Nadu	285.81	140.23	105.34	29.88	10.38
West Bengal	218.92	77.78	107.61	28.62	4.90
Low Income States					
Bihar	171.24	110.38	36.48	20.28	4.11
Madhya Pradesh	171.31	108.04	40.02	20.92	2.32
Orissa	203.18	118.68	51.22	29.41	3.87
Rajasthan	256.86	139.87	89.57	21.35	6.06
Uttar Pradesh	152.13	75.72	55.89	18.56	1.96
Average	**223.80**	**112.71**	**77.54**	**29.21**	**4.34**

A major problem with the assessment of public policy with respect to subsidising education relates to the difficulty of analysing their incidence. The developmental impact of the subsidies can differ widely, however, depending on the distribution of subsidies between teachers and students, and within different categories of students. A subsidy merely to support the salaries of

teachers unconnected with any indicator of their productivity (as is given in several States), for example, may not have the requisite developmental impact at all. In fact, such subsidies may cause leakages from the system and end up in completely unintended hands. Similarly, general subsidies to all students may not have as much impact as selective subsidies based on criteria related to need.

Since almost the entire expenditure on education is in the form of a subsidy, patterns reflected on the basis of expenditure also reflect corresponding patterns for subsidies. Important features pertaining to distribution of benefits of educational subsidies have been highlighted in a few studies. For example, Tilak (1996) notes that there is a high degree of disparity in the benefits accruing to girls vis-a-vis boys. The number of boys who receive partial or total exemption from payment of tuition fees is more than the number of girls. Also, a smaller proportion of girl students receive scholarships than boys in rural areas, and the amount of average scholarship is also less for a girl student. The percentage of students exempted from fees wholly or partially in primary education was also higher for urban rather than rural areas. In Dasgupta and Tilak (1983), a study of the benefits of public expenditure on education by income groups for rural and urban areas of Andhra Pradesh was made. It was found that expenditure of elementary and secondary education was relatively higher for the lower income groups while that on higher education was a monotonically increasing function of income. While this pattern appeared to be similar for rural and urban areas, public expenditure on higher education in rural areas favoured the richer classes relatively more.

HEALTH SUBSIDIES

The recovery rates in the health sector both for the Centre (3.33 per cent) and the States (1.55 per cent) are very low, and the pattern of government expenditure on health can be taken to reflect generally the pattern of health subsidies also.

According to our own estimates for 1993-94, subsidies on health were predominantly allocated to the non-rural sector, the share of which in total subsidies was 75.9 per cent of total health subsidies. In the Centre, the share of non-rural subsidies was 98 per cent while, for the States, this share was 73 per cent. In the total health subsidies, the States account for about 88.6 per cent. However, it is worth noting that even though health expenditures are

classified as rural and non-rural, the corresponding figures should not be taken as servicing exclusively rural population and urban population respectively because a considerable proportion of rural population is served by hospitals and other facilities located in urban areas.

The relative urban bias in health expenditures, as per budgetary allocations, has been noted in other studies also. According to a study by Reddy and Selvaraju (1994), considering all levels of government together, 33.04 per cent of health care expenditure was allocated to the rural sector, and 66.96 per cent to the urban sector. For the Centre alone, the relative ratios were 29 per cent for rural and 71 per cent for the urban sector. The rural per capita expenditure was Rs. 25.90 as against Rs. 151.56 for the urban sector. For the States also, the expenditure profile is clearly in favour of the urban areas which get 66.21 per cent of total expenditure on health.

The distribution of resources between type of expenditure (curative, preventive and others) indicates that the highest priority was accorded to curative expenditure both by the States and the Central government. The share of preventive health care expenditure has however shown an increase over the years as indicated in Table 5.6. The greater emphasis on curative health care expenditure often reflects a bias towards the better-off people whereas preventive health care expenditure with much larger externalities would clearly be of greater help to the economically weaker sections of the society.

Deolalikar and Vashishtha (1992) carried out a study on the utilisation of government and private health services in India based on all-India market information survey (MISH) by NCAER in which a medical module was included in 1990. They find that health infrastructure, government health expenditure and the general standard of living in a community all serve to reduce the real cost of health care for consumers. They find that own price elasticity of demand for public health centres (PHCs) is quite small (-0.2). From this, they conclude that substantial revenue increases could be realised from raising user charges at the PHCs. Further, the middle and high income groups rely on PHCs to a much greater extent than the poor. As such, increased user charges at PHCs would also have favourable distributional effects. In this study, significant negative cross-price elasticities have also been reported. An increase in user charges at PHCs will shift demand to use of government hospital, and that in user charges at government hospitals, to private hospital/nursing homes. Conversely, increased user fees at private hospitals/nursing homes would shift demand towards government hospitals and PHCs.

TABLE 5.6
Structure of Health Care Expenditure by Purpose and by Level of Government: 1974-75 to 1990-91

(Percentage)

Level of Government\Purpose	*Direction[1] and Adminis-tration*	*Curative[2]*	*Preventive[3]*	*Miscella-neous[4]*	*Total*
1974-75					
a. Central government	4.79	57.43	19.65	18.13	100.00
b. State governments	6.45	64.72	22.91	5.91	100.00
c. Union territory governments	8.01	82.73	3.49	5.76	100.00
d. All governments (a+b+c)	6.35	64.46	22.34	6.86	100.00
1982-83					
a. Central government	3.02	55.00	22.85	19.13	100.00
b. State governments	5.03	60.45	27.18	7.34	100.00
c. Union territory governments	3.18	75.26	10.94	10.61	100.00
d. All governments (a+b+c)	4.82	60.26	26.51	8.42	100.00
1990-91					
a. Central government	2.66	62.58	25.54	10.22	100.00
b. State governments	5.12	59.19	27.14	8.55	100.00
c. Union territory governments	4.63	86.12	6.76	2.48	100.00
d. All governments (a+b+c)	4.88	60.25	26.33	8.53	100.00

Source: Reddy & Selvaraju (1994).

Notes: 1. Includes Direction and Administration under (a) Medical, (b) Public Health and (c) Family Welfare.

2. Includes expenditure on Medical Relief, Employees State Insurance, Central Government Health Scheme, Medical Education Training, Research, Other System of Medicine-Ayurveda, Homeopathy, Sidda, Unani, etc. - under Medical.

3. Includes expenditure on (a) Prevention and control of diseases, prevention of food adulteration, drug control, minimum needs programme under Public Health and (b) Family Planning Services, maternity and child health, Compensation and Other Services and Supplies under Family Welfare.

4. Includes expenditure on (a) International cooperation, medical stores department, department of drugs, school health scheme, other health schemes and tribal area, sub-plan under Medical, (b) Training, health statistics and research, public health laboratories, health transport, international cooperation under public health and (c) Transport selected area programme, mass education, training, research and statistics, research and evaluation, awards tribal area sub-plan and international cooperation under Family Welfare.

INTER-REGIONAL DISTRIBUTION OF STATE-LEVEL SUBSIDIES: SOCIAL AND ECONOMIC SERVICES

An idea as to inter-regional distribution of subsidy benefits can be obtained by looking into distribution of per capita subsidies across States. As far as subsidies given by the States are concerned, it has clearly been brought out that residents of the poorer States also get relatively low per capita subsidies. This general pattern holds for subsidies in social as well as economic services. The inter-State pattern of per capita subsidies was discussed in Chapter 3. It was noted that there is a positive relationship between per capita income of a State and per capita subsidies. As the State subsidies accrue more to people living in the richer regions, it is at least an indirect indication that benefits of the large volume of State subsidies accrue more to the richer sections of the society.

DISTRIBUTIONAL IMPACT OF SUBSIDIES CONSIDERED AS A WHOLE

While the distributional pattern of the benefits of individual subsidies, or that of a particular group, was considered in the previous sections, some remarks about the overall distributional impact, considering the subsidy-regime as a whole, are also in order. This is not a straightforward exercise because of the myriad forms that these subsidies take and the variety of mechanisms through which they are given.

The estimates of implicit and explicit subsidies together indicate that the quantitatively important subsidies relate to agriculture, irrigation, fertilisers, rural development, education, health, food, power, industry and transport sectors, taking the Centre and the States together. Of these, practically all the subsidies on agriculture, irrigation and fertilisers, and a substantial portion of the subsidies on rural development, power and food are meant for the farmers. But, as discussed earlier, in order to ascertain that they are net recipients of benefits, account should be taken of both input subsidies and output prices. In this wider context, Indian agriculture has been shown to be net taxed rather than net subsidised. Most of the subsidies in the area of industry and transport, and a part of the subsidies in the areas of food and power largely benefit the public enterprises. Only the subsidies on education, health, a part of those on rural development, the consumer subsidy within food subsidies, and some parts of the subsidies on power and transport can be presumed to be subsidies to the consumers of these services. On their overall distributional pattern, some observations can be made.

First, many of the subsidies on agriculture have a bias towards the surplus farmers, who usually fall in the category of at least medium farmers. Subsidies through procurement prices clearly fall into this category. Further, the consumption of fertilisers, irrigation water and power is also greater in this category of farmers. The other subsidies in agriculture could be assumed to be in proportion to holdings, while those on rural development may have a pro-poor bias. On balance, the subsidies in agriculture do appear to be somewhat regressive. The subsidies under social welfare schemes (excluding the direct transfer payments) may mitigate this regressivity to some extent.

The consumer subsidy component of the food subsidies may have a pro-poor bias on the whole due to partial operation of the self-selection mechanism resulting from the non-monetary costs involved and the indifferent quality of supplies. A similar mechanism operates with publicly supplied health and family welfare services, making the subsidies in this area somewhat progressive. The distribution of education subsidies is likely to be regressive due to (a) less than half of these being in elementary education, (b) lack of means testing and (c) leakages from the system.

As already noted, much of the subsidies going to industries actually benefit the public enterprises. These normally benefit either the employees or the consumers. Given that the bulk of the consumers are either other public enterprises or the private industrial sector, almost all the subsidies probably end up as either wages for the employees or private profits. In either case, the distribution is likely to be regressive. The same reasoning is probably applicable to power subsidies and a part of the transport subsidies as well. The transport subsidies available for the consumers, however, may have a more progressive distribution.

Keeping in mind the weights of the major subsidies considered above, the overall distribution could thus well be rather regressive. This is not to say that therefore these subsidies could straightaway be dispensed with. The economic effects of these subsidies need to be carefully considered before such a judgement is passed. For example, it may be necessary to continue subsidies to agriculture to maintain self-sufficiency in foodgrains. It is also necessary to keep in mind the fact that there may be other imperfections which may not be amenable to policy measures, and that subsidies may be a way of countering them. However, careful review and rationalisation of the subsidies is certainly called for.

Conclusions

6

Subsidies in the fiscal system would be considerably understated if one looked only at the explicit budgetary provisions of subsidies. The hidden subsidies are exposed by measuring subsidies as unrecovered costs of providing governmental services. It turns out that for the Central government, the proportion of implicit subsidies is about 70 per cent in the total budget-based subsidies for 1994-95. A similar indication cannot, however, be given for the States because of varying practices adopted by them in reporting the subsidy figures in their respective budgets. But, in general, the proportion of hidden subsidies in their case is larger. Below, we summarise the main empirical findings of this study, and indicate the basic tenets in designing subsidy reforms in India.

AGGREGATE SUBSIDIES

The Central subsidies are estimated at Rs. 43089 crore in 1994-95. For the States, the aggregate amount of subsidies, at Rs. 93754 crore, is more than twice that at the Centre in 1994-95. Together, these amount to Rs. 136844 crore constituting 14.35 per cent of GDP in 1994-95. If we take subsidies net of surplus (Centre and all States) it comes to 13.36 per cent of GDP in 1994-95. The estimates of subsidies in social and economic services are more or less in line with the division of expenditure responsibilities in this area. In the provision of social services, the Centre has had a limited role, and its subsidies in this sector are only a small fraction of the total subsidies given by the government as a whole. Nearly 90 per cent of the subsidies in social services and a little more than 55 per cent of subsidies in economic services are State government subsidies.

If only non-merit subsidies are taken into account, they amount to 10.93 per cent of GDP, which is composed of 3.94 and 6.99 per cent of GDP, pertaining to Central and State subsidies, respectively. The average all-India recovery rate for these non-merit subsidies is just 8.98 per cent, implying a subsidy rate of more than 90 per cent.

For merit goods, the largest subsidy is provided by States under social services amounting to Rs. 18837.47 crore. State subsidies on non-merit social services are also much higher than those provided by the Centre. As far as economic services are concerned, Central subsidies on non-merit services are almost as large as those for the States, the two figures being Rs. 33627.59 for Centre and Rs. 38837.37 for the States. In the aggregate, for non-merit economic services, the recovery rate is 11.17 per cent which is quite low, and the Centre and the States share responsibility for this poor performance almost in equal measure.

In social services, there are no surplus sectors in general; only in a few cases, individual States show some surplus, which are essentially non-recurrent in nature. While human development is legitimately a major concern of the welfare State, it may be necessary to reassess policies in this area at the micro level to temper this concern with the equally legitimate concern for the burgeoning public expenditures. This is particularly important if inadequate targeting and leakages are major problems with these subsidies.

The disaggregated picture shows large subsidies in the areas of agriculture, irrigation, industries, power (excluding petroleum), transport and higher education. In these cases, the services involved can be priced in varying degrees. There is scope for augmenting cost recovery in these areas. A substantial reduction in subsidies in the six sectors noted above would make a real dent on the problem of rising government expenditures. This would need to be done both by reducing expenditure in non-priority areas within these sectors and by ensuring better recoveries. Some of the subsidies, as discussed earlier, may need to be reduced for efficiency reasons also (e.g., irrigation and power).

It would be interesting to analyse the intertemporal changes in the overall magnitude and pattern of subsidies in India. The exercise undertaken here constructs a comprehensive picture but only for one year (1994-95). Exercises undertaken earlier for 1987-88 and 1992-93 can provide a basis for some comparison over time, but only in a limited way due to differences in the methodology and approach. Our estimates are expected to be larger, as compared to the previous two studies because in their case, surplus of some sectors were adjusted against subsidies of other sectors in calculating the aggregate subsidy, and because their estimates cover the Centre and 14 States only. In their cases, the aggregate subsidy amounted respectively to 14.38 per cent (1987-88) and 15.20 per cent (1992-93) of GDP. It would appear, therefore, that aggregate subsidies have fallen between 1992-93 and 1994-95.

Also, the share of subsidies as a percentage of GDP appear to have marginally fallen since 1987-88 and 1992-93, although the volume of subsidies still remains massive in size and as a proportion of GDP.

Recovery Rates

The degree of relative subsidisation between different services can be gauged by a comparison of the relevant recovery rates. The average recovery rate, considering the Centre and States together, for all services is just 7.21 per cent. In the case of non-merit economic services of the Centre and States, where the average recovery rates are expected to be relatively higher, the recovery rates are respectively, 11.73 and 7.35 per cent. There is a clear scope for improving these recovery rates by raising user charges, and reducing costs by locating and minimising sources of inefficiency in the provision of services.

For merit services, the recovery rates are all below 3 per cent. For most of the State level merit services, these rates are lower than corresponding rates for the Centre. While greater subsidisation of merit services has been justified on grounds of externalities, there is a scope for increasing the recovery rates even in these sectors by reducing inefficiencies and leakages. This would improve the quality and spread of the merit subsidies.

Subsidies and Fiscal Deficit

Aggregate subsidies (Centre and States) on non-merit social and economic services amount to 10.93 per cent of GDP at market prices in 1994-95. In the same year, the fiscal deficit of the Centre and States has been estimated to be 7.3 per cent of GDP. Any reduction in the quantum of non-merit subsidies would have a direct and immediate impact on fiscal deficit. By raising the relevant user charges in the non-merit services, our fiscal deficit profile can easily be improved. The all-India recovery rates on non-merit services are as low as 3.54 per cent for social services and 11.17 per cent for economic services. Any increase in the relevant user charges would lead to a more than proportionate increase in cost recovery due tc three distinct effects, *viz.*, (i) increase in user prices, (ii) reduction in quantity supplied and (iii) a fall in average costs. Apart from these first round effects, there would also be positive secondary effects on fiscal deficit, as the overall efficiency in

the economy increases with an improved utilisation of scarce resources like water, power and petroleum. With an increase in efficiency, the consequent expansion of tax-bases and rise in tax-revenues would further reduce the fiscal deficit.

Structure and Distributional Implications

Subsidies are by definition indirect even if they pertained to final goods. If they are administered through inputs, the degree of indirectness increases. Taxes that fall on final goods, rather than inputs, are preferred among indirect taxes as they are least distortionary, and most amenable to controlling incidence. Similarly, subsidies that directly accrue to the target beneficiaries are more desirable than subsidies administered through inputs. The benefits of input subsidies are easily dispersed to non-target population. In our subsidy regime, considerable subsidies are introduced through inputs, e.g., feedstock of fertiliser, fertiliser, electricity, diesel and irrigation. Just as cascading is an undesirable feature of commodity taxation, diffusion inhibits the performance of a subsidy regime.

In the case of subsidy on a final good like food subsidy also, targeting is reported to be poor, and leakages extensive. Similarly, on average, nearly half of the fertiliser subsidies are estimated to accrue to the producers/ suppliers rather than the farmers. A significant portion of subsidies in higher education is appropriated by the middle to high income groups, because shortages of seats in this sector are cleared by a quality-based screening in the shape of entrance examinations, etc., where the poorer sections of society are easily competed out. Health subsidies exhibit a non-rural and pro-rich bias. Thus our subsidy regime is not tangibly progressive and could in fact be regressive.

Subsidies and Indirect Taxes

As noted earlier, subsidies are indirect taxes in reverse. In 1994-95 indirect taxes were 12.68 per cent of GDP. Government subsidies on merit and non-merit services amounted to 14.35 per cent in the same year. Together, indirect taxation and subsidies accounted for about 27 per cent of GDP. This represents the extent of indirect fiscal intervention in the economy. It is difficult to control the ultimate distributional impact in the case of indirect taxes as well as subsidies. As such, there is a *prima facie* case for examining

the resultant progressivity/regressivity of the tax/subsidy configuration within the overall fiscal regime in India.

Subsidies and Efficiency

In addition, our subsidies are inducing a wastage of scarce resources, and promoting inefficiency. Extremely low recovery rates in sectors relating to irrigation water, electricity and diesel lead to their wasteful use, having been drawn away from other sectors in which their marginal productivity would have been higher. The scheme of retention prices for fertiliser and petroleum sectors are not designed to encourage efficiency. A significant and increasing portion of food subsidies do not filter through to the consumers but are absorbed in increasing costs of handling and storing foodgrains. Scrapping inefficiency-promoting subsidies and a tangible increase in user charges in the cases of oversubsidisation would usher a leaner but more effective subsidy regime.

At the Central level, the rates of return on investment in public enterprises are better than those at the State level. However, the return on equity investment is substantially lower as compared to that on loans. In the States, the loans to public enterprises fetch practically no return while the rate of return on equity investment is also negligible. This implies that disinvestment in public enterprises ought to receive priority at both levels. Further, at the State level, it is imperative to reduce government lending to public enterprises and cooperatives, and direct them to market sources, which should have a salutary influence on their financial discipline. At the least, the interest subsidies will become less opaque.

The incidence of the subsidy programmes could be better aligned towards economically weaker sections of the society and their magnitudes can be controlled by better targeting. In reforming the subsidy programmes, the Centre will have to take initiatives and lead by example.

Subsidy Reforms

Subsidy reforms should be directed towards:

- Reduction of their size on the basis of careful prior consideration of each specific case so as to identify the exact extent and duration for which a subsidy is proposed.

- Strict adherence to the principle that subsidies are used for economic reasons only and not for political reasons or as vote catching exercises. The greater is the transparency of a subsidy, the more likely would be the application of strict fiscal principles governing it.

- The mode of administering the subsidy should be such as to minimise its overall size and maximise its reach to the intended targets.

Transparency

In order to minimise costs of individual subsidy programmes and to subject a subsidy to constant scrutiny by legislators, researchers as well as the public at large, it is best to make subsidies as transparent as possible. In other words, for any given total amount of subsidy, the larger the proportion of transparent subsidies the better it would be. Transparency implies that subsidies are explicit and as far as possible budget-based. It is the hidden and the extra budgetary subsidies that usually grow beyond control.

Better Targeting

Subsidies may be designed for specific targeting, i.e., towards intended groups or sections. Since they usually operate through a market mechanism, there is little control on their final incidence. As different modes of administering subsidies are available, a choice among these modes should be made in a manner such that instead of giving generalised benefits in which intended as well as unintended groups are able to participate, sometimes with perverse results, the choice of the mode leads to a minimisation of the total cost of subsidy and maximisation of its reach.

As an example, instead of a generalised supply of staple food at controlled prices, alternative modes of administering subsidy such as food coupons or differentiated ration cards would reduce the total size of subsidy and increase the coverage of the target groups.

Time Profile of Subsidies

Once a subsidy programme gets initiated either in the budget or outside of it, there is a tendency for it to become a permanent feature. It is essential to work out the entire time profile of a subsidy before it is introduced. This may also require periodic studies of existing subsidies so as to evaluate the effects and incidence of the subsidies and for working out the remaining

duration for which they may be continued. Subsidy programmes should not be allowed to be seen by their beneficiaries as permanent features because then they change their behaviour in a manner as to become dependent on the subsidies. These time profiles of subsidies are specially useful for protecting industries against foreign competition or absorbing sudden price shocks, etc.

Improving Cost Recovery

Since subsidies are unrecovered costs of government services, the most direct means of reducing their size would be to improve the recovery of costs. The goods in question are usually excludable goods and the consumers of the good/service in question can be identified and charged according to the extent of their consumption. It would lead to overall economic efficiency if they are charged according to the extent of their consumption. When they are charged at flat rates independent of the extent of their consumption (e.g., water and electricity rates in rural areas) they generate overconsumption and wastage of scarce resources.

Efficiency and Cost Minimisation

Several existing subsidies involve inefficiency costs in the provision of public services. If the same goods were to be supplied through private producers, the per unit cost is likely to go down considerably. The fiscal burden of the subsidies would be automatically reduced where the costs of provision of goods are minimised on the basis of standard efficiency principles. In the provision of services where partial or full participation of the private sector is possible (e.g., contracting out to private sector relevant production/ distribution activities), it ought to be considered. In general, the greater the efficiency of the government sector, the lower would be the burden of subsidy for achieving the same subsidy objective.

CONCLUDING OBSERVATIONS

The main objective of this work was to draw attention to the massive draft the government subsidies in India constitute on our budgetary resources. A significant reduction in the subsidy to GDP ratio can easily solve the basic fiscal malaise. For example, if a reduction of about five percentage points in the non-merit subsidy to GDP ratio is brought about, the fiscal deficit to GDP ratio would be brought to a level below 2 per cent.

A reduction in the subsidy levels can be achieved through (i) a reduction in level of provision of governmental services and (ii) by increasing the relevant user charges, fees, etc., i.e., by increasing the price of the service. In each case, there would be beneficial secondary effects if resource allocation becomes more efficient as a result of release of resources from pre-emptive claims by the government, or as a result of better alignment of prices of resources to their true opportunity costs.

The design of a suitable subsidy reform package needs to be carefully considered. This task calls for prioritisation and phasing. Sectors where the extent of subsidisation is extremely high, and not easily justified need to be targeted first. For the Centre, as well as for the States, a sustained programme of reducing and restructuring our subsidy regime can improve overall efficiency of the system, and make a significant positive impact on the fiscal profile of the country. In designing a subsidy reform programme, sector-level and State-specific studies should now be undertaken.

Notes

1. In the U.S., studies relating to subsidy evaluation and control date back to the early seventies. Studies have been commissioned by the Joint Economic Committee of the U.S. Congress as also the House Committee on Agriculture. Similarly, periodic assessments of government subsidy programmes are made at an interval of two years in Germany. There are also several cross country studies such as those by Webb, Lopez and Penn (1990), and Roberts and Trapido (1991) for the United States Department of Agriculture (USDA).

2. A number of international institutions have undertaken comparative assessments of subsidy programmes across countries and economic groupings. Surveys have been undertaken by the Commission of the European Communities (CEE, 1989, 1990, 1992), the European Free Trade Association (EFTA, 1990) and Organisation for Economic Co-operation and Development (OECD, 1983, 1990) as also by the World Bank and the IMF.

3. Also see, Break (1972), Deacon (1990), Gerritse (1990), Hauser (1981), Mackenzie (1991), Hyman (1987), Musgrave (1972) and Prest (1975) for an analytical discussion of various facets of subsidies.

4. The nominal depreciation rate is calculated as the sum of the long-term inflation rate (measured over a period of 10 years preceding 1994-95) and a two per cent real depreciation rate (assuming an average life of fifty years for a capital asset). In this paper, calculation of a nominal depreciation rate follows the assumptions and methodologies used by the two earlier studies, *viz.*, Mundle and Rao (1991) and Tiwari (1996), with a view to obtaining results that may be comparable. This method, however, may not adequately address the problem of summing capital expenditures of varying vintages reflecting differing values of the rupee.

5. Other limitations may also be noted. Subsidies arising due to tax expenditures (incentives and other concessions) are not taken into account. Subsidies implicit in a market price which would be higher than the actual price for such merit goods as technical/medical education are also not covered.

6. For a general discussion on food subsidies in developing countries, see Per Pinstrup-Anderson and Alderman (1988).

7. See, Karnik and Lalvani (1996), Narayan and Gupta (1996) and Vidya Sagar (1991), for an extended discussion on fertiliser subsidies.

8. See, Kelkar (1980), NCAER (1975), Pradhan (1991), and Verghese (1978) for a discussion on export subsidies.

9. A study of subsidies in Tamil Nadu especially those pertaining to public sector enterprises was done by Guhan (1992).

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APPENDIX 1

Rationale for Subsidies: An Example

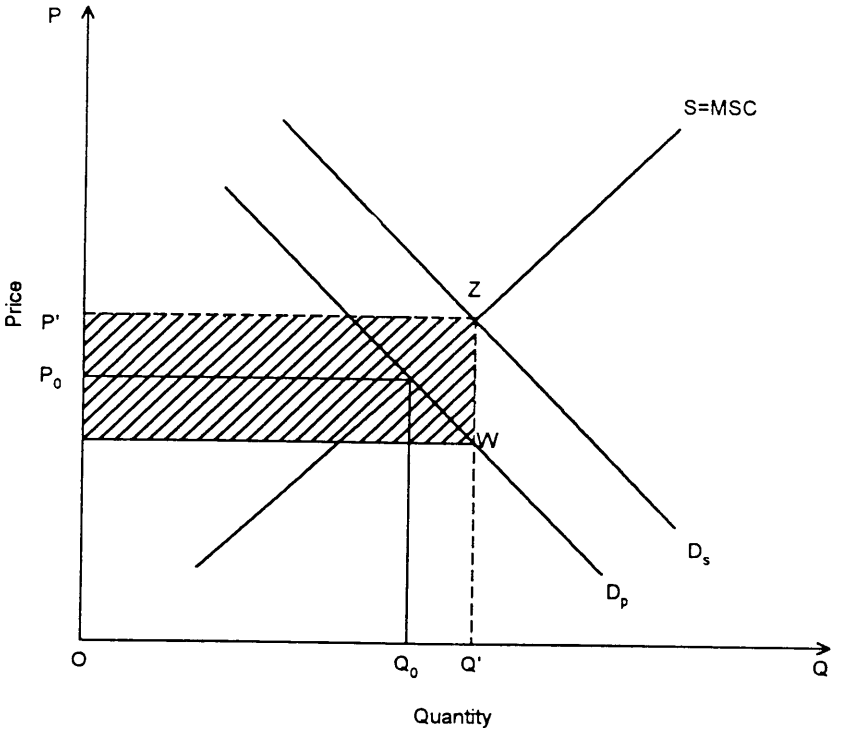
As an illustration one case is considered here. In Diagram 1, the private demand curve for a good (D_p) is below that of social demand curve (D_s) due to externalities. The supply curve (S) represents (social) marginal cost of providing the good.

Left to the market forces, the quantity consumed will be Q_o, which is less than the socially optimal consumption Q*. The government can intervene in the market by giving a subsidy which is equal to the vertical distance between the two demand curves, per unit of the good. This would shift the private demand curve to coincide with the social demand curve, increasing the consumption of the good to Q*. The total amount of subsidy that is required is indicated by the shaded area. The increased consumption results from the fact that although the total unit price increases from P_o to P*, the private cost is reduced to WQ*, ZW being the element of subsidy in the price.

Other illustrations may be considered distinguishing between cases where (i) the good is produced exclusively by private producers and (ii) by both private producers and the government. Differentiation can also be made where the price includes a private cost element in addition to a social cost element with the good being produced entirely by the government. Differentiation in the extent of subsidy according to economic status or other considerations can also be examined in this analytical framework.

In the illustration given above, one market was considered at a time. However, subsidies would also have repercussions in other markets. For example, as consumers buy more of the product under consideration, the demand for other products may decline. Assuming production to be subject to increasing cost (positively sloped supply curve), this will lower their price. Similarly, as the output mix changes, so would the derived demand for various factors. The ideal analytical framework for a consideration of subsidies, like that of taxes, is a general equilibrium framework.

Diagram 1



APPENDIX 2

CSO Estimates of Subsidies

The Central Statistical Organisation (CSO) estimates the amount of subsidies given by the Central and the State governments as a part of the economic-cum-functional classification of the budgets of these governments. Consistent with its overall commitment to follow the System of National Accounting (SNA) proposed by the Statistical Office of the United Nations in 1993, the definition of subsidies employed closely follows that in the SNA. As already discussed, the essential features of this are:

- Subsidies are received by producers or importers only. Direct consumer subsidies are therefore *not* treated as subsidies.

- All subsidies are in the nature of current expenditures. Thus "capital subsidies" are not treated as subsidies, but as capital transfers.

- The objective(s) of subsidies must be to influence the level of production, the product price or the rate of return of the concerned unit(s); it is therefore necessary to establish a nexus between a good or a service and the payment for them which may qualify as a subsidy, irrespective of the terminology used in the government budgets.

The CSO has to examine all payments to producing or importing units contained in the revenue and capital budgets and reclassify them using the above yardsticks. An important example is that of government expenditure on irrigation. All expenditures for the provision of this service (by the departmental undertaking) net of receipts, in other words the losses of the irrigation department, are treated as subsidies, since the objective is taken to be the supply of water at rates deliberately kept low. Losses of other departmental undertakings, however, are treated as losses and not subsidies. While some of the explicit subsidies contained in the budget may not be counted as such under the CSO classification, their estimate of subsidies

would generally be higher than the explicit subsidies alone on balance, as a number of items recorded as grants in the budgets are treated as subsidies. However, it should be noted that there is no attempt to actually estimate any imputed subsidies, since those are not a part of the government budgets based on cash flows. In effect, the estimates of subsidies by the CSO are derived from a reclassification of the budgetary accounts only.

Table A2.1 shows total subsidies as a percentage of GDP as per the CSO estimates given by the Centre and the State governments. For the Centre, as a percentage of GDP, the subsidies increased in the second half of the eighties as compared to the first half. Since then, a declining trend is visible coinciding with the reform years. However, in the last year under observation, the declining trend has been reversed, although as a ratio of GDP in 1993-94, central subsidies were still below the level observed for the first half of the eighties. For the States, as a percentage of GDP, subsidies are lower than that for the Centre. This does not match with our findings based on our methodology for budget-based subsidies. In general, the CSO estimates put subsidies at a much lower level than our estimates.

Table A2.1
Subsidies as Percentage of GDP: CSO Estimates

(Per Cent)

Government	*Average 1980-85*	*Average 1985-90*	*1990-91*	*1991-92*	*1992-93*	*1993-94*
Centre	1.67	2.38	2.23	1.77	1.41	1.50
States	0.73	0.99	1.00	1.64	1.24	1.16
All-India	2.40	3.37	3.23	3.42	2.65	2.67

Table A2.2 reports State-wise total subsidies and those on economic and social services as percentages of Net State Domestic Product (SDP) and in per capita terms to facilitate comparisons. A broad correlation between the levels of income (per capita SDP) and per capita subsidies is discernible in Table A2.2. States are divided into three groups, *viz.*, high, middle and low income States. On average, the per capita subsidies are the highest for the high income group of States, and the lowest for the low income group of States. But the differences become negligible when the subsidy-SDP ratio is considered. In general, the same pattern of higher per capita subsidies in higher income States is reflected here, as already discussed in the context of our estimates.

Table A2.2
CSO Estimates of Subsidies in Selected States: 1993-94

State\Categories	*Total Subsidies*		*Subsidies on Social Services*		*Subsidies on Economic Services*	
	As Percentage of SDP	*Rs. Per Capita*	*As Percentage of SDP*	*Rs. Per Capita*	*As Percentage of SDP*	*Rs. Per Capita*
High Income States						
Gujarat	4.31	327.98	0.01	0.55	4.30	327.39
Haryana	1.41	146.76	0.00	0.27	1.40	146.50
Maharashtra	1.02	110.89	0.00	0.00	1.02	110.89
Punjab	0.80	98.56	0.00	0.19	0.80	98.37
Middle Income States						
Andhra Pradesh	2.15	142.29	0.88	58.22	1.27	84.07
Karnataka	1.38	96.49	0.00	0.28	1.37	96.21
Kerala	0.52	32.96	0.01	0.38	0.52	32.58
Tamil Nadu	3.06	223.35	0.94	68.33	2.12	155.02
West Bengal	0.64	38.60	0.03	1.80	0.61	36.80
Low Income States						
Bihar	2.15	78.55	0.00	0.00	2.15	78.55
Madhya Pradesh	2.42	131.82	0.04	2.31	2.38	129.51
Orissa	1.08	51.38	0.00	0.09	1.08	51.29
Rajasthan	1.26	65.50	0.00	0.18	1.26	65.33
Uttar Pradesh	1.41	66.19	0.00	0.00	1.41	66.19

A disaggregated analysis based on CSO estimates of subsidies shows the dominance of the economic services in subsidies (96 per cent in 1993-94). The relative share of the Centre in subsidies in 1993-94 as per the CSO estimates works out to 56 per cent of the total subsidies. This picture is quite the reverse of our findings based on comprehensive budget-based subsidies, where it is the States which have a higher share in both social and economic services. As mentioned earlier, this is primarily due to the way subsidies are defined by the CSO. The bulk of unrecovered costs which are not in the form of explicit subsidies are not reflected in the CSO estimates. Since such unrecovered costs are far greater at the State level, the relative shares of the Centre and the States in the total subsidies project completely different pictures.

APPENDIX 3

Subsidies: An International Perspective

Interest in measuring the magnitudes and relative importance of subsidies has increased significantly across the World in the last 15 years. Individual countries, economic unions (CEE, EFTA, OECD) and multilateral agencies (IMF, UN) have undertaken major surveys and studies pertaining to estimation of subsidies. These sources of information can be divided into three groups, *viz.*, System of National Accounts (SNA), Government Finance Statistics (GFS) and other Alternative Sources of Information (ASI). A study by Clements *et.al.* lists the results of three CEE studies (1989, 1990 and 1992), two OECD studies (1990 and 1992), two EFTA studies (1986, 1990) and one USDA (1990) study under ASI.

The magnitude of subsidies relative to GDP, based on GFS and SNA data-bases, is presented below for a comparison of the Indian position with selected developed and developing countries. Tables A3.1 and A3.2 relate to the GFS and Table A3.3 relates to the SNA data bases, respectively. Table A3.1 has two parts. First, figures for subsidy and other current transfers are given as a percentage of GDP. In the lower part of table only subsidy figures (exclusive of other current transfers) as percentage of GDP are given for a selected list of countries for whom relevant data were available from the country sheets of the SNA tables. It will be immediately noticed that the subsidy-GDP ratios are considerably lower as compared to the subsidy plus transfer to GDP ratios. A similar set of figures are given for subsidy plus transfer and subsidy only as a percentage of total government expenditure plus net lending in Table A3.2. Since comparable figures for India are available in these two tables only with respect to the subsidy plus transfer figures, some observation can be made only in this context. For most of the developed countries, subsidies and transfers as a percentage of GDP account for 10 per cent or more. The Indian figure (7.27) lies in the lower half of the range between the lowest (2.42) and the highest (18.14) ratios.

Table A3.1
Subsidy and Other Current Transfers as Percentage of GDP

Countries	*1988*	*1990*	*1992*	*1994*
U.S.	11.49	11.87	13.43	13.42
Canada	12.37	13.54	N.A.	N.A.
Australia	17.24	15.75	18.65	19.38
Japan	8.56	8.46	N.A.	N.A.
U.K.	18.14	19.84	24.21	N.A.
India	7.27	7.43	7.12	N.A.
Indonesia	2.42	3.91	2.44	N.A.
Korea	6.09	7.45	8.41	9.06
Malaysia	13.50	12.76	13.07	12.15
Pakistan	8.07	9.82	11.41	11.83
Philippines	7.55	8.58	7.99	N.A.
Singapore	10.51	10.33	9.64	N.A.
Sri Lanka	9.31	9.37	9.33	9.45
Thailand	9.50	8.76	9.41	N.A.
Argentina	3.51	3.21	N.A.	N.A.
Brazil	5.44	5.80	3.89	N.A.
Chile	6.58	5.67	5.74	5.87
Subsidy Exclusive of Other Current Transfers as Percentage of GDP				
U.S.	0.69	0.63	0.62	0.55
Australia	0.66	0.52	0.64	0.64
Indonesia	0.37	1.83	0.53	N.A.
Sri Lanka	1.70	1.99	1.20	1.27
Thailand	2.37	2.77	1.75	N.A.
India	287.8	397.8	500.6	554.7
(Nominal figure of subsidy and other current transfers in Rs. billion)				

Source: Government Finance Statistics (1995), IMF.
Note: 1988 refers to 1987–88.

If we look at total subsidy and current transfers as a percentage of either expenditure or GDP, India's position was eleventh and twelfth in 1988 respectively in the list of selected countries (see Tables A3.1 and A3.2). However, India's position improved marginally in 1992 when total subsidy and current transfers of the consolidated Central government declined from 7.3 per cent of GDP in 1988 to 7.1 per cent in 1992. Similarly, the share of

subsidy and transfers in total expenditure plus net lending declined from 32.6 per cent in 1988 to 31.2 per cent in 1994. Average share of subsidy and transfers over the sample period in total expenditure plus net lending in India (33.3 per cent) is lower than all countries in the sample except Indonesia, Sri Lanka, Argentina, Brazil and Chile. As far as the average share of subsidy and current transfers in GDP is concerned, India does better than all the countries in the sample except Korea, Brazil, Indonesia, Argentina and Chile.

Table A3.2
Subsidy and Other Current Transfers as Percentage of Total Expenditure and Net Lending

Countries	*1988*	*1990*	*1992*	*1994*
U.S.	49.41	49.78	54.56	58.08
Canada	57.52	56.77	N.A.	N.A.
Australia	63.12	63.49	66.68	68.59
Japan	52.07	52.94	N.A.	N.A.
U.K.	52.53	54.74	58.75	N.A.
India	32.55	34.18	35.43	31.24
Indonesia	12.59	20.55	13.05	N.A.
Korea	38.83	40.14	44.95	45.95
Malaysia	51.97	44.84	46.49	48.74
Pakistan	32.50	38.70	43.27	45.41
Philippines	44.33	42.37	41.77	N.A.
Singapore	50.79	49.80	48.96	N.A.
Sri Lanka	26.99	30.22	33.93	32.60
Thailand	57.55	59.24	60.08	N.A.
Argentina	31.55	28.72	N.A.	N.A.
Brazil	15.38	14.68	12.20	N.A.
Chile	24.93	28.58	28.22	28.68
Subsidy Exclusive of Other Current Transfers as Percentage of Total Expenditure and Net Lending				
U.S.	2.98	2.64	2.51	2.38
Australia	2.41	2.11	2.30	2.28
Indonesia	1.92	9.62	2.84	N.A.
Sri Lanka	4.92	6.42	4.35	4.37
Thailand	14.38	18.74	11.16	N.A.

Source and Note: As in Table A3.1.

Table A3.3
Subsidy as Percentage of GDP (General Government)

Countries	*1988*	*1990*	*1991*
U.S.	0.644	0.509	0.525
Canada	0.187	1.756	2.136
Australia	1.370	1.519	1.544
Japan*	0.918	1.094	0.854
U.K.	1.305	1.153	1.067
India	3.619	3.47	3.188
Korea	0.306	0.553	0.778
Malaysia*	0.003	0.095	0.133
Pakistan*	1.657	1.097	0.696
Philippines	0.339	1.242	0.663
Sri Lanka	1.024	1.149	1.375
Thailand	0.347	0.938	0.633

Source: *Year Book of National Accounts* (U.N.).
Note: * Government plus supernational organisations.
Figures refer to calender year.

However, when a comparison is made using the SNA figures (Table A3.3) for subsidy provided by General government, that includes States and local governments, as percentage of GDP, a different picture emerges. The subsidy-GDP ratio is higher than those for many of the developed countries. During the pre-reform period, total subsidy as a percentage of GDP was highest in India. However, it has declined from 3.6 per cent in 1988 to 3.2 per cent in 1991. The total subsidy remained much higher in proportion to GDP in India at the start of the reforms than in many developed countries and Asian countries.

From the ASI studies, apart from measuring subsidies as a percentage of GDP, the relative importance of different policy objectives in the total subsidies, and the relative importance of different subsidisation tools has also been brought out (Clements, *et.al.*, 1995). This information, however, relates mostly to the developed countries. The OECD and the EFTA averages along with individual figures for a selected list of countries are summarised in Table A3.4. Among the policy objectives, trade and regional objectives appear to be relatively important in the developed countries. The relative importance

of different subsidisation tools has been brought out in Table A3.5. Cash subsidies predominate. Although individual country profiles differ, tax subsidies also appear to be quite important.

Table A3.4
Policy Objectives of Government Subsidies
(as Percentage of Total)

Countries/Country Groups	*R&D*	*SME**	*Trade*	*Sectoral*	*Regional*	*Other*
OECD (average 1986-89)	10	4	15	8	18	45
EFTA (average 1985-89)	9	1	3	17	19	51
U.K.	10	9	24	3	24	30
U.S.	9	4	14	-	10	63
Sweden	10	3	1	27	22	37
Switzerland	37	4	14	-	27	18

Source: Clements, *et.al.* (1995).
Note: * Small and medium enterprises.

Table A3.5
Subsidisation Tools Applied in Selected OECD Member Countries
(Averages for 1986-89)

Countries	*Cash Subsidies*	*Tax Subsidies*	*Equity Subsidies*	*Soft Loans*	*Guaran-tees*	*Mixed Instruments*
Australia	64	19	-	-	-	17
Belgium	7	25	7	-	-	60
Canada	94	-	-	-	2	4
France	42	17	16	3	22	1
Germany	38	43	2	1	15	2
Sweden	37	15	1	18	10	19
Switzerland	14	-	-	-	78	8
U.K.	55	-	24	-	15	5
U.S.	7	89	-	4	1	-

Source: Clements, *et.al.* (1995).

Annexure 1
Explicit Subsidies in the Central Budget

(Rs. Crore)

Year	*Food Subsidy*	*Fertiliser Subsidy*	*Assistance for Export Promotion and Market Development*	*Subsidy on Railways*	*Interest Subsidy**	*Others*	*Grand Total*
1971-72	47	0	54	0	5	34	140
1972-73	117	0	62	0	12	14	205
1973-74	251	0	66	0	20	24	361
1974-75	295	0	80	0	30	14	419
1975-76	250	0	149	0	47	24	470
1976-77	506	60	241	0	66	74	947
1977-78	480	266	324	0	88	129	1287
1978-79	570	342	375	0	59	129	1475
1979-80	600	603	361	56	92	109	1821
1980-81	650	505	399	69	253	152	2028
1981-82	700	381	477	78	102	203	1941
1982-83	711	603	477	97	217	157	2262
1983-84	835	1042	463	93	118	198	2749
1984-85	1101	1928	518	100	135	256	4038
1985-86	1650	1924	603	128	271	220	4796
1986-87	2000	1898	785	144	229	395	5451
1987-88	2000	2164	962	174	393	287	5980
1988-89	2200	3201	1386	207	406	332	7732
1989-90	2476	4542	2014	233	881	328	10474
1990-91	2450	4389	2742	283	379	1915	12158
1991-92	2850	5185	1758	312	316	1832	12253
1992-93	2800	5796	818	353	113	2115	11995
1993-94	5537	4562	665	412	113	1393	12682
1994-95	5100	5769	658	420	76	909	12932
1995-96	5377	6735	16	418	34	725	13305
1996-97(RE)	6066	7767	400	466	1257	738	16694

Source: *Indian Economic Statistics and Budget Documents.*

Note:* Does not include subsidy to: (i) Shipping Development Fund Committee which was treated as grants in the economic classification in the absence of details available then (upto 1977-78) and (ii) States and Union Territories for Janata cloth in the handloom sector which is treated as grants to States in the economic classification.

Annexure 2
Explicit Subsidies of the Centre at Constant (1980-81 = 100) Prices

(Rs. Crore)

Year	*Food Subsidy*	*Fertiliser Subsidy*	*Assistance for Export Promotion and Market Development*	*Subsidy on Railways*	*Interest Subsidy**	*Others*	*Grand Total*
1971-72	104.86	0.00	120.48	0.00	11.16	75.86	312.36
1972-73	235.27	0.00	124.67	0.00	24.13	28.15	412.23
1973-74	427.45	0.00	112.40	0.00	34.06	40.87	614.78
1974-75	430.41	0.00	116.72	0.00	43.77	20.43	611.32
1975-76	370.37	0.00	220.74	0.00	69.63	35.56	696.30
1976-77	707.79	83.93	337.11	0.00	92.32	103.51	1324.66
1977-78	636.01	352.46	429.31	0.00	116.60	170.93	1705.31
1978-79	736.53	441.92	484.56	0.00	76.24	166.69	1905.93
1979-80	669.34	672.69	402.72	62.47	102.63	121.60	2031.46
1980-81	650.00	505.00	399.00	69.00	253.00	152.00	2028.00
1981-82	634.86	345.55	432.61	70.74	92.51	184.11	1760.38
1982-83	600.20	509.03	402.67	81.88	183.18	132.53	1909.51
1983-84	649.81	810.89	360.31	72.37	91.83	154.09	2139.30
1984-85	764.11	1338.05	359.50	69.40	93.69	177.67	2802.42
1985-86	1111.41	1295.97	406.17	86.22	182.54	148.19	3230.50
1986-87	1264.70	1200.20	496.40	91.06	144.81	249.78	3446.95
1987-88	1164.96	1260.48	560.34	101.35	228.91	167.17	3483.22
1988-89	1185.92	1725.51	747.13	111.58	218.86	178.97	4167.97
1989-90	1232.33	2260.60	1002.39	115.97	438.48	163.25	5213.02
1990-91	1099.20	1969.13	1230.20	126.97	170.04	859.17	5454.71
1991-92	1116.90	2031.98	688.95	122.27	123.84	717.95	4801.90
1992-93	1006.14	2082.72	293.94	126.85	40.61	760.00	4310.25
1993-94	1840.02	1516.02	220.99	136.91	37.55	462.91	4214.41
1994-95	1528.23	1728.69	197.17	125.85	22.77	272.38	3875.10
1995-96	1497.44	1875.63	4.46	116.41	9.47	201.90	3705.30
1996-97(RE)	1598.21	2046.37	105.39	122.78	331.18	194.44	4398.37

Source & Note: As in Annexure 1.

Annexure 3
Major Explicit Subsidies of the Centre (as Percentage of Total)

Year	*Food Subsidy*	*Fertiliser Subsidy*	*Assistance for Export Promotion and Market Development*	*Subsidy on Railways*	*Interest Subsidy**	*Others*	*Grand Total*
1971-72	33.57	0.00	38.57	0.00	3.57	24.29	100
1972-73	57.07	0.00	30.24	0.00	5.85	6.83	100
1973-74	69.53	0.00	18.28	0.00	5.54	6.65	100
1974-75	70.41	0.00	19.09	0.00	7.16	3.34	100
1975-76	53.19	0.00	31.70	0.00	10.00	5.11	100
1976-77	53.43	6.34	25.45	0.00	6.97	7.81	100
1977-78	37.30	20.67	25.17	0.00	6.84	10.02	100
1978-79	38.64	23.19	25.42	0.00	4.00	8.75	100
1979-80	32.95	33.11	19.82	3.08	5.05	5.99	100
1980-81	32.05	24.90	19.67	3.40	12.48	7.50	100
1981-82	36.06	19.63	24.57	4.02	5.26	10.46	100
1982-83	31.43	26.66	21.09	4.29	9.59	6.94	100
1983-84	30.37	37.90	16.84	3.38	4.29	7.20	100
1984-85	27.27	47.75	12.83	2.48	3.34	6.34	100
1985-86	34.40	40.12	12.57	2.67	5.65	4.59	100
1986-87	36.69	34.82	14.40	2.64	4.20	7.25	100
1987-88	33.44	36.19	16.09	2.91	6.57	4.80	100
1988-89	28.45	41.40	17.93	2.68	5.25	4.29	100
1989-90	23.64	43.36	19.23	2.22	8.41	3.13	100
1990-91	20.15	36.10	22.55	2.33	3.12	15.75	100
1991-92	23.26	42.32	14.35	2.55	2.58	14.95	100
1992-93	23.34	48.32	6.82	2.94	0.94	17.63	100
1993-94	43.66	35.97	5.24	3.25	0.89	10.98	100
1994-95	39.44	44.61	5.09	3.25	0.59	7.03	100
1995-96	40.41	50.62	0.12	3.14	0.26	5.45	100
1996-97(RE)	36.34	46.53	2.40	2.79	7.53	4.42	100

Source & Note: As in Annexure 1.

Annexure 4
Estimates of Subsidies Given by the Centre: 1994-95

(Rs. Crore)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**5633.19**	**111.28**	**5521.91**	1.98
i) Social Services	1198.07	35.14	1162.93	2.93
Elementary Education	187.25	0.15	187.10	0.08
Public Health	107.58	10.31	97.27	9.58
Sewerage and Sanitation	42.24	0.00	42.24	0.00
Information and Publicity	113.86	23.11	90.75	20.30
Welfare of SC., ST., OBCs.	91.13	0.00	91.13	0.00
Labour	386.27	1.57	384.70	0.41
Social Welfare	263.12	0.00	263.12	0.00
Nutrition	6.62	0.00	6.62	0.00
ii) Economic Services	4435.12	76.14	4358.98	1.72
Soil and Water Conservation	20.67	0.00	20.67	0.00
Environmental Forestry and Wild Life	0.00	0.00	0.00	0.00
Agricultural Research and Education	495.15	0.00	495.15	0.00
Flood Control and Drainage	41.14	0.00	41.14	0.00
Roads and Bridges	1703.35	48.84	1654.51	2.87
Atomic Energy Research	489.23	13.72	475.51	2.80
Space Research	573.99	0.02	573.97	0.00
Oceanographic Research	62.01	0.00	62.01	0.00
Other Scientific Research	787.51	13.56	773.95	1.72
Ecology and Environment	165.97	0.00	165.97	0.00
Meteorology	96.10	0.00	96.10	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**42558.26**	**4991.14**	**37567.12**	11.73
i) Social Services@	4496.32	556.79	3939.53	12.38
Education, Sports, Art and Culture	2230.74	6.29	2224.45	0.28
Health and Family Welfare	777.65	19.14	758.51	2.46
Water Supply	88.30	0.38	87.92	0.43
Housing	506.56	71.97	434.59	14.21
Urban Development	102.81	0.03	102.78	0.03
Social Scurity	28.00	0.00	28.00	0.00
Other Social Services	762 26	458.99	303.27	60.21
ii) Economic Services#	38061.94	4434.35	33627.59	11.65
Agriculture and Allied Activities	8463.82	287.99	8175.83	3.40
Cooperation	140.61	102.18	38.43	72.67
Rural Development	0.80	0.00	0.08	0.00
Special Area Programmes	240.78	0.00	240.78	0.00
Irrigation	138.00	5.28	132.72	3.83
Power (Excluding Petroleum)	6213.51	2284.57	3928.94	36.77
Industries	11953.35	1075.40	10877.95	9.00
Transport	1744.88	259.48	1485.40	14.87
Civil Supplies	27.90	0.13	27.77	0.47
Other Economic Services	9138.29	419.32	8718.97	4.46
3. Surplus Sectors: Economic Services#	**26132.90**	**30775.73**	**-4642.83**	117.77
Merit (Environmental Forestry and Wild Life)	14.95	56.15	-41.20	375.59
Non-Merit: Economic Services	26117.95	30719.58	-4601.63	117.62
Petroleum	435.73	1628.48	-1192.75	373.74
Communications	6547.89	8958.44	-2410.55	136.81
Other Economic Services	19134.33	20132.66	-998.33	105.22
4. Total Subsidies (1 + 2)	**48191.45**	**5102.42**	**43089.03**	**10.59**
5. Subsidies Net of Surplus (1 + 2 + 3)	**74324.35**	**35878.15**	**38446.20**	48.27

Basic Data Source: *Finance Accounts, 1993-94 and 1994-95.*

Notes: * Revenue Expenditure and Revenue Receipts are Net of Transfers.
@ Net of Natural Calamities and Secretariat Social Services.
# Net of Secretariat Economic Services.

Annexure 5
Estimates of Subsidies Given by the States: 1994-95

(Rs. Crore)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**27358.16**	**251.57**	**27106.59**	**0.92**
i) Social Services	18951.71	114.25	18837.46	0.60
Elementary Education	12176.27	33.36	12142.91	0.27
Public Health	1266.03	20.26	1245.76	1.60
Sewerage and Sanitation	217.40	12.10	205.30	5.57
Information and Publicity	202.21	8.81	193.40	4.36
Welfare of SC., ST., and OBCs.	3151.60	0.27	3151.34	0.01
Labour	152.64	39.36	113.28	25.79
Social Welfare	1070.45	0.00	1070.44	0.00
Nutrition	715.12	0.07	715.04	0.01
ii) Economic Services	8406.45	137.32	8269.13	1.63
Soil & Water Conservation	717.18	1.33	715.85	0.19
Environmental Forestry and Wild Life	117.44	2.48	114.96	2.11
Agricultural Research & Education	594.59	0.00	594.59	0.00
Flood Control & Drainage	1075.60	0.00	1075.60	0.00
Roads & Bridges	5828.89	133.16	5695.73	2.28
Space Research	0.14	0.00	0.14	0.00
Oceanographic Research	0.01	0.00	0.01	0.00
Other Scientific Research	32.34	0.34	32.00	1.04
Ecology and Environment	39.55	0.00	39.55	0.00
Meteorology	0.70	0.00	0.70	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**71933.68**	**5285.83**	**66647.85**	**7.35**
i) Social Services@	28420.59	610.11	27810.48	2.15
Education, Sports, Art & Culture	13229.05	194.54	13034.51	1.47
Medical & Family Welfare	6577.20	87.09	6490.11	1.32
Water Supply and Sanitation	5304.76	169.39	5135.36	3.19
Housing	1116.20	75.12	1041.09	6.73
Urban Development	1253.05	35.28	1217.76	2.82
Social Security and Welfare	355.93	28.95	326.98	8.13
Other Social Services	584.40	19.73	564.67	3.38
ii) Economic Services#	43513.09	4675.72	38837.37	10.75
Agriculture and Allied Activities	7828.98	1728.34	6100.64	22.08
Co-operation	1114.82	159.27	955.55	14.29
Rural Development	2601.60	44.13	2557.47	1.70
Special Area Programmes	981.04	24.53	956.51	2.50
Irrigation	14858.63	645.59	14213.04	4.34
Power	9325.89	1291.06	8034.84	13.84
Industries	2736.35	142.36	2593.99	5.20
Transport	1335.68	501.75	833.93	37.57
Civil Supplies	923.85	49.25	874.59	5.33
Other Economic Services	1806.24	89.43	1716.81	4.95
3. Surplus Sectors (Merit & Non-Merit)	**-148.05**	**4670.76**	**-4818.80**	**-3154.93**
i) Social Services@	65.47	322.59	-257.13	492.76
ii) Economic Services#	-213.51	4348.16	-4561.68	-2036.49
4. Total Subsidies (1 + 2)	**99291.83**	**5537.40**	**93754.44**	**5.58**
5. Subsidies Net of Surplus (1+2+3)	**99143.79**	**10208.15**	**88935.64**	**10.30**

Basic Data Sources: *Finance Accounts, 1993-94 and 1994-95; Finance of State Governments: 1994-95, and 1995-96, Reserve Bank of India.*

Notes: * Revenue Expenditure and Revenue Receipts Net of Transfers.
@ Excludes Secretariat - Social Services and Relief from Natural Calamities
# Excludes Secretariat - Economic Services

Annexure 6
Interest Rates Used for Estimation of State Subsidies

State	*Percentage*
Andhra Pradesh	11.01
Bihar	9.32
Goa	6.56
Gujarat	10.85
Haryana	11.65
Karnataka	11.20
Kerala	11.59
Madhya Pradesh	9.99
Maharashtra	11.77
Orissa	11.08
Punjab	11.26
Rajasthan	11.15
Tamil Nadu	11.83
Uttar Pradesh	9.34
West Bengal	11.40

Annexure 7

Government Subsidies in Andhra Pradesh: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**172903.86**	**1683.50**	**171220.36**	**0.97**
i) Social Services	133934.80	639.79	133295.01	0.48
Elementary Education	60526.62	469.56	60057.06	0.78
Public Health	9757.61	63.74	9693.87	0.65
Sewerage and Sanitation	1096.64	92.07	1004.57	8.40
Information and Publicity	2005.71	14.35	1991.36	0.72
Welfare of SC., ST., and OBCs.	50606.37	0.07	50606.30	0.00
Labour	0.00	0.00	0.00	0.00
Social Welfare	7763.65	0.00	7763.65	0.00
Nutrition	2178.19	0.00	2178.19	0.00
ii) Economic Services	38969.06	1043.71	37925.35	2.68
Soil & Water Conservation	1698.84	0.00	1698.84	0.00
Environmental Forestry and Wild Life	844.98	6.63	838.35	0.78
Agricultural Research & Education	4014.98	0.00	4014.98	0.00
Flood Control & Drainage	6460.13	0.00	6460.13	0.00
Roads & Bridges	24993.84	1037.08	23956.76	4.15
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	110.03	0.00	110.03	0.00
Ecology and Environment	846.27	0.00	846.27	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**482687.60**	**51499.45**	**431188.15**	**10.67**
i) Social Services@	157478.19	4036.69	153441.50	2.56
Education, Sports, Art & Culture	83295.32	2536.30	80759.02	3.04
Medical & Family Welfare	40337.78	266.68	40071.10	0.66
Water Supply and Sanitation	18961.87	309.19	18652.68	1.63
Housing	4368.74	486.89	3881.85	11.14
Urban Development	7235.55	175.93	7059.62	2.43
Social Security and Welfare	0.00	0.00	0.00	0.00
Other Social Services	3278.92	261.70	3017.22	7.98
ii) Economic Services#	325209.42	47462.76	277746.66	14.59
Agriculture and Allied Activities	31266.65	7869.11	23397.54	25.17
Co-operation	8488.70	1421.93	7066.77	16.75
Rural Development	37880.27	62.97	37817.30	0.17
Special Area Programmes	0.00	0.00	0.00	0.00
Irrigation	140322.01	8693.22	131628.79	6.20
Power	34383.84	24570.09	9813.75	71.46
Industries	16519.03	807.99	15711.04	4.89
Transport	2654.93	454.42	2200.51	17.12
Civil Supplies	42096.32	3086.32	39010.00	7.33
Other Economic Services	11597.67	496.71	11100.96	4.28
3. Surplus Sectors (Merit & Non-Merit)	**3698.59**	**28807.49**	**-25108.90**	**778.88**
i) Social Services@	1041.18	1241.52	-200.34	119.24
ii) Economic Services#	2657.41	27565.97	-24908.56	1037.33
4. Total Subsidies (1 + 2)	**655591.46**	**53182.95**	**602408.51**	**8.11**
5. Subsidies Net of Surplus (1+2+3)	**659290.05**	**81990.44**	**577299.61**	**12.44**

Basic Data Source: *Finance Accounts, 1993-94.*

Notes: * Revenue Expenditure and Revenue Receipts are Net of Transfers.

@ Excludes Secretariat - Social Services and Relief from Natural Calamities

Excludes Secretariat - Economic Services

Annexure 8
Government Subsidies in Bihar: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**162106.05**	**1176.45**	**160929.60**	**0.73**
i) Social Services	121904.50	385.40	121519.10	0.32
Elementary Education	100662.98	0.00	100662.98	0.00
Public Health	3758.59	55.20	3703.39	1.47
Sewerage and Sanitation	1667.69	147.34	1520.35	8.83
Information and Publicity	594.56	4.27	590.29	0.72
Welfare of SC., ST., and OBCs.	9177.98	0.00	9177.98	0.00
Labour	733.23	178.59	554.64	24.36
Social Welfare	4016.82	0.00	4016.82	0.00
Nutrition	1292.65	0.00	1292.65	0.00
ii) Economic Services	40201.55	791.05	39410.50	1.97
Soil & Water Conservation	1499.32	0.00	1499.32	0.00
Environmental Forestry and Wild Life	157.62	0.00	157.62	0.00
Agricultural Research & Education	2332.72	0.00	2332.72	0.00
Flood Control & Drainage	13445.15	0.00	13445.15	0.00
Roads & Bridges	22766.73	791.05	21975.68	3.47
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	0.00	0.00	0.00	0.00
Ecology and Environment	0.00	0.00	0.00	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**375696.13**	**11125.25**	**364570.88**	**2.96**
i) Social Services@	121883.39	1399.13	120484.26	1.15
Education, Sports, Art & Culture	58561.34	281.42	58279.92	0.48
Medical & Family Welfare	34753.67	951.41	33802.26	2.74
Water Supply and Sanitation	21089.45	17.90	21071.55	0.08
Housing	2403.70	91.07	2312.63	3.79
Urban Development	2660.16	0.11	2660.05	0.00
Social Security and Welfare	0.00	0.00	0.00	0.00
Other Social Services	2415.07	57.22	2357.85	2.37
ii) Economic Services#	253812.75	9726.12	244086.63	3.83
Agriculture and Allied Activities	39720.18	4869.93	34850.25	12.26
Co-operation	4194.07	161.34	4032.73	3.85
Rural Development	26977.57	88.08	26889.49	0.33
Special Area Programmes	0.00	0.00	0.00	0.00
Irrigation	84141.57	1924.06	82217.51	2.29
Power	68351.28	2451.90	65899.38	3.59
Industries	8139.24	59.67	8079.57	0.73
Transport	3819.78	5.15	3814.63	0.13
Civil Supplies	1165.13	0.00	1165.13	0.00
Other Economic Services	17303.93	165.99	17137.94	0.96
3. Surplus Sectors (Merit & Non-Merit)	**764.83**	**67870.32**	**-67105.49**	**8873.92**
i) Social Services@	0.00	0.00	0.00	0.00
ii) Economic Services#	764.83	67870.32	-67105.49	8873.92
4. Total Subsidies (1 + 2)	**537802.19**	**12301.70**	**525500.49**	**2.29**
5. Subsidies Net of Surplus (1+2+3)	**538567.01**	**80172.02**	**458394.99**	**14.89**

Source and Notes: As in Annexure 7.

Annexure 9
Government Subsidies in Goa: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**7784.81**	**212.50**	**7572.31**	**2.73**
i) Social Services	**4129.98**	**52.14**	**4077.84**	**1.26**
Elementary Education	**2627.59**	**0.36**	**2627.23**	**0.01**
Public Health	**293.40**	**2.52**	**290.88**	**0.86**
Sewerage and Sanitation	**438.58**	**33.02**	**405.56**	**7.53**
Information and Publicity	**89.64**	**0.23**	**89.41**	**0.26**
Welfare of SC., ST., and OBCs.	**61.17**	**0.13**	**61.04**	**0.21**
Labour	**95.71**	**15.88**	**79.83**	**16.59**
Social Welfare	**405.83**	**0.00**	**405.83**	**0.00**
Nutrition	**118.06**	**0.00**	**118.06**	**0.00**
ii) Economic Services	3654.84	160.36	3494.48	4.39
Soil & Water Conservation	551.46	0.00	551.46	0.00
Environmental Forestry and Wild Life	73.32	0.00	73.32	0.00
Agricultural Research & Education	50.84	0.00	50.84	0.00
Flood Control & Drainage	76.93	0.00	76.93	0.00
Roads & Bridges	2858.13	160.36	2697.77	5.61
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	39.96	0.00	39.96	0.00
Ecology and Environment	4.20	0.00	4.20	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**36932.99**	**11758.47**	**25174.52**	**31.84**
i) Social Services@	16987.83	1239.77	15748.06	7.30
Education, Sports, Art & Culture	7348.42	44.88	7303.54	0.61
Medical & Family Welfare	4005.13	38.91	3966.22	0.97
Water Supply and Sanitation	4342.88	1035.15	3307.73	23.84
Housing	425.32	60.19	365.13	14.15
Urban Development	432.45	57.53	374.92	13.30
Social Security and Welfare	130.00	3.11	126.89	2.39
Other Social Services	303.65	0.00	303.65	0.00
ii) Economic Services#	19945.16	10518.70	9426.46	52.74
Agriculture and Allied Activities	2270.52	299.22	1971.30	13.18
Co-operation	206.80	55.68	151.12	26.92
Rural Development	333.01	3.66	329.35	1.10
Special Area Programmes	234.11	0.00	234.11	0.00
Irrigation	3727.07	33.27	3693.80	0.89
Power	10320.78	9938.99	381.79	96.30
Industries	891.35	32.39	858.96	3.36
Transport	919.93	113.45	806.48	12.33
Civil Supplies	37.02	1.13	35.89	3.05
Other Economic Services	1004.57	40.91	963.66	4.07
3. Surplus Sectors (Merit & Non-Merit)	**108.44**	**1022.53**	**-914.09**	**942.91**
i) Social Services@	0.00	0.00	0.00	0.00
ii) Economic Services#	108.44	1022.53	-914.09	942.91
4. Total Subsidies (1 + 2)	**44717.81**	**11970.97**	**32746.84**	**26.77**
5. Subsidies Net of Surplus (1+2+3)	**44826.25**	**12993.50**	**31832.75**	**28.99**

Source and Notes: As in Annexure 7.

Annexure 10
Government Subsidies in Gujarat: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**170866.97**	**926.40**	**169940.57**	**0.54**
i) Social Services	125905.59	714.45	125191.14	0.57
Elementary Education	72747.47	340.94	72406.53	0.47
Public Health	6565.01	40.46	6524.55	0.62
Sewerage and Sanitation	1235.49	0.00	1235.49	0.00
Information and Publicity	1135.56	54.85	1080.71	4.83
Welfare of SC., ST., and OBCs.	18547.70	0.01	18547.69	0.00
Labour	1613.74	271.63	1342.11	16.83
Social Welfare	11957.33	0.00	11957.33	0.00
Nutrition	12103.29	6.56	12096.73	0.05
ii) Economic Services	44961.38	211.95	44749.43	0.47
Soil & Water Conservation	3984.73	0.00	3984.73	0.00
Environmental Forestry and Wild Life	625.98	11.63	614.35	1.86
Agricultural Research & Education	3696.38	0.00	3696.38	0.00
Flood Control & Drainage	2200.46	0.00	2200.46	0.00
Roads & Bridges	34377.13	200.23	34176.90	0.58
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	17.78	0.09	17.69	0.51
Ecology and Environment	58.92	0.00	58.92	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**458535.85**	**12955.05**	**445580.80**	**2.83**
i) Social Services@	120493.24	3265.78	117227.46	2.71
Education, Sports, Art & Culture	65044.46	1469.24	63575.22	2.26
Medical & Family Welfare	26395.27	635.98	25759.29	2.41
Water Supply and Sanitation	17288.96	56.66	17232.30	0.33
Housing	0.00	0.00	0.00	0.00
Urban Development	7793.34	514.06	7279.28	6.60
Social Security and Welfare	0.00	0.00	0.00	0.00
Other Social Services	3971.21	589.84	3381.37	14.85
ii) Economic Services#	338042.60	9689.27	328353.33	2.87
Agriculture and Allied Activities	33194.12	2306.20	30887.92	6.95
Co-operation	16836.00	1141.34	15694.66	6.78
Rural Development	9445.02	171.98	9273.04	1.82
Special Area Programmes	1658.65	1569.44	89.21	94.62
Irrigation	128623.52	3311.80	125311.72	2.57
Power	110119.20	104.28	110014.92	0.09
Industries	17741.49	215.22	17526.27	1.21
Transport	11205.23	12.45	11192.78	0.11
Civil Supplies	1534.33	0.00	1534.33	0.00
Other Economic Services	7685.04	856.56	6828.48	11.15
3. Surplus Sectors (Merit & Non-Merit)	**4802.20**	**63413.41**	**-58611.21**	**1320.51**
i) Social Services@	3875.22	25237.96	-21362.74	651.26
ii) Economic Services#	926.98	38175.45	-37248.47	4118.27
4. Total Subsidies (1 + 2)	**629402.82**	**13881.45**	**615521.37**	**2.21**
5. Subsidies Net of Surplus (1+2+3)	**634205.02**	**77294.86**	**556910.16**	**12.19**

Source and Notes: As in Annexure 7.

Annexure 11
Government Subsidies in Haryana: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**52382.85**	**1033.93**	**51348.92**	**1.97**
i) Social Services	31595.02	1026.16	30568.86	3.25
Elementary Education	20274.33	854.89	19419.44	4.22
Public Health	2044.41	13.74	2030.67	0.67
Sewerage and Sanitation	191.57	6.33	185.24	3.30
Information and Publicity	617.50	11.84	605.66	1.92
Welfare of SC., ST., and OBCs.	2138.18	22.36	2115.82	1.05
Labour	207.40	116.64	90.76	56.24
Social Welfare	4427.51	0.36	4427.15	0.01
Nutrition	1694.13	0.00	1694.13	0.00
ii) Economic Services	20787.84	7.77	20780.07	0.04
Soil & Water Conservation	1410.75	0.00	1410.75	0.00
Environmental Forestry and Wild Life	122.25	3.06	119.19	2.50
Agricultural Research & Education	2600.11	0.00	2600.11	0.00
Flood Control & Drainage	4970.90	0.00	4970.90	0.00
Roads & Bridges	11461.83	4.39	11457.44	0.04
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	158.94	0.32	158.62	0.20
Ecology and Environment	63.06	0.00	63.06	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**181453.06**	**32150.85**	**149302.21**	**17.72**
i) Social Services[@]	52244.31	1998.27	50246.04	3.82
Education, Sports, Art & Culture	26904.98	352.46	26552.52	1.31
Medical & Family Welfare	10939.59	157.15	10782.44	1.44
Water Supply and Sanitation	8319.90	808.32	7511.58	9.72
Housing	2517.74	252.36	2265.38	10.02
Urban Development	1159.62	347.71	811.91	29.98
Social Security and Welfare	0.00	0.00	0.00	0.00
Other Social Services	2402.48	80.27	2322.21	3.34
ii) Economic Services[#]	129208.75	30152.58	99056.17	23.34
Agriculture and Allied Activities	13982.95	1785.90	12197.05	12.77
Co-operation	1756.23	317.91	1438.32	18.10
Rural Development	3678.81	345.80	3333.01	9.40
Special Area Programmes	0.00	0.00	0.00	0.00
Irrigation	41466.61	2044.45	39422.16	4.93
Power	27785.71	0.00	27785.71	0.00
Industries	3203.31	161.56	3041.75	5.04
Transport	28705.24	25303.92	3401.32	88.15
Civil Supplies	0.00	0.00	0.00	0.00
Other Economic Services	8629.89	193.04	8436.85	2.24
3. Surplus Sectors (Merit & Non-Merit)	**-14.77**	**2261.72**	**-2276.49**	**NC**
i) Social Services[@]	0.99	151.92	-150.93	15366.95
ii) Economic Services[#]	-15.76	2109.80	-2125.56	NC
4. Total Subsidies (1 + 2)	**233835.91**	**33184.78**	**200651.13**	**14.19**
5. Subsidies Net of Surplus (1+2+3)	**233821.14**	**35446.50**	**198374.64**	**15.16**

Source and Notes: As in Annexure 7.

Annexure 12
Government Subsidies in Karnataka: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**134823.40**	**770.72**	**134052.68**	**0.57**
i) Social Services	103274.56	363.55	102911.01	0.35
Elementary Education	64223.04	37.64	64185.40	0.06
Public Health	3102.36	14.45	3087.91	0.47
Sewerage and Sanitation	477.18	0.00	477.18	0.00
Information and Publicity	1286.96	21.37	1265.59	1.66
Welfare of SC., ST., and OBCs.	23155.52	0.00	23155.52	0.00
Labour	506.40	290.09	216.31	57.28
Social Welfare	7967.80	0.00	7967.80	0.00
Nutrition	2555.29	0.00	2555.29	0.00
ii) Economic Services	31548.84	407.17	31141.67	1.29
Soil & Water Conservation	6319.74	0.00	6319.74	0.00
Environmental Forestry and Wild Life	1271.27	24.89	1246.38	1.96
Agricultural Research & Education	3754.34	0.00	3754.34	0.00
Flood Control & Drainage	360.83	0.00	360.83	0.00
Roads & Bridges	19588.14	369.20	19218.94	1.88
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	155.12	13.08	142.04	8.43
Ecology and Environment	64.39	0.00	64.39	0.00
Meteorology	35.00	0.00	35.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**375551.34**	**25685.95**	**349865.39**	**6.84**
i) Social Services@	127991.56	3399.60	124591.96	2.66
Education, Sports, Art & Culture	63253.42	1729.19	61524.23	2.73
Medical & Family Welfare	35708.11	715.54	34992.57	2.00
Water Supply and Sanitation	14661.76	69.79	14591.97	0.48
Housing	6789.54	460.37	6329.17	6.78
Urban Development	3104.29	29.93	3074.36	0.96
Social Security and Welfare	507.65	149.22	358.43	29.39
Other Social Services	3966.79	245.56	3721.23	6.19
ii) Economic Services#	247559.78	22286.35	225273.43	9.00
Agriculture and Allied Activities	47292.67	10790.39	36502.28	22.82
Co-operation	3785.50	995.18	2790.32	26.29
Rural Development	19064.28	157.38	18906.90	0.83
Special Area Programmes	966.97	0.12	966.85	0.01
Irrigation	106972.52	1425.57	105546.95	1.33
Power	28578.49	3910.06	24668.43	13.68
Industries	26820.79	3071.17	23749.62	11.45
Transport	4414.73	122.54	4292.19	2.78
Civil Supplies	194.52	0.00	194.52	0.00
Other Economic Services	9469.30	1813.94	7655.36	19.16
3. Surplus Sectors (Merit & Non-Merit)	**369.15**	**4183.42**	**-3814.27**	**1133.26**
i) Social Services@	0.00	0.00	0.00	0.00
ii) Economic Services#	369.15	4183.42	-3814.27	1133.26
4. Total Subsidies (1 + 2)	**510374.74**	**26456.67**	**483918.07**	**5.18**
5. Subsidies Net of Surplus (1+2+3)	**510743.89**	**30640.09**	**480103.80**	**6.00**

Source and Notes: As in Annexure 7.

Annexure 13
Government Subsidies in Kerala: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**99685.77**	**975.59**	**98710.18**	**0.98**
i) Social Services	69393.31	210.23	69183.08	0.30
Elementary Education	52927.22	29.53	52897.69	0.06
Public Health	2316.30	24.42	2291.88	1.05
Sewerage and Sanitation	1367.91	0.41	1367.50	0.03
Information and Publicity	493.99	2.96	491.03	0.60
Welfare of SC., ST., and OBCs.	6886.26	0.00	6886.26	0.00
Labour	691.85	152.91	538.94	22.10
Social Welfare	3918.05	0.00	3918.05	0.00
Nutrition	791.74	0.00	791.74	0.00
ii) Economic Services	30292.46	765.36	29527.10	2.53
Soil & Water Conservation	1079.91	0.00	1079.91	0.00
Environmental Forestry and Wild Life	675.16	0.00	675.16	0.00
Agricultural Research & Education	3415.89	0.00	3415.89	0.00
Flood Control & Drainage	4766.19	0.00	4766.19	0.00
Roads & Bridges	20009.38	750.81	19258.57	3.75
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	338.23	14.55	323.68	4.30
Ecology and Environment	7.70	0.00	7.70	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**209405.49**	**6718.41**	**202687.08**	**3.21**
i) Social Services@	113759.35	2674.08	111085.27	2.35
Education, Sports, Art & Culture	64380.05	2147.46	62232.59	3.34
Medical & Family Welfare	27379.96	210.57	27169.39	0.77
Water Supply and Sanitation	13889.92	0.00	13889.92	0.00
Housing	3639.24	86.31	3552.93	2.37
Urban Development	1100.20	177.01	923.19	16.09
Social Security and Welfare	133.56	23.59	109.97	17.66
Other Social Services	3236.42	29.14	3207.28	0.90
ii) Economic Services#	95646.14	4044.33	91601.81	4.23
Agriculture and Allied Activities	25860.73	1268.61	24592.12	4.91
Co-operation	3578.59	752.23	2826.36	21.02
Rural Development	6420.88	42.21	6378.67	0.66
Special Area Programmes	991.15	1.12	990.03	0.11
Irrigation	24140.62	283.03	23857.59	1.17
Power	5893.19	0.00	5893.19	0.00
Industries	14438.05	787.88	13650.17	5.46
Transport	3754.41	280.45	3473.96	7.47
Civil Supplies	182.53	91.11	91.42	49.92
Other Economic Services	10386.00	537.69	9848.31	5.18
3. Surplus Sectors (Merit & Non-Merit)	**5912.03**	**11235.24**	**-5323.21**	**190.04**
i) Social Services@	0.00	0.00	0.00	0.00
ii) Economic Services#	5912.03	11235.24	-5323.21	190.04
4. Total Subsidies (1 + 2)	**309091.27**	**7694.00**	**301397.27**	**2.49**
5. Subsidies Net of Surplus (1+2+3)	**315003.29**	**18929.24**	**296074.05**	**6.01**

Source and Notes: As in Annexure 7.

Annexure 14
Government Subsidies in Madhya Pradesh: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**194300.23**	**1669.54**	**192630.69**	**0.86**
i) Social Services	144968.76	437.50	144531.26	0.30
Elementary Education	75953.98	0.00	75953.98	0.00
Public Health	7084.08	29.45	7054.63	0.42
Sewerage and Sanitation	1039.43	186.73	852.70	17.96
Information and Publicity	922.35	8.85	913.50	0.96
Welfare of SC., ST., and OBCs.	50743.34	0.00	50743.34	0.00
Labour	671.18	212.47	458.71	31.66
Social Welfare	5863.57	0.00	5863.57	0.00
Nutrition	2690.82	0.00	2690.82	0.00
ii) Economic Services	49331.47	1232.04	48099.43	2.50
Soil & Water Conservation	4331.90	0.00	4331.90	0.00
Environmental Forestry and Wild Life	857.22	0.00	857.22	0.00
Agricultural Research & Education	2079.61	0.00	2079.61	0.00
Flood Control & Drainage	310.20	0.00	310.20	0.00
Roads & Bridges	41648.10	1232.04	40416.06	2.96
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	104.44	0.00	104.44	0.00
Ecology and Environment	0.00	0.00	0.00	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**415625.25**	**30886.41**	**384738.84**	**7.43**
i) Social Services@	131733.17	3501.18	128231.99	2.66
Education, Sports, Art & Culture	52564.70	500.50	52064.20	0.95
Medical & Family Welfare	33388.37	384.66	33003.71	1.15
Water Supply and Sanitation	28571.42	1336.15	27235.27	4.68
Housing	6192.75	430.54	5762.21	6.95
Urban Development	7616.03	212.75	7403.28	2.79
Social Security and Welfare	1472.80	636.58	836.22	43.22
Other Social Services	1927.11	0.00	1927.11	0.00
ii) Economic Services#	283892.08	27385.23	256506.85	9.65
Agriculture and Allied Activities	31559.81	1984.86	29574.95	6.29
Co-operation	6570.40	947.30	5623.10	14.42
Rural Development	12562.54	103.21	12459.33	0.82
Special Area Programmes	0.00	0.00	0.00	0.00
Irrigation	114514.83	3222.39	111292.44	2.81
Power	98990.27	20121.47	78868.80	20.33
Industries	10641.50	818.13	9823.37	7.69
Transport	2778.24	0.57	2777.67	0.02
Civil Supplies	103.73	0.00	103.73	0.00
Other Economic Services	6170.76	187.30	5983.46	3.04
3. Surplus Sectors (Merit & Non-Merit)	**34529.74**	**97387.50**	**-62857.76**	**282.04**
i) Social Services@	201.69	661.95	-460.26	328.20
ii) Economic Services#	34328.05	96725.55	-62397.50	281.77
4. Total Subsidies (1 + 2)	**609925.48**	**32555.95**	**577369.53**	**5.34**
5. Subsidies Net of Surplus (1+2+3)	**644455.22**	**129943.45**	**514511.77**	**20.16**

Source and Notes: As in Annexure 7.

Annexure 15
Government Subsidies in Maharashtra: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**286733.09**	**1778.48**	**284954.61**	**0.62**
i) Social Services	190422.17	1361.66	189060.51	0.72
Elementary Education	114759.31	179.30	114580.01	0.16
Public Health	27282.75	363.01	26919.74	1.33
Sewerage and Sanitation	127.11	23.91	103.20	18.81
Information and Publicity	1269.39	41.77	1227.62	3.29
Welfare of SC., ST., and OBCs.	26687.19	0.00	26687.19	0.00
Labour	1597.45	753.67	843.78	47.18
Social Welfare	13906.64	0.00	13906.64	0.00
Nutrition	4792.33	0.00	4792.33	0.00
ii) Economic Services	96310.92	416.82	95894.10	0.43
Soil & Water Conservation	11808.64	0.05	11808.59	0.00
Environmental Forestry and Wild Life	0.00	0.00	0.00	0.00
Agricultural Research & Education	8627.75	0.00	8627.75	0.00
Flood Control & Drainage	792.81	0.00	792.81	0.00
Roads & Bridges	74682.14	416.62	74265.52	0.56
Space Research	12.96	0.00	12.96	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	40.00	0.15	39.85	0.38
Ecology and Environment	346.62	0.00	346.62	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**780678.77**	**104892.02**	**675786.75**	**13.44**
i) Social Services[@]	273479.70	12393.31	261086.39	4.53
Education, Sports, Art & Culture	149780.43	2143.76	147636.67	1.43
Medical & Family Welfare	40459.63	1172.42	39287.21	2.90
Water Supply and Sanitation	32208.28	5005.73	27202.55	15.54
Housing	22853.60	2267.72	20585.88	9.92
Urban Development	18547.86	1545.74	17002.12	8.33
Social Security and Welfare	1245.13	0.32	1244.81	0.03
Other Social Services	8384.76	257.62	8127.14	3.07
ii) Economic Services[#]	507199.07	92498.71	414700.36	18.24
Agriculture and Allied Activities	149299.95	71952.61	77347.34	48.19
Co-operation	18583.66	3695.61	14888.05	19.89
Rural Development	11994.62	1514.81	10479.81	12.63
Special Area Programmes	4402.44	81.52	4320.92	1.85
Irrigation	233438.75	8940.01	224498.74	3.83
Power	69559.97	5216.43	64343.54	7.50
Industries	8823.27	318.58	8504.69	3.61
Transport	3806.29	137.56	3668.73	3.61
Civil Supplies	5.38	0.00	5.38	0.00
Other Economic Services	7284.76	641.58	6643.18	8.81
3. Surplus Sectors (Merit & Non-Merit)	**992.97**	**15453.31**	**-14460.34**	**1556.27**
i) Social Services[@]	0.00	0.00	0.00	0.00
ii) Economic Services[#]	992.97	15453.31	-14460.34	1556.27
4. Total Subsidies (1 + 2)	**1067411.86**	**106670.50**	**960741.36**	**9.99**
5. Subsidies Net of Surplus (1+2+3)	**1068404.83**	**122123.81**	**946281.02**	**11.43**

Source and Notes: As in Annexure 7.

Annexure 16
Government Subsidies in Orissa: 1993-94

(Rs. Lakh)

Services	Total Cost	Total Receipts*	Subsidies/ Surplus (-)	Recovery Rate (%)
1. Merit Goods/Services (Subsidy Sectors)	**92458.22**	**1190.33**	**91267.89**	**1.29**
i) Social Services	62317.16	774.60	61542.56	1.24
Elementary Education	39739.65	574.13	39165.52	1.44
Public Health	2881.08	32.84	2848.24	1.14
Sewerage and Sanitation	199.07	113.22	85.85	56.88
Information and Publicity	525.21	11.59	513.62	2.21
Welfare of SC., ST., and OBCs.	12233.70	0.00	12233.70	0.00
Labour	325.48	42.82	282.66	13.16
Social Welfare	3949.69	0.00	3949.69	0.00
Nutrition	2463.27	0.00	2463.27	0.00
ii) Economic Services	30141.06	415.73	29725.33	1.38
Soil & Water Conservation	2784.11	0.00	2784.11	0.00
Environmental Forestry and Wild Life	143.84	14.55	129.29	10.12
Agricultural Research & Education	1209.90	0.00	1209.90	0.00
Flood Control & Drainage	4412.07	0.00	4412.07	0.00
Roads & Bridges	20797.08	401.18	20395.90	1.93
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	279.19	0.00	279.19	0.00
Ecology and Environment	514.86	0.00	514.86	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**191753.28**	**3513.32**	**188239.96**	**1.83**
i) Social Services@	64989.04	1621.39	63367.65	2.49
Education, Sports, Art & Culture	31351.51	377.80	30973.71	1.21
Medical & Family Welfare	16056.55	86.00	15970.55	0.54
Water Supply and Sanitation	8937.35	455.56	8481.79	5.10
Housing	4674.80	486.71	4188.09	10.41
Urban Development	2615.18	30.09	2585.09	1.15
Social Security and Welfare	153.95	83.77	70.18	54.41
Other Social Services	1199.70	101.46	1098.24	8.46
ii) Economic Services#	126764.24	1891.93	124872.31	1.49
Agriculture and Allied Activities	15661.47	499.48	15161.99	3.19
Co-operation	3271.67	164.21	3107.46	5.02
Rural Development	5723.15	169.58	5553.57	2.96
Special Area Programmes	0.00	0.00	0.00	0.00
Irrigation	58002.38	636.37	57366.01	1.10
Power	24852.52	38.11	24814.41	0.15
Industries	9416.28	129.02	9287.26	1.37
Transport	3093.32	186.58	2906.74	6.03
Civil Supplies	65.81	60.06	5.75	91.26
Other Economic Services	6677.63	8.52	6669.11	0.13
3. Surplus Sectors (Merit & Non-Merit)	**8365.87**	**23451.39**	**-15085.52**	**280.32**
i) Social Services@	0.00	0.00	0.00	0.00
ii) Economic Services#	8365.87	23451.39	-15085.52	280.32
4. Total Subsidies (1 + 2)	**284211.50**	**4703.65**	**279507.85**	**1.65**
5. Subsidies Net of Surplus (1+2+3)	**292577.37**	**28155.04**	**264422.33**	**9.62**

Source and Notes: As in Annexure 7.

Annexure 17
Government Subsidies in Punjab: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**59129.75**	**460.54**	**58669.21**	**0.78**
i) Social Services	29393.61	314.78	29078.83	1.07
Elementary Education	21878.42	46.71	21831.71	0.21
Public Health	2316.15	19.44	2296.71	0.84
Sewerage and Sanitation	39.41	0.03	39.38	0.08
Information and Publicity	647.91	11.76	636.15	1.82
Welfare of SC., ST., and OBCs.	2768.67	1.05	2767.62	0.04
Labour	300.50	235.79	64.71	78.47
Social Welfare	1442.56	0.00	1442.56	0.00
Nutrition	0.00	0.00	0.00	0.00
ii) Economic Services	29736.13	145.76	29590.37	0.49
Soil & Water Conservation	4705.24	98.61	4606.63	2.10
Environmental Forestry and Wild Life	253.45	0.00	253.45	0.00
Agricultural Research & Education	3849.27	0.00	3849.27	0.00
Flood Control & Drainage	7169.45	0.00	7169.45	0.00
Roads & Bridges	13479.92	47.15	13432.77	0.35
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	266.42	0.00	266.42	0.00
Ecology and Environment	9.32	0.00	9.32	0.00
Meteorology	3.06	0.00	3.06	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**233624.33**	**22007.93**	**211616.40**	**9.42**
i) Social Services@	85756.69	1714.48	84042.21	2.00
Education, Sports, Art & Culture	49283.63	527.33	48756.30	1.07
Medical & Family Welfare	20851.38	274.38	20577.00	1.32
Water Supply and Sanitation	5889.37	621.13	5268.24	10.55
Housing	4393.39	132.49	4260.90	3.02
Urban Development	2852.94	105.35	2747.59	3.69
Social Security and Welfare	0.00	0.00	0.00	0.00
Other Social Services	2485.99	53.80	2432.19	2.16
ii) Economic Services#	147867.64	20293.45	127574.19	13.72
Agriculture and Allied Activities	17049.16	2155.21	14893.95	12.64
Co-operation	2406.75	320.25	2086.50	13.31
Rural Development	1651.67	172.45	1479.22	10.44
Special Area Programmes	1134.24	0.71	1133.53	0.06
Irrigation	36208.20	1656.99	34551.21	4.58
Power	48653.95	19.61	48634.34	0.04
Industries	11788.86	179.03	11609.83	1.52
Transport	19809.28	15655.92	4153.36	79.03
Civil Supplies	562.28	87.14	475.14	15.50
Other Economic Services	8603.25	46.14	8557.11	0.54
3. Surplus Sectors (Merit & Non-Merit)	**25.42**	**3494.18**	**-3468.76**	**13748.20**
i) Social Services@	15.72	839.91	-824.19	5342.73
ii) Economic Services#	9.69	2654.27	-2644.58	27377.89
4. Total Subsidies (1 + 2)	**292754.08**	**22468.47**	**270285.61**	**7.67**
5. Subsidies Net of Surplus (1+2+3)	**292779.49**	**25962.65**	**266816.84**	**8.87**

Source and Notes: As in Annexure 7.

Annexure 18
Government Subsidies in Rajasthan: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**123954.66**	**984.00**	**122970.66**	**0.79**
i) Social Services	84302.43	758.71	83543.72	0.90
Elementary Education	65589.70	128.32	65461.38	0.20
Public Health	4027.30	9.52	4017.78	0.24
Sewerage and Sanitation	3613.98	549.33	3064.65	15.20
Information and Publicity	632.28	5.16	627.12	0.82
Welfare of SC., ST., and OBCs.	6181.05	0.00	6181.05	0.00
Labour	406.35	66.38	339.97	16.34
Social Welfare	927.45	0.00	927.45	0.00
Nutrition	2924.32	0.00	2924.32	0.00
ii) Economic Services	39652.23	225.29	39426.94	0.57
Soil & Water Conservation	5340.39	0.00	5340.39	0.00
Environmental Forestry and Wild Life	1048.37	30.63	1017.74	2.92
Agricultural Research & Education	2347.51	0.00	2347.51	0.00
Flood Control & Drainage	1099.55	0.00	1099.55	0.00
Roads & Bridges	29373.49	194.66	29178.83	0.66
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	208.55	0.00	208.55	0.00
Ecology and Environment	234.38	0.00	234.38	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**365178.43**	**50833.35**	**314345.08**	**13.92**
i) Social Services@	154594.03	6070.58	148523.45	3.93
Education, Sports, Art & Culture	59233.01	258.12	58974.89	0.44
Medical & Family Welfare	34717.74	381.83	34335.91	1.10
Water Supply and Sanitation	52855.34	5140.63	47714.71	9.73
Housing	3551.73	200.47	3351.26	5.64
Urban Development	2544.99	22.62	2522.37	0.89
Social Security and Welfare	98.83	0.00	98.83	0.00
Other Social Services	1592.38	66.91	1525.47	4.20
ii) Economic Services#	210584.40	44762.77	165821.63	21.26
Agriculture and Allied Activities	24557.53	1824.57	22732.96	7.43
Co-operation	6874.66	333.43	6541.23	4.85
Rural Development	11017.75	87.23	10930.52	0.79
Special Area Programmes	1868.70	54.16	1814.54	2.90
Irrigation	84170.46	3135.86	81034.60	3.73
Power	58682.46	38383.00	20299.46	65.41
Industries	6043.48	380.19	5663.29	6.29
Transport	733.84	0.00	733.84	0.00
Civil Supplies	788.87	0.00	788.87	0.00
Other Economic Services	15846.67	564.33	15282.34	3.56
3. Surplus Sectors (Merit & Non-Merit)	**3644.97**	**16425.00**	**-12780.03**	**450.62**
i) Social Services@	0.00	0.00	0.00	0.00
ii) Economic Services#	3644.97	16425.00	-12780.03	450.62
4. Total Subsidies (1 + 2)	**489133.09**	**51817.35**	**437315.74**	**10.59**
5. Subsidies Net of Surplus (1+2+3)	**492778.06**	**68242.35**	**424535.71**	**13.85**

Source and Notes: As in Annexure 7.

Annexure 19
Government Subsidies in Tamil Nadu: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**194323.23**	**2691.51**	**191631.72**	**1.39**
i) Social Services	151454.18	1141.21	150312.97	0.75
Elementary Education	80914.09	3.15	80910.94	0.00
Public Health	8044.34	139.84	7904.50	1.74
Sewerage and Sanitation	2162.28	0.03	2162.25	0.00
Information and Publicity	1305.87	248.83	1057.04	19.05
Welfare of SC., ST., and OBCs.	21177.08	0.00	21177.08	0.00
Labour	2994.71	749.36	2245.35	25.02
Social Welfare	6262.53	0.00	6262.53	0.00
Nutrition	28593.28	0.00	28593.28	0.00
ii) Economic Services	42869.05	1550.30	41318.75	3.62
Soil & Water Conservation	3186.56	0.00	3186.56	0.00
Environmental Forestry and Wild Life	400.08	0.00	400.08	0.00
Agricultural Research & Education	4742.13	0.07	4742.06	0.00
Flood Control & Drainage	930.72	0.00	930.72	0.00
Roads & Bridges	33320.82	1550.15	31770.67	4.65
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	1.00	0.00	1.00	0.00
Other Scientific Research	286.87	0.08	286.79	0.03
Ecology and Environment	0.87	0.00	0.87	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**465462.51**	**23804.99**	**441657.52**	**5.11**
i) Social Services@	215772.70	5408.57	210364.13	2.51
Education, Sports, Art & Culture	95550.27	2478.64	93071.63	2.59
Medical & Family Welfare	47236.29	380.64	46855.65	0.81
Water Supply and Sanitation	39373.98	249.70	39124.28	0.63
Housing	6843.55	908.30	5935.25	13.27
Urban Development	10375.97	60.34	10315.63	0.58
Social Security and Welfare	12409.36	1153.84	11255.52	9.30
Other Social Services	3983.29	177.11	3806.18	4.45
ii) Economic Services#	249689.81	18396.42	231293.39	7.37
Agriculture and Allied Activities	101477.48	14309.99	87167.49	14.10
Co-operation	7518.23	1285.29	6232.94	17.10
Rural Development	13631.66	127.51	13504.15	0.94
Special Area Programmes	2486.25	76.14	2410.11	3.06
Irrigation	33965.50	585.76	33379.74	1.72
Power	13007.64	2.61	13005.03	0.02
Industries	29830.02	854.15	28975.87	2.86
Transport	2050.00	236.05	1813.95	11.51
Civil Supplies	40207.28	335.25	39872.03	0.83
Other Economic Services	5515.76	583.67	4932.09	10.58
3. Surplus Sectors (Merit & Non-Merit)	**434.99**	**5357.25**	**-4922.26**	**1231.59**
i) Social Services@	0.00	0.00	0.00	0.00
ii) Economic Services#	434.99	5357.25	-4922.26	1231.59
4. Total Subsidies (1 + 2)	**659785.74**	**26496.50**	**633289.24**	**4.02**
5. Subsidies Net of Surplus (1+2+3)	**660220.72**	**31853.75**	**628366.97**	**4.82**

Source and Notes: As in Annexure 7.

Annexure 20
Government Subsidies in Uttar Pradesh: 1993-94

(Rs. Lakh)

Services	Total Cost	Total Receipts*	Subsidies/ Surplus (-)	Recovery Rate (%)
1. Merit Goods/Services (Subsidy Sectors)	**252417.45**	**3414.75**	**249002.70**	**1.35**
i) Social Services	157193.55	1671.48	155522.07	1.06
Elementary Education	111725.05	110.25	111614.80	0.10
Public Health	15730.22	1116.05	14614.17	7.09
Sewerage and Sanitation	2136.97	0.00	2136.97	0.00
Information and Publicity	1593.08	23.16	1569.92	1.45
Welfare of SC., ST., and OBCs.	21295.43	0.00	21295.43	0.00
Labour	1181.70	422.02	759.68	35.71
Social Welfare	3531.10	0.00	3531.10	0.00
Nutrition	0.00	0.00	0.00	0.00
ii) Economic Services	95223.89	1743.27	93480.62	1.83
Soil & Water Conservation	6511.59	0.00	6511.59	0.00
Environmental Forestry and Wild Life	625.98	11.63	614.35	1.86
Agricultural Research & Education	5368.60	0.00	5368.60	0.00
Flood Control & Drainage	10385.02	0.00	10385.02	0.00
Roads & Bridges	71595.38	1731.64	69863.74	2.42
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	710.48	0.00	710.48	0.00
Ecology and Environment	0.00	0.00	0.00	0.00
Meteorology	26.85	0.00	26.85	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**707316.82**	**27577.37**	**679739.45**	**3.90**
i) Social Services@	258325.19	3882.53	254442.66	1.50
Education, Sports, Art & Culture	129119.62	2883.66	126235.96	2.23
Medical & Family Welfare	82876.86	273.38	82603.48	0.33
Water Supply and Sanitation	18505.94	7.98	18497.96	0.04
Housing	8583.57	417.50	8166.07	4.86
Urban Development	5501.42	5.43	5495.99	0.10
Social Security and Welfare	8495.61	444.97	8050.64	5.24
Other Social Services	5242.16	-150.39	5392.55	NC
ii) Economic Services#	448991.63	23694.84	425296.79	5.28
Agriculture and Allied Activities	52744.93	2118.54	50626.39	4.02
Co-operation	6111.52	598.27	5513.25	9.79
Rural Development	36892.42	578.75	36313.67	1.57
Special Area Programmes	45501.93	204.38	45297.55	0.45
Irrigation	183018.33	18314.13	164704.20	10.01
Power	80512.09	-4.55	80516.64	NC
Industries	24604.71	266.86	24337.85	1.08
Transport	1819.05	60.64	1758.41	3.33
Civil Supplies	686.29	541.41	144.88	78.89
Other Economic Services	17100.37	1016.41	16083.96	5.94
3. Surplus Sectors (Merit & Non-Merit)	**-75786.08**	**19072.25**	**-94858.33**	**NC**
i) Social Services@	411.62	673.25	-261.63	163.56
ii) Economic Services#	-76197.69	18399.00	-94596.69	NC
4. Total Subsidies (1 + 2)	**959734.27**	**30992.12**	**928742.15**	**3.23**
5. Subsidies Net of Surplus (1+2+3)	**883948.19**	**50064.37**	**833883.82**	**5.66**

Source and Notes: As in Annexure 7.

Annexure 21
Government Subsidies in West Bengal: 1993-94

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**116908.81**	**1431.18**	**115477.63**	**1.22**
i) Social Services	81877.51	442.61	81434.90	0.54
Elementary Education	56004.99	1.61	56003.38	0.00
Public Health	6398.07	5.31	6392.76	0.08
Sewerage and Sanitation	360.26	0.04	360.22	0.01
Information and Publicity	1523.88	363.27	1160.61	23.84
Welfare of SC., ST., and OBCs.	8734.24	0.00	8734.24	0.00
Labour	850.23	72.38	777.85	8.51
Social Welfare	7591.79	0.00	7591.79	0.00
Nutrition	414.04	0.00	414.04	0.00
ii) Economic Services	35031.30	988.57	34042.73	2.82
Soil & Water Conservation	987.70	0.00	987.70	0.00
Environmental Forestry and Wild Life	1155.59	49.83	1105.76	4.31
Agricultural Research & Education	2091.22	0.00	2091.22	0.00
Flood Control & Drainage	12391.34	0.00	12391.34	0.00
Roads & Bridges	18402.46	938.74	17463.72	5.10
Space Research	0.00	0.00	0.00	0.00
Oceanographic Research	0.00	0.00	0.00	0.00
Other Scientific Research	3.00	0.00	3.00	0.00
Ecology and Environment	0.00	0.00	0.00	0.00
Meteorology	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**360044.51**	**14938.22**	**345106.29**	**4.15**
i) Social Services@	197025.97	2543.19	194482.78	1.29
Education, Sports, Art & Culture	108660.89	438.64	108222.25	0.40
Medical & Family Welfare	46149.99	1498.39	44651.60	3.25
Water Supply and Sanitation	9300.48	77.10	9223.38	0.83
Housing	7106.73	451.27	6655.46	6.35
Urban Development	20429.84	24.43	20405.41	0.12
Social Security and Welfare	1681.32	0.00	1681.32	0.00
Other Social Services	3696.71	53.36	3643.35	1.44
ii) Economic Services#	163018.55	12395.03	150623.52	7.60
Agriculture and Allied Activities	40802.10	7577.49	33224.61	18.57
Co-operation	2825.36	182.92	2642.44	6.47
Rural Development	14439.95	21.06	14418.89	0.15
Special Area Programmes	6623.51	9.33	6614.18	0.14
Irrigation	24267.88	697.59	23570.29	2.87
Power	21097.81	318.43	20779.38	1.51
Industries	19608.78	3320.02	16288.76	16.93
Transport	17695.09	4.04	17691.05	0.02
Civil Supplies	192.95	0.06	192.89	0.03
Other Economic Services	15465.12	264.09	15201.03	1.71
3. Surplus Sectors (Merit & Non-Merit)	**341.33**	**1227.77**	**-886.44**	**359.70**
i) Social Services@	0.00	0.00	0.00	0.00
ii) Economic Services#	341.33	1227.77	-886.44	359.70
4. Total Subsidies (1 + 2)	**476953.32**	**16369.40**	**460583.92**	**3.43**
5. Subsidies Net of Surplus (1+2+3)	**477294.66**	**17597.17**	**459697.48**	**3.69**

Source and Notes: As in Annexure 7.

Annexure 22
Government Subsidies in Assam: 1994-95

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**108678.63**	**1183.64**	**107494.99**	**1.09**
i) Social Services	62789.77	116.61	62673.16	0.19
Elementary Education	52126.65	0.00	52126.65	0.00
Public Health	2861.92	0.00	2861.92	0.00
Sewerage and Sanitation	223.22	0.00	223.22	0.00
Information and Publicity	958.78	3.38	955.40	0.35
Welfare of SC., ST., and OBCs.	3136.00	0.00	3136.00	0.00
Labour	401.81	113.23	288.58	28.18
Social Welfare	2379.65	0.00	2379.65	0.00
Nutrition	701.74	0.00	701.74	0.00
ii) Economic Services	45888.87	1067.03	44821.84	2.33
Soil & Water Conservation	975.93	0.00	975.93	0.00
Environmental Forestry and Wild Life	840.75	40.28	800.47	4.79
Agricultural Research & Education	2107.87	0.00	2107.87	0.00
Flood Control & Drainage	15013.45	0.00	15013.45	0.00
Roads & Bridges	26710.00	1026.75	25683.25	3.84
Other Scientific Research	157.10	0.00	157.10	0.00
Ecology and Environment	83.76	0.00	83.76	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**252456.54**	**2872.31**	**249584.23**	**1.14**
i) Social Services@	145130.62	494.47	144636.15	0.34
Education, Sports, Art & Culture	36403.12	121.72	36281.40	0.33
Medical & Family Welfare	20670.36	277.77	20392.59	1.34
Water Supply and Sanitation	80178.01	16.39	80161.62	0.02
Housing	2968.41	70.17	2898.24	2.36
Urban Development	2015.90	2.10	2013.80	0.10
Social Security and Welfare	1752.67	6.25	1746.42	0.36
Other Social Services	1142.15	0.07	1142.08	0.01
ii) Economic Services#	107325.92	2377.84	104948.08	2.22
Agriculture and Allied Activities	23742.82	1916.49	21826.33	8.07
Co-operation	3427.77	9.55	3418.22	0.28
Rural Development	11502.93	14.70	11488.23	0.13
Special Area Programmes	4659.24	0.27	4658.97	0.01
Irrigation	22404.92	37.93	22366.99	0.17
Power	21649.59	2.70	21646.89	0.01
Industries	14530.08	133.84	14396.24	0.92
Transport	4121.74	197.17	3924.57	4.78
Civil Supplies	31.03	0.00	31.03	0.00
Other Economic Services	1255.82	65.19	1190.63	5.19
3. Surplus Sectors: Economic Services*	**163.32**	**26470.94**	**-26307.62**	**16208.21**
Coal and Lignite	0.00	54.23	-54.23	NC
Petrolium	14.04	25756.15	-25742.11	183412.35
Other Industries	149.28	660.56	-511.28	442.51
4. Total Subsidies (1 + 2)	**361135.17**	**4055.95**	**357079.22**	**1.12**
5. Subsidies Net of Surplus (1+2+3)	**361298.49**	**30526.89**	**330771.60**	**8.45**

Basic Data Source: *Finance Accounts, 1994-95.*

Notes: * Revenue Expenditure and Revenue Receipts are Net of Transfers.
@ Excludes Secretariat - Social Services and Relief from Natural Calamities
# Excludes Secretariat - Economic Services

Annexure 23
Government Subsidies in Himachal Pradesh: 1994-95

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**48430.92**	**402.60**	**48028.32**	**0.83**
i) Social Services	19563.57	252.54	19311.03	1.29
Elementary Education	14696.52	249.42	14447.10	1.70
Public Health	1581.59	0.00	1581.59	0.00
Sewerage and Sanitation	783.36	0.00	783.36	0.00
Information and Publicity	405.89	3.12	402.77	0.77
Welfare of SC., ST., and OBCs.	705.43	0.00	705.43	0.00
Labour	54.57	0.00	54.57	0.00
Social Welfare	931.87	0.00	931.87	0.00
Nutrition	404.34	0.00	404.34	0.00
ii) Economic Services	28867.35	150.06	28717.29	0.52
Soil & Water Conservation	1876.75	13.78	1862.97	0.73
Environmental Forestry and Wild Life	288.45	3.97	284.48	1.38
Agricultural Research & Education	1718.14	0.00	1718.14	0.00
Flood Control & Drainage	237.31	0.00	237.31	0.00
Roads & Bridges	24686.83	132.31	24554.52	0.54
Other Scientific Research	45.12	0.00	45.12	0.00
Ecology and Environment	14.75	0.00	14.75	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**95439.92**	**7922.09**	**87517.83**	**8.30**
i) Social Services@	47086.75	630.44	46456.31	1.34
Education, Sports, Art & Culture	14865.46	16.14	14849.32	0.11
Medical & Family Welfare	11402.61	125.43	11277.18	1.10
Water Supply and Sanitation	15725.05	327.32	15397.73	2.08
Housing	2374.02	76.85	2297.17	3.24
Urban Development	509.50	0.48	509.02	0.09
Social Security and Welfare	1554.20	64.05	1490.15	4.12
Other Social Services	655.90	20.17	635.73	3.08
ii) Economic Services#	48353.17	7291.65	41061.52	15.08
Agriculture and Allied Activities	18831.96	5373.23	13458.73	28.53
Co-operation	1303.94	940.06	363.88	72.09
Rural Development	3796.07	50.46	3745.61	1.33
Special Area Programmes	0.00	0.00	0.00	0.00
Irrigation	5991.57	10.88	5980.69	0.18
Power	11292.68	501.25	10791.43	4.44
Industries	2368.84	355.03	2013.81	14.99
Transport	3476.30	5.55	3470.75	0.16
Civil Supplies	105.05	0.00	105.05	0.00
Other Economic Services	1186.75	55.19	1131.56	4.65
3. Surplus Sectors: Economic Services^	**711.76**	**2828.06**	**-2116.30**	**397.33**
Special Area Programmes	0.00	0.68	-0.68	0.00
Industries	556.95	2156.54	-1599.59	387.21
Non Ferrous Mining and Metallurgical Industries	154.81	670.34	-516.03	433.33
4. Total Subsidies (1 + 2)	**143870.83**	**8324.69**	**135546.14**	**5.79**
5. Subsidies Net of Surplus (1+2+3)	**144582.59**	**11152.75**	**133429.84**	**7.71**

Source and Notes: As in Annexure 22.

Annexure 24
Government Subsidies in Jammu & Kashmir: 1994-95

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**49835.59**	**6.90**	**49828.69**	**0.01**
i) Social Services	26621.54	6.90	26614.64	0.03
Elementary Education	18375.31	5.62	18369.69	0.03
Public Health	1948.01	0.00	1948.01	0.00
Sewerage and Sanitation	1053.12	0.00	1053.12	0.00
Information and Publicity	486.11	1.28	484.83	0.26
Welfare of SC., ST., and OBCs.	1170.67	0.00	1170.67	0.00
Labour	307.51	0.00	307.51	0.00
Social Welfare	3142.80	0.00	3142.80	0.00
Nutrition	138.02	0.00	138.02	0.00
ii) Economic Services	23214.05	0.00	23214.05	0.00
Soil & Water Conservation	4136.09	0.00	4136.09	0.00
Environmental Forestry and Wild Life	840.59	0.00	840.59	0.00
Agricultural Research & Education	452.51	0.00	452.51	0.00
Flood Control & Drainage	3938.46	0.00	3938.46	0.00
Roads & Bridges	12855.70	0.00	12855.70	0.00
Other Scientific Research	0.00	0.00	0.00	0.00
Ecology and Environment	990.70	0.00	990.70	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**218873.82**	**9436.77**	**209437.05**	**4.31**
i) Social Services[@]	79474.73	321.81	79152.92	0.40
Education, Sports, Art & Culture	22887.03	39.06	22847.97	0.17
Medical & Family Welfare	18906.11	141.37	18764.74	0.75
Water Supply and Sanitation	25467.91	61.49	25406.42	0.24
Housing	3317.61	32.58	3285.03	0.98
Urban Development	8475.61	0.17	8475.44	0.00
Social Security and Welfare	126.77	38.74	88.03	30.56
Other Social Services	293.70	8.40	285.30	2.86
ii) Economic Services[#]	139399.09	9114.96	130284.13	6.54
Agriculture and Allied Activities	27776.31	4255.81	23520.50	15.32
Co-operation	1420.70	8.79	1411.91	0.62
Rural Development	6598.97	2.62	6596.35	0.04
Special Area Programmes	11249.50	72.98	11176.52	0.65
Irrigation	12087.58	116.89	11970.69	0.97
Power	64039.27	4539.53	59499.74	7.09
Industries	8163.52	88.38	8075.14	1.08
Transport	2121.55	0.00	2121.55	0.00
Civil Supplies	0.44	0.00	0.44	0.00
Other Economic Services	5941.25	29.96	5911.29	0.50
3. Surplus Sectors: Economic Services[$]	**1.14**	**1.53**	**-0.39**	**134.47**
Plantations	0.00	0.07	-0.07	0.00
Other Industries	1.14	1.46	-0.32	128.31
4. Total Subsidies (1 + 2)	**268709.40**	**9443.67**	**259265.73**	**3.51**
5. Subsidies Net of Surplus (1+2+3)	**268710.54**	**9445.20**	**259265.34**	**3.52**

Source and Notes: As in Annexure 22.

Annexure 25
Government Subsidies in Tripura: 1994-95

(Rs. Lakh)

Services	*Total Cost*	*Total Receipts**	*Subsidies/ Surplus (-)*	*Recovery Rate (%)*
1. Merit Goods/Services (Subsidy Sectors)	**20707.83**	**17.62**	**20690.21**	**0.09**
i) Social Services	13543.43	17.23	13526.20	0.13
Elementary Education	6596.79	14.79	6582.00	0.22
Public Health	371.30	0.00	371.30	0.00
Sewerage and Sanitation	78.62	0.00	78.62	0.00
Information and Publicity	262.04	2.44	259.60	0.93
Welfare of SC., ST., and OBCs.	4785.42	0.00	4785.42	0.00
Labour	104.84	0.00	104.84	0.00
Social Welfare	574.95	0.00	574,95	0.00
Nutrition	769.47	0.00	769.47	0.00
ii) Economic Services	7164.40	0.39	7164.01	0.01
Soil & Water Conservation	573.47	0.00	573.47	0.00
Environmental Forestry and Wild Life	0.00	0.00	0.00	0.00
Agricultural Research & Education	45.54	0.00	45.54	0.00
Flood Control & Drainage	671.66	0.00	671.66	0.00
Roads & Bridges	5838.57	0.00	5838.57	0.00
Other Scientific Research	35.15	0.39	34.76	1.11
Ecology and Environment	0.00	0.00	0.00	0.00
2. Non-Merit Goods/Services (Subsidy Sectors)	**48148.22**	**1727.56**	**46420.66**	**3.59**
i) Social Services@	18466.26	225.51	18240.75	1.22
Education, Sports, Art & Culture	9100.09	64.41	9035.68	0.71
Medical & Family Welfare	3699.70	38.05	3661.65	1.03
Water Supply and Sanitation	3613.86	15.29	3598.57	0.42
Housing	1100.31	28.16	1072.15	2.56
Urban Development	662.18	4.00	658.18	0.60
Social Security and Welfare	139.76	66.99	72.77	47.93
Other Social Services	150.37	8.61	141.76	5.73
ii) Economic Services#	29681.96	1502.05	28179.91	5.06
Agriculture and Allied Activities	6924.63	465.43	6459.20	6.72
Co-operation	583.79	7.66	576.13	1.31
Rural Development	1746.03	25.56	1720.47	1.46
Special Area Programmes	1552.28	0.00	1552.28	0.00
Irrigation	3641.38	0.61	3640.77	0.02
Power	9240.59	914.35	8326.24	9.89
Industries	1507.07	69.06	1438.01	4.58
Transport	300.90	0.00	300.90	0.00
Civil Supplies	71.83	2.49	69.34	3.47
Other Economic Services	4113.46	16.89	4096.57	0.41
3. Surplus Sectors: Economic Services*	**36.95**	**270.95**	**-234.00**	**733.29**
Environmental Forestry and Wild Life	30.35	90.77	-60.42	299.08
Industries	0.00	46.51	-46.51	0.00
Other Industries	6.60	133.67	-127.07	2025.30
4. Total Subsidies (1 + 2)	**68856.05**	**1745.18**	**67110.87**	**2.53**
5. Subsidies Net of Surplus (1+2+3)	**68893.00**	**2016.13**	**66876.87**	**2.93**

Source and Notes: As in Annexure 22.

Price : Rs. 285
US $ 15

Government Subsidies in India

Subsidies, both explicit and implicit in the unrecovered costs of public provision of a wide array of services, constitute a significant part of the government expenditures in India. The primary objective of this study is to provide a comprehensive estimate of budget-based government subsidies in India. These estimates are separately given for the Central government as well as the individual States, with a substantive degree of functional disaggregation. The methodology used defines both costs of and receipts from various public services in a comprehensive manner as opposed to the usually cited explicit subsidies only. It also reviews, *inter-alia*, the rationale for and the economic effects of subsidies. In the overall context of fiscal reforms, the need for as well as the significance and mechanics of subsidy reforms are also discussed.

This monograph is a revised version of the Report on Government Subsidies in India, on which a recent Discussion Paper on government subsidies issued by the Ministry of Finance, Government of India, was based. It is hoped that this monograph will provide the necessary details to supplement the Discussion Paper which drew widespread attention among policymakers, administrators, the media and researchers.

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