CHAPTER I

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1.1 Introduction:

The principal fiscal concern of India is its increasing fiscal imbalance. Both revenue deficit and fiscal deficit of the country have shown a steady increase. This prompts one to examine the issues relating to the burden arising out of the un-recovered costs and to examine the rationale for allowing any such costs to persist. Un-recovered costs include intended subsidies and unintended subsidies arising out of the cost of inefficiency in providing goods and services. The goal of any fiscal policy is to reduce revenue expenditure and the revenue gap. Hence, a reduction in the un-recovered cost or in the intended and unintended subsidies needs special attention.

Of late, the issue of subsidies and fertilizer subsidies in particular, has assumed considerable significance. This has happened essentially because of two reasons. Firstly the rising burden of revenue deficit had created fiscal imbalance in the central budget during the late 1980s. Neglect of simple economic principles in various sectors of the economy contributed their due and the growth process increasingly relied on unsustainable financial foundation. Secondly the serious crisis in the balance of payments and growing fiscal deficit, these two developments
along with our own concern pertaining to plausible impact of fertilizer subsidies on efficiency in resource use and environmental degradation in general has compelled Government of India to take far-reaching policy decisions on curtailing budgetary subsidies. Among the decisions aimed at minimizing government expenditure, decrease in fertilizer subsidies was important. Basically one of the reason for advocating a fertilizer subsidy is to counteract distortions in output prices. In many developing countries, two types of policies have been pursued-namely, the protectionist and the provisionalist. A country is said to be protectionist if it adopts measures, such as import tariffs, that holds domestic prices above international prices. On the other hand, a country is said to be provisionist if it adopts measures to hold domestic prices below the border prices, one abiding logic for maintaining provisionalist price policies for food commodities has been largely politico-economic. It is a part of an implicit social contract of every modern society to ensure food and other basic necessities to the people at affordable prices so that they suffer no provisions in basic human needs.

In India, food prices are held below border prices and input subsidies are given in order to compensate for the loss of output and income that farmers incur because of lower domestic prices. Moreover, the benefits of low input prices are shared by all farmers (including small and marginal) who use these inputs, while the benefits of high output-prices are shared by only a small proportion of farmers, who have marketable surplus. There is no evidence to suggest that only rich farmers
use modern inputs like fertilizers. No doubt, rich farmers would probably be using these inputs in larger volume and therefore, would be getting a larger part of subsidy. Since it is very difficult to operate or administer dual pricing for fertilizers and other inputs, then government is left with two options (a) provide inputs to all farmers at subsidized rates, but large farmers who need not to be subsidized may be taxed, and (b) remove all subsidies and increase output prices (as government did in the post-reform period) for minimizing the adverse impact of these increase in input prices on output. If government opts for the second alternative, the income of rich large farmers will go up due to higher output prices and since the cost of production of small and marginal farmers would go up they need to be compensated for the income loss.

In fact 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 expenditure, only a small part of the subsidies is made explicit in the budget documents. Since substantial subsidies remain implicit in the provision of social and economic services, they easily grow out of the control putting further pressure on the fiscal deficit. In addition to having become unduly large in volume, 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 raise to
concerns about their ramifications for economic inefficiency, income distribution and fiscal deficits

The macro economic costs are unjustified and subsidies are mirrored in persistent large fiscal deficits and consequently higher interest rates. In addition, unduly high levels of subsidization reflected in corresponding lower user charges which has produced serious micro economic distortions as well. Its prime manifestations include excessive demand for subsidized services, distortions in relative prices and misallocation of resources. These are discernible in the case of certain input based subsidies. Sizeable portion of fertilizer subsidy goes to the affluent farm group due to their high share of land. These problems are further compounded where the subsidy regime is plagued by leakages which ensure neither equity nor efficiency. In fact, subsidies can have a major impact in augmenting welfare of the society provided these are designed and administered efficiently to serve a clearly started set of objectives. However, subsidies can also be very costly, if they are poorly designed and inefficiently administered.

In this respect, almost every Finance Minister in their budgets has emphasized an austerity of expenditure, and still one finds additions to unproductive, non-developmental and non-essential expenditures which are increasing year after year. The revenue expenditure of the Central Government has exceeded the revenue receipts leading to more and more unproductive debt and a larger gap between payments and receipts. This is
in spite of a phenomenal rise over the year of tax receipts of various kinds. A secular up trend, in expenditure both in absolute terms and in proportion of GDP has slightly blowing down in its growth rate since 1991-92. It would be seen that revenue expenditure dominates and far exceeds the capital expenditure. In this context the 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 of food, fertilizer and exports, a substantial portion of subsidies remain hidden in the provision of social and economic services, by the central and state governments. While, in principle, it may be possible to recover the costs of providing these services from their user, overwhelming large portions of these costs remain unrecoverd. These implicit subsidies not only cause a considerable draft on the other wise strained fiscal resources, but may also fail on the anvil of equity and efficiency. More over the revenue expenditure increased from two-thirds of the total in late 1980s to over three-fourths of the total at present. This is not a healthy trend for a developing country like India. More over, there is a persistent deficit on revenue account, while ideally speaking there should have been a surplus for generating investment on capital account. Various factors have contributed to this rapid increase in revenue expenditure. One such most important factor is ever increasing subsidies particularly fertilizer subsidies, because it has been one of the hardest nuts to crack for any finance minister in India since the launching of economic reforms in July 1991.
1.2 Scope and Importance:

In India, as also elsewhere, subsidies now account for a significant part of government expenditure although, like that of an iceberg, only their tip may be visible. Ever since the present government’s proposal to reduce the subsidy burden led to increase in fertilizer prices by 40 percent and the subsequent dilution of the proposed measures, the issue has assumed added significance. Until recently, an important feature of the fertilizer subsidy in India was that the rate of subsidy on domestic production is higher than the subsidy on imported fertilizer. It is, therefore, argued that the industry is being supported through higher retention price than the import price, and for this reason a large part of the benefits from subsidy accrue either to the fertilizer industry through the mechanism of retention price or to the feed stock supplying agencies in public sector- through administered price of the feed stock.

One way of competing subsidies to the farmer is in terms of the difference between the cost of imported fertilizer at the farm-gate and the actual price paid by the farmer, roughly 48 percent of the fertilizer subsidy of the central government gone to the farmer. The rest of the budgeted fertilizer subsidy can be deemed to be going either to fertilizer industry or to the feed stock supplying government agencies. Subsidies amount to negative taxation. They can take diverse open and hidden forms such as cash assistance, tax concession, purchase preference, price differentials, and interest rate differentials, subsidized inputs and so on.
and also meeting the losses of public enterprises. Similarly, subsidies is the converse of an indirect tax like excise duty or sales tax. While the indirect tax raises the price of the taxed commodity as compared to others, a subsidy is expected to lower it. A subsidy, by implication, helps one section of the community by processing resources from the rest of the society.

Fertilizer subsidies are in use in several countries and they are recommended for counteracting failures of market mechanism in bringing about acceptable pattern of resource allocation and distribution of income and wealth in the rural sector. In developed countries, fertilizer subsidies are used mainly for helping selected farm community, but in poor under developed country like India, it is an important component of the agricultural policy. Fertilizer consumption in India picked up after the introduction of high yielding verities, particularly in irrigated agriculture. Recognizing the importance of fertilizers in increasing agricultural productivity, the government aimed not only at stabilizing the fertilizer prices but also keeping them low for the farmer. Until the oil shock of the seventies, fertilizer prices were low and lower than the sale price. The situation changed after the oil crises when the world prices soared high.

To meet the growing demand for fertilizers, it was necessary to promote fertilizer industry in the country which could be achieved only by allowing a fair price to the manufacturers (Retention Price). Subsidy component was introduced in 1977 to supply fertilizer to the farmer, at a
price lower than the retention price. However, the divergence between the two prices increased sharply during the eighties due to increase in cost of fertilizer production, while the sale price remained stagnant. On the one hand this led to a three fold growth in production capacity of the fertilizer industry during the eighties. On the other, this also implied increasing burden of subsidies on the central budget. The burden of fertilizer subsidy is considerable. A reduction in the use of fertilizers may have serious adverse impact on agricultural output. In one study it was estimated that a 30 percent hike in the real price of fertilizer would lead to 18 percent decline in fertilizer consumption, which is then would lead to a 5.4 percent fall in the food grain production. In a general equilibrium framework, it was worked out that fertilizer subsidy does increase the welfare of the poor, and withdrawal of fertilizer subsidy releases funds for making increment in irrigation and in other productive activities, which finally augments growth.

Fertilizer subsidies may also lead to perverse or unintended economic effects. They would result in inefficient resource allocation 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. The Generalized fertilizer subsidies waste resources; further they may have unintended distributional effects endowing greater benefits on the better-off people.
However, fertilizer subsidies, promote the use of new inputs or to transfer income in favor of farming community. They have certain implications on agro economy and central budget too. They entail a resource-cost for the economy and curtail budgetary maneuverability of the authorities. They tend to help the beneficiaries in hiding their own inefficiency. They create vested interests of all verities. Consequently, some of them tend to become open ended, i.e., it cannot be restricted within prescribed limits.

Another difficulty lies in the fact that quite often the benefit may not go to them for whom the subsidies is meant. The vested interests drain away the benefits to the disadvantage of the poor people, that way; subsidies do not serve the purpose of distributive justice. For this reason, some thinkers and Finance Ministers believe that subsidies, by there vary nature, should only be temporary. But in India fertilizer subsidies have been given since the beginning of planning. But it has led to the growth of revenue expenditure and its management. The pertinent question is not whether, continued importance of fertilizer as a source of plant nutrients is desirable but how to sustain further rapid growth in its use with minimum adverse impact on the environment and also on the fiscal resources of the government. Discussions which ignore this distinction often distract policy maker’s attention from many complexities and dilemmas in continuously raising agricultural production through land saving technological change.
1.3 Research Gap

There is no secret that a vast amount of literature and documentation exists on central budgetary subsidies. However, most of the studies discussed about allocation of Government Budgetary Subsidies in India. Secondly a considerable number of studies attribute to agricultural input subsidies and its impact on agricultural production. Besides, they cover very briefly on the issue of fertilizer subsidies and its impact on central budget. Thirdly another set of studies focused on to examine the issue of inter-crop, Inter-regional and Inter-class equity in fertilizer subsidy. In fact, it is rare to find studies which refer to the issue of implication of fertilizer subsidies on central budget in India. Also, there is no comprehensive study on it. They fail to identify problems surrounding the increasing burden on the central budget.

In this juncture, the present research tries to fill the gap. At present, at the national level, reduction of fertilizer subsidies has become a serious concern of the policy maker. Because every year, the fertilizer subsidies burden is increasing on the central budget and is a main cause for fiscal imbalance and for serious macro economic distortions in India. In this context the research study is very much needed to explore the problems surrounding it.
1.4 Objectives:

Keeping the various issues raised with regard to subsidies in general and fertilizer subsidies in particular, the following objectives have been formulated for the present study:

1. To review and examine the strategy followed by the Government of India with regard to subsidies in general and fertilizer subsidies in particular.
2. To analyze the impact of fertilizer subsidies on the fiscal imbalance in India and the problems connected around it.
3. To study the impact of decrease in fertilizer subsidies on fertilizer consumption and agricultural production.
4. To frame a timetable as to how subsidies can be sustained during the reform period and policies related to efficient utilization of fertilizer subsidies.

1.5 Hypotheses:

Based on the objectives of the study, the following hypotheses were tested.
1. Fertilizer subsidies are major components of non-developmental expenditure of the Government of India. It has increased leaps and bounds during the reform period. It has led to excess use of fertilizer and mis-allocation of resources in the agriculture sector.
2. Increase in fertilizer subsidies has led to land degradation on the one hand and increase in the fiscal deficit and budgetary imbalance on the other.
3. Fertilizer subsidies instead of bringing equity and efficiency, created inequity and inefficiency in the economy

1.6 Methodology:

Analytical method is used which rely heavily on the post facto analysis of data generally collected from records. Both primary and secondary data has been used in this analysis. Primary sources are original sources and first hand information collected from farmers through stratified random sampling. The secondary sources consist of readily available compendia and already compiled statistical statements and reports whose data has been used for the research study. It also includes unpublished records with the department of finance, Government of India. It may consist of a system of mathematical models of statistical techniques like averages, percentages, co-efficient, \( \chi^2 \) test etc., applicable to numerical data. It has concentrated on analyzing data in depth and examined the relationships from various angles by bringing in as many relevant variables as possible.

Estimation of the volume and composition of fertilizer subsidies under explicit and implicit categories is based on the data collected from secondary sources such as the Budget Documents; Finance Accounts, Reports, RBI Bulletins and Economic Survey etc. The study employs descriptive analysis pertaining to the growth and composition of fertilizer subsidies in India based on the data for the last twenty years.
To analyze the decrease in fertilizer subsidy and its impact on fertilizer consumption and agricultural productivity, primary data has been collected from three taluk each one from Mandya, Kolar and Bangalore Rural districts respectively. Due to time and resource constraints, the primary data has been collected from three taluks each one from Mandya, Kolar and Bangalore Rural district. The rationale in adopting three districts is as follows.

1.6.1 Selection of District

The major objective of our study has to select the districts on the basis of level and quality of irrigation facilities and to find out the effect of increase in fertilizer price on fertilizer consumption and on agricultural productivity. In other words, in the selection of the districts due weight age has been given with regard to consumption per hectare and also adequate importance to irrigational facilities and crops grown. For this purpose, data has been giving due weight age to rainfall, extent and sources of irrigation, cropping pattern and fertilizer use in all the districts for the period 1990-91 to 2004-05. After conducting a pilot study in the districts of Mandya, Kolar and Bangalore rural, it became clear that these three districts would be a better choice for our study than other districts for the following reasons.

Mandya district has been selected because the district has well established canal irrigation having through out the year. The economy of
he district is mainly agrarian and agriculture is the backbone of the district, nearly 84 percent of the population lives in rural area which is higher than the state average of 69 percent, nearly 57.1% of the net sown area is irrigated. The cropping pattern in Mandya district is diversified apart from paddy, Ragi and food crops; they are also growing pulses, groundnut, Jowar, sugarcane and vegetable. Under plantation and horticulture-coconut, mango and banana are extensively cultivated.

The selection of Bangalore rural district is justified on the ground that the district comes under semi irrigation, with medium fertilizer consumption. The cropping pattern in the district is diversified and the crops grown in the district are cereals like paddy, Ragi, Maize Millets and pulses, Tur, Horse gram and commercial crops include sugarcane and groundnut. This would help us to find out fertilizer consumption in the case of rain fed crops such as, Ragi, minor Millet, Pulses, tur and Groundnut etc.

The selection of Kolar district is justified on the ground that the district is drought-prone with lower per hectare consumption of fertilizer, added to that, the cropping pattern in this district is diversified. It reveals that 38 percent of gross cultivated area is under cereals, (Ragi 25%, Paddy 9% and others 4 %,) 8% under pulses, 23% under oil seeds and 1% each under onion and sugarcane. Mulberry cultivation is undertaken in 0.33 lakh hectares accounting for about 8% of the gross cultivated area. This
would help us to find out fertilizer consumption and productivity under the major crops like Ragi, Pulses, groundnut, etc.

1.6.2 Selection of Taluk

Maddur in Mandya district comes under completely irrigated taluk with about 80 percent of the total cultivated area is under assured source of Krishna Raja Sagar Project. The net sown area in the maddur taluk is 40,555 hectare and net irrigated area is around 30,328 (Gross cropped area 47,453). Added to that cropping pattern of maddur taluk, it has more diversified cropping pattern compared to other taluks in mandya districts. The main crops grown in this taluk are Paddy, Ragi, Jowar, pulses, groundnut and Maize

Channapatna taluk in Bangalore rural district is located in between Bangalore rural and Mandya district, but bulk of the land in this taluk is not having enough irrigation facilities. The cropping pattern is more diversified than other taluks in this district. Mainly they are growing paddy, Jowar, Ragi, Pulses, groundnut and Mulberry. Several farmers have complained about the problems of shortage of irrigation water in the taluk

Chikkkaballapur taluk in Kolar district is completely a dry taluk with most of the land depending on uncertain and erratic rainfall. The area cultivated, therefore fluctuate, according to the season and of rainfall. The
copping pattern of this taluk is well diversified. The main crops are, Paddy, Maize, Ragi, Oil seeds and pulses.

1.6.3 Selection of Households

The households for collecting primary data have been selected on the basis of stratified random sampling. In the first round, a census survey was conducted to obtain data on caste and land ownership of each household in all the taluks. Based on this information, the households are selected by giving due weight age to caste and landholding.

A well structured questionnaire was canvassed to all the selected households for collecting basic information about the households, specifically concentrated on changes in consumption of fertilizers, cropping pattern and productivity. It also sought to obtain qualitative information on the impact of decrease in fertilizer subsidy, and functioning of the agricultural extension system in the taluks.

1.7 Limitations

The study is on fertilizer subsidies and its implications on central budget-India. It has not included other indirect subsidies (food, credit, petroleum, irrigation, power subsidies) and its implications on the central budget.
The data has been collected for 20 years. For cross country study only few identified countries were selected where the fertilizer subsidies are intensively operated and having major share in government budget.

The data used in this study are drawn from Budget documents, and the data is not strictly comparable with other documents. The study is confined only to the central budgetary subsidies which are explicit in nature and not implicit or hidden subsidies.

The primary data has been collected only from the state of Karnataka even though the study is on at the national level. Due to time and financial constraints, the selection of study area are made on the basis of the use of fertilizer and irrigation facility.

The sugarcane is one of the identified crops in Maddur taluk and data has been collected for both Kharif and Rabi seasons. However, since sugarcane takes about 12 months to mature, it is difficulty to categorize this crop under Kharif and Rabi seasons. It is also difficulty to arrive at the productivity of this crop. To overcome this problem; sugarcane crop has been not taken in this study.

1.8 Chapters Summary:

Chapter I Introduces the subject and shows the scope, importance of the study, research gaps, objectives of study and hypothesis formed, the
methodology adopted and limitations come across in the study. Lastly it
brings up summary of all chapter analysis of the thesis.

Chapter II Discuss as the various concepts used in the study are
defined, and explained in detail, such as Retention Price Scheme followed
both domestically and at the international level. Further it explains the
Retention Price Scheme in relation to Fertilizer subsidies in India in
particular. Lastly it also throws light on the nature and the growth of
fertilizer subsidy and its impact on the central budget in terms of increase
in revenue and fiscal deficit.

Chapters III analyzes the implications of fertilizer subsidies over
agro-economy of selected countries of the world in relation to food
production. The study reveals that the fertilizer subsidies encouraged
wasteful and misdirected use of resources consequently, cheap fertilizers
are overused. Similarly it depress the prices of agricultural products of
world markets generally, and specifically in targeted export markets. They
reduce farm incomes in third world countries and inhibit badly needed
investments in agriculture. Then it also reviews importance and
composition of various Input subsidies in India. Further it also explains
about the share of fertilizer subsidy going to marginal and small farmers
in India. Further an attempt has also been made to show the percentage of
fertilizer subsidy going to various crops, and the ratio of fertilizer subsidy
going to irrigated and unirrigated areas. In that it explains how fertilizer
subsidy changed the cropping pattern and resulted in the spread of low
yielding farming and ranching into ecologically vulnerable tropical forests. It concludes that it is right time to review the current input subsidy policy framework and reform it so that it promotes growth, efficiency and equity as also financial and environmental sustainability.

Chapter IV reveals the burden of subsidy on the central budget in absolute term. There has been an increase in the fertilizer subsidy over a period of time. It was 0.8 percent in the year 1990-2000 and marginally decreased to 0.7 percent in the year 2005-06, in which case it has led to increase in the fiscal deficit and revenue deficit as a percentage of GDP. The increase in fiscal and revenue deficit has lead to inter generational inequity and increased non-developmental expenditure respectively. Both are economic growth retarding instruments. In view of this, recently in the parliament a bill has been passed to control growth in fiscal deficit and non-developmental expenditure in India. The Fiscal Responsibility and Budgetary Management Act indicate a check on the growth of subsidies in India at the earliest. If not it leads to overwhelming distortion on the growth of the Indian economy.

Chapter V explains the impact of decrease in fertilizer subsidy on the fertilizer consumption and on agricultural productivity in Karnataka during the period 2003-04 and 2004-05 for both Rabi and Kharif season. It is based on the primary data collected from Maddur (completely irrigated taluk), Channapattana (semi-irrigated taluk) and Chikkaballapur (dry taluk). The analysis of primary data shows that there is a change in
the consumption of fertilizer from one season to another season taking the size class of land. It is in the maddur taluk and in the channapattana taluk there has been an increase in the use of fertilizer compared to use in dry taluk. Further farmers used more fertilizer in the first stage of crop rather then in the later stages. The data also reveals that there is a significant increase in the use of fertilizer in irrigated area even though there has been an increases in fertilizer price due to change in fertilizer subsidy. Fertilizer consumption depends more on cropping pattern and on irrigational facilities rather then on subsidy. The marginal farmers used more fertilizer than big farmers due to their intensive cultivation; in this case irrigation is also another important factor which has influenced on the use of fertilizer. The disproportionate use of fertilizer has led to fall in the agricultural productivity.

Chapter VI lists the major findings and suggestions of the present study. Finally concludes with saying “unless fertilizer subsidies are targeted to needy, the burden fiscal and revenue deficit will increase in India, in turn it will bring inter generational inequity”.