Chapter I

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The study of the impact of government expenditure in input-output framework is of relatively recent origin compared to the study of its growth and determinants. The interest in study of this aspect of public expenditure was evoked mainly by three major factors: viz. (i) advent of Keynesianism and its prescriptions; (ii) enormous growth in the size of public expenditure in relation to national income in almost all countries; and (iii) increasing role of the government in the economic management of most of the developing economies. Out of these three factors, the second and the third have considerable importance in the context of developing countries.

The possibility of growth in these countries rests on quick and efficient building up of the economic and social infrastructure which, in turn, calls for heavy public investments and expenditures. Such heavy investment or expenditure programmes, if improperly planned in an environment of structural rigidities and sectoral bottlenecks, will have an adverse impact on the economy either by creating excess demand in certain critical sectors or by their adverse implications on certain cherished macro-economic objectives. It is precisely in this context, a comprehensive understanding of the impact of government
expenditure is necessary to provide insight into proper planning of the expenditure programmes. The input-output framework of analysis proves useful in this respect.

Studies on the impact of government expenditure in input-output framework are few, and each of them has one limitation or another. The limitations are on three counts. Firstly, none of the earlier studies is comprehensive in its coverage of government expenditure in as much as all of them have completely ignored a large part of the government expenditure viz., the expenditure on salary and wage disbursals. Secondly, the conventional impact multipliers estimated in input-output framework, are based on a set of standard assumptions about the mode of finance and excess capacities. But in reality, these two assumptions are untenable. The implications of the relaxation of these two assumptions on the values of impact multipliers have not been worked out by any of the earlier studies except, to some extent by one. The last limitation is with respect to the models used. Most of the studies have used 'open Leontief input-output model' which does not capture the induced income effects. In this respect, no Indian study so far has attempted to analyse the impact taking into account the induced income effects.

The present study makes a modest attempt to overcome all the above three limitations. It pertains to the Central
Government expenditure for the year 1971-72.

1.1 Objectives of the Study:

The present study addresses itself:

(i) to develop a semi-closed input-output model with endogeneous consumption, taking into account rural-urban differences in sectoral income generation and consumption patterns;

(ii) to develop a suitable methodology to estimate the sectoral consumption demand generated by the Central Government expenditure on salary disbursal, taking into account the structure of income distribution of the employees;

(iii) to estimate the impact of the government expenditure on commodities and salaries on output, employment, income, income distribution (rural vs. urban), tax feedback and import requirements;

(iv) to bring into sharp focus the implications of sectoral bottlenecks on the values of income multipliers;

(v) to study the implication of sectoral bottlenecks on the relative cost-price movements with the help of an allocation coefficient matrix;
(vi) to estimate the balanced budget matrix multipliers for each tax, so as to bring into focus the impact of various combinations of tax and expenditure policies, and

(vii) to draw broad policy implications from the results of the above analysis.

1.2 Chapter Scheme of the Present Study:

The following Chapter reviews the literature on public expenditure under three broad sections. The views of classical and Keynesian schools are included in the first section. Second section traces the development of literature relating to historical and determinant approaches and discusses various issues relating to this stream. The final section is addressed to the critical survey of literature relating to 'Impact studies' in input-output framework. It also identifies, briefly, the hitherto unexplored aspects.

The semi-closed input-output model used for the purpose of this study is elaborated in the first section of Chapter III. The key feature of this model is that while endogenizing consumption, it incorporates the sectoral differences in income propagation across rural and urban areas. Since the observed consumption pattern and savings behaviour is different across the areas,
the structure of consumption determined by the model becomes flexible and depends on the structure of exogenously determined government expenditure. The second section of this chapter discusses the methodological procedures used to estimate the parameters of the model.

The fourth chapter covers the data base of the present study. The procedures adopted for generation of sectoral composition of the expenditure on commodities are presented in the first section of this chapter. Second section deals with the estimation of sectoral commodity demand generated by expenditure on salary disbursals. Elaborate discussion on the statistical distributions used and delicate data adjustments made therein, are presented in this section. It also discusses the limitations of the methods used and the difficulties encountered while fitting the statistical distributions.

The next four chapters are devoted to empirical estimations and analysis, using the model and data developed in chapters three and four, and progressively relaxing various assumptions made. The fifth chapter begins with a discussion on the assumptions behind the estimates of the chapter. The consequences of the relaxation of some of the assumptions have been examined in a Hicks-Hansen IS-LM framework. The estimates of impact of the government
expenditure on commodities and salary disbursements on various macro aggregates are then presented. These include income, output, employment, imports, tax feedback and rural-urban income distribution.

The assumption of the non-existence of sectoral bottlenecks has been relaxed in the sixth chapter. The first section of this chapter studies the influence of various combinations of sectoral bottlenecks on income multipliers, when government adopts a policy of compensating variation in its expenditure composition in order to maintain price stability. Section two relaxes the assumption about the policy of compensating variation in expenditure composition. In the absence of such policy, it studies the effect of increase in government expenditure on cost-prices of different sectors with the help of allocation coefficient matrix.

All the above estimates of impact multipliers implicitly assume a compensatory monetary policy in order to keep the rate of interest constant. If the additional expenditures are tax financed, the values of impact multipliers will be different from those estimated in the fifth chapter. This aspect of simultaneous increase in tax rates and expenditures has been examined in the seventh chapter. It estimates the negative impact of a
hike in tax rates on national income and the balanced budget multipliers of various combinations of tax and expenditure policies. In this respect, the seventh chapter falls in the realm of pure fiscal policy.

The last chapter recapitulates all the results and brings out some broad generalisations as also policy implications of the study.