

CHAPTER 1

INTRODUCTION

1.1. INTRODUCTION

The classical economists like Adam Smith, J.S.Mill and David Ricardo et al. advocated minimum State interference in the economic affairs of a country as they strongly believed in the policy of laissez faire. They held the market mechanism supreme and considered it a better method through which various activities in the economy could be guided and allocation of resources could be decided in the best possible way. It was argued that each rational economic unit could decide for itself how its economic interests could be maximised. The operation of price-profit mechanism through the force of invisible hand made this possible. Hence, they recommended that the State should restrict its activities to "justice, police and arms." In other words, it was the duty of the State to protect the citizens against foreign aggression and internal disorders. These writers were further of the view that the government should restrict itself to the performance of only those activities in which people might not be interested due to low profitability, long gestation period or which they might not bother to provide due to huge investments and externalities like social overheads and infrastructure (roads, bridges, education etc.). Also, for market mechanism to function properly, the State should take active steps to maintain competition and free markets, should undertake management of currency and monetary systems, prevention of monopolies, removal of internal barriers to the movement of

goods and factors of production etc.

However, as the Industrial Revolution progressed, the scope of the State activity widened beyond what was advocated by the classical economists. This came in the form of different role assumed by the State, i.e. of 'Welfare State', which aimed at providing protection to domestic industries (Infant Industry Doctrine), labour welfare, social security measures, reduction of inequalities in income and wealth etc. It was during the period of Great Depression of 1930's and the Second World War that the limitations of the market mechanism were badly experienced by all countries and the need for government intervention was increasingly felt. It was also believed that the market mechanism left to itself may not bring high employment, price-level stability and socially desirable rate of economic growth. It was during this time, that Keynes came out with his famous thesis on pumping of investment by the State to combat widespread unemployment and bring economic stability. Since then, there was an increasing volume of government intervention in the economic activities resulting in the rise of public expenditure level. In other words, the government assumed the role of initiating, guiding and regulating the economic activities.

In spite of the fact that public expenditure has increased in magnitude during the last two centuries or so in all types of countries, irrespective of the economic philosophy followed, it was not until the late 1950's that the growth and pattern of expenditure were studied on an increasing scale. These studies have to some extent redressed the imbalance in the public finance literature, which was earlier dominated by taxation themes. The

growing importance of the government expenditure on the economic activities of various countries can be readily seen from the data presented below.

1.2. PATTERN OF GOVERNMENT EXPENDITURE IN SELECTED DEVELOPED AND DEVELOPING COUNTRIES

Table 1.1. gives the data on government expenditure, as a percentage of GDP for OECD (Organization for Economic Cooperation and Development) countries at current prices for the period 1960-61 to 1980-81. Here, three year simple averages (i.e. for the years 1960-61, 1961-62 and 1962-63) of the share of government expenditure in GDP are calculated for the beginning of the period. Similarly, the percentage share of government expenditure in GDP is calculated for the end of the period (i.e. on the basis of the data for the years 1978-79, 1979-80, and 1980-81). Here, government expenditure refers to all levels of government i.e. federal, state and local. From Table 1.1., it can be verified that the level of public expenditure in relation to GDP shows considerable diversity across OECD countries. The proportion of government expenditure in GDP was less than 25% for Australia, Greece, Japan, Spain and Switzerland. Denmark and Sweden showed the most rapid increase in the ratio of expenditure to GDP. For Denmark, it increased from 26.4% to 53.4% and, for Sweden, it increased from 31.5% to 60.4% at the beginning and at the end of the period, respectively. This rise was almost double of what was at the beginning of the period.

Table 1.2 gives the data on government expenditure as a proportion of GDP for developing countries at 1960-61 prices for the period 1957-58 to 1976-77. The beginning of the period refers

TABLE 1.1

GOVERNMENT EXPENDITURE FOR OECD (ORGANISATION FOR ECONOMIC COOPERATION & DEVELOPMENT) COUNTRIES AS PERCENTAGE OF GROSS DOMESTIC PRODUCT AT CURRENT PRICES (1960-61 to 1980-81)

Government Expenditure as Percentage of Gross Domestic Product			

S.NO.	COUNTRY	Beginning of Period	End of Period
	(1)	(2)	(3)

1	Australia	23.1	33.4
2	Austria	32.7	49.2
3	Belgium	30.2	49.7
4	Canada	29.6	40.1
5	Denmark	26.4	53.4
6	Finland	26.7	38.7
7	France	35.8	45.6
8	Germany	34.0	47.9
9	Greece	17.7	30.0
10	Ireland	29.1	50.0
11	Italy	30.0	45.9
12	Japan	17.8	31.9
13	Luxembourg	31.0	53.0
14	Norway	30.4	50.7
15	Spain	17.0	30.8
16	Sweden	31.5	60.4
17	Switzerland	17.9	29.8
18	United Kingdom	33.2	44.0
19	United States	28.5	33.5

Source: Peter Saunders, "Explaining International Differences in Public Expenditure : An Empirical Study," Public Finance / Finances Publiques, Vol.43, No.2 (1988).

Notes:

(1) Values listed under the column marked "Beginning of Period" refer to the simple average of the country's Government Expenditure as percentage of its Gross Domestic Product for the years 1960-61, 1961-62 and 1962-63.

(2) Values listed under the column marked "End of Period" refer to the simple average of the country's Government Expenditure as percentage of its Gross Domestic Product for the years 1978-79, 1979-80 and 1980-81.

to three year simple averages (i.e., for the years 1957-58, 1958-59 and 1959-60) of the share of government expenditure in GDP. Similarly, the percentage share of government expenditure in GDP are calculated for the end of the period (i.e., on the basis of the data for the year 1974-75, 1975-76 and 1976-77) .

Table 1.2. illustrates the fact that, as far as the developing countries are concerned, the proportion of government expenditure in GDP never went beyond 21.2% (for Taiwan) at the beginning of the period, except in case of Sri Lanka (27.5%). The group of countries with growing public sectors (Nos.1-13 in Table 1.2.) includes both, countries with relatively large as well as small levels of government involvement at the beginning of the study period. Cyprus (17.7%), Singapore (16.7%) and Chile (16.0%) belong to the former category with share of expenditure in GDP increasing by 9, 4 and 8 percentage points respectively. Pakistan(7.0%), Columbia(7.6%) and Honduras(8.7%) belong to the latter category, with the share of government expenditure in GDP increasing by 7, 1 and 4 percentage points, respectively.

The cluster of countries with declining public sectors (Nos.14-20 in Table 1.2.) also includes countries with relatively large government involvement such as Sri Lanka (27.5%), Taiwan(21.2%), Dominican Republic(18.3%) and South Korea(17.5%). The share of government expenditure in GDP in these countries declined by 1, 6, 1 and 0.5 percentage points, respectively. The countries with relatively small government participation include countries such as Paraguay (10.6%), Brazil (10.4%) and Argentina (10.2%). The share of government expenditure in GDP for these

TABLE 1.2

**GOVERNMENT EXPENDITURE FOR DEVELOPING COUNTRIES AS
PERCENTAGE OF GROSS DOMESTIC PRODUCT AT CONSTANT 1960-61 PRICES
(1957-58 to 1975-76)**

Government Expenditure as Percentage of Gross Domestic Product			

S.NO.	COUNTRY	Beginning of Period	End of Period

	(1)	(2)	(3)

Growing Public Sectors:			
1	Pakistan	7.0	13.8
2	Honduras	8.7	12.7
3	Chile	16.0	23.8
4	Cyprus	17.7	26.7
5	Turkey	13.2	19.8
6	Bolivia	10.4	14.2
7	Panama	15.8	21.7
8	Peru	13.8	17.8
9	Philippines	12.8	16.5
10	Thailand	13.0	16.3
11	Singapore	16.7	20.5
12	Columbia	7.6	8.4
13	Guatemala	9.6	10.2
 Declining Public Sectors:			
14	Brazil	10.4	7.6
15	Taiwan	21.2	15.7
16	Paraguay	10.6	9.5
17	Argentina	10.2	9.3
18	Dominican Republic	18.3	17.3
19	Sri Lanka	27.5	26.5
20	South Korea	17.5	17.0

Source: Joseph E. Pluta, "Real Public Sector Growth and Decline in Developing Countries," Public Finance / Finances Publiques, Vol.36, No.3 (1981).

Notes:

(1) Values listed under the column marked "Beginning of Period" refer to the simple average of the country's Government Expenditure as percentage of its Gross Domestic Product for the years 1957-58, 1958-59 and 1959-60.

(2) Values listed under the column marked "End of Period" refer to the simple average of the country's Government Expenditure as percentage of its Gross Domestic Product for the years 1973-74, 1974-75 and 1975-76.

countries declined by 1, 3 and 1 percentage points, respectively. Hence, from the analysis of Tables 1.1. and 1.2., it can be said that the public sector growth seems to be totally unrelated to the initial level of public sector. It may be mentioned here that India belongs to the group of countries with growing public sector as is seen in the following section.

1.3. PATTERN OF GOVERNMENT EXPENDITURE IN INDIA

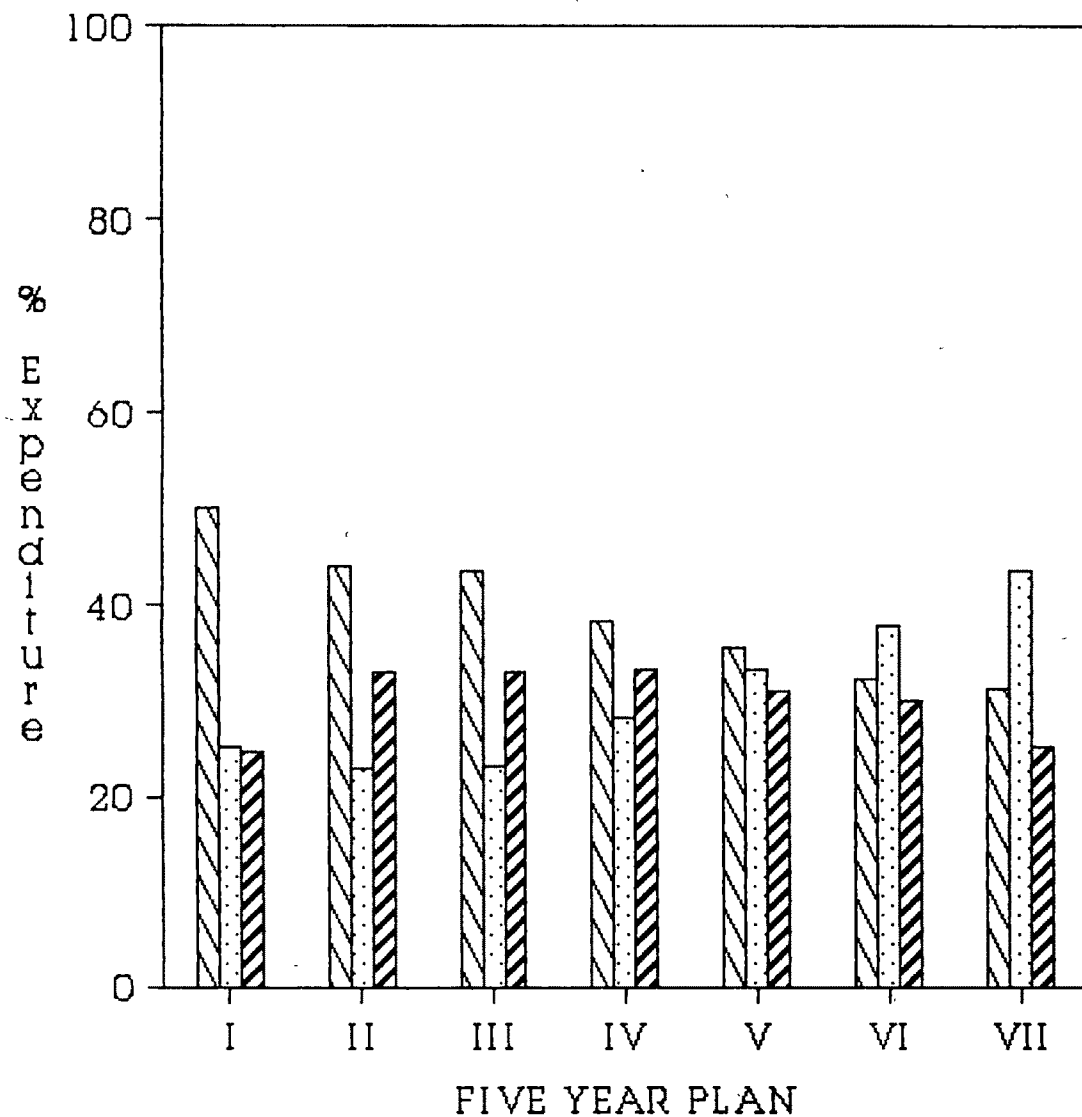
After India became independent and adopted planning as an instrument for accelerating economic growth and development and attainment of broad objectives like growth of national income, price stability, full employment, social justice, industrialisation, self-reliance etc. there has been a phenomenal growth of government expenditure and national income in India.

The government expenditure at current prices has grown 188 times from Rs.5035 million in 1950-51 to Rs.950494 million in 1989-90, while the national income has registered a 47 fold increase from Rs.93250 million to Rs.4401500 million during the same period. A part of this increase can be attributed to inflation. The government expenditure as a proportion of national income increased from 5.4% in 1950-51 to 21.6% in 1989-90, thereby indicating a growing importance of the government in the economic management of a developing country like India. The rate of growth of government expenditure has been faster than that of national income. The above observations have been explained in greater detail in the succeeding chapters.

The composition of expenditure has also undergone certain changes over the years. Chart 1.1. depicts the percentage

CHART 1.1

PERCENTAGE DISTRIBUTION OF CENTRAL GOVERNMENT EXPENDITURE OF INDIA BY ECONOMIC CATEGORIES DURING VARIOUS FIVE YEAR PLANS AT CURRENT PRICES (1951-52 to 1989-90)



Note:



FINAL OUTLAYS



TRANSFER PAYMENTS



FINANCIAL INVESTMENT AND LOANS

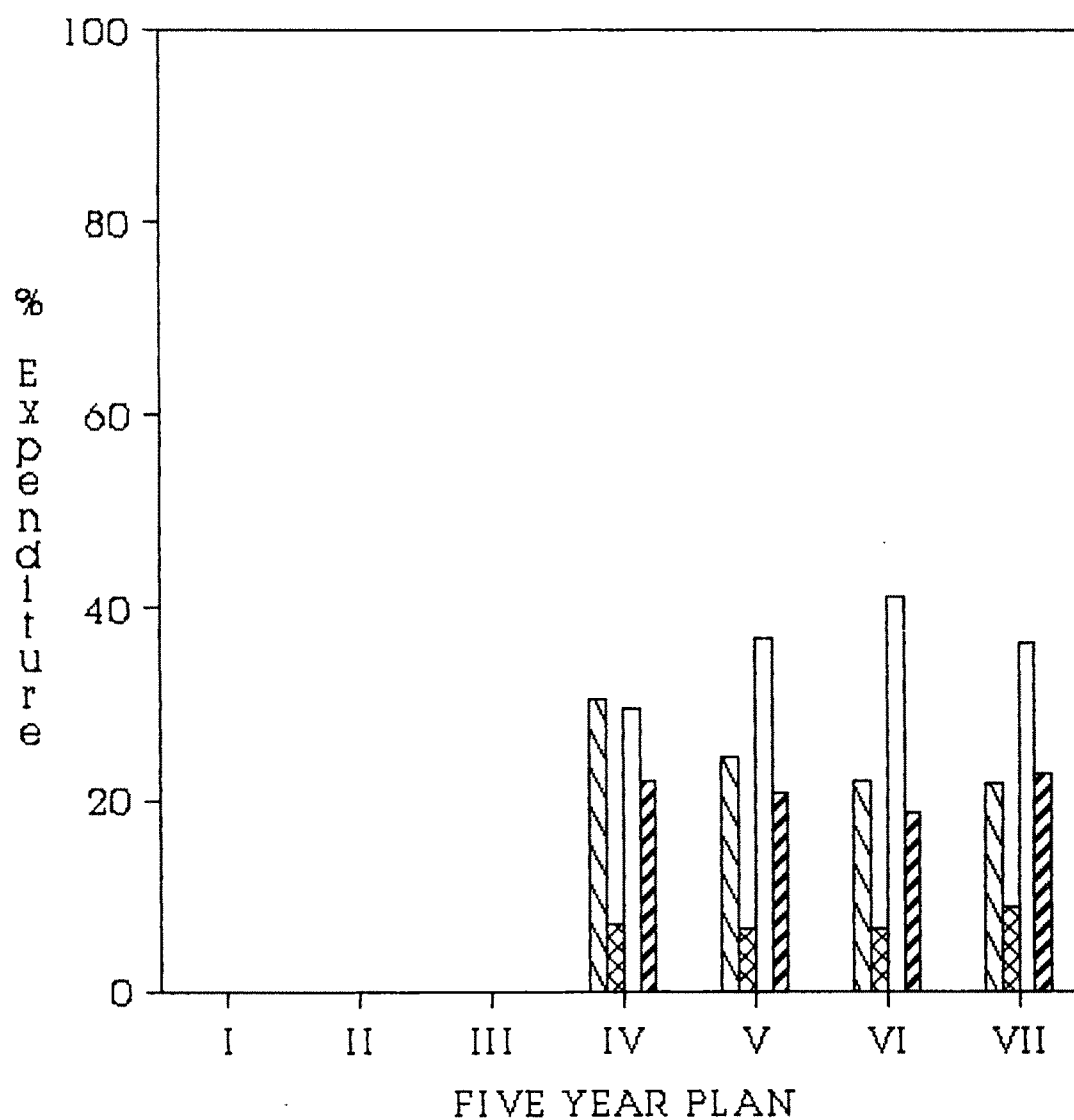
Source: Based on Table 4.1

distribution of the government expenditure by economic categories at current prices during various Five Year Plans in the form of a bar chart. As far as the economic categories of the government expenditure are concerned, the share of the final outlays showed a declining trend through various plans. The consumption expenditure on wages & salaries and on purchase of commodities & services forms the major portion of the final outlays. Hence, a declining trend in the final outlays is indicative of a shift from labour intensive techniques of production to capital intensive ones (with a resulting reduction in the wage-bill). Though the proportion of gross capital formation in the total government expenditure has declined, it does not indicate a reduction in the amount of capital formation undertaken by the Centre. This is because large amounts of disbursements are made by the Centre to States & Union Territories as well as local authorities towards building up of physical assets, thereby promoting capital formation indirectly. Another noteworthy feature is the increasing share of transfer payments, which indicates a growing concern for welfare through pensions and subsidies -- especially the consumer subsidies such as on food, edible oils and controlled cloth. It also indicates an increase in grants to public sector research and educational institutions and also block grants & loans to States & Union Territories for undertaking various developmental activities.

The functional categories of the government expenditure also show some fluctuations, as can be seen from Chart 1.2. which gives the percentage share of Central Government expenditure by functional categories at current prices during various Five

CHART 1.2

PERCENTAGE DISTRIBUTION OF CENTRAL GOVERNMENT EXPENDITURE OF INDIA BY FUNCTIONAL CATEGORIES DURING VARIOUS FIVE YEAR PLANS AT CURRENT PRICES (1969-70 to 1989-90)



Note:



GENERAL SERVICES



SOCIAL SERVICES



ECONOMIC SERVICES



UNALLOCABLE SERVICES

Source: Based on Table 4.7

Year Plans. The proportion of social services and the Unallocable services remained more or less the same. The proportion of general services slightly declined. The economic services showed most drastic changes amongst various functional categories. From Vth Five Year Plan onwards, it constituted the major share of the total Central Government expenditure. This indicates the importance given by the government towards development of infrastructure through transport & communication network and strengthening of the economic base of the country through larger investments in sectors such as industry and agriculture.

From the discussion in Sections 1.2 and 1.3, it is evident that the State now shoulders greater responsibility towards fulfillment of social and economic objectives. This has been true in case of India as can be seen from the preceding brief discussion on growth and composition of government expenditure in India. As against the earlier conception, that the level and structure of public expenditure were politically determined and hence beyond the economists' jurisdiction of study, many studies have been undertaken to study the growth pattern of public expenditure, its effect on redistribution of income and welfare etc. Such attempts, focussing on different aspects of public expenditure, have also been made in India as discussed in the following section.

1.4. PRIOR STUDIES RELATING TO GOVERNMENT EXPENDITURE IN INDIA

Numerous studies specific to India have been carried out dealing with the following aspects of government expenditure:

(1) Studies relating to growth and structure of government expenditure:

Studies on the above subject have been carried out by Gulati (1961), Tripathi (1964), Gopal (1964), Mukherjee (1965), Madalgi (1966) Kher (1967), Lakdawala (1967), Venkatraman (1968), Bhatt (1969), Bhargava (1969), Patnaik (1970), Lal (1976), Thimmaiah (1977) Rajendra (1978), Rajachandrasekhar (1981), Reddy (1970, 1972, 1976, 1984), Singh (1983), Rede (1993) etc. These studies concern one or more of the following aspects on government expenditure namely, size and growth of government expenditure, changes in the composition of expenditure, Centre-State financial relations etc. and pertain to a relatively shorter period.

(2) Studies focusing on the regional disparities in government expenditure:

This aspect of government expenditure in India has been investigated by Ahuja (1968), Chelliah (1979) and Rao (1983). These studies have mainly tried to analyse the factors responsible for regional inequalities in the level of government expenditure and its impact on the development of the region.

(3) Studies considering the relation between government expenditure and economic development:

Gupta (1967,68), Mohammad (1972), Dutt (1984), Tripathi and Tripathi (1985), Kumar (1986), Balbir Singh and Balvir Sahni (1983, 1984) and Rao and Sarma (1992) have all investigated this inter-relationship. These authors have tried to

emphasize the fact that the behavioural pattern of government expenditure influences the process of economic development. Some of the above studies have also tried to determine the direction of causality between government expenditure and economic growth.

(4) Studies investigating the economic impact of expenditure:

The studies by Paithankar (1973) and Sarma and Tulsidhar (1980, 1984) have brought forth the effect of government expenditure on the output of numerous sectors of the economy adopting the input-output framework.

(5) Studies evaluating the distributional impact of government expenditure:

Gandhi (1972), Ahuja (1978), Gupta (1977, 1980) and Dholakia (1990) have investigated how far the various government expenditure programmes have been successful in achieving the objective of redistribution of income and wealth, and promotion of equality through greater provision of free or subsidised public services.

(6) Studies concerning the determinants of government expenditure:

Dar (1964) and Misra (1982) have considered the government expenditure as being dependent on growth of population, gross national product, urbanization etc. However, a systematic econometric testing of the above mentioned factors has not been dealt with.

The present study, while adopting an economic and functional analysis of the Central Government expenditure, also investigates

it by making use of the economic-cum-functional classification, which has not been done earlier in any of the studies on public expenditure in India. Also, the empirical testing of the determinants of government expenditure has not been attempted earlier. It is against this background and aim to fill up the voids in the public expenditure analysis in India that the present study is undertaken.

1.5.NEED FOR THE PRESENT STUDY

The public expenditure increase in the developing economies has been largely on account of heavy cost of defence and national security against foreign aggression, rapid growth of population and concentration of people in the urban areas, increased expenditure on industrial and agricultural development of the country, growing concern of the State regarding welfare of the people, etc. The government also spends on economic social overheads which act as catalyst to the productive process in the economy. The building up of roads, railways and means of communication helps to boost production, trade and commerce. The government also invests on human resources development by providing education, medical and public health and other social services. Public expenditure on the development of agriculture and industry through assistance in research in these areas, investment in irrigation works, multipurpose river valley projects helps to increase industrial and agricultural production. The State also spends on various transfer payments like subsidies pensions etc. for promoting welfare, in the country. Thus, the government plays a vital role in the

economic life of a developing country and it has come to acquire an important task of initiating and furthering the process of economic growth and development, and the achievement of the goals of a 'Welfare State'.

India being a developing country, the government is assigned a significant role in achieving the broad objectives like growth of national income, price stability, full employment, welfare etc. It can then be said that the objectives largely determine the volume and pattern of expenditure. Hence, great significance is attached to the study of growth and pattern of government expenditure in India. As already brought out in Section 1.3, that India has experienced a rapid increase in government expenditure, along with some compositional changes. The growing significance government expenditure has attracted our attention and induced us to take up the present study.

1.6 OBJECTIVES AND OUTSTANDING FEATURES OF THE STUDY

This study differs in its objectives from the earlier studies in several significant respects which are brought out below :

1. To study the size and trend of government expenditure and national income in India and to ascertain the relationship between government expenditure and aggregate national income over time:

While the increased expenditure indicates the growing importance of the government in the economic activities of the country, the increase in GNP is an indicator of the level of development of a country. In order to calculate the growth rate of government expenditure and national income, an exponential fit

of the form $y = ae^{gt}$ has been used, where y is the government expenditure or GNP, a is the intercept, g is the growth rate to be calculated and t is the time period. The above mentioned form has been used since this turned to be the best fit to the data on expenditure and GNP, as is explained in Chapter 3. The growth pattern of expenditure and GNP has also been calculated during various Five Year Plans and four decades of planning to find out the periods of rapid growth of the two variables. The two traditional hypotheses concerning the growth of expenditure, the Wagner's 'law of increasing State activity' and Wiseman-Peacock 'displacement effect' hypothesis, have been empirically tested. Also, the relation of cause and effect or the causality pattern between government expenditure and national income and that between various components of expenditure and national income has been studied using the Granger-causality framework. This will be useful in getting an idea about how far the expenditure programmes have been successful in bringing about a growth in national income. Alternatively, it can help us understand how with economic growth the expenditure pattern has undergone a change.

2. To analyse the structure of government expenditure:

An investigation of public expenditure over the 40 year period of 1950-51 to 1989-90 can give us an idea if the size, trend and composition has remained same or changed. Is it in accordance with the national objectives? To view such changes the government expenditure growth and trend in aggregate has been analysed, as well as at the disaggregate level to get a better idea of the public expenditure policy. The analysis at the

disaggregate level can help investigation of resources amongst competing demand. For this purpose, the structure of the government expenditure has been analysed using the economic, functional as well as economic-cum-functional classification. An advantage of such a classification is that it helps to assess⁵ the economic significance of the various functional categories. For instance, the expenditure on functional category "defence" under the economic category "consumption expenditure" refers to the part of consumption expenditure allocated to defence and such data has been used to ascertain the importance attached by the government to each functional category.

3. To ascertain the factors responsible for the growth of government expenditure:

The statistical technique of least-square multiple regression has been used. The factors identified are the per-capita income, tax revenue, welfare-oriented expenditure and urbanisation. The analysis of public expenditure remains incomplete without a determinant of public expenditure which brings out the factors responsible for growth of expenditure. Such an investigation can throw some light on the nature of difficulties inherent in formulating any long term policy of restraining public expenditure, particularly where those factors responsible for the past increases in expenditure may continue to exert upward pressures. The empirical testing of the factors responsible for growth of expenditure has been a neglected area in the expenditure related studies in India. Hence, this aspect has been considered in the present study.

1.7. CONCEPTUAL AND METHODOLOGICAL ISSUES

The basic conceptual problems which confronts a study of this nature are the definitions of government expenditure and the choice of the national income concept. For the present study, the definition of government expenditure is adopted from that given in "An Economic-cum-Functional Classification of Central Government Budget," Ministry of Finance, Government of India, which includes transfer payments. Since the government purchases have an indirect tax content, the indirect taxes should be reflected in the measure of the total product. Hence, the concept of national income used in the present work is the Gross National Product (GNP) at market prices.

In order to nullify the effect of inflation (or price rise) on the government expenditure and to make a comparative analysis possible between the government expenditure series at current and constant prices, the series of Central Government expenditure at current prices has to be converted into real terms (or constant prices). This has been achieved by disaggregating the total expenditure into the following economic categories:

1. Expenditure on Wages & Salaries
2. Expenditure on Goods & Services
3. Gross Capital Formation
4. Current Transfers
5. Capital Transfers
6. Financial Investments and Loans to the Rest of the Economy

The expenditure on wages & salaries has been deflated using the implicit deflator for compensation of employees of the government administration. The expenditure on goods & services

is deflated by using the implicit deflator for the purchase of goods and services by the Central Government. For converting the series on gross capital formation into constant prices, the implicit deflator for gross capital formation in the public sector has been used. The current transfers as well as the financial investments and loans to the rest of the economy have been deflated by the implicit Gross Domestic Product (GDP) deflator for want of a better alternative, as these two categories of expenditure include heads of expenditure which are diverse in nature. The capital transfers have been deflated in the same way as the gross capital formation. Since the various series used for calculating implicit deflators for different components of government expenditure were readily available for 1970-71, the said year has been used as a base year for a comparative analysis at current and constant prices. The national income series is deflated by using the implicit Gross Domestic Product (GDP) deflator. The methodology of deflation procedure is explained in detail in Appendix IIA.

It may be pointed out here that, the government expenditure and national income figures can not be satisfactorily adjusted for the effect of the price changes over very long periods which are marked by noteworthy changes in the economic structure, which has occurred in case of India. Also, the more closely the set of commodities included in the price index chosen tallies with the set in the series at current prices, the better is the accuracy of the deflation procedure. Hence, any of the deflators employed may at best be a compromises and one cannot assert having used the best of the deflators.

1.8. COVERAGE AND SOURCES OF DATA

The present study constitutes a detailed analysis of the Central Government expenditure only for the period 1950-51 to 1989-90 which encompasses seven Five Year Plans. This forty-year coverage makes this the most comprehensive study to date pertaining to India, which adopts both the economic and the functional classification of expenditure.

The data used in the present study has been taken from the following sources:

(a) Annual issues of "An Economic-cum-Functional Classification of Central Government Budget," Ministry of Finance, Government of India.

(b) INDIA DATABASE "The Economy," Vol. I, H.L. Chandhok and The Policy Group (Annual Time Series Data), Living Media Pvt. Ltd., New Delhi (1990).

(c) "Basic Statistics Relating to Indian Economy," Vol.I (All India), Centre for Monitoring Indian Economy, Bombay (various annual issues).

(d) "New Series on National Accounts Statistics," (with 1980-81 as the base year, June 1989), Central Statistical Organization and various annual issues of "National Accounts Statistics."

(e) "Central Government Expenditure - Growth, Structure and Impact (1950-51 to 1977-78)," by K.N.Reddy, J.V.M.Sarma and Narain Sinha, National Institute of Public Finance and Policy, New Delhi.

1.9. CHAPTER SCHEME OF THE STUDY

The following chapter deals with the concepts and methodology used in the study. It discusses in detail which concepts of government expenditure and national income have been used and the underlying reasons for it. It also contains a detailed discussion on the deflation procedure of the government expenditure and national income series.

Chapter III studies the growth of Central Government expenditure and national income for the period 1950-51 to 1989-90. The results pertaining to testing of the two traditional hypotheses, Wagner's Law of "increasing state activity" and Wiseman-Peacock "displacement hypothesis", have also been presented and discussed in detail and empirically tested in this chapter.

The change in composition of the Central Government expenditure is analyzed in Chapter IV by adopting economic, functional and economic-cum-functional classifications of expenditure.

Chapter V brings out the determinants of government expenditure. The most dominant factors influencing government expenditure in India have been ascertained using a least-squares multiple regression model and their significance discussed.

Chapter VI, which focuses on the causality between public expenditure and national income, also includes an investigation of causality between various components of expenditure (by functional and economic categories) and national income.

The final chapter discusses in detail all the prominent findings of the study.

1.10. MAIN FINDINGS OF THE STUDY

The significant findings of the present study are enlisted below:

(a) Both the Central Government expenditure and the national income have grown tremendously over the forty-year period from 1950-51 to 1989-90. However, the growth in real terms was far less than that in the nominal terms, implying the existence of the inflationary pressures in the country during the study period .

(b) The rate of growth of expenditure has been faster than that of the national income during the period of this study and it thus confirms the Wagner's law.

(c) The Wiseman-Peacock "displacement hypothesis" could not be substantiated for India as the growth curve of government expenditure is a smooth one and does not exhibit a step-like pattern.

(d) As far as the structure of government expenditure is concerned, the share of the final outlays in the total government expenditure was found to steadily decline while the share of the transfer payments continuously increased during the Five Year Plans.

(e) The proportion of general services in the total government expenditure during the Five Year Plans declined (not continuously), whereas that of other services remained more or less the same.

(f) Per capita income, expenditure on non-traditional functions and tax revenue have emerged as the major determinants of government expenditure.

(g) The causality testing procedure between government expenditure and national income (Gross National Product) shows there exists a bi-directional causality and hence they should be treated as jointly dependent variables, i.e., both variables cause each other.

Note: In the analysis that follows henceforth, the term government expenditure refers to Central Government expenditure and national income indicates Gross National Product at market prices.