

Chapter 1

Introduction

1.1 Public Expenditure as Economics

In economics, the word 'expenditure' signifies not exactly the coins and currency notes of a country but rather the resources of an individual or a group of persons denominated in terms of money. On the other hand, the word 'public' means a heterogeneous crowd of people having something in common; should possess some common bond uniting them for some purpose for some time (Kumar,V.,1986). Therefore, public expenditure is defined as the expenditure of the public sector where relationships are adequately integrated for a common pursuit. Public expenditure is a branch of public finance, studies how finances both in cash and kind are spent or should be spent to enable the state to perform its activities according to its avowed goal.

Generally speaking, policy choice of a government is reflected through public expenditure. Public expenditure would on the one hand indicate the cost of various types of projects selected by the government and on the other their quality and quantity as decided for the society by the government. In other words, the volume of public expenditure made through government budget would enable us to ascertain the cost of provisions of public goods and services which would generally appear in public sector accounts. It should, however, be mentioned that certain expenditures would result from governmental rules and regulations applied in private sector. Such, expenditures on all accounts, should have been included in public expenditures. However, for our purpose, we shall refrain from adopting such wider definition of public expenditure, although we recognize the importance of such wider definition in ascertaining the 'cost' of government action. Thus, we shall in our analysis use the narrower definition of public expenditure to point out mainly the size and the growth of government.

Public expenditure is catered to satisfy certain wants which individuals in their capacity can not satisfy. They are unable to make appropriate provision for

the satisfaction of certain wants when acting individually. In other words it is observed that very often people may not take as much interest to satisfy those wants as the State or government would generally be. This is the root of assuming importance of the government in the economic sphere and of the increased public expenditure in modern times.

In traditional development economic literature, the justification for growth of government or government expenditure is rooted in market failure arguments. The market does not always live up to competitive norms, and even when it does, it may not secure Pareto Optimal resource allocation when private and social value diverges. Nor can the market bring about appropriate corrections in income distribution. In such cases, the necessary corrections have to be brought about through government expenditure policy.

1.2 Nature and Scope of Public Expenditure:

There are a number of alternative ways of approaching the question of the growth of the government. At present we think in terms of absolute size of public expenditure. The change in public expenditure is related to the change in other economic magnitudes like change in GNP, change in the price level or the population change. Of course, the absolute level as well as the change in public expenditure has to be explained and accounted for. At the same time, it is also important to consider such changes in public expenditure in relation to other quantities.

In national income accounts, public expenditure are represented by two categories of government activities. First we find public expenditure of exhaustive type which would correspond to public/government purchase of current goods and services (e.g. consumables, labour etc.) and capital goods and services (like public sector investment in schools, roads, hospitals etc.). Thus, exhaustive public expenditure consists of public purchase of inputs and arrived at by multiplying the volume of inputs by their prices. These expenditures might be regarded as claims on the resources which also signify the output of the other sectors forgone and hence can be taken as opportunity costs of public

expenditure. In fact, such an opportunity costs set limit to the size of public sector and would determine the efficiency of such expenditures.

The second category of public expenditure is transfer payments which are, in effect, a redistribution of resources between individuals in society, with the resources flowing through the public sector as intermediary.

It should be noted at this point that these two categories of public expenditure (viz, exhaustive and transfer payments) assume importance while we examine the growth of public expenditure. In the present study, we shall begin with data on public expenditure and proceeds to explain the time pattern of public expenditure in terms of broad aggregate variables such as GNP or the rate of inflation. Broadly speaking, we shall try to explain how government expenditure has behaved over the long term. This macro-type of analysis differs from short-term macro economic forecasting analysis where government expenditure is taken as exogenously determined. Our analysis would seek to explain how government has behaved over the long term. In other words, we shall try to analyze 'time pattern' of public expenditure.

Three models have in the past been developed to analyze such pattern of public expenditure. The first such model can conveniently be described as the 'development models of public expenditure growth'. The second is related to the law of expanding state activity and third one is associated with political theory of public expenditure.

The first approach to the problem is related in the work of Musgrave and Rostow. Their analysis give the impression of changes in the relative share of government expenditures and variation in mix of public services over the development cycle. Thus according to them, it is evident that in the early stages of economic growth and development public sector investment as proportion of total investment of the economy is found to be higher. The public sector is seen to provide infrastructure like roads, transportations, sanitation systems, law and order, health and education and other investment in human capital. Such public sector investment is believed to be required for taking the economy from 'take-off'

into the middle stages of economic and social development. In the middle stages of growth, public investment becomes complementary to the growth in private investment.

Adam Smith confined the subject of public expenditure mainly to defence, the administration of justice, and certain public works. In the modern democratic setup the nature and scope of public expenditure has been described by Sahni (Sahni, 1972). According to him public expenditure deals with question relating to the appropriate level and composition of public expenditure development, and the various operational aspects of public expenditure decision-making. A three fold aspect of voluminous literature may serve to provide an over view of the nature and scope of public expenditure viz., a) Normative aspects, b) Positive aspects, and c) Applied aspects (Sahni, 1972).

The 'normative aspect' of public expenditure determines the norms of operations for the satisfaction of social wants. It also examines the effects and consequences of public expenditure and assesses the aims and objectives of public expenditure programmes. This approach is also known as 'welfare approach'. Therefore, 'normative aspect' of public expenditure is concerned with the study of appropriate levels and composition public expenditure.

The concept of 'public good' was revived with the appearance of Samuelson's articles (Samuelson, 1955). The service of public good are provided in such a way that they are consumed equally by all citizens, whether they pay for them or not. These services can not be provided through the normal working of the price mechanism and therefore, provision of these services is to be made by the government. These market failures also give rise to various degree of government intervention. Therefore, the theories of public goods are normative in nature and the interest of economists was confined almost exclusively to determine the expenditure policy of a government. In fact, there is need to shift attention from the problems relating to "what should be" to "what is". For this, answer has to be found as to how expenditure policy will in fact be determined. This leads to development of positive theory of public expenditure. Bird has defined the positive theory of public expenditure as that body of economic and

political analysis which attempts to understand and explain the observed pattern and level of government expenditure and the changes in those expenditures over time⁵. This positive or behavioral approach to public expenditure has a vital role to play in the policy making. It deals with the formulation and verification of relevant behavioral hypotheses. There are two widely debated hypotheses in this regard – Wagner’s “Law” and the “Displacement effect” of Peacock and Wiseman which represent a major part of the literature dealing with the positive aspect of Government expenditure analysis (Gandhi, 1971).

Adolph Wagner (1835-1917) was a famous German economist who based his law of Increasing State Activities on historical facts . According to Wagner, there are inherent tendencies for the activities of different layers of a government to increase both intensively and extensively. He hypothesized a functional relationship between the growth of an economy and government activities with the result that governmental sector grows faster than the economy. Statistics of public expenditure of various countries are very often analyzed to prove the validity of Wagner’s “Law”. Some researchers have found the so called Wagner’s “Law” imprecise and vague. However, in spite of its vagueness, Wagner’s ideas have continued to be influential (Bird, 1970).

The second thesis dealing with the growth of public expenditure was put forth by Wiseman and Peacock in their study of public expenditure in UK for the period 1890-1955 (Wiseman and Peacock, 1961). *The main thesis of the authors is that public expenditure does not increase in a smooth and continuous manner, but in jerks or step like fashion.* In their study they suggested growth of public expenditure by way of the ‘displacement effect’ which signifies that public expenditure grows over time, not at a constant rate, but roughly stepwise on an ascending spiral. At times, some social or other disturbance takes place, creating a need for increased public expenditure which the existing public revenue cannot meet. While earlier, due to an insufficient pressure for public expenditure, the revenue constraint was dominating and restraining an expansion in public expenditure. Now under changed requirements such a restraint gives way. The public expenditure increases and makes the inadequacy of the present revenue quite clear to every one. The movement from the older level of expenditure and

taxation to a new and higher level is the *displacement effect*. The inadequacy of the revenue as compared with the required public expenditure creates an *inspection effect*. The government and the people review the revenue position and the need to find a solution of the important problems that have come up and agree to the required adjustments to finance the increased expenditure. They attain a new level of tax tolerance. They are now ready to tolerate a greater burden of taxation and as a result the general level of expenditure and revenue goes up. In this way, the public expenditure and revenue get stabilized at a new level till another disturbance occurs to cause a displacement effect. Thus each major disturbance leads to the government assuming a larger proportion of the total national economic activity.

A number of empirical studies have been undertaken to test the hypotheses of Adolph Wagner, Peacock-Wiseman since the early 1950s. These studies can be classified into – a) expenditure-determining studies, and b) expenditure-determined studies. In the expenditure-determining studies one or more independent variables have been used to study the growth and pattern of public expenditure, the latter being the dependent variables. The most frequently used variables are – a) the level of economic development, b) the shift in the public expenditure during major social upheaval like war and economic depressions, and c) the type of the economic system. A very large number of studies have been made to relate the pattern and growth of public expenditure to the level of economic development. But in a very few studies have been used shift in public expenditure and economic system as independent variables. Peacock-Wiseman have used the shift in government expenditure as an independent variable in their study, while Pryor (Pryor, 1968) has made a pioneering study by analyzing public expenditure of a group of nations with different economic system.

In the expenditure-determined studies specific components and /or the aggregate measure of public expenditure constitute the independent variable. Sahni (Sahni, 1972) has noted that “*these studies attempt to determine the effect of public expenditure in terms of some measures of efficiency*”. Bird has pointed out that “the positive theory of public expenditure for present purposes may be

considered to encompass study of the following subjects: a) the determinants of the volume of public expenditure; b) the determinants of the composition of public expenditure – what goods and services are financed through the public sector and how the 'mix' of expenditure changes overtime; and c) such 'behavioral' properties of public expenditure as centralization and stability (Bird, 1970).

At present there is a trend of 'programme budgeting' which is also known as planning, programming, budgeting system (PPBS). PPBS help decision-makers to allocate resources efficiently and fool-proof manner. According to Burkhead and Miner (Burkhead and Minar,1971) Programme budgeting in its recent evolution, has three partially separable objectives – a) classification of government activity by goals and objectives, b) the comparison of cost with outcomes and the exploration of alternative means of achieving outcomes and c) long-range planning of government programme. It attempts to bring together in a coherent way the planning activities of the government and the budget process. Another essential element of PPBS is the careful comparison of benefits and costs of various programmes and alternative means of attaining the objectives. Benefit-cost analysis seek to take all benefits and costs, direct and indirect, into consideration and to evaluate alternative approach as well as the over-all projects in the light of objectives. This analysis of public expenditure programmes is an attempt to achieve the most effective distribution of scarce public resources. Benefit-cost analysis is based on estimation of present value of expected benefits of a programme compared to the present value of programme cost in order to help public official decide on alternative government programmes, or weigh alternative methods of accomplishing a given programme at the least cost. This different programme might be selected according to their value of return by comparing net benefits with costs. However, benefit-cost analysis is not free from difficulties and limitations. Apart from valuation difficulties, estimation of benefits is always coloured by uncertainty about future conditions. The uncertainties associated with some activities are so great that any precisely predictable conclusions are impossible.

In spite of these limitations and difficulties, cost-benefit analysis is being used with considerable success in the field of physical resource development like

investment in highways, transportation and water resource development. It has also been used in the field of investment programme of human resource development like education and health. Therefore, it can make, and also has been making, significant contributions towards governmental decision-making.

1.3 A Brief Survey of Relevant Literature:

Many attempts have been made to study the behaviour of government expenditure in India on the basis of empirical data. Mathews (1958) has analyzed the pattern of public expenditure during the period of 1937 to 1956. He wanted to examine the extent to which the changes in the pattern of expenditure are the result of deliberate policy or whether they have been the outcome of circumstances beyond the control of the government. According to him, the expenditure pattern that emerged at the end of the First Five Year Plan was mostly the result of deliberate policies of the government.

Mukherjee's (1965) study is an attempt to the reconstruction of historical statistics and relates to the development of the first half of the 20th century. Moreover, he did not made any effort to go behind his statistical result to establish a theoretical link between aggregate and economic activity and the activity of the public sector (Mukherjee, 1965) .

Sir Puroshotamdas Thakurdas Research Wing Study (1966) presents a study of finances of the government of India from 1950-51 to 1964-65. This work endeavours to analyse the important issues and focus attention on them in such a manner that further exploration and critical examination may be possible.

Panchmukhi (1967) presented the applied theory of public expenditure. He brings out the importance of cost-benefit analysis in the process of public expenditure. His study represents a step towards clarifying the economic aspects of the effects of expenditure on education and health, the knowledge of which is so essential for making rational decisions in these fields (Panchmukhi, 1967).

Reddy in his first study (1972) has analyzed a secular and time pattern of the growth of public expenditure in India from 1872 to 1968. He has examined the applicability of Wagner's hypothesis to India. He showed the relevance and validity of the concept of 'displacement effect' propounded by Peacock and Wiseman.

Gupta (1977) has examined and evaluated the extent of the impact of the central government expenditure on mitigating economic inequality and poverty and for generation of employment opportunities.

Zahir (1972) has examined the role of public expenditure in the field of income distribution during the period 1951-52 and 1965-66. He concludes that the growing public expenditure in India has made very insignificant contribution towards the achievement of social justice which is very important objective of public policy in our country. Zahir concluded that '*the Welfare State, instead of distributing welfare, has infact, proliferated misery.*'

There are some attempts which have been made at studying the growth and pattern of public expenditure of either an individual State or all States taken together. Madalgi (1966), Toya (1973), Nanjundappa (1976), and Thimmaiah (1977) have studied the public expenditure of different State Governments. Madalagi analysed the trends in State governments' expenditure in India since the five year plans from 1951-52 to 1965-66. He has confined his study to the revenue expenditure only, and as such, not considered capital expenditure.

Toya (1973) has highlighted the major changes that have occurred in the structure of State expenditure during 1955-70 and concluded that significant changes have been taking place within the development component of the total expenditure of the States.

Thimmaiah (1977) has studied the growth and pattern of public expenditure in Karnataka from 1957-58 to 1977-78. He has aimed at testing a few theoretical hypotheses in the context of public expenditure of a particular

state of India and concluded by saying '*the growth pattern of public expenditure in Karnataka State is not linear*' (Thimmaiah G., 1977).

Tapas K. Chakrabarty (1980) highlighted the broad trends in the growth and pattern of expenditure of the government of India during the last three decades, with a view to suggest some areas of expenditure where economies are possible without any adverse effect on the growth of the economy. He finally expressed "the approach of examining the scope for reduction in expenditure in various activities of the government of India has to be essentially micro....." (Chakrabarty, T.K., 1980)

Jag M Chona (1980) has tried to identify certain issues in respect of expenditure of the Central Government, especially the areas of expenditure where reduction and rationalization could be effected without any deleterious effect on efficiency or growth (Chona, J.M., 1980).

Raghbendra Jha (1995) tried to examine the true cost and benefit of public expenditure and enumerate the components of the true cost of public expenditure and highlighted that the dimensions of the costs of public expenditure are several-fold.

Trish Kelly (1997) in his article 'Public Expenditure and Growth' explores the effects of public expenditure on growth among the 73 countries over the period 1970-89 and highlights the contributions that public investment and social expenditure may make to growth. The article's econometric analysis suggests that crowding out and rent-seeking concerns may have been over stated in the literature (Kelly, T., 1997).

Santosh Mehrotra, Jan Vandemoortele and Enrique Delamonica (1998) in their paper 'Reallocating Public Spending for Basic Social Services in Developing Countries' show that not all social sector expenditures play as important a role in supporting economic growth and reducing poverty as basic social services – preventive, and basic curative health services, water and sanitation, family planning, and basic education. They are not only more efficient in terms of

providing 'human capital' but they are also more equitable.....'. This paper (Mehrotra, Jan Vandemoortele and Enrique Delamonica., 1998) estimated the level of public spending on the basis of social services with special emphasis on the need for future work on assessing the possibilities for increasing these expenditures. The relevance to issues in the health and education sector in India is notable.

But almost all of the studies mentioned above failed to make any disaggregative analysis of public expenditure on the basis of functions. The impact of government expenditure on economic development can be comprehended in a better way if such function-wise categorization is made. The present study is an attempt to bridge up the gap in existing studies of public expenditure through incorporating function wise disaggregative analysis.

1.4 Need and Objective of the study:

Public expenditure is not merely a financial mechanism. It is rather a means of securing social objectives. Socialism in any sense, can be realized only through progressive taxation and their distribution afterwards.

The traditional economists held the view that the state should not interfere in the general activity, for the government is merely an agent for the people to keep the political organization intact; hence it should spend public funds discreetly and sparingly.

A new approach to public finances has, however, evolved in the thirties since the Keynesian revolution in economic thought. Modern economists conceive that public expenditure has a positive role to play to achieve definite ends. Its goal is to promote maximum social welfare. In fact, the significance of public expenditure lies in the supply of those essential services by the government for the satisfaction of collective wants, which might not otherwise be provided economically and efficiently by the private sector. Its importance lies in its lubricating quality also, as deficit spending of the government amounts to the creation of additional money, which facilitates trade and exchange and stimulates further production and growth of national income.

In modern era, the need of public expenditure can be underlined by the following objective:

- (a) provision of collective wants in order to optimize society's consumption in a rational way and to maximize social and economic welfare.
- (b) Control of the depressionary tendency in the market economy. Public expenditure should be designed to optimize the level of investment in such a way as to maintain full employment with growth.
- (c) In a backward economy, public expenditure should accelerate the tempo of economic development by constructing the infrastructure of the economy and increasing the capital formation for augmenting industrial activity and allied production of goods and services.
- (d) A better distribution of income is also an equally important goal under socialism. Public expenditure for providing public services should lead to a just distribution of welfare.

Therefore, Public expenditure is an important instrument to produce desirable effect and at the same time to avoid undesirable impact on the national income, production and employment (Patnaik, 1970). It is an important instrument for realizing the objective of government policy. The government formulates programmes and schemes, and undertakes different social and economic activities, the actual implementation of which is done through the act of financial allocation and spending. Hence the expenditure programme largely determines the realization of objective of the government and the magnitude and pattern of public expenditure are determined by the objective. In this context, the study of the growth and pattern of public expenditure in India becomes significant.

In a federal set-up like India, the magnitude and pattern of expenditure in constituent states are determined jointly by the policy of the Central as well as the State Governments. So the success of the national objectives can not be achieved by the Central Government alone, independently of the States. Therefore the attainment of broad objectives of the Centre will be judged by the States' willingness and ability to pursue proper course of action in their own

spheres. This signifies the importance of expenditure policy of the State Government.

But sufficient attention has not been paid to the various aspects of government expenditure despite its significance. Although the questions relating to revenue side have received some attentions as it is clear from the several major enquiries conducted by the central and the state government to examine the tax structure (Tax Enquiry Commission, 1953-54) the enquiries have paid little or no attention to the various questions pertaining to public expenditure. This lack of a comprehensive and impartial study of public expenditure has been well underlined by the Taxation Enquiry Commission (1953-54). The Commission remarked that *'a detailed enquiry into public expenditure from this point of view, however, falls beyond our terms of reference.....such enquiries should be undertaken by sufficiently high powered bodies* (Lakdawala, 1958). The Indian Economic Association at its 41st Annual Conference in 1958, Lakdawala in his report observed that *'painstaking work in the realm of public expenditure has not been undertaken in any appreciable measure*. This remark of Lakdawala (1976) holds good today even after a lapse of five decades. Regarding research in public finance he has observed once again that 'the area of public expenditure has not however, obtained as much emphasis as it deserves in Indian public finance research. On the basis of above lacuna the study of public expenditure assumes special significance in developing countries like India.

The purpose of the present study is to trace out the growth and pattern of public expenditure (Centre, States and Union Territories) in the context of changing socio-economic development after independence as well as to review the role of public expenditure in the context of changed socio-economic needs contingent upon the recent globalization of the Indian economy. Thus, the study would make an attempt to assess first the extent to which public expenditure in India has achieved to fulfill the desired socio-economic well-being of the people after independence when the economy is destined to face certain new challenges in the new economic environment. And hence our analysis purports to answer questions as to whether the last five decades have witnessed a quantitative

growth in the government expenditure and also whether a qualitative changes in terms of its composition has accompanied the size growth.

Taking the above objective in view our main hypothesis of the study can be framed like this –

H₀ : The growth and pattern of public expenditure in India have secured the avowed socio-economic development of the economy.

The present study of public expenditure differs from the earlier studies of public expenditure in several important aspects. The public expenditure policy can be best understood by disaggregating it into its component parts rather than by generalizing overall expenditure in the aggregate. This will facilitate investigation of expenditure choice among the different competing demands for resources. For satisfactory explanation of variations in specific expenditures, different types expenditures have to be given more individual attention. But almost all the earlier studies failed to make any disaggregative analysis of public expenditure on the basis of functions. The impact of public expenditure on economic development can be comprehended in a better way if such a function-wise categorization can be made.

In this study we have proposed to examine the quantitative and qualitative growth of public expenditure (developmental and non-developmental expenditure and its component part) in India from 1950-51 to 2000-01. During these fifty years of development planning a very sizable expenditure has been made by the government. The study of the size, trend and composition of public expenditure is very useful for obtaining a total view of public finance and the national development.

1.5 Methodology and some concept:

Our study is based on secondary data. The data have been collected from different sources such as: Indian Public Finance Statistics – Ministry of Finance, Department of Economic Affairs; Indian Economic Statistics, Ministry of Finance, GOI; Statistics Relating to Indian Economy, GOI. We have also consulted

important articles appeared in various periodicals and journals as well as some observation expressed in the books written by different scholars on the subject.

In our study we seek to have better understanding of structural and behavioural changes in the growth of public expenditure. Here the basic objective is to see what aspects of the real world complexity are most relevant to the determination of public expenditure.

The mass of public expenditure being heterogeneous, aggregate expenditure is broken down into individual categories. Although disaggregation of expenditure is necessary there is no agreed Classification for the purpose (Pryor, 1968, Musgrave, 1969, Bird, 1970, Mahar, and Rezende, 1975,). Bird and Pryor favour functional classification (e.g. economic services, defence, social services and so on) in contrast to Musgrave who has favoured economic classification (e.g. consumption, capital formation, transfer, subsidies, etc.). Each method of disaggregation is expected to reveal something which the other may not reveal. And hence the classifications are complementary (Mahar, and Rezende). However, in our analysis we have attempted for a functional classification for disaggregating public expenditure over time. Of course, the breaking up is very often vitiated by non-availability of data in disaggregative form which made impossible to study every small item of public expenditure. Therefore, only such items which affect economic development have been considered in our analysis.

The Government of India adopted a new accounting classification in 1974-75 and fitted all government expenditure into:

- (a) General Services,
- (b) Social and Community Services, and
- (c) Economic Services

The new system of classification will facilitate an economic and functional analysis of the budget, monitor the programmes and activities and to bring out a closer coordination between the heads of development and heads of account.

The expenditure figures will be first grouped under two broad heads – (i) Developmental expenditure, and (ii) Non-developmental expenditure. Again developmental expenditure will be sub-grouped under two heads – (a) social and community services, and (b) economic services. Non-developmental expenditure will consist of general services. However, this study has not taken each and every item of expenditure for analysis, since for want of more details it has not been possible to spilt up the existing budget heads and to present a complete picture of expenditure according to different functions. In order to show the broad trend, the following items for an in-depth analysis have been selected:

- (1) Total expenditure: Developmental and Non-developmental
- (2) Defence expenditure.
- (3) Non-development expenditure as a whole
- (4) From the category of non-development expenditure, the administrative expenditure, tax collection charges, debt services (interest payment) and relief for natural calamities have been taken for detailed consideration.
- (5) Developmental expenditure as a whole
- (6) From the category of Social and Community services, education and medical and public health services have been selected for detailed analysis
- (7) From the category of Economic services, agriculture and allied services; industry and minerals, water and power development, and transport and communication have been selected for analysis.

1.6 Some Concepts:

In social accounting there are two important definitional categories of national income, namely, Gross National Product (GNP) and Net National Product at factor cost (NNP). As all data relating to public expenditure are related to net, we have taken NNP at factor cost for our study of public expenditure.

The comparison between the growth of total government expenditure over time and the growth of aggregate community output indicates the variation in the influence of government in the community economic life. And the comparison of government expenditure as a proportion of national income signifies to a great

extent about the nature and consequence of governmental intervention or participation in the economic system. The relation between government expenditure and national income reflects the importance of the government in the total life of the community.

The elimination of price changes is a conceptual problem because there is no perfect method of choosing the deflator. A common method used for adjusting the government expenditure and national income for changes in the purchasing power of money, consists in deflating them by using appropriate price indices. Government expenditure and national income is composed of expenditure not only on goods but also on services. However, for our purpose we have adopted a single index for deflating government expenditure and national income. A special index is prepared on the basis of whole sale price index, arranged by the office of the Economic Adviser, Ministry of Industry, Government of India, from 1950-51 to 2000-01. In our study we have used this index for deflating both government expenditure and national income.

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