

Monograph Series—II

**SURVEY OF RESEARCH ON FISCAL FEDERALISM  
IN INDIA**

**M. GOVINDA RAO  
R.J. CHELLIAH**

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**NATIONAL INSTITUTE OF PUBLIC FINANCE AND POLICY  
NEW DELHI**

Price : Rs. 100  
Printed in India  
at  
**SHEELA ART PRINTERS**  
18, Shivpuri Ext., Delhi. 110051

Published by Rita Wadhwa  
on behalf of  
National Institute of Public  
Finance and Policy  
18/2, Satsang Vihar Marg,  
Special Institutional Area,  
New Delhi - 110057.

© National Institute of Public Finance and Policy  
**FIRST PUBLISHED 1991**

### **Acknowledgements**

The paper has been prepared at the request of the Indican Council of Social Science Research. We are grateful to the Council for providing financial assistance. Thanks are also due to Ms. Sujata Datta for research assistance, Ms. Rita Wadhwa for editorial improvements and Mr. R. Periannan for competent secretarial assistance.

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## 1 INTRODUCTION

Fiscal history throughout the world has demonstrated convincingly both the advantages of 'size' and gains from decentralisation. With the strengthening of interdependence of the international economic system, the vulnerability of small open economies in conducting macroeconomic policies has become obvious. In addition, the beneficial effects of a large common market have been amply demonstrated with the emergence of the prosperous European Common Market. At the same time, the importance of smaller jurisdictions in providing a number of important public services continues to grow. In most federal countries, the growth of sub-central levels of government has been faster than that of the Central government. These events have generated a good deal of interest in the study of multilevel finance. "Fiscal Federalism" thus has emerged as an important area of study.

The economics of federalism or 'fiscal federalism' is an area of study in which the principles of economics are applied to the functioning of the public sector in a federal system. It deals with the traditional concerns of the economists - resource allocation and income distribution in a multilevel public sector organisation (Oates, 1972, 1977). Although there are no distinct or unified theories of fiscal federalism, one can find various models analysing the equity and efficiency implications arising from fiscal location of both of consumers and producers, inter-jurisdictional competition and cooperation, and multi-jurisdictional community (Musgrave, 1969).

The study of fiscal federalism in a developing mixed economy, like India, assumes additional significance. In market economies the governmental role is confined mainly to the provision of public services and to interventions in cases of market failure. In contrast, in India, the government has taken over the major responsibility for allocating resources to achieve growth and equity, both inter-personal and inter-regional, in consonance with social priorities as determined by the policy makers. The emphasis on multilevel physical planning has necessitated financial planning and this brings an additional dimension to the problem of federal or multi-level finance. Besides, since historically considerations of a colonial power did not necessarily enable resource allocation across different regions according to their endowments, fiscal federalism in the Indian context is perceived to play a more dynamic economic role than what is seen in many of the other federations<sup>1</sup>.

Considering the importance of the subject, it is not surprising that the issues of federal finance in India have received considerable scholarly attention. The purpose of this survey is to review the contributions to the analysis of Indian fiscal federalism. Given the large and growing volume of literature on the subject, it is not possible to analyse all the contributions and some selectivity becomes unavoidable. While the historical, political and legal aspects of federalism are equally important, we have, for analytical convenience, attempted to focus attention on the economics of federal finance or 'fiscal federalism'. Also, for understandable reasons, we have preferred to emphasise the studies with more analytical content rather than those which are more descriptive.

Section II reviews the major theoretical and empirical contributions on fiscal federalism summarising, in the main, the theory of fiscal decentralisation, the rationale for intergovernmental transfers and the effects of various types of intergovernmental transfers. Against this background, the developments in the Indian fiscal federalism are

**analysed and contributions of both official and academic experts on Indian federal finance are reviewed in section III and in section IV, important areas for future research on the subject are highlighted.**

## II. THEORIES OF MULTILEVEL FINANCE

### 1. Theory of Fiscal Decentralisation and Optimum Jurisdictions

The Constitutional or legal approach to analysis, defines federalism as “the method of dividing powers so that the general and regional governments are each, within a sphere, co-ordinate and independent” (Wheare, 1951). Thus defined, Wheare in the 1940’s was able to identify only four genuine federal systems of government.

As against this approach of political scientists, economists, in their early writings, recognised the interdependence among the different units of government. Thus, the “co-ordinate and independent” idea of federalism gave way to “cooperative federalism” (Hicks, U.K., 1978). The more recent view of federalism, however, is much broader, and differs from the political scientists’ view in some fundamental ways. To the economists, “the essence of federalism lies not in the institutional or constitutional structure but in the society itself”<sup>2</sup>. The structure is important only to the extent that it has implications for resource allocation and distribution. Also, the economics of federalism would have to recognise the constraints posed by the structure in arriving at optimal decisions. But more importantly, federalism for an economist is the organisation of the public sector combining centralised and decentralised decision making processes so as to be able to provide public services in accordance with the diversified demands of the residents in different regions of the country while at the same time reaping the advantages of economies of scale. Thus, federalism is not understood in absolute but in relative terms. In this sense, all countries can be said to be federal and they differ only in

terms of varying degrees of centralisation, because every country has some form of "local government" endowed with some functions. As through appropriate decentralisation public services can be provided to cater to the diversified preferences of the people across all regions in a cost efficient manner, federalism, from an economic perspective, is viewed as an optimal form of public sector organisation (Oates, 1972, 1977).

What is the optimum degree of fiscal decentralisation and what should be the role of different layers of government in fiscal operations? The "layer-cake" perspective on federalism though not entirely realistic is helpful in answering these questions. In such a set up, the sub-Central levels of government are clearly unsuited to undertake macro economic stabilisation because theirs are 'open' economies. Similarly, the effectiveness of redistributive functions undertaken by sub-Central units is limited by the potential inter-jurisdictional mobility of their residents<sup>3</sup>. It is in performing the allocative function that decentralisation promises the greatest gains, through increase in economic efficiency by providing public services corresponding more closely to the varying preferences of groups of consumers<sup>4</sup>. The decentralisation theorem, thus, argues that in the absence of scale economies and spillovers, decentralisation in the provision of public services results in significant welfare gains as compared to the situation of the Central government providing any specified and uniform levels of output across all jurisdictions. The more varied the demands of individuals across different jurisdictions, the larger is the welfare gain from fiscal decentralisation. It is also demonstrated that the welfare gains from decentralisation are inversely related to the price elasticity of demand for public services<sup>5</sup>.

Determination of the optimal structure of the public sector, thus, is a central theoretical problem of fiscal federalism. In the literature, there are two types of models designing the optimum structure. The

first attempts to explore the necessary and sufficient conditions required to achieve Pareto optimal situation assuming that population is geographically fixed; and the second analyses the efficiency conditions by assuming consumers to be perfectly mobile. Breton, for example, has shown that when the population is geographically fixed, under the assumptions of known preferences, absence of spillovers, benefits of non-private goods linearly related to space and benefit taxes, it is possible to arrange administratively hierarchical units to have economically optimal constitutions, wherein, both private and 'non-private' goods are provided satisfying Pareto optimal conditions. Tiebout, on the other hand, has argued that the consumers under extremely unrealistic assumption of 'footloose' mobility, living solely on dividend incomes in a community with large number of jurisdictions 'vote on their feet' to move into jurisdictions providing their desired pattern of public outputs<sup>7</sup>. However, the welfare gains of decentralisation demonstrated by the models of Breton and Tiebout, are not so obvious when the possibilities of scale economies, spillovers, signaling and mobility costs and the costs of administration are considered. The optimal degree of decentralisation is achieved when the net gains after allowing for these costs are maximised (Tullock, 1969, Breton and Scott, 1978).

## **2. Fiscal Imbalances and Intergovernmental Transfers**

An important issue that remains even when the optimal degree of decentralisation in the above sense is achieved is the problem of fiscal mismatch between revenue sources and expenditure functions vertically across different layers and horizontally among different jurisdictions. Even when only the allocation function is considered, the difficulty in the imposition of non-benefit taxes not only violates the optimality rule, (equality between marginal benefit from public goods and marginal benefit of private goods foregone to pay taxes) but also,

creates mismatch between revenues and expenditures in different jurisdictions. The role of sub-Central units of government in undertaking allocative function is important and expanding at a fast rate, but they do not have matching revenue sources. When, redistribution and stabilisation functions are also taken into account, the vertical mismatch becomes even more significant. Redistribution being primarily the function of the Central government, nationwide progressive taxes would be assigned to it. Similarly, in order to facilitate nationwide stabilisation policy, money supply would be the sole responsibility of the Central government and the power to borrow would also largely vest with it. In the event, while the important and growing allocative functions are assigned to sub-Central units, the major revenue handles are vested with the Centre, creating what is called the 'vertical fiscal imbalance' (Hunter, 1977) requiring intergovernmental transfers<sup>8</sup>.

The case for intergovernmental transfers, however, does not rest on vertical imbalance argument alone. In the models discussed above, fiscal imbalance can also occur, horizontally across the sub-Central units, if benefit taxes are not levied or alternatively, if the existing revenue sources in some jurisdictions are inadequate to finance a given optimum level of public services. Thus, although much of the literature merely asserts the existence of vertical and horizontal imbalances, the foundation for these imbalances can be seen in the attempts to evolve an optimal constitution in terms of efficiency in resource allocation and equity in the sense of enabling the sub-Central units to provide a given level of public services at a standard tax price.

a. Efficiency Basis for Intergovernmental Transfers. Intergovernmental transfers as stated above, have both efficiency and equity bases. The main plank of efficiency basis for transfers is that

non-benefit taxes such as a proportional income tax (for a given individual) creates a wedge between the marginal utility of public goods and the marginal utility of private consumption sacrificed to pay his taxes. One way to correct this situation is to introduce transfers from those individuals whose marginal disutility from taxes is lower than the marginal utility derived from public goods to those individuals whose marginal disutility from taxes is higher than the marginal utility from public goods. Thus, these transfers are required not for any equity reasons but to achieve pareto optimality and such transfers shall be necessarily unconditional (Breton, 1965). Other efficiency reasons for intergovernmental transfers advanced are to arbitrate 'spillovers' (Breton, 1965, Gramlich, 1977), or for 'merit' goods reasons (Musgrave, 1961, Musgrave and Musgrave, 1976). It is argued that when spillovers exist, the provision of public goods by sub-national governments will be non-optimal (Williams, 1966) and to ensure the provision of optimal output, specific-purpose matching intergovernmental transfers should be made. Similarly, all communities may not afford to provide some public services considered meritorious. Specific purpose transfers could be made to ensure minimum levels of such services across all jurisdictions. The latter category of transfers may also be equitable as larger amount of grants would have to be given to the States with lower levels of services, but that is only incidental as equity is not the objective of such transfers. The essential feature of such transfer schemes is the enforcement of grant or preferences on the allocative decisions of the grantees. Essentially, under this scheme, the instrument is employed to induce the sub-Central governments to provide public service at the optimum level or to undertake

welfare improving tax reforms (Gordon, R., 1983). The transfers designed for the purpose could be open-ended or close ended and could also have matching requirements by the recipients (Gramlich, 1977).

**b. Equity Arguments for Intergovernmental Transfers.**

The arguments for intergovernmental transfers on equity grounds have been made either in terms of ensuring horizontal equity among individuals across the jurisdictions or to bring about inter-regional equity. Both the approaches, however, establish a case for unconditional transfers to less developed States. The efficiency and growth implications of such equitable transfers too have received considerable attention in the literature, though, the controversy itself has remained somewhat inconclusive. The main strands in these equity arguments are worth considering in greater detail.

A persuasive case for unconditional transfers on equity grounds has been put forward by Buchanan (1950). Buchanan's arguments are based on three premises. (i) It is more sensible to consider the relationship of Central governments to individuals rather than to the States. "Equity in terms of States is difficult to comprehend and it carries little ethical force for policy implementation". (ii) Equity should be defined to include both taxes and benefits. Buchanan, therefore, defines equity in terms of equality in fiscal residuum, which is, taxes minus benefits. Benefits from government expenditures are assumed to accrue equally to all individuals within a State. (iii) The requirements of horizontal equity are more meaningful than those of vertical equity.

Given these premises, Buchanan demonstrates that so long as there are income differences among the States, even when both the Centre and the States separately treat equals equally, overall horizontal equity is not ensured. In order to ensure horizontal equity the Central government could levy geographically discriminating tax rates. But that may not be Constitutionally permis-

sible. Besides, it could also lead to unintended allocative distortions. He, therefore, prefers unconditional transfers from people in richer States to those in poorer States to bring about horizontal equity. In Buchanan's views such an arrangement would be justified on efficiency grounds also as, it would prevent resource migration induced by lower public spending in poorer regions.

The discussions that followed this seminal paper between Buchanan, Scott and Musgrave, brought to the fore a number of important implications. It has been effectively argued that inter-governmental transfers are neither necessary nor are they sufficient to bring about horizontal equity in the sense defined by Buchanan. Transfers are not necessary if benefit taxes are levied, as then, fiscal residuum would be zero for all individuals. Again, the conclusions reached by Buchanan crucially depend upon the assumption that the benefits from government expenditures are distributed equally among individuals. Instead, if it is assumed that the benefits would accrue in proportion to incomes, proportional income tax would satisfy the condition of equalising fiscal residuum. Nor is equalising transfers a sufficient condition, for, that ensures only potential and not actual equality of equals. It is also argued that identical fiscal residuum is not equivalent to being on the same indifference curve. A person with a given level of income is likely to be indifferent among many tax-benefit combinations—each with a different fiscal residuum (Scott, 1964, Graham, 1963).

Scott (1950, 1952) strongly disagrees with Buchanan's argument that the transfers given to equalise fiscal residuum, by avoiding fiscally induced distortions, would also enhance efficiency. He argues that income levels reflect resource endowments and as the transfers to low income jurisdictions imply transfer of capital from the States where the marginal productivity of capital is high to those with lower productivities, equitable transfers do involve a cost

interms of lower GDP. Scott, however, agrees that equitable transfers could lead to higher growth in cases where income differences of the States, for some reason do not reflect resource endowments<sup>9</sup>.

Buchanan's analysis, nevertheless, highlights an important source of inequity in federal systems, namely, the differences in the capacity to raise resources among the States. Consequently, for a given level of public service consumption, the States with lower revenue raising capacity would have to levy higher tax-price. Alternatively, at uniform level of tax effort (tax rates) in the States with lower capacity the levels of public services would be lower. Thurow (1966), therefore, suggests a scheme to offset this source of inequity, by giving transfers to equalise benefit-effort ratios across the States. But, as Le Grand (1975) has shown, equalising benefit-effort ratios can affect the spending-saving decisions of the States. By deciding to save rather than spend more from the given revenues, a State may enhance its share of grants and this might result in the underprovision of public services. Besides, this approach, equates expenditures with benefits. Bradford; Malt and Oates (1969) have shown that there can be significant differences in the unit costs of public services, thus, bringing about a divergence between levels of public expenditures and public services. If the cost differences are due to environmental factors which are beyond the control of sub-Central governments, this clearly forms another important source of inequity, for, ceteris paribus, residents in States with higher unit costs would have to bear higher tax burdens to provide a given level of public services. Le Grand, (1975), therefore, argues for transfer schemes to equalise purchasing power-effort ratios across the States.

A number of attempts have been made to operationalise the transfer formula devised to offset the two sources of inequity namely, variations in taxable capacities and differences in the unit costs

of providing public services among the States. Hicks (1961) favours grants to be given according to needs. The Commonwealth Grants Commission in Australia recommends general revenue sharing to offset deficiencies in revenue capacity and variations in unit costs (Mathews, 1980). In the Canadian federation also, deficiency in revenue capacity is offset through unconditional grants<sup>10</sup>. Musgrave (1961) considers a number of alternative schemes to equalise various fiscal parameters of the States and examines their allocative implications. Of the various schemes, the plan offsetting deficiencies in the capacity to generate revenues at standard levels of tax effort over expenditure needs to provide a normative level of services is considered conceptually the most appropriate (Le Grand, 1975; Bradbury, et.al., 1984, Ladd et.al, 1986, Hoffman, 1969).

The equity basis for intergovernmental transfers, presented above, however, rests on an implicit assumption, namely, the absence of significant consumer mobility. When the consumers are mobile, it is argued that fiscal differentials are capitalised into local property values. The increased price of property exactly offsets the fiscal advantage, and therefore, transfers to offset fiscal inequities are not required<sup>11</sup>. Such a process, however, is likely to occur at the metropolitan level than at the regional level. Besides, in economies where consumer mobility itself is constrained by various religious, socio economic and linguistic factors, horizontal equity would not be self policing.

Intergovernmental transfers, thus, are considered necessary in all federations to offset two important sources of inequity, namely, differences in the revenue raising capacities and variations in the unit costs of providing public services due to reasons beyond the control of the sub-Central units. However, deficiency in capacity and excessive unit costs can be measured only with reference to a bench-mark State and this has to be set by the policy maker. The

fiscal disadvantage of the bench-mark State is assumed to be zero. The vertical imbalance, then, refers to the sum of the disadvantages of the States below the bench-mark level. Offsetting these fiscal disadvantages necessitates conceptualisation and measurement of fiscal parameters like taxable "capacities". "unit costs" of public services and expenditure "needs" of the States. The conceptual framework for such transfer schemes has been developed, importantly by Musgrave (1961), Hoffman (1969), Bradbury et.al (1984) and Ladd et.al (1986).

c. Design of Intergovernmental Transfers. We have, so far, advanced two main reasons for intergovernmental transfers leading to two categories of transfers. Transfers meant to ensure optimal output in the wake of spillovers or those meant to ensure minimum levels of particular public services have to be necessarily specific purpose with or without matching requirements. Besides, specific purpose transfers can also be used to impose donor's preferences on the recipients (King, 1984). On the contrary, the transfers intended to offset fiscal disadvantages of lower resource base or higher unit costs of public services have to be necessarily unconditional. Thus, it is necessary to emphasise that transfers meant to ensure optimal or minimum levels of public services have to be conditional with or without matching provisions whereas those meant to enable the States to provide a pre-determined level of services at a given tax-price have to be unconditional. Besides these two categories, for administrative (sometimes even for economic) reasons, or to harmonise the tax structure, the Central government can set the rates of tax, collect the revenue and assign them to the States.

The designing of transfer schemes should take into account not only the objectives they are intended to subserve, but also the responsiveness of the recipients. This is particularly true of the

transfers given to ensure minimum levels of specified services. In order to induce the deficient States to provide the services at the stipulated level, as mentioned earlier, it may be necessary to provide transfers with matching requirements by the States. To what extent the transfers would augment the levels of services would depend upon the income and substitution effects of transfers and changes in the price ratio in favour of the aided goods achieved by the transfer scheme. Wilde (1971) provides a comprehensive analysis of the possible income and substitution effects of different types of transfers and examines the suitability of these schemes to serve various objectives.

The empirical estimates of the responsiveness of different types of transfers, however, provide a curious, yet an interesting phenomenon. While, on a priori reasoning, unconditional transfers constitute a veil for tax cuts and, therefore, the responsiveness of expenditures to per capita incomes and per capita unconditional transfers should be identical, the transfers are found to enhance government expenditures by a significantly higher magnitude (Gramlich and Galper, 1973). This has given rise to what is called "the flypaper effect" - a phenomenon where 'money sticks where it hits', and has been rationalised in terms of the misperception of the true marginal cost of the public goods provided by the recipient jurisdiction. (Courant, et.al, 1979, Oates, 1979).

d. Summing up Theory of Multilevel Finance and Inter-governmental Transfers. From an economist's perspective, fiscal federalism is an optimal institutional arrangement for the provision of public services. To him, all countries are federal and yet, they differ in terms of varying degrees of centralisation. The optimal degree of centralisation from the economic point of view is achieved when the net cost of federating is minimised.

The theory of fiscal decentralisation clearly indicates the superiority of the Central government in undertaking redistributive and

stabilisation functions and the welfare gains that can accrue by decentralising the allocative decisions. The more diverse the preferences of people across jurisdictions, the greater are the welfare gains from decentralisation. Also, it is demonstrated that welfare gains from decentralisation are inversely related to the price elasticity of demand for public services.

A number of models have been applied to achieve optimal degree of decentralisation assuming either geographical fixity of population or footloose mobility; but it is found that it is not possible to arrive at a self policing system; for, the degrees of optimal decentralisation are necessarily different for revenue raising powers and for expenditure functions. The imbalances exist not only vertically between different layers of government, but also horizontally among various sub-Central jurisdictions mainly due to the differences in their capacities to raise revenues and variations in the unit cost of providing public services. Besides, the existence of externalities result in non-optimal provision of public services calling for 'Pigovian' transfers.

Arguments for intergovernmental transfers have been advanced on both efficiency and equity grounds. The efficiency rationale for transfers has been put forward mainly to correct the distortions arising from non-benefit taxes, spillovers and for 'merit' goods reasons. Equity arguments for transfers have been put forward either to enable horizontal equity between individuals, or in some sense, geographical equity in a federation. However, the most important equity argument for intergovernmental transfers is to offset fiscal disadvantages of particular States, arising from shortfall in their revenue raising capacity and excessive unit cost of providing public services as compared to the bench-mark State. Intergovernmental transfers enable such States to provide the nor-

matively determined level of public services at the bench mark (average) tax-price.

Thus, the design of intergovernmental transfers depends upon the objectives of these transfers. Grants given to ensure minimum levels of services or to arbitrate spillovers should be specific purpose, open-ended or closed-ended, with or without matching requirements. On the other hand, transfers given to offset fiscal disadvantages of the States have to be necessarily unconditional. In order to design the transfer schemes to serve the objectives, it is important to conceptualise and measure fiscal parameters such as revenue capacity, unit cost of providing public services and expenditure need and also the expenditure responsiveness of sub-Central units to various types of intergovernmental transfers.

### **III. INDIAN FISCAL FEDERALISM - MAJOR ISSUES**

#### **1. Introduction**

The foregoing discussion provides a useful backdrop for the analysis of Indian fiscal federalism. Nevertheless, it must be kept in mind that the Indian federation differs from the developed federations in many important respects. Therefore, many of the theoretical contributions surveyed in the earlier section are relevant to Indian fiscal federalism only to a degree. First, India is a vast country with wide inter-regional differences in economic endowments as well as levels of income, and is faced with conflicting tendencies of centralisation and decentralisation, the former designed to reduce inter-regional disparities and the latter to meet the diverse patterns of demand. Besides, the Indian economy is faced with severe inter-jurisdictional competition, underlining the need for utmost cooperation among various jurisdictions. Second, the low levels of income and wide inter-regional disparities have necessitated governmental intervention not just in the provision of public services; the government has taken the major responsibility for economic development of the country by taking up the role of both a catalyst and an entrepreneur. The multilevel planning adopted for the purpose has brought forth additional complexities in the fiscal arrangements in terms of heavy fiscal dependence of the States on the Centre, high degree of vertical and horizontal tax and expenditure spillovers and multiplicity in intergovernmental transfer schemes with overlapping and

ambiguously defined objectives (Grewal, 1975). Third, as the pattern of investments in pre-independent era was largely determined on the basis of colonial interests of the ruling power, the differences in the levels of development currently in vogue among the States do not necessarily represent their varied resource endowments. Finally, the existence of wide inter-regional differences in the levels of development itself underlines a significant role for inter-governmental equitable transfer schemes, as the nexus between levels of development and resource endowments seem to be tenuous in most cases. In such a situation, equitable transfers at the expense of richer States may not necessarily result in lower economic growth.

## **2. Centripetal Bias**

A convenient starting point for the survey of research on Indian fiscal federalism is to ask whether the existing degree of fiscal decentralisation in India is optimal. In fact, there is very little analytical or empirical literature examining cost savings from centralisation and welfare gains from decentralisation in the Indian context. Nevertheless, there is virtual unanimity that the Indian Constitution imparts a strong centripetal bias (Chanda, 1965, India, 1967, Venkataraman, 1968, Mitra, 1987).

The most notable factor in operation against decentralisation is the unsatisfactory status of fiscal tiers below the State level. Constitutionally, the local bodies are not autonomous, but derive their powers from the State governments although, some attempts have recently been made to amend the Constitution to provide local bodies an independent status. In effect, they merely undertake 'agency' functions on behalf of the States and are heavily dependent on them for financing their expenditures (Venkataraman 1965, Datta, 1984). The virtual absence of a reasonably developed independent institutional structure to pro-

vide public services at local levels, in both urban and rural areas in Indian federalism is truly glaring. It may be inferred that public services, at least below the State level, do not appear to be provided in such a manner as to meet the diversified demand patterns of the people; thus important welfare gains of decentralisation are only minimally obtained<sup>12</sup>. Consequently, much of the important work on welfare implications of decentralisation and mobility of economic agents loses its relevance in the Indian context. Besides, lack of decentralisation below the State level is also reflected in the limited research, especially, the absence of analytical studies on local finances and on State-Local relations<sup>13</sup>.

Another important aspect of the centripetal bias is seen in the distribution of fiscal powers between the Centre and the States. In fact, the uneven distribution of fiscal powers has prompted some observers to call India a quasi-federal country (India, 1988). Closely following the Government of India Act, 1935, the Constitution of India, although it has demarcated the respective subjects coming under the Central and State government jurisdictions, has also left a large concurrent area in which Central law has precedence over the States<sup>14</sup>. It has also been pointed out that rather than merely performing the role of a mediator between the States and looking after the responsibilities of defence, external affairs, certain strategic industries, the major network of transportation and general economic coordination, the Centre undertakes many other allocative functions (Mitra, 1987). The Central government's power to borrow virtually unlimited sums, particularly from the Reserve Bank of India, and the limitation placed on the States' power to borrow even from the market when they are indebted to the Centre has tended to cause very high degree of centralisation in the capacity to raise financial resources and with it, the States' heavy fiscal dependence on the Centre<sup>15</sup>.

Not only that the original distribution of functions exhibits a centripetal bias, but also, over the years, the actual operation of the

Indian federalism seems to have caused a continuing increase in the degree of centralisation. The planning process adopted to hasten the pace of development, has brought forth enormous centralisation in resource allocation. The very process of planning as has been undertaken in India involves centralisation in allocative decisions. Acquiring a larger degree of control over the States' expenditures by expanding the Centrally Sponsored Schemes has also been pointed out as yet another important instance of increasing centralisation<sup>16</sup>. Gulati and George (1985) also have highlighted the Central encroachment into the States' areas by transferring some of the activities in the State list to the concurrent list through Constitutional amendments and increase in the Centre's share of spending on concurrent activities.

The economic consequences of the alleged overconcentration, have not been subjected to any detailed analysis. Mitra (1987), however, asserts that centralisation has resulted in both the deceleration in the rate of growth of the economy and accentuation in income inequalities. Mitra argues that overcentralisation has adversely affected the initiative of the States. Besides, he argues that favouring recalcitrant areas and significantly enhancing current expenditures particularly on unproductive items, arising from attempts to shore up politically unstable areas to force political conformism, have caused severe misallocation of resources. This has cost the economy heavily in terms of 'near zero rate of growth of per capita national income and progressively aggravating income inequalities' (p.30). Two comments on Mitra's analysis are in order. First, the political factors responsible for misallocation of resources, causing stagnation in the growth of incomes, could function even in cases where more decentralisation is achieved. In fact, Olson's (1983) analysis shows that decentralisation makes it easier to articulate special interests and hence, tends to slow down economic growth<sup>17</sup>. Second, in an economy with significant inter-regional disparities in the levels of living, higher degree of

centralisation may be necessary to ensure balanced economic growth (Chelliah, et.al., 1981). Mitra's analysis, nevertheless, provides an interesting working public choice hypothesis for future studies.

The discussion on centralisation in Indian federalism is not complete without some observations on the relative fiscal roles of the Central and State governments. First, although in the preceding section it was stated that the primary responsibility for redistribution should lie with the Central government, in the Indian context, the States too have taken redistribution as an important objective in their tax policies. This has caused enormous complications in the tax structures of the States. In particular, in the State sales taxes the serious pursuit of the equity objective has resulted in minute rate differentiation among various commodities, largely based on judgments regarding their respective income elasticities of demand. The number of sales tax rates varies from six in Orissa to as many as 19 in Bihar and Gujarat (Rao and Tulasidhar, 1986). While the effective progressivity of such complicated structures of sales tax is doubtful, this certainly appears to have caused significant distortions in resource allocation<sup>18</sup>. Second, although in the legal sense, there is no concurrent area of taxation, in effect, tax overlapping between Central and State governments has been significant. The same tax base namely, consumption/sale of commodities is subject to tax by the Central, State and Local authorities by way of excise duty, sales tax and octroi respectively. The allocative implications of such tax overlapping have not been adequately explored<sup>19, 20</sup>. Third, as the demarcation of States' boundaries does not correspond to economic divisions, there could be significant inter-jurisdictional spillovers of taxes and expenditure benefits. In fact, in the case of taxes, it is in the interest of each State to export the burden to the residents of other States. As sales tax predominates in the State tax

revenues, and with the States empowered to levy tax on inter-State sales although within the prescribed ceiling rate, the producing States are able to export tax burden to the consuming States to a significant extent. There are no quantitative estimates of such inter-regional incidence of State taxes nor are there any studies analysing allocative and equity implications of such perverse transfers<sup>21</sup>.

### 3. Vertical and Horizontal Imbalances

An inherent problem faced in all federations as mentioned in the earlier section, is the inadequacy of revenue resources to perform the constitutionally assigned functions at sub-Central levels of government. Given that the primary responsibility for stabilisation and redistribution is vested with the Central government, the taxes with nationwide bases are assigned to it. Besides, the economic consideration of having less distortionary taxes dictates near uniformity in the levy of taxes nationwide. The existence of wide inter-State disparities gives another rationale for greater centralisation in revenues so that Central government can undertake appropriate tax-transfer programmes to prevent accentuation of inequalities and to promote balanced regional development<sup>22</sup>. However, the pursuit of the redistributive goal at the Central level dictates the assignment of more progressive taxes to the Centre and a more progressive structure of taxation should have higher elasticity with respect to both real income and prices<sup>23</sup>. On the other hand, with the major responsibility of providing social and economic services being assigned to the States, their revenue resources are inadequate to meet their expenditure needs. As these services are known to have high income elasticity of demand, the gap between own resources and needs has been continuously increasing over the years. At the same time, outpacing of the revenue growth by the rate of growth of expenditures by a significant magnitude has converted the revenue surpluses that existed in the earlier years in the Central budget to very high and growing levels of revenue deficits in

the eighties (India, 1989)<sup>24</sup>. Thus, while on the one hand, the need for resource transfers has shown a continuous increase, on the other, the resources available with the Centre for distribution has substantially dwindled. Hence, instead of distributing surpluses, the Centre now has to contend with distributing deficits (Guhan, 1988).

It has also been pointed out that some developments in Indian federalism have contrived to increase vertical imbalances over the years. Redefining the income tax to exclude corporation tax from the compulsorily shareable proceeds, the abolition of estate duty on non-agricultural property - an assigned tax under Article 269 - in 1985, the Centre raising revenues by resorting to administered price increases rather than by enhancing excise duties which are shareable with the States, inadequate exploitation of additional excise duties in lieu of sales tax on sugar, textiles and tobacco, thereby rendering them less buoyant than the States' sales taxes are some of the alleged reasons for increasing the extent of vertical imbalances<sup>25</sup>.

Equally important is the fact that the imbalance is not uniform across the States. This problem of horizontal fiscal imbalances, as argued in the earlier section, has to be attributed to the existence of two important sources of fiscal disadvantage, namely, differences in the capacity to raise revenues and variations in the unit cost of providing public services across the States. With these differences, from their own resources, the fiscally disadvantaged States would not be able to provide uniform standards of public services at a given uniform (effective) tax rate. Although provision of uniform levels of public services is not the objective of fiscal federalism, the fact that non-uniformity in the service levels stems from factors beyond the States' control and not on account of deliberate choice

exercised by them, is considered to be an important source of inequity.

A major source of horizontal imbalances mentioned above is the differences in the capacity to raise revenues across the States. In developed economies such differences arise largely due to differences in resource endowments and any attempt to transfer funds to poorer jurisdictions might have a cost in terms of lower growth of GNP. However, in the Indian context, differences in revenue capacity are mainly attributed to the distortions in the pattern of investments made to serve mainly the colonial interests during pre-independent era (Bharadwaj, 1982). The fact that inter-State inequalities in per capita incomes have not shown any perceptible decline even during the post-independent period shows that the horizontal imbalances have not shown any declining trend over the years (Chelliah, et.al. 1981). We will return later to the problems faced in measuring horizontal fiscal imbalances .

#### **4. Intergovernmental Transfers in India**

The existence of fiscal imbalances, both vertical and horizontal in itself may not be a cause for concern, if there exists an efficient and equitable mechanism of intergovernmental transfers to offset these imbalances. Then, the imbalances will be compensated by federal transfers.

Basically, in India there are three types of transfers from the Centre to the States. First, the transfers recommended by the Finance Commission, a semi-judicial body provided for in the Constitution for the purpose; second, the Planning Commission, which gives assistance in terms of both grants and loans to the States for State Plan purposes; and the third, other discretionary grants and loans including the finances from institutional agencies such as the Life Insurance Corporation, General

Insurance Corporation and the Unit Trust of India to assist Plan programmes.

**a. The Finance Commission Transfers.**

**i. The terms of reference.** Under Article 280 of the Constitution, the President appoints the Finance Commission every five years or earlier to make recommendations on:

- (i). the distribution between the Union and the States of the net proceeds of taxes which are to be or may be divided between them and the allocation between the States of the respective shares of such proceeds;
- (ii). the principles which should govern the grants-in-aid of the revenues of the States, out of the Consolidated Fund of India and the sums to be paid to the States which are in need of assistance by way of grants-in-aid of their revenues under Article 275 of the Constitution; and
- (iii). any other matter referred to the Commission by the President in the interest of sound finance.

Under sub-clause (iii) the Finance Commissions have been asked to examine and make recommendations on a number of issues such as,

- (a) the distribution of net proceeds from additional excise duties in lieu of sales tax on sugar, textiles and tobacco<sup>26</sup>
- (b) the grants to the States in lieu of the repealed tax on railway passenger fares.
- (c) the distribution of the net proceeds of estate duty on property other than agricultural land until the tax itself was repealed in 1986.

- (d) the grants to be made available to the States on account of abolition of wealth tax on agricultural property<sup>27</sup>.
- (e) the assessment of States' debt position or non-Plan capital gaps and providing relief or suggesting corrective measures.
- (f) the problem of unauthorised overdrafts of certain States with the Reserve Bank of India and the procedure to be observed for avoiding such overdrafts<sup>28</sup>.
- (g) reviewing the policy and arrangements in regard to financing of relief expenditures by the States affected by natural calamities and recommending appropriate measures.
- (h) the scope for raising revenue from taxes and duties mentioned in Article 269 of the Constitution which are not yet levied at the time and the scope for raising revenue from the duties mentioned in Article 268<sup>29</sup>

It has been pointed out that the provision of a Constitutional semi-judicial body to resolve the problem of fiscal imbalances in an objective manner is unparalleled in any federation (Lakdawala, 1967). By and large, the nine Finance Commissions which have made their recommendations hitherto have commanded widespread respect, and their important recommendations have been accepted by the government<sup>30</sup>. Yet, the working of these Commissions and the approach and methodology adopted by them in formulating their recommendations have come in for severe criticism. The main planks of criticism are (i) those relating to attempts to restrict the scope of the Finance Commissions through the Presidential terms of reference; (ii) those on the approach and methodology employed by the Commissions to base their recommendations.

ii. Restrictions on the scope of the Commission. It has been pointed out that through the Presidential order detailing the terms of reference, restrictions were sought to be placed on the Finance Commissions' role and independent thinking. More importantly, with emphasis on developmental planning gaining ground, the terms of reference restricted the Finance Commissions' role to the examination of the non-Plan revenue budgets of the States, particularly since the third Finance Commission (Chelliah, et.al., 1981, Gulati, 1973). Although the terms of reference of the Ninth Finance Commission did not impose any such restriction, the Commission could not completely break the shackles in view of the convention of assessing the non-Plan sides separately from the Plan side developed over the years. However, the Constitution does not place any such limitations on the scope of the Commission. In fact, the Chairman of the Fourth Finance Commission went so far as to state: "as the language of Article 275 stands, there is nothing to exclude from its purview, grants for meeting revenue expenditures on Plan schemes nor is there any explicit bar against grants for capital purposes"<sup>31</sup> Yet, the Commission did not do so "..... as it would-blur the entire division of functions between the (Finance) Commission and the Planning Commission"<sup>32</sup> and therefore took upon a role much narrower than the Constitutionally assigned one. In this sense, the hesitancy on the part of the Commissions is as much to blame as the terms of reference given to them (Rao, M.G., 1981).

Never before were the guidelines issued to the Commission through the terms of reference as controversial as those of the Ninth Finance Commission. It has been pointed out that the language suggesting the adoption of a normative approach was in the nature of a directive<sup>33</sup>. Besides, it has been argued that the terms of reference were discriminatory against the States (Vithal and Sastry, 1987)<sup>34</sup>.

**iii. Methodology – the “gap-filling” approach.** The approach and methodology employed by the Commissions to determine the shares of individual States in total transfers and the methodology adopted by them to assess revenue receipts of the Centre and the States which formed the basis of their recommendation, too have come in for very severe criticism. Basically, following the procedure adopted by the first Finance Commission, the succeeding Commissions adopted what has come to be called the “gap-filling” approach. Briefly, the Finance Commissions’ approach consisted of (i) the assessment of revenue receipts and revenue expenditures of the Centre and the States which involved the analysis of the budgets to put them on a comparable footing and projecting States own revenues and expenditures for the period of the award; (ii) recommending distribution of grants in lieu of the repealed tax on railway passenger fares, additional excise duties in lieu of sales tax on sugar, textiles and tobacco, estate duty on property other than agricultural land (abolished since 1987) and wealth tax on agricultural property (abolished since 1982); (iii) recommending distribution of the shareable taxes between the Centre and the States and among the States inter-se. The two shareable taxes are the non-corporate income tax and Union excise duties. In determining the States’ share in these taxes, the Commissions perhaps implicitly took into account the budgetary requirements of the States and the resource position of the Centre, though, the exact manner in which it was done was not spelt out by any of the Commissions; and (iv) recommending grants in aid of revenues to the States left with gaps in the revenue account after adjusting their estimated shares of assigned and shared taxes. In fact, subsequent to the third Finance Commission, even the assessment, as mentioned earlier, has been restricted to the non-Plan side of the States’ budgets. Before we go into the criticism of this gap-filling approach, it may be useful to review the issues relating to

the distribution of assigned taxes and shared taxes and grants-in-aid among the States.

**iv. Distribution of assigned taxes – important issues.**

Assigned taxes are those which are levied and collected by the Centre, and entirely passed on to the States. The additional excise duty in lieu of sales tax is an important example of this. Also, the Constitution empowers the Centre to levy tax on railway passenger fares and assign the revenue to the States but after the repeal of this tax, the Finance Commissions have been asked to recommend the grants-in-lieu thereof. Besides, the earlier Finance Commissions were also required in the terms of reference given to them to recommend the distribution of other taxes leviable under Article 269, such as, the estate duty on property other than agricultural land and wealth tax on agricultural property.

The levy of additional excise duty in lieu of sales tax is essentially in the nature of a tax rental arrangement. The States voluntarily surrendered the right to levy sales tax on the three groups of commodities in 1956, in return for which, the Centre agreed to levy additional excise duties, the proceeds of which are to be entirely passed on to the States. The Centre also guaranteed the sums of compensation for each State. Therefore, the basis of distribution has been, an estimate of the amount of revenue each State would have collected, had this tax rental arrangement not been in force. In the case of other taxes levied under Article 269, as the entire proceeds have to be transferred to the States, the Commission recognised that the principle for the distribution among the States should be origin or accrual. Accordingly, the proceeds of these taxes have been distributed to the States on the basis of the best available proxies of "accrual".

Two important issues with regard to these assigned taxes may be pointed out. First, the States have not been happy with the way the tax rental arrangement has worked. In particular, the reluctance of the Centre to raise the rates of additional excise duties, has been a matter

of dissatisfaction among the States. Even the commitments made by the Central Government in the National Development Council that the incidence of additional duties of excise would be raised to 10.8 per cent of the value of the goods cleared was not fulfilled, as even by the end of 1987-88, the ad-valorem incidence of additional excise duties was only 9.87 per cent, though by 1988-89, it came to 10.7 per cent which was close to the stipulated figure (India, 1988).

This reluctance or indifference on the part of the Centre has had important adverse implications for the economy. The most important adverse impact is that it has brought to nought, the easiest and the best method of extending tax harmonisation to more commodities in the Indian context. In fact, the recommendations of the Committee appointed to extend the scope of additional excise duties to more commodities (India, 1983) could not be implemented mainly due to the dissatisfaction of the States with the existing arrangement.

The second important issue concerning the assigned taxes relates to the States' complaint that the Central government has not adequately exploited the taxable bases under Article 269. In particular, there has been a demand to levy tax on newspaper advertisements and assign the proceeds to the States. The States have also suggested an amendment to the Constitution to widen the scope of the Article 269 (1) (f), to include advertisements, broadcast in radio and telecast by television. The Eighth Finance Commission (India, 1983) which went into the question of the scope of raising revenue from the items listed under Article 269, felt that the additional revenue implications from these taxes may not be significant. The Sarkaria Commission, however, has recommended the amendment of the Constitution to expand the scope of the Article 269 to include the tax on advertisements, broadcast or telecast.

v. Distribution of shared taxes. Shared taxes consist of non-corporate income tax and union excise duty. The net proceeds

from non-corporate income tax excluding revenue from certain items such as tax on Union emoluments, and surcharges are compulsorily shareable between the Centre and the States under Articles 270 and 271 of the Constitution. On the other hand, revenue from Union excise duties may be shared between the Centre and the States under Article 272 of the Constitution. The relative shares of the Centre and the individual States are determined by the Finance Commissions. The shares of the Centre and the States and the criteria adopted for distribution of both income tax and excise duty among the States are summarised in Annexure I and II. In what follows, we analyse the major issues relating to tax devolution.

An important feature of tax devolution recommended by the Finance Commissions has been that while the criteria adopted for distributing them are different from the principles adopted for giving grants-in-aid, nowhere is it made clear that the economic objectives of the two instruments are different (Rao, M.G, 1987). The tax devolution has been recommended mainly on the basis of general economic indicators whereas, grants-in-aid has been given to offset the residuary fiscal disadvantages of the States as quantified by the Commissions. Even in the case of tax devolution, the principles adopted for the distribution of the net proceeds from non-corporate income tax have been very different until the Seventh Commission from those employed for Union excise duties on the rationale that the former is compulsorily shareable and the latter is not.

The criteria adopted for the distribution of shared taxes have also been a matter of controversy<sup>35</sup>. The important issues discussed on the criteria for tax devolution are: (i) the relevance of the 'contribution' factor in distributing the share of income tax, (ii) the relevance of backwardness factor in tax devolution; and (iii) the appropriate indicator of backwardness to be employed for tax devolution.

Almost all the Commissions have assigned 10-20 per cent weight to the 'contribution' factor in distributing the proceeds from income tax though the rationale for doing so has not been adequately explained in terms of either economic or legal arguments. This has been done in spite of the Finance Commissions themselves asserting that there is no principle of compensation or reimbursement involved<sup>36</sup>. The rationale for assigning some weight to the contribution factor appears to be, "Receipts from devolution constitute a right. Its status is similar to the taxes levied and collected by the States". (Rao, V.K.R.V., 1973). The alternative view point, however, has been forcefully put forward by Rajkrishna, (India, 1979) in his minute of dissent to the Seventh Finance Commission wherein he has argued that there is no case for assigning any weight to the collection factor.

The second important issue on tax devolution relates to the use of backwardness indicator in the tax devolution formula. Here again, the view that tax devolution should be mainly made on the basis of population and that the backwardness factor should not be brought in as a criterion (Rao, V.K.R.V., 1973) is not shared by many. The predominant view is that, in view of the glaring disparities in the provision of public services among the States, use of population as the only basis is clearly inadequate (Hicks, U.K., 1961, Sastry, 1966, Lakdawala, 1967). After the Seventh Finance Commission significantly increased the role of tax devolution in the total statutory transfers by doubling the States' share of excise duties from 20 per cent to 40 per cent, and with mounting criticism on the lack of progressivity in transfers, the subsequent Commissions have assigned substantial weight to the backwardness indicators.

Another important issue concerns the appropriate indicator of backwardness to be used in the tax devolution formula. It has been stated that the criteria for backwardness to be used by the Finance Commission should be general rather than specific (Rao, V.K.R.V.,

1973). Thus, the composite index of backwardness used by the Fourth and the Fifth Finance Commissions ( which was estimated by assigning equal weights to some selected socio-economic variables), or the per capita SDP employed by the subsequent Commissions either in the 'inverse' or in the 'distance' form, did not invite much criticism<sup>37</sup>. However, the use of relative levels of poverty or poverty ratio in tax devolution formula employed by the Seventh Commission was severely criticised by Dandekar (1979) on the ground that the poverty line employed was not State-specific and the adjustment for consumer price differences took into account only the differential growth in prices and not differential price levels themselves. The use of poverty ratio in the first report of the Ninth Finance Commission came in for even more serious criticism. Bagchi (1988) considers the use of the poverty factor in tax devolution even conceptually incorrect<sup>38</sup>.

The distribution of tax shares among the States on the basis of various economic indicators by different Finance Commissions has led to each State arguing for the adoption of indicators advantageous to it. The lack of agreement in the factors to be employed even among the researchers on the subject, has not helped to settle the issue.

Before we close our discussion on tax devolution, it is important to highlight two important issues relevant to intergovernmental fiscal relations. The first is the amendment to the Income-tax Act in 1959, which introduced a separate tax on corporations. This led to exclusion of income tax on corporate entities from the divisible pool. This has continued to be a major cause of complaint among the States. The States have contended that the annual grants given to compensate the States for the loss of revenue arising from the exclusion of income tax on corporate entities during 1959 to 1962 was inadequate and, more importantly that the amendment meant the exclusion of a more buoyant source of revenue from the divisible pool. The latter contention implicitly assumes that with the inclusion of a more buoyant

source of revenue in the divisible pool, the Finance Commission would not have reduced the percentage shares of the divisible taxes going to the States.

The second important issue relates to the high proportion of non-corporate income tax and excise duty transferred to the States and its alleged incentive effects on Centre's effort in raising revenue from these divisible taxes. The Eighth and the Ninth Finance Commissions, for example, have recommended the transfer of 85 per cent of non-corporate income tax and 45 per cent of Union excise duty to the States. The consequence of this is alleged to be the lack of interest on the part of the Centre in revenue productivity of income tax and its resorting to frequent administered price increases instead of raising excise duties on the products of public monopolies to raise revenues. One solution to this is said to be broadening the divisible pool itself to include the proceeds from all Central taxes and sharing a fixed proportion of it with the States, but the Sarkaria Commission did not consider this suggestion favourably (India, 1988-2).

vi. Grants-in-aid of revenues to the States. Grants-in-aid of revenues have been traditionally recommended by the Finance Commissions for two distinct purposes: First, to fill the estimated post-devolution gaps in the non-Plan revenue accounts of the States and second, to enhance the levels of specified public services in the States where these services are deficient. The former is a general purpose transfer, whereas the latter is in the nature of a close-ended specific purpose non-matching grant. Thus, the grants given to the States under Article 275 were not designed to offset the fiscal disadvantages of the States per se but to help them to overcome their projected budgetary difficulties and to raise the levels of certain specified services to the 'bench mark' level. Even in the latter case, the design of the transfer schemes did not take into account the responsiveness of expenditures on aided functions to the specific purpose non-matching

transfers, nor did it ensure a suitable monitoring mechanism to make the grants effective.

vii. Evaluation of Finance Commission transfers. The gap-filling approach outlined above has been subject to severe criticism for four important reasons. First, none of the Finance Commissions assessed the overall resource position of the Centre and the proportion of the resources required to meet its commitments on any objective basis, although the terms of reference explicitly required them to do so. They merely made judgments about the shareable proportions of non-corporate income tax and Union excise duty ( Gulati, 1987, p.7). While, this criticism is too sweeping, it is a fact that the Commissions have found it difficult to evolve objective criteria for evaluating the Centre's needs. On the other hand, continuously raising the percentages of the yield of the taxes to be shared implicitly meant that the Centre had more resources than its needs warranted or that it was the Centre which should or could raise more resources.

Second, the transfers made by the Finance Commissions were not designed to meet the major objective of unconditional transfers, namely, offsetting fiscal disadvantages of the States. The tax devolutions were decided on different considerations from those of the grants in aid, and, even in the use of the former, the criteria used for distribution among the States of income tax were different from those of the excise duties, although since the Eighth Finance Commission they were substantially the same for the two shareable taxes. The earlier Commissions recommended tax devolution mainly on the basis of population but greater weight was assigned to the backwardness factor by the later Commissions. The tax devolution, which formed the predominant proportion of Finance Commission transfers, is made on the basis of general economic indicators and is not geared to offset fiscal disadvantages of the States as such.

Third, the use of grants-in-aid given mainly to fill the projected budgetary gaps of the States after tax devolution, has been criticised virtually by every study on the subject. First, it is pointed out that such an approach has implicit in it a strong disincentive to tax effort and to economy in expenditure (Lakdawala, 1967, Sastry, 1966, Gulati, 1973, Chelliah et.al, 1981). Second, this methodology does not enable the States with lower resource bases to provide reasonable standards of services as the emphasis would be on meeting budgetary gaps arising from the existing relatively low levels of services in these States (Grewal, 1975). Third, as grants-in-aid were taken to be a residuary form of assistance, the methodology of scrutinising the budgets had relevance only to the States with post-devolution gaps in their non-Plan revenue accounts (Chelliah, et.al., 1981).

It has been argued that the overall effect of the approach adopted by the Commission is to render the scheme of transfers inequitable (Gulati and George, 1978). This is because, in the distribution of shareable taxes, predominant weight is assigned to the population factor either explicitly or implicitly in scaling other variables (Datta, 1979). And given that budgetary needs formed the basis of determining the grants-in-aid, the low expenditure levels of many of the poorer States could not qualify them to receive grants-in-aid under Article 275.

The more recent Finance Commissions have modified the above approach and methodology in response to the criticism in three important ways. First, they introduced norms selectively by targeting the rates of growth of revenues and expenditures, assuming certain rates of interest and dividends on the loans given and investments made by the governments (Sarma and Kalyani, 1987). Second, tax devolution was enhanced substantially so that very few States were left with gaps after tax devolution. This was done particularly by the Seventh Finance Commission by doubling the proportion of excise duty shares

of the States from 20 per cent to 40 per cent. As a consequence, virtually all major States except Orissa, and in some years West Bengal and Rajasthan, were left with surpluses in their non-Plan revenue accounts after tax devolution. As the States' shares of divisible taxes were enhanced, significantly larger weight was assigned to the backwardness criterion to make the transfers more progressive. In the event, as already mentioned, the transfers came to be related largely to general economic indicators of backwardness and population and not specifically to fiscal disadvantages of the States. Further, the assessment of receipts and expenditures in respect of the States with post-devolution surpluses had no bearing on the transfers received and as most of the major States had surpluses, the elaborate exercise of making assessment was largely irrelevant. Besides, the disincentive effects on tax effort and expenditure economy continued and as the States were left with significant variations in per capita surpluses in their non-Plan revenue accounts after tax devolution, the resources available for the Plans varied substantially leading to an inequitable growth pattern. The third important change the more recent Commissions brought about was to recommend upgradation grants to equalise standards of some specific services. Although the first Finance Commission (India, 1952) made such a grant to equalise primary educational levels and the third Finance Commission, for improvement in Communications (India, 1959), sizeable amounts of upgradation grants were given only since the sixth Finance Commission's award (1973). This has been argued as a way of making the transfer schemes more progressive (Gulati, 1978). But the objective of specific purpose transfers has to be to raise the levels of services in all the States to the normative levels and not 'equity' per se. However, none of the Finance Commissions paid adequate attention to the proper designing of the specific purpose transfers in order to achieve the objective of raising the services in the States to the required normative levels, nor did they examine the

suitability of non-matching transfers recommended by the Finance Commissions to undertake such a task (Rao and Aggarwal V., 1990). In the light of the above, the attempt by the Ninth Finance Commission to link the transfers to fiscal disadvantages more closely is noteworthy. This will be discussed in greater detail later.

**viii. Measurement of fiscal disadvantages of the States: studies in taxable capacities and effort.** If it is accepted that federal transfers are meant to offset fiscal disadvantages of the States, measurement of these disadvantages is unavoidable. The measurement of fiscal disadvantages involves estimation of the 'need-revenue' gap of the States. In fact, this was intended in the approach broadly outlined by the First Finance Commission itself. However, neither the first nor the subsequent Commissions, until the ninth could follow the approach "owing to inherent difficulties of the task, absence of a permanent secretariat and the short time in which each Finance Commission has to submit its report" (Lakdawala, 1984). It may also be mentioned that the absence of worthwhile work in estimating the fiscal disadvantages of the States even in academic literature is a major shortcoming inhibiting the adoption of a more scientific approach to federal transfers by the Finance Commissions.

In fact, there are very few studies providing a satisfactory workable normative framework of designing federal transfers. Of these, Bhargava's study (1956) is the earliest and it attempted to relate federal transfers to fiscal 'capacities' and 'needs'. He, in fact, suggested the adoption of an approach analogous to that of the Commonwealth Grants Commission. More recently, Grewal, (1975) has presented a framework of giving equalisation grants to cover the difference between expenditure needs (warranted expenditures) and revenue capacity (standard tax rate applied on the actual base). But the conceptual issues and empirical problems of measuring them were not gone into by him (Bagchi, 1977). This approach, although it has

proved extremely useful to the Australian Federation, cannot be readily applied to the Indian context in view of larger number of States, lower level of development and more acute inter-regional disparities in development. Nanjundappa (1974) attempts to estimate a composite index of development of States which is argued as the appropriate basis for making transfers. He constructs the index on the basis of eight development indicators and assigns weights exogenously on the basis of some judgments. Hemalata Rao (1981) attempts to link federal transfers to an eligibility index constructed on the basis of the first principal components of original sets of variables representing index of development, index of fiscal potential and index of relative tax effort. However, this too is not satisfactory analytically, for, it does not estimate fiscal disadvantages of the states as such. Besides, the method of principal components analysis employed in the study assigns weights to different factors mechanically on the basis of their inter-correlations. Arbitrariness is also involved in the selection of variables. Gupta (1978) suggests that Finance Commission transfers should be linked to the excess of States' non-Plan revenue expenditure needs over their fiscal capacities. However, the difficulties of empirically measuring these concepts have not been gone into. Also, his framework is partial in the sense that it ignores the Plan requirements of the States altogether.

To design general purpose transfers to offset fiscal disadvantages of the States, it is necessary to conceptualise and measure 'revenue capacities' and 'expenditure needs' of the States. 'Revenue Capacity' consists of taxable capacity and 'non-tax revenue capacity'. On the measurement of taxable capacity and its variant tax efforts of the States, however, some studies are available<sup>39</sup>. The pioneering attempt of Sastry (1965) estimated tax effort as  $(e.Y_i/Y)^2$  wherein 'e' represents all States' average tax - State domestic product (SDP) ratio,  $Y_i/Y$  denotes the ratio of per capita SDP of the *i*th State to all the States'

average per capita GDP. This measure, though operationally simple, is not scientific enough as (i) it assumes that tax potential is determined only by per capita GDP and (ii) it takes an arbitrary exponential value of 2, thereby assuming that the tax potential increases by the square of the ratio between the per capita GDP of the State and all State average per capita GDP. Other studies on tax efforts of the State either followed the 'aggregate regression' (AR) approach or the 'representative tax system' (RTS) approach. According to the AR approach, the residual variance in tax-income ratio not explained by taxable capacity variables is attributed to variance in tax effort (Bahl, 1971). Most of the studies in the Indian context, however, do not distinguish between taxable capacity and tax effort factors.<sup>40</sup> The major problem in estimating taxable capacity under this method, however, is the difficulty in segregating tax effort factors from the stochastic error term. Some attempts have been made to overcome this problem by endogenising the tax effort variables in a covariance model using pooled cross-section and time series observations.<sup>41</sup>

The studies employing the RTS approach estimate taxable capacity for each of the taxes levied by the States. Originally used by Advisory Commission on Intergovernmental Relations in the United States of America (ACIR, 1962), taxable capacity for each of the taxes is estimated by multiplying all States' effective average tax rate on the tax base of the individual States. By adding up the capacities from individual taxes, aggregate taxable capacity is obtained. In the Indian context the important studies following this method are by Chelliah and Sinha (1982), Thimmaiah (1979), Bansal (1988) and Sen and Tulasidhar (1989). However, the complicated structure of State taxes, their wide variations across the States, non-availability of data on tax bases and their proxies at the required level of disaggregation and the problem of inter-State tax exportation

pose severe difficulties in the measurement of taxable capacities and efforts of the States using this approach.

A major shortcoming of these studies arises from the fact that in an environment of general undertaxation, the concept of relative taxable capacity and the adoption of the average tax rate or average technical relationship between tax revenues and economic factors may not provide useful policy parameters (Bajaj and Viswanathan, 1989, Viswanathan, 1990). However, the issue of general level of undertaxation or overtaxation takes us into the realm of measuring absolute taxable capacity, objective estimation of which is virtually impossible. Perhaps, the solution lies in supplementing the estimates of relative taxable capacity with some estimates or judgments of the known sources of underexploitation<sup>42</sup>. Moreover, for ensuring inter-State equity in federal transfers, it is the relative deficiency in revenue capacity that is relevant. Absolute tax effort becomes relevant when considering the needed magnitude of federal transfers.

While at least some attempt at measuring taxable capacity and tax efforts of the States, however imperfect, are available, no successful attempt at estimating expenditure needs has been made till recently. Measuring expenditure needs of the States involves estimation of the levels of public services provided and the unit cost of providing them at a standard level of productivity<sup>43</sup>.

**ix. The award of the Ninth Commission.** Considering the limitations placed on the earlier Commissions, the terms of reference given to the Ninth Finance Commission are significant in two important respects: (i) The Commission was asked to adopt a 'normative' approach, and (ii) assessment was to be made of the receipts and expenditures on the revenue accounts of the States and the Centre, without making a distinction between Plan and non-Plan sides.

For developing a framework of transfers not involving disincentive on resource mobilisation and economy in spending, the Commission had

two alternatives before it: First, after deciding on the amount of transfers to be made to the States, distribute them on the basis of some general economic indicators of backwardness. However, the transfers thus designed would not offset the fiscal disadvantages of the States per se.

The report of the Ninth Finance Commission is noteworthy for the important reason that an attempt has been made to link transfers to the States' 'fiscal capacities' and 'needs'. This required the Commission to estimate for the first time 'capacities' and 'needs' of the States. However, problems arising on account of the predominance of tax devolution in the overall transfer scheme and adoption of general economic backwardness criteria for the distribution of shared taxes still persist. There is also the view that the compartmentalised assessment of the plan and non-plan expenditure needs of the States by the Ninth Commission is unsatisfactory (Rao, M.G., 1990). Another view is that this is unavoidable so long as the Planning Commission is expected to exist as a meaningful entity.

**b. Plan Transfers.** Plan transfers from the Centre consist of grants and loans given to the States. In earlier years, these were distributed largely on a schematic basis wherein both the quantum of transfer and its loan-grant components were largely discretionary<sup>44</sup>. However, since 1969, the assistance is allocated on the basis of a modified version of the "Gadgil formula" approved by the National Development Council in October, 1990. According to the procedure prevailing at present, after earmarking the assistance for the special category States, the resources available for distribution are allocated to the major States with weights assigned to various factors and categorisation. 55 per cent to population, 25 per cent on the basis of per capita SDP; 5 per cent to fiscal management and the remaining 15 per cent to the special problems of the States. Of the 25 per cent weight assigned to per capita SDP, the major portion of the funds, 20 per cent is allocated only to the States with less than average per capita SDP on the basis of the inverse formula; remaining 5 per cent of the funds is assigned to all the States according to the Distance

formula. For the major States, the assistance is given by way of grants and loans in the ratio of 30:70, whereas, for the special category States the ratio is 90:10<sup>45</sup>. Thus, transfers given to the States for plan purposes as also its grant-loan components are determined independently of the "needed" plan developmental outlays, their sectoral composition or the resources available with different States or their performance or their relative capacities.

c. **Other Transfers.** Other transfers from the Centre to the States consist of (i) schematic transfers under Centrally Sponsored Schemes and externally aided projects (ii) allocation of institutional finances from Life Insurance Corporation, General Insurance Corporation and Unit Trust of India to the States for financing socially desirable projects (iii) small savings loans (iv) assistance for meeting relief expenditure to the States affected by natural calamities (v) other miscellaneous loans and grants including grants to scheduled areas under Article 275 (1), and grants from the Central Road Fund given for the maintenance of national highways and special accommodation loans. These are termed as discretionary transfers (Grewal, 1975; George, 1986, Nanjundappa and Rao, 1973).

Of the various forms of discretionary assistance, schematic transfers made for the Centrally Sponsored Schemes have attracted the sharpest criticism. It has been pointed out that these schemes have grown both in volume and in number over the years in spite of States' objection to their proliferation and the decision of the National Development Council (NDC) in 1979 to roll them back to the level of 1/6th of Central assistance for States' Plans. Besides the discretionary element implicit in these transfers, it is pointed out that the conditionality imposed by the Centre including those on staffing pattern tend to distort States' own priorities and programmes. Therefore, the NDC, after considering the Ramamurty Committee Report in November, 1985, set up another Committee headed by the Union Minister of Human Resources Development to go into this matter. This committee, in turn, appointed a group of officials, which

although recommended some scaling down of Centrally sponsored schemes, in fact, favoured the retention of many of the major schemes.

The basic issue however is, what is the role of specific purpose transfers in the Indian federation and how should they be designed? As pointed out in the earlier sections, the objective of specific purpose transfers is to 'ensure' the provision of optimum levels of specified services which are not achieved due to the existence of spillovers, or to ensure certain minimum levels of certain services for 'merit' goods reasons. The matching transfers, thus given, affect States' own priorities when donor's objective does not coincide with those of the recipients'. Yet, it is necessary to carefully select the schemes for which specific purpose transfers should be made and design the transfer schemes properly to obtain the desired results. This has not been done in India.

Another important issue that needs to be discussed is - the allocation of institutional finance from Life Insurance Corporation, General Insurance Corporation and the Unit Trust of India to different States by the Planning Commission to finance socially desirable projects. The net investible funds available with these financial institutions are first invested in long-dated government securities according to statutory requirement. Of the remaining, a part is set apart and deposited with the Central government for investment in socially desirable activities such as housing, sanitation, sewerage, water supply, road transport and State electricity boards and the balance is invested in the securities of the private sector. The amount deposited with the Central government is allocated to the States by the Planning Commission, on the basis of a formula wherein, - a major portion is given so as to have a marginal step up over the assistance given in the previous year and the balance is distributed so as to give larger shares to the poorer States.

**d. Some General Comments on Inter-Governmental Transfers in India.** On the whole, it is felt that the design and implementation of intergovernmental transfer schemes suffer from a number of

important weaknesses rendering the achievement of their objectives extremely difficult. First, it is pointed out that multiple agencies transferring Central resources with overlapping roles result in wasteful duplication in functioning (Lakdawala, 1967, Chelliah, 1983). The compartmentalised role of Planning and Finance Commissions to assess what is essentially an interdependent, and many a time, artificially distinguished, Plan and non-Plan needs of the States have posed severe difficulties in the clear pursuit of the objectives of these transfers.

Second, the designing of both general purpose and specific purpose transfers by the Finance and Planning Commissions has left much to be desired. In the case of statutory general purpose transfers, the increased role of tax devolution vis-a-vis grants-in-aid and substantial implicit and explicit weight assigned to the population factor have resulted in varying levels of non-Plan surpluses, thereby constraining the pursuit of the objective of balanced regional development. Again, the tendency has been to tailor the transfers largely on the basis of certain general indicators of backwardness of the States rather than designing them to offset their fiscal disadvantages arising from the shortfall in revenue raising capacity and higher cost disabilities in the provision of public services due to factors beyond the States' control (Rao, M.G. and Aggarwal, V., 1990). The general purpose transfers given by the Planning Commission, on the other hand, is totally independent of the planning process as it does not take into account either the States' normative plan outlays or the resources available with them. In fact, the absence of a clear framework for distributing unconditional transfers to the States is a major weakness in the Indian federation. In the case of specific purpose transfers too, the designing of the schemes in terms of the services chosen for equalisation, its grant-loan components of assistance and matching ratio of the donor and the recipient appear to be ad-hoc. In fact, no worthwhile analytical work is available in this area estimating income and price elasticities

of demand for important public services to help in designing the schemes better.

Third, inadequate conceptual framework and improper designing of the general purpose and specific purpose transfers seem to have adversely affected the incentives on revenue and expenditure decisions of the States. These also have led the States to provide different sets of estimates to the Planning and Finance Commissions - overestimating the resources to get larger Plans approved in the case of the former and under-estimating the resources to obtain large transfers in the case of the latter (Lakdawala, 1967, Grewal, 1975)

### 5. The Problem of States' Indebtedness

The discussion on Indian fiscal federalism is incomplete without a reference to the important problem of mounting indebtedness of the States. The two main sources of States' indebtedness which deserve more detailed discussion are: (i) the market borrowing; and (ii) the Central loans to the States.

According to Article 292 of the Constitution, if a State is indebted to the Centre, it can borrow from the market only after obtaining the latter's approval. As all the States are indebted to the Centre, the market loans are allocated by the Centre to each of the States, in consultation with the Reserve Bank of India. The principles of allocations are not made explicit anywhere. The procedure adopted appears to be largely based on historical factors as every year, each State is allocated a volume of market loan which is higher than the States' repayment liability by a broadly predetermined margin. Thus, as the repayments of old loans are made by incurring new loans, the growth of market loans has gained a momentum of its own. In recent years, a small portion of the market loans apportioned to the States is distributed to the less developed States so that the margins available with them for spending

after meeting repayment liability is higher than those of the advanced States.

Borrowing from the Centre forms a predominant proportion of State loans and the largest component of Central loans to the States is the loan given for Plan purposes (Thimmaiah, 1977)<sup>46</sup>. As mentioned earlier, until 1969, the Plan assistance was largely schematic and discretionary. After the introduction of the Gadgil formula in 1969, for all the major States, 70 per cent of Plan assistance is given in the form of loans irrespective of the current- capital content of the Plan outlay undertaken by them. As Plan outlay and Central assistance have increased over the years, the outstanding Central loans to the States have also shown phenomenal increases.

Thus, the growth of both market loans and borrowings from the Central government have acquired their own momentum. These and the increases in the rates of interest have caused considerable financial strain in terms of debt servicing liability to the States. Again, with the spending of a significant portion of these borrowed funds on non-revenue yielding activities and with inadequate revenue realisation even from their commercial ventures, the States have not been able to make adequate provision for amortisation of loans and therefore, fresh loans are used to repay the old loans. Consequently, in spite of significant increases in gross loans, the net resources available to the States have shown a decline.

A major outcome of the above is the emergence of very high levels of non-Plan capital gaps in the States. In order that such States may have resources to formulate a reasonable Plan size, the Finance Commissions have been asked from time to time to assess their non-Plan capital gaps and recommend some debt relief to them. Although the Sixth, the Seventh and the Eighth Finance Commissions provided significant debt relief to the States by writing off or rescheduling the loans and revising the rate of interest thereon, the problem has continued to persist and in fact, on the eve of every successive Plan, has grown larger.

The debt relief given through the awards of Finance Commissions, though providing temporary succour, does not provide any permanent solution to the problem. Again, such reliefs are not costless - it only transfers the burden of the loan from the residents of State receiving the relief to the national citizens. From the point of view of neutrality, therefore, the effective average cost of States' borrowing from the Centre should equal the average cost of Centre's own borrowing.

The issue is not merely one of inter-State equity. The availability of resources for future investments crucially depends on the productive use of the borrowed funds, be it by the Centre or by the States. Only through prudent fiscal management, adequate provision for amortisation can be made to liquidate the past loans. From this point of view, the term of reference given to the Ninth Finance Commission to ".....make an assessment of the debt position of the States.....and suggest such corrective measures .....keeping in view the financial requirements of the Centre" assumes immense significance.

The Ninth Finance Commission, in keeping with the changed term of reference has adopted a different approach to the problem of States' indebtedness to the Centre. The Commission, in principle felt that rescheduling or writing off of loans is undesirable, but suggested changes in the terms and conditions of loans to States. Considering that the Centre now floats market loans of 20 year maturity, the Commission recommended that Central loan to States from 1990-91 should have a maturity period of 20 years. It also suggested that 50 per cent of these loans should be granted a five year initial grace period after which, repayments should be spread over 15 years. In order to reduce the States' dependence on the Centre, the Commission recommended the transfer of a portion ( 20 per cent) of Central assistance to the States to be raised from the market in future so that the grant and loan components of plan assistance are equal. As the terms of the existing loans are more stringent, the Commission granted some relief to the States by rescheduling their loans. The repay-

ment of Central loans to States incurred during 1984-90, falling due in 1990-95 were reduced by 10 per cent, 7.5 per cent and five per cent in respect of the States where the investments in the transport and the power sectors yielded gross returns of more than 15 per cent, 10 to 15 per cent and less than 10 per cents respectively.

These corrective measures may indeed help to restore some financial discipline, but still fall short of providing remedy to the capital account problem of the States. Reduction in the dependence on the Centre and increased market borrowing by itself would not reduce the burden of the States or decelerate the growth of States' indebtedness. Long term remedial measure surely lies in prudent fiscal management and adequate provision of amortisation charges from revenue surpluses of the States. This calls for more research in the area of sustainability of debt at State levels, appropriate strategy for creating revenue surpluses to make adequate amortisation payments, comparison of States' borrowing cost from the Centre with the latter's own borrowing costs, pattern of utilisation of borrowed funds and appropriate pricing policies to generate the required returns from investments.

Another important issue that deserves some discussion is the assistance given to the States for their externally aided projects. External agencies generally assist to the extent of only 50 to 60 per cent of the project costs and of this assistance, only 70 per cent is passed on to the States, leaving the States to finance about 58 to 65 per cent of the project cost. The entire assistance is not passed on to finance the project mainly in order to ensure inter-State equity. A number of States can not formulate bankable projects qualifying for external assistance either because they are not allowed to do so for security reasons, or they do not have projects in respect of activities for which financing is available. Besides, many of the more prosperous States are able to obtain greater amount of external assistance due to their absolute advantage in project formulation and internal resource availability. The 30 per cent assistance retained is

actually pooled with Plan assistance distributed according to the Gadgil formula. Some of the States have in recent years, argued for the passing on of the entire amount of assistance to the States. Accordingly, since 1989-90, the assistance given to socially oriented projects has been entirely passed on to the States. In fact, the Ninth Finance Commission (India, 1990) has recommended that the entire project assistance should be passed on to the States in all cases. This has been recommended keeping in view the more even spread of externally aided projects among the States. It would be interesting to analyse the inter-State equity implications of this proposal.

#### **6. The Relative Roles of Planning and Finance Commissions and the Need for Institutional Reform.**

Accommodating the planning dimension in Indian fiscal federalism has brought to the fore a number of important issues. The difficulties of achieving the objectives of intergovernmental transfers due to dichotomous functioning, sometimes at cross purposes, have already been highlighted (Rao and Aggarwal V., 1990). The inefficiencies arising on account of overlapping and duplication in the functioning of the two Commissions have also been pointed out. Equally important is the concern expressed about relegating a statutory body - the Finance Commission - to a much diminished role vis-a-vis what is envisaged in the Constitution and the emergence of a political body - the Planning Commission as an important dispenser of funds and more importantly, as also about the increasing importance of discretionary element in federal transfers. It has also been pointed out that the 'capital account' problem of the States highlighted above is itself, a 'fall out' of the planning process (Thimmaiah, 1977). The dichotomous functioning of multiple agencies has been cited as one of the important reasons for the inability of evolving a rational criteria for intergovernmental trans-

fers. In view of this, it is strongly felt in some quarters that there is the imperative need for institutional reform.

Analysts on Indian federal finance, have from time to time, suggested a number of proposals for reforming the institutional arrangements. Khatkate and Bhatt (1970), almost twenty years ago suggested a complete reclassification of the assistance and reorganisation of the institutions consistent with it. According to them, the then existing statutory grants and assistance given to agricultural programmes were to be grouped as non-discretionary grants to be dispensed by a modified permanent Finance Commission. The Centrally Sponsored Schemes were to be continued and assistance was to be given on schematic basis and the criterion for determining the nature and number of schemes were to be indicated by the Planning Commission and finally, the assistance to the States for financing projects in power, transport, irrigation and manufacturing sectors were to be disbursed entirely by way of loans by the proposed National Development Bank which was to ensure also its effective and efficient utilisation. A similar suggestion was put forward also by Lakdawala (1967). A suggestion for making the Finance Commission a permanent body was made even earlier by Bhargava (1956) and later reiterated in the studies of Sastry (1966) and Eapen (1969). On the contrary, according to Thimmaiah (1978) the case for a permanent Finance Commission is not strong if a cell is established to conduct continuous studies on federal finance in the Planning Commission. There has also been a suggestion that all current transfers should be effected through a permanent finance Commission and all capital transfers should be devolved through the Planning Commission (Grewal, 1975 and Bagchi, 1977). V.K.R.V. Rao (1973) on the other hand, has argued for placing both the Planning and Finance Commissions on a firm statutory footing with a clear division of functions and the establishment of a National Loans Organisation on the lines of the Australian Loan Council to effectively administer market borrowing and Central loans to States.

Thimmaiah (1976), on the contrary argues that the case for such an institution is weak in view of the institutional differences prevailing between the two federations.

In spite of the detailed discussion, a consensus on the issue of rationally reorganising the institutions has continued to be elusive and so are the institutional reforms to make the transfer schemes purposive and well administered.

### **7. Effect of Federal Transfers**

We have mentioned earlier that the objectives of federal transfers are (i) to put the fiscal position of Centre and States on an even keel in relation to their expenditure commitments (vertical balance); (ii) to enable the States to provide a normative level of public services by making up for shortfall in their fiscal capacity and cost disabilities in providing public services on account of factors beyond their control; and (iii) to ensure minimum levels in respect of selected public services considered meritorious or those having a high degree of spillovers. It is important to analyse how far the various transfer schemes do help in achieving these intended objectives. Also, it is possible that the various transfer mechanisms may also have certain unintended economic effects on allocative efficiency and equity. The analysis of the economic effects of various types of transfers, therefore, is extremely important, both for designing proper transfer mechanisms and for evaluating their efficacy.

In spite of the importance of these matters, there are very few analytical and quantitative studies on the effects of federal transfers in India. However, many have asserted that the gap-filling role adopted by the Finance Commissions has tended to encourage laxity in revenue effort and uneconomic spending. Uneconomic spending could arise due to both higher expenditure on providing the public services in respect of cost factors within the control of the States and higher levels of public service

provision itself. States' preferences to take on some pet schemes, the cost of which can be spilled over to the residents of other States in the gap-filling approach adopted by the Finance Commissions is also mentioned in this context (Chanda, 1965 and Lakdawala, 1967). Transfers made for State Plan purposes too are not expected to have significant stimulating effect, for, before the Gadgil formula was modified in October, 1990, tax effort was given only ten per cent weight and after modification this has given place to 5 per cent weight to "fiscal management". Even the measure of tax effort used by the Commission, the tax-SDP ratio was not really scientific. Nor is it clear how fiscal management would be operationalised. On the contrary, it has been hypothesised that discretionary transfers made for Centrally Sponsored Schemes have been enhancing expenditures on the aided functions, largely by the States re-allocating their expenditures rather than by raising more revenue. It is also pointed out that this tends to distort States' own spending priorities.

While there are several qualitative assertions on the subject, hardly any quantitative study providing reliable estimates of the effects of different types of federal transfers on States' expenditures is available. The studies by Reddy (1976), and V.G. Rao (1985), like most other determinants' studies merely examine the effect of various economic factors on expenditure variations across the States. The models are essentially ad-hoc, the selection of variables not well reasoned out, and in the case of some variables, two-way causation appears to be obvious. Bahl and Pillai (1976) estimate the allocative effects of intergovernmental flows by types of federal transfers, namely, shared taxes, statutory and non-statutory grants and loans on various expenditure disaggregates classified into developmental and non-developmental expenditures. Essentially, they employ a two-stage factor regression model wherein, the eight original variables are converted into three orthogonally rotated factors. These, along with predicted values of federal aid variables are regressed on expenditures. As no significant relationship between States'

per capita expenditures and statutory grants and loans is observed, they conclude, "There is no evidence of a substitutive effect...". Moreover, the lack of statistical relationship between statutory transfers and expenditures is inferred to reject the hypothesis that the States tend to indulge in fiscal irresponsibility arising from the particular methodology adopted by the Finance Commissions. There are, however, several problems with this study. First, disbursement of statutory and non-statutory transfers is made to meet non-Plan and Plan expenditure needs whereas, the responsiveness of federal transfers is measured on developmental and non-developmental expenditures. Second, the lack of significant relationship between statutory grants and loans with States' expenditures cannot be interpreted to refute fiscal irresponsibility hypothesis, for, to an extent, these transfers in any case are substituted for own revenues. Nor is the stimulative effect observed for shared taxes explained satisfactorily.

Absence of analytically sound quantitative studies on States' expenditure behaviour and on the effects of different types of intergovernmental transfers on States' expenditures is truly an important shortcoming in the literature on Indian fiscal federalism. Modelling the States' expenditure behaviour and obtaining quantitative estimates of the effects of different types of federal transfers on State expenditures, the policy responses to shared taxes, block transfers and specific purpose non-matching as well as matching transfers are all essential in order that the federal transfer policy may be appropriately designed to achieve the desired results.

The studies dealing with the effects of federal transfers in India have been mainly concerned about their equity implications. The study of Gulati and George (1978), groups the States into three categories: high income, middle income and low income, on the basis of their average per capita incomes computed at national prices for the period 1966-69. Per capita federal transfers during different Plan periods and their indices for each State as well as for each group, during different Plan periods are then computed. Their results show that the highest transfers were

received by the middle income and not the low income States. From this, it is argued that federal transfers in India have exhibited a regressive bias. The later studies by Gulati and George (1985) and George (1988) are further attempts using broadly the same methodology at substantiating this finding by including transfers by institutional financing agencies in addition to intergovernmental transfers<sup>47</sup>.

A common criticism that can be levelled against these studies is the lack of a satisfactory conceptual framework behind such analysis. If the objective of transfers is to offset fiscal disadvantages, relationship with per capita incomes is relevant only to the extent that this is one of the factors determining States' fiscal capacity. Examining this relationship is, at best, a crude and an indirect method of examining whether the transfers have indeed been made to equalise fiscal capacity. Even so, as capacity is not directly estimated, it is not possible to specify the hypothesised relationship between per capita transfer and per capita incomes. In other words, the analysis does not indicate the required degree of progressivity of federal transfers against which actual distribution can be judged (Lakdawala, 1989). Secondly, as far as Gulati-George studies are concerned, it is not clear why every kind of transfers should be progressive. The transfers given to meet relief expenditure in States affected by natural calamities should be related to the intensity of natural calamities faced by them and not to their income levels. Similarly, if the objective of specific purpose transfers is to ensure the provision of public services at a bench mark level, the evaluation should be done against this objective rather than by relating transfers with income levels. In other words, any evaluation of federal transfers should be done in the light of the specific objectives of the different types of transfers rather than by merely examining their overall relationship with per capita incomes, that too, taking only at a single time period.

#### **IV. AGENDA FOR FUTURE RESEARCH**

In the foregoing, we have noted the major problems faced in Indian fiscal federalism, highlighted important contributions on the analysis of Indian federal fiscal problems and identified the areas deserving more detailed analysis. In this section, the important issues requiring further research are highlighted.

Any analytical study on Indian fiscal federalism would have to base itself on an appropriate/conceptual framework. This framework would have to recognise and take into account the specific conditions prevailing in the country. Low levels of income, wide inter-regional disparities in the levels of living of the people and the more active State participation in economic activities call for a different analytical framework, where, the scope of the allocation function of the government is much larger in the shape of development planning than in the more developed countries. The incorporation of the planning dimension in a decentralised set up creates additional complications and contradictions and this has to be taken into account in any framework adopted to analyse Indian fiscal federalism.

We have already reviewed a number of studies making assertions on the virtues of decentralisation while criticising the centripetal bias in the functioning of Indian fiscal federalism. However, there have not been any studies attempting to measure the net gains from decentralisation or trying to quantify the net losses on account of centralisation. Mitra's (1987) assertion that centralisation has had adverse effects on economic growth and equity in the Indian federation provides, at best, a working hypothesis for future studies. At the theoretical level, more such working hypotheses have to be formu-

lated. The implications of centralisation and decentralisation under alternative assumptions of the government behaviour would be useful in forging a better understanding of the political economy of Indian federation. At the empirical level, more studies on the trends in centralisation and quantification of the gains from decentralisation would be helpful in any attempt at redesigning the functions. This requires the estimation of scale economies through properly specified cost functions of various public services and the analysis of the diversity in demand conditions and estimation of income and price elasticities of demand for public services.

As mentioned in the earlier sections, there are virtually no worthwhile studies on the economics of State-Local fiscal relations in India. The important aspects that require detailed attention of the researchers are, the evolution of an appropriate analytical framework for the distribution of functions and sources of finance between the two levels of the government, factors inhibiting the autonomous functioning of the local bodies which would enable them to provide public services according to the diversified preference patterns, objective methods of making transfers to local bodies for both general and for specific purposes and their appropriate design, effects of intergovernmental transfers in terms of stimulating or substituting local expenditures, problems arising from the interaction of rural-urban local bodies, issues of tax harmonisation between the State and local areas and evolving an appropriate institutional framework for conducting State-Local relations.

The most important shortcoming in the literature that prevails presently is the lack of a comprehensive analytical framework for designing Central transfers to the States. In future, any study to be usual, would have to consider introducing such a framework. The framework thus evolved would have to include the planning dimension and would have to recognise the various channels of financial flows between the Centre and the States and among the States inter se

through the banking system and the institutional financial agencies. The framework would also have to assign clearly defined roles to the Planning Commission and the Finance Commissions and should have a clear specification of the objective functions of the two institutions. The clearly defined objective functions would then help determine the roles of general purpose and specific purpose transfers on the one hand and grants and tax shares on the other. As we saw, the tax share are now not related to fiscal needs or fiscal disadvantages. One major question to be decided is whether the existing basis should be changed so that all general purpose transfers would be related to fiscal disadvantages. Additionally, there must be found a way to incorporate the planning dimension in the general framework of transfers.

One of the important prerequisites of linking general purpose transfers to fiscal disadvantages of the States is the empirical estimation of the fiscal disadvantage itself. Methods of estimating fiscal capacities, in spite of a number of studies that have been done so far have remained imperfect. Some of the peculiar problems that are faced in the estimation of taxable capacity are, non-uniform allocation of the tax powers to the local bodies in different States, tendency of the States to export the tax burden to the residents of other States and the non-availability of data on tax bases at the required level of disaggregation. Continuous effort would have to be made in improving both the data base and information system as well as the methodology of estimating taxable capacity and effort of the States. On the non-tax revenue front, there are virtually no analytical studies available determining appropriate user charges for various services rendered. Some of the important undertakings such as electricity boards and road transport corporations would have to be subjected to much more detailed analysis before appropriate norms on the rates of return are stipulated. Adopting a uniform norm irrespective of the hydro-thermal mix in the generation of electricity and applying a single

rate of return for road transport corporations without considering the peculiar problems prevailing in different States as has been done by the Finance Commissions is not very scientific. Detailed studies of various taxes in individual States over a time period would also be useful in order to help in understanding the determinants of tax revenues in the States better and could be extremely helpful both in developing an appropriate forecasting method and in the development of norms for the purpose of the Finance Commissions. Detailed periodic studies of individual Central taxes with a view to making judgments about the revenue potential of these taxes and identifying the ways and means to improve revenue productivity would also be needed to determine the extent of Central transfers. Also, the studies estimating revenue potential of tax bases listed under Articles 268 and 269 would be helpful in determining their feasibility.

In contrast to the analysis on fiscal capacity, as mentioned already, there are hardly any studies on estimating expenditure needs and cost disabilities of providing public services in different States. The existing few expenditure determinants' studies suffer from severe limitations of both theoretical and empirical nature. Quantitative analysis of States' expenditures in more rigorous and properly specified models is essential both for designing general purpose and specific purpose transfers and for analysing their effects. Quantification of the units of public services provided and identification of cost factors within and beyond the control of State governments provide extremely useful inputs in designing the transfer schemes which would be effective in fulfilling the intended objectives. Such studies can also be employed to estimate expenditure needs of the States which, along with this revenue capacity can be employed to determine the norm for making general purpose transfers. The estimation of income and price elasticities of different types of transfers is not only helpful in the design of various specific purpose transfers but also would be helpful in

analysing the extent of misallocation caused on account of commanding the States' resources to fulfill the objective of providing a specified level of public services desired by the Central government.

Another important area of study is the States' indebtedness in general and borrowings from the Central government in particular. Some of the important issues that should be covered in such studies are: the magnitude of the burden of States' borrowings; the problem of sustainability and corrective measures required to reduce the burden on the States; the merits of borrowing from the market vis-a-vis from the Central government; the terms and conditions of borrowing from the Centre and their reasonableness; appropriate methods of providing for amortisation; and the issues concerning the externally aided projects, the allocative problems created on account of additionality and its effects on States with different levels of development.

While the issues relating to the relationship between the Centre and the States have evoked considerable attention, there has not been much analysis of the problems arising from the interaction of the States among themselves. The effects of inter-State tax competition to attract capital, the analysis of inter-State tax exportation and estimation of inter-regional incidence of State taxes are all important areas requiring detailed analytical scrutiny.

The above list is by no means comprehensive. These are only the more important areas as we see them. It is our fond hope that the present state of Centre-State relations itself which is by no means harmonious, would give rise to a number of analytical studies with a view to resolving the outstanding issues between the Centre and the States and among the States inter se.

## Notes

1. For a general discussion on federalism and economic growth, see Hicks, J.R. (1969) and also, Scott, A.D. (1964).
2. See Livingstone (1952), quoted in Oates (1977).
3. The general opinion among the economists is that there should be a nationwide redistributive policy and that should be formulated and implemented by the Central government (Oates, 1972, Musgrave and Musgrave, 1976, King, 1984). However, Pauly (1973) does not share this view. Taking redistribution as a local public good, he argues that programmes for assistance to the poor have often relied heavily on decentralised finance and administration. For a detailed analysis and criticism of this point of view, see Ladd and Dolittle (1982), and Brown and Oates (1987).
4. In an ideal case, in the absence of spillovers, when geographical distribution of population is fixed, optimal structure of government is obtained when there exists a level of government for each sub-set of population over which the public good is defined. This perfect mapping (Breton) or perfect correspondence (Oates, 1977) would provide Pareto-efficient levels of output. See also, Olson (1969).
5. On the attempt to measure welfare gains, see Bradford and Oates (1974). An estimate of price elasticity of demand for local public services is made by Bergstrom and Goodman (1973).
6. Besides welfare gains arising from catering to different preferences, four other advantages of decentralisation are adduced in the literature (King, 1984). First, decentralised provision enables more responsive signaling system. Second, it secures better

democratic control and accountability; Third, it can lead to better coordination among different layers and if one layer ignores the consumer's wishes other layers can either directly or by applying pressure on the first layer, cater to the wishes of the consumers. Finally, greater awareness of costs at sub-central levels may result in cost efficient methods of providing these services. Decentralisation also can lead to more experimentation and innovation. Brennan and Buchanan (1977) have argued for decentralisation on the reasoning that the increased competition at sub-central levels would tend to control the 'leviathan' governments. On the other hand, the main disadvantages from decentralisation pointed out are, inter-jurisdictional tax exportation (Mc Lure, 1967), non-optimal provision of public output arising from attempts to attract capital through tax competition or due to the existence of spillovers. Olson (1983) has recently put forth another disadvantage, namely, that since decentralisation probably makes it easier to articulate special interests, it could slow down economic growth.

7. The large volume of literature that followed Tiebout's seminal paper has analysed the implications on efficiency in resource allocation by relaxing some of the heroic assumptions of the mobility model. The important among them are, Buchanan and Goetz (1972), and Flatters, Henderson and Mieszkowski (1974).
8. For a discussion on the problems of measuring fiscal imbalances and fiscal centralisation, see Bird (1986 - 1).
9. For a detailed survey of these arguments see Scott (1964) and Wiseman (1987).
10. For a comparative analysis of the developed federation of Australia, Austria, Canada, Germany, Switzerland and the United States of America, see, Bird (1986 - 2).

11. Empirical support to the hypothesis that fiscal differentials affect property values. See, Oates (1969).
12. Some of the State governments, even within the existing Constitutional framework have tried to strengthen the local body institutions. Mention must be made of decentralisation attempts by the States of Karnataka and West Bengal, in this context.
13. For some discussion on the issue, see, Venkataraman (1965) and Datta (1984).
14. Thimmaiah argues that the Constitutional division of functions makes the States in India subordinate to the Centre, whereas, in Australia they ( States ) are coordinate. For a detailed analysis of Constitutional division of functions in India and its comparison with Australia, see, Thimmaiah, 1976.
15. The overdraft regulation scheme introduced in January, 1985 totally took away the States' powers to have overdraft with the Reserve Bank of India beyond seven continuous working days, see, note 28 below.
16. A number of States have complaints about erosion of their authority in various spheres. In fact, the appointment of Sarkaria Commission (1988) which analyses these issues in detail is in response to States' demand.
17. Olson states, "the efficiency of an economy may be increased either by making narrow special interest groups weaker or by making government stronger in relation to them; that is, by increasing the degree of government centralisation".
18. The empirical study by Ahmed and Stern (1982) shows that the effective sales tax rates across various consumer expenditure groups of households is more or less proportional.

19. Some analysis of this vertical tax overlapping is seen in the report of the Indirect Taxation Enquiry Committee (India, 1977). See also, Chelliah (1980) and Ahmed and Stern (1982).
20. A study by Shyam Nath (1987) estimates cumulative burden of Central and State taxes on the households belonging to various consumer expenditure groups in Rajasthan.
21. Even in the United States of America where tax on inter-State trade does not exist, Mc Lure (1967) estimated that almost 20-25 per cent of States' taxes are exported to the residents of other States in the average.
22. Chelliah, et.al (1981, p. 9) argues, "A large degree of centralisation of revenue resources is needed not only for economic and administrative consideration but also to fulfil the objective of regional equalisation".
23. However, in actual practice, at least since the mid-seventies, State tax revenues have exhibited higher buoyancy than that of the Centre; although firm estimates of elasticity of taxes at the two levels are not available due to inadequacies in the data on additional resource mobilisation, the available estimates of tax elasticities of individual taxes also point towards a similar trend. Therefore, the cause of increasing horizontal imbalances identified in the earlier years as the relative inelasticity of State taxes is not factually correct. On the estimates of elasticity of Central and State taxes, see Rao, V.G. (1979) and more recently, Sarma and Rao (1988).
24. There is some controversy on the reasons for fiscal imbalances at the Centre. While the Report of the Ninth Finance Commission (India, 1989) cites increased transfers to the States subsequent to the recommendation of the Seventh Finance Commission as the reason, low rate of growth of Central revenues and expansion of

Central activities in several concurrent and State areas are cited as main reasons by others (C.H.H. Rao, 1988).

25. Many of the issues are discussed in detail in the official literature, particularly in the Reports of the Finance Commissions as well as the Report of the Commission of Centre- State Relations (Chairman: R.S. Sarkaria, 1987), and therefore, the merits of these arguments have not been gone into here. On measuring the degree of centralisation in the Indian context, see, Pillai, V and Gopalakrishnan (1979), Chelliah (1983) and Rao (1987).
26. Consequent to the agreement between the States and the Centre in 1957, the former surrendered the right to levy tax on the three groups of commodities, namely, sugar, textiles and tobacco in lieu of which, the latter agreed to levy additional excise duty and distribute it among the States. This matter has been referred to every Commission subsequent to the second..
27. Abolished in 1982.
28. This was referred to the Seventh Finance Commission. The overdraft regulation scheme introduced in January, 1985 disallowed the practice altogether. According to the scheme, the RBI would not be obliged to honour the cheques of the States indulging in overdrafts beyond seven continuous working days. A medium term loan was given by the Centre to the States amounting to 90 per cent of the outstanding overdrafts as on January 28, 1985. The loans thus given amounted to Rs 1628 crore.
29. This matter was referred to the Fifth and the Eighth Commissions.
30. A notable exception to this is the rejection of the majority recommendation of the third Finance Commission on the inclusion of 75 per cent of Plan revenue expenditures in the assessment. Another exception is the rejection of a unanimous recommendation of the

Seventh Finance Commission of treating small saving loans as loans in perpetuity.

31. Minute of dissent by P.V. Rajamannar, Chairman, the Fourth Finance Commission, (India, 1965).
32. See, the Report of the Fourth Finance Commission (India, 1965, p. 12).
33. The term states, "In making its recommendations, the Commission shall ..... adopt a normative approach .....". The language of the terms of reference for the earlier Commission gave greater leeway as it had "inter alia after, "shall".
34. This is mainly because according to the terms of reference, while in the case of the Centre, the committed expenditures were to be taken account of, no such requirement was laid down in the case of the States; the terms also required the Commission to examine the feasibility of establishing a national insurance fund to which only the State governments were to contribute; and the Commission was asked to examine the feasibility of the merger of additional duties of excise in lieu of sales tax with basic duties, the arrangement of which is in the nature of a tax rental arrangement.
35. In fact, the Fifth Finance Commission itself stated, ".....taken together, as a whole they can and must observe the overall purpose of providing necessary assistance to the States on an equitable bases". (India, 1969. pp 72-73).
36. The first Commission itself stated, "in our view, there is no question of considering distribution of the tax on the basis of returning to a particular State, the whole or part of the collection in its area .....". There is no question of any compensation or reimbursement in India where the former provinces,.... at any rate, never possessed any right to tax incomes .... the integration did not

countenance the theory of compensation either in respect of federal assets or federal revenue passing to the Centre" (India, 1952 p. 18).

37. The relative shares of the States according to per capita income in its 'inverse' form is,

$$\frac{P_i/Y_i}{\sum_i (P_i/Y_i)} \quad (1)$$

and in the distance form is,

$$\frac{(Y_h - Y_i)P_i}{\sum (Y_h - Y_i)P_i} \quad (2)$$

where  $Y_i$  is the per capita State domestic product (SDP) of the  $i$ th State.  $Y_h$  - Per capita SDP of the highest income State, and  $P_i$ , its population. The share of the highest per capita SDP State in the formula (2) is computed by substituting the  $(Y_h - Y_i)$  of the next highest per capita SDP State.

38. On this, see also, Bagchi and Roy Choudhury (1989) Guhan, S (1989) and Arun (1989).
39. The effort is defined as the ratio of actual tax collection to taxable capacity.
40. See Reddy (1977), Ommen (1987).
41. Rao (1979) estimates tax effort by applying such a methodology for four States. More recently, this method has been employed by the Ninth Finance Commission to estimate taxable capacity of States for 1989-90. See, First Report of the Ninth Finance Commission, 1988. For a critique of this, see, Krishnaji (1988) and Coondoo and Mukherjee (1989). A reply to the issues raised in Krishnaji is given in Rao and Sarma (1989). For a detailed

discussion on alternative types of panel data models to estimate tax effort, see Sarma (1990).

42. One of the widely mentioned sources at the State level is the undertaxation of agricultural incomes. The Raj Committee after considering the difficulties of taxing agricultural incomes recommended a progressive tax on agricultural holdings (India, 1972). For an estimation of revenue potential from a modified agricultural holdings tax, see, Bagchi (1978).
43. For some recent attempts to measure, expenditure needs of the States, see, Rao and Aggarwal (1990), India (1989).
44. Hanson (1968 p.321) therefore states, "...the principles on which Central assistance to State plans is allocated have never been made clear. At present, no one knows, and even if the Commission has all this worked out, no one is likely to be told, at least just yet".
45. See footnote 37 for the computation of 'inverse' and 'distance' formulae.
46. According to the Ninth Finance Commission report, borrowings from the Centre constituted 63 per cent of States' outstanding loan at the end of March, 1989.
47. See also, George (1988).

## Annexure I

**Distribution of the States' Share in the Net Proceeds of  
Non-Corporate Income-tax**

Finance Commission	Net Proceeds distributed to the States	Criteria for Distribution			Others
		1 Contribution	2 Population	3 Per Capita SDP	
First	55	20	80	-	-
Second	60	10	90	-	-
Third	66.67	20	80	-	-
Fourth	75	20	80		
Fifth	75	10	90		
Sixth	80	10	90		
Seventh	85	10	90		
Eighth	85	10	22.50	45*	
				22.5*	
Ninth (First Report)	85	10	22.5	45* 11.25*	11.25 (proportion of poor in the States to total poor population)
Ninth (Second Report)	85	10	22.5	45* 11.25*	11.25 Composite index of backwardness.@

\* According to "distance" formula - see notes under Annexure II

\*\* According to "inverse" formula - see notes under Annexure II.

@ The variables included are (i) the population of scheduled castes and tribes; and (ii) number of agricultural labourers. Equal weights are assigned to the two factors.

## Annexure II

## Distribution of States' Share in the Net Yield from Union Excise Duties

Criteria used for distribution among the States						
Finance Commission	Coverage	States' share (per cent)	Proportion of population of the States of the total population of all States	Per capita income	Economic or social backwardness	Other criteria
(1)	(2)	(3)	(4)	(5)	(6)	(7)
First	Three commodities: Tobacco, matches & vegetable products	40	100	-	-	-
Second	Eight commodities: (Tobacco, matches, vegetable products, sugar, coffee, tea, paper and vegetable non-essential oils)	25	90	-	-	10 per cent used for adjustment
Third	All commodities on which Union excise duties collected in 1960-61 amounting to Rs 50 lakh or more (about 35)	20	Mainly on population basis along with relative financial weakness and economic backwardness as other factors.			
Fourth	All commodities excluding regulatory duties, special excises and earmarked cesses	20	80	-	20	According to relative backwardness as indicated by seven factors, which are: (i) per capita gross value of agricultural production (ii) per capita value added by manufacture (iii) Percentage of workers to total population (iv) Percentage of enrolment in class 1 to 5 to the population in the age group 6-11. (v) Population per hospital bed (vi) Percentage rural population (vii) Percentage of scheduled caste population

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Fifth</b>	For 1969-70 to 1971-72 all types of Union excise duties excluding regulatory duties, special excises and duties and earmarked cesses; for 1972-73 and 1973-74 all types of Union excise duties including regulatory duties and earmarked cesses	20	80	13.3 Distributed among only those States whose per capita SDP was below the all States average: in proportion to the shortfall of the State's per capita SDP from all States average multiplied by the population of the concerned State	6.7 According to an integrated index of backwardness as indicated by six factors, which are: (i) scheduled caste population (ii) number of factory workers per lakh of population (iii) net irrigated area per cultivator (iv) length of railways and surfaced roads per square km area (v) enrolment ratio of school going age children and (vi) number of hospital beds per thousand persons	
<b>Sixth</b>	For 1974-75 and 1975-76 all articles on which Union excise duties were levied excluding auxiliary duties of excise and cesses levied under special Acts and earmarked for special purposes.	20	75	25 According to the 'distance' formula**		
<b>Seventh</b>	Net proceeds from all Union excise duties collected on all commodities excluding the net proceeds of the duty on the generation of electricity	40	25	25 Inverse* of per capita SDP formula	25 Percentage of poor or people below the poverty line	25 According to a formula of revenue equalisation. This represents equalisation of revenue capacity which has been computed by regressing States' capita revenue on per capita SDP and substituting the actual values of per capita SDP in the equation.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Eighth	Net proceeds excluding cesses levied under special Acts and earmarked for special purposes	45 40 per cent to all States and 5 per cent to the States having deficits after taking into the devolution of taxes and duties	25	25 Inverse per capita* SDP formula. Distance formula**	50	(5 per cent to deficit States) in proportion to the deficit of a State to the total deficit of the States in that year.
Ninth-First Report (1989-90)	Net proceeds excluding cesses levied under special Acts and earmarked cesses	45 40 per cent all States and 5 per cent to the States having post-devolution deficits	25	50 Distance formula** 33.5 Distance formula*	12.5 Percentage of people below poverty line	
Ninth-Second Report (1990-95)	Net proceeds excluding cesses levied under Special Acts and earmarked cesses	45	25	12.5 Inverse formula* 33.5 Distance formula**	12.5 Index of backwardness computed with equal weights assigned to population of scheduled castes and tribes and a number of agricultural labourers	16.5 On the basis of deficits computed after devolving assigned taxes and the non-corporate income-tax.

$$\text{Inverse formula} = \frac{P_i/Y_i}{\sum_i P_i/Y_i}$$

\*\* Distance formula =  $(Y_h - Y_i) P_i / \sum (Y_h - Y_i) P_i$   
 where  $Y_i$  and  $Y_h$  represent per capita SDP of the  $i^{\text{th}}$  and the highest per capita SDP State,  $P_i$  = the population of the  $i^{\text{th}}$  State  
 $(Y_h - Y_i)$  for the 'h' State is taken to be the distance between the highest and the next highest per capita SDP.

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