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"[2]. 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[3]. 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[4]. 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[5].

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 hierarchial 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[7]. 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[8].

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 permissible. 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 view 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 intermsoflowerGDP.Scott,however,agreesthatequitabletransfers could lead to higher growth in cases where income differences of the States, for some reason do not reflect resource endowments[9].

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[10]. 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[11]. 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. <u>Design of Intergovernmental Transfers.</u> We have, so far, advanced two main reasons for intergovernmental transfers leading to two categories of transfers. Transfers meant to <u>ensure</u> optimal output in the wake of spillovers or those meant to <u>ensure</u> 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 <u>ensure</u> optimal or minimum levels of public services have to be conditional with or without matching provisions whereas those meant to <u>enable</u> 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 hormonise 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 transfersgiventoensureminimumlevelsofspecifiedservices. Inorder 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 Intergovernmental 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 normatively 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.