FISCAL IMBALANCES IN INDIAN FEDERALISM - TRENDS AND ISSUES

M GOVINDA RAO

NO. 30 JUNE 1987

NATIONAL INSTITUTE OF PUBLIC FINANCE AND POLICY
18/2 SATSANG VIHAR MARG
SPECIAL INSTITUTIONAL AREA
NEW DELHI-110067

The author is grateful to A. Bagchi, N. Jetha, T.K. Sen, and V.B. Tulasidhar for offering useful comments on an earlier draft of the paper. Thanks are also due to C. Cecil for editorial advice and to K.K. Atri for computational advice.

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1. Introduction

'Fiscal imbalance' essentially denotes the imbalance between independent revenue raising and expenditure powers. This indicates the extent of expenditure which the government is unable to finance from its independent revenue sources. Usually, two types of fiscal imbalances are diagnosed: Vertical, that is, between independent revenues and expenditures across various levels of government, and horizontal, that is, in the context of different regional units.[1/]

As distinct from a classical federation where both central (federal) and regional governments have their functions perfectly matched with independent sources of finance, cooperative federalism has an inherent component of fiscal imbalances -- both vertical and horizontal. Regional governments volunteer to cooperate into a federation in spite of fiscal imbalances so long as they are net gainers. Net gains ensue when decentralisation leads to the economising of 'administration' and 'coordination' costs on the supply side and signalling and mobility costs on the demand side[2/] (Tullock, 1969, Breton and Scott, 1978).

Cost economies, however, are not the sole reason for fiscal imbalances. For instance, they cannot fully explain striking disparities in fiscal imbalances between regional units. Such horizontal fiscal imbalances have to be explained largely in terms of varying fiscal capacities and needs and degrees of fiscal efforts.

This paper attempts to analyse the trends in vertical and horizontal imbalances in the Indian federation and identify, to the extent possible, the responsible factors.

For several reasons, the study of Indian fiscal federalism in general, and its fiscal imbalances in particular, is of special interest and significance. First, the problem of inter-State disparities in India is qualitatively different from that of the developed countries due to its low level of income and wide regional disparities in income levels. These and the fact that 'depressed' areas in India encompass a major segment of the national economy, have necessitated active State participation in the developmental effort. Thus, unlike in developed federations where the direct role of the government is essentially limited to the provision of social services and developmental effort is largely the responsibility of the market, government in India are called upon to take the roles of both entrepreneur and catalyst to accelerate economic growth through the process of planning. This has brought forth additional complexities. Second, due to well developed market economy and high degree of mobility of capital and labour, 'depressed' areas in developed countries essentially reflect their poor resource endowment. However, in a country like India, low degree of market penetration, poor development of the capital market, imperfect mobility of labour and absence of infrastructural facilities have left the developmental potential of a large part of the backward economy virtually unrealised. Thus, low income levels of backward regions in India are not necessarily the result of their poor resource endowment. Hence, channelling the flow of investment into backward regions rather than encouraging their population mobility should be a preferred strategy.3/ This also means that horizontal inequity is not self-correcting through population mobility or capitalisation of property values, (Tiebout, 1956, Oates, 1969), but requires to be tackled through inter-governmental transfers.4/

2. Indian Fiscal Federalism: Salient Features

Before analysing the trends in vertical and horizontal fiscal imbalances in Indian federalism, it may not be out of place to briefly outline the structure of the Indian federation and the institutional mechanisms that have been evolved over the years to effect inter-governmental transfers to resolve vertical and horizontal budgetary disequilibria.

An important feature of the Indian Constitution is its inherent 'centripetal' bias. Although political opinion before independence was overwhelmingly in favour of a decentralised structure, the Constitutional provisions closely follow the Government of India Act, 1935; and as the latter derived its powers not from the people but from above, centralisation was unavoidable. Prevalence of central authority over that of the States in the event of conflict of jurisdiction over any item in the concurrent area, virtual absence of independent borrowing powers to the States, and the assisting of the power to levy a broad-based tax on production – excise duty, to the centre, (which in effect is not different from the tax at the first point of sale, thus limiting the States' manoeuvrability) - are some examples of the centripetal bias. Besides, the programme of planned development, while not giving additional revenue handles to the States, has brought forth much higher expenditure responsibilities, causing severe vertical fiscal imbalances.

Vertical fiscal imbalance in itself would not be a matter for concern if a proper and efficient institutional mechanism had been evolved to effect inter-governmental transfers. But, multiple channels of devolution of resources from the centre to the States - each with different objectives - have obscured the sense of direction and objectivity. The quinquennial semi-judicial Constitutional body the Finance Commissions - have confined themselves merely to the task of meeting the non-plan current budgetary needs of the States. Although there is nothing in the Constitution that prevents the Finance Commissions from looking into the fiscal needs of the States in their totality, the directives and guidelines given to the successive Finance Commissions in the Presidential order and hesitancy on the part of the Commissions themselves, have relegated them merely to the role of fiscal dentists filling the projected current (revenue account) non-plan budgetary cavities[5] (Chelliah et al., 1979, Rao, 1981). The procedure generally followed has been to scrutinise the States' budgets to ensure comparability and estimate the gap between revenue receipts and non-plan expenditures within their revenue accounts. The gap is filled first with shared taxes and those States still left with gaps are given grants to cover them. The shared taxes consist of non-corporate income taxes and Union excise duties. The formulae used for effecting the transfers differ not merely between shared taxes and grants, but even the proceeds from income taxes and Union excise duties are shared on the basis of varying criteria (see Table 1). The Planning Commission, on the other hand, transfers resources to the States to meet plan expenditures on both current and capital accounts. The distinction between 'plan' and 'non-plan' itself is largely unclear as it is not based on the nature of expenditure nor are the two sides independent.[6] Thus, assessment of needs by two different agencies, sometimes of similar expenditure purposes, and adoption of different criteria for devolving funds has not only resulted in the avoidable duplication of work, but has also blurred objectivity and a sense of direction to the system of transfers. Besides the mediation of these two agencies, large amounts are devolved to the States through both grants and loans by different Central Ministries for a variety of purposes like clearing overdrafts police housing, relief and rehabilitation, assistance for building roads, relief from natural calamities, educational schemes and agricultural schemes. Also, mention must be made of the grants given for specific purposes under the centrally-sponsored schemes by different Central Ministries.

Neither efficiency nor equity has been achieved by the powers of devolution occurring through several channels, each relying on its own criteria (Chelliah, et.al.). Sometimes the criteria employed to devolve income tax, excise duty and grants have worked at cross-purposes.

The large weights given to population in the distribution of income tax and Union excise duties[7] (see Table 1) have ensured that every State, irrespective of its financial need, gets a share in the central devolution. Weights given to collection or assessment in the distribution of income tax have introduced a regressive bias in federal transfers. Since the devolution of taxes is not influenced by norms adopted to determine the budgetary gaps by the Commissions, the States having surpluses in their own reckoning after tax devolution cannot be brought to fiscal discipline. Hence, the budgetary scrutiny conducted by the Finance Commissions is applicable only to States having large budgetary gaps. The increasing role of shared taxes in the transfers effected by the Finance Commissions, weight given to collection and high weight given to population have substantially eroded progressivity in federal transfers (Gulati and George, 1978). More importantly, as the grants are given to fill budgetary gaps, the States have tended to overstate their requirements to maximise grants by slackening their fiscal effort and indulging in improvident expenditure. In particular, as the Commissions usually do not make any distinction between essential expenditure of national importance, or those with large externalities or those of special interest to the States, the States can pass on the burden of some of their pet expenditure schemes to the residents of other States.

The distribution of non-statutory transfers also suffers from several deficiencies.[8] First, plan transfers were made largely in the form of discretionary assistance and not guided by any objective formulae until 1969 when the distribution was rationalised in terms of the Gadgil formulae.[4] Second, the assistance given to central sector schemes and centrally-sponsored schemes, not only distorted the State priorities through matching provisions, but also have left the States with the burden of meeting large committed expenditures. Also, richer States (or at least those who have current surpluses) are in a better position to take advantage of centrally-sponsored schemes. While the statutory transfers have helped the more advanced States to generate substantial surpluses in their revenue accounts to finance the plans, poor States were barely able to bridge their budgetary gaps in the non-plan revenue accounts. As a result, the proportions of loan assistance in financing the Plans in poor States have been much larger with consequent burden of debt servicing and debt repayment and escalation of the non-developmental component of their current expenditures. The effect of discretionary loans given to poor States for various purposes has been similar.

3. Trends in Vertical and Horizontal Imbalances in India

We have not made any attempt to obtain any refined measure of fiscal imbalances here. We have merely tried to draw inference on the basis of certain ratios measuring revenue and expenditure centralisation and the extent of fiscal dependence of the States on the Central government to measure vertical imbalance. Specifically, the proportion of States' own revenues to their expenditures is taken broadly to indicate the vertical fiscal imbalance which is explained in terms of centralisation of revenues and decentralisation of expenditures. Similarly, two alternative measures of inequality - coefficient of variation and Lorenz ratio of States' revenues and expenditures - are employed to infer trends in horizontal imbalances.

a. Trends in Vertical Imbalance. A notable feature of Indian fiscal federalism is its steadily growing vertical fiscal imbalance. While in 1950-51, the States were able to raise over 80 per cent of the expenditure requirements within the revenue account, in 1985-86, they could meet only about 56 per cent of their requirements (Table 2, column 5). In other words, the fiscal dependence of States on the Central government for their revenue expenditures which was only about 20 per cent in 1950-51 steadily increased over the years to reach 44 per cent in 1985-86. A similar picture emerges when the revenue and capital accounts are aggregated. In the aggregate, the States' own receipts (including market borrowing, but excluding borrowing from the Central government) could finance over 76 per cent of their total expenditure (revenue as well as capital expenditures), but in 1985-86, the States could raise only about 52 per cent of their expenditure requirements.

Aggravation of the vertical fiscal imbalances in the aggregate (revenue and capital accounts taken together) over the period can be attributed more to greater centralisation in revenues rather than decentralisation in expenditures. While the States' share of revenues in the combined revenues of Central and State governments fell by 4 percentage points from 46 per cent in 1950-51 to 42 per cent in 1985-86, their share in consolidated expenditures did not show any increasing trend; it fluctuated around 52 per cent during the period. However, increase in the vertical fiscal imbalance in the revenue account over the period has come about both due to greater centralisation of revenues and decentralisation of expenditures. While the share of States' own revenues in total revenue receipts of Central and State governments fell by 3 percentage points from 38 per cent in 1950-51 to 35 per cent in 1985-86, their share in expenditures within revenue account increased by over 5 percentage points from 51 per cent to 56 per cent during the period.

The increase in the dependence of the States on the Central government to finance their expenditures and the consequent inroads the latter has made on the independent decision-making powers of the former cannot be fully captured by the ratios discussed above. As Bird (1986) contends, "No simple quantifiable index can truly measure the degree of effective centralisation of decision making power." In fact, there have been several qualitative centralising tendencies in the Indian federation which have not only increased the effective control over the States' expenditures but have also become a cause of irritation and friction between the Central and State governments.

To begin with, as mentioned earlier, the Constitutional provisions did exhibit centripetal bias, for both historical and political reasons. Subsequently, since the advent of the planning era, the statutory Finance Commissions were assigned mere support role in transfer of resources. The transfers effected by the Planning Commission and discretionary transfers effected by the Central Finance Ministry together constitute almost 60 per cent of the total transfers (Table 3). Although the share of statutory transfers has increased from 31 per cent during the First Plan to 41 per cent during the Sixth Plan, the sheer volume of the Plan (42 per cent) and discretionary transfers (17 per cent) have considerably imposed central piorities on State expenditures. Another factor effectively limiting the States' powers to raise taxes has to be found in the assignment of tax powers in the Constitution. In India, the tax on production or excise duty leviable by the Central government is a broad-based commodity tax unlike in many other countries where it is a narrow based sumptuary levy on liquor, tobacco and petroleum products. This, in effect, is not different from the major State tax - the sales tax at the first point of sale. Given the relative ease of levying commodity taxes, both Central and State governments have been using the base more intensively over the years. Intensive taxation of commodities by the Central government has, in fact, constrained the manoeuvr-ability of taxing the same base by the State governments.

There have been several other developments which have contributed to the centralising tendency. Article 270 of the Constitution provides for the compulsory sharing of the proceeds from income tax. The exclusion of corporate income tax, a more buoyant source of revenue, from the compulsorily shareable income tax proceeds in 1957 has continued to be a source of resentment among the States. The centre's abolition of estate duty on non-agricultural property in 1985 -- a tax assigned to the States -- without reference to them is another example of a violation of the federal spirit. Successive reductions in the rates of income tax, though intended to effect better tax compliance, has not been appreciated by the States. More importantly, in recent years, the Central government has been taking recourse to enhancing the administered prices on important items produced in public sector enterprises such as coal, steel and petroleum products to mobilise resources, which can also be achieved by increasing excise duties on these commodities. But, as the latter are shareable with the States, resort to administered price increases by the Central government has been suspected by the States as a method of denying them their due share of excises. The States have also been disappointed with the Central government for having surrendered their right to levy sales tax on sugar, textiles and tobacco as a tax rental arrangement. The additional excise duties have failed to be a buoyant source of revenue, largely due to the reluctance on the part of the Central government to enhance sufficiently the tax rates. Fixation of low royalty rates on mineral products by the Central government and the reluctance to make periodic revisions in keeping with the general rise in prices, charging of higher rate of interest on central loans to States than the borrowing rate of centre itself, dispensation of aid and making central investments on political considerations (Raj, 1986) are some other examples of the change in the balance of power between Central and State governments.[10]

b. Trends in Horizontal Fiscal Imbalance. Equally important is the increasing trend in horizontal fiscal imbalance. The divergence among the States on the dependence too has increased over the years.[11] Thus, both the coefficient of variation and the Lorenz ratio[12] of the share of own revenue (tax and non-tax) in their current expenditures among the States have shown an increasing trend over the years from 1965-66 to 1983-84 (Table 4). The coefficient of variation increased from 17.14 per cent in 1965-66 to 25.49 per cent in 1983-84. Similarly, the Lorenz ratio increased from 0.0826 to 0.1451 during the period. The increasing divergence in the dependence is also seen in the case of the ratio of States' own tax revenue to their expenditures.

Certain interesting features of the trends in horizontal fiscal imbalance are noteworthy. It is seen that aggravation in horizontal imbalance has been primarily due to growing inter-State divergence in the generation of revenues from own sources as evident from the increasing coefficient of variation and Lorenz ratios of per capita States' own revenues. On the other hand, inter-State variation in per capita expenditures has been more or less constant over the period. The substantial difference between the inter-State variations in own revenues and expenditures, in fact, shows that federal transfers have been an important factor in reducing variations in per capita expenditures in spite of substantial variations among the States in raising revenues.

Inter-State variation in revenues can be explained either by variations among the States in their capacity to raise revenues or variation in their revenue efforts. We have, in order to quantify the effect of the two factors on the horizontal imbalance, regressed States' own current revenue to current expenditure ratio on per capita State Domestic Product (SDP) and current revenue - SDP ratios of different States in a log-linear model. For meaningful results the analysis is confined only to 15 major States; atypical States have been excluded. While per capita SDP is taken to represent, broadly the capacity variable, the Revenue-SDP ratio is presumed to reflect their relative efforts.13/ The regression equations for different years are summarised in Table 5.

An important inference that may be drawn from these equations is that, both 'capacity' and 'effort' variables have been significant in explaining variations in horizontal fiscal imbalance among the States. What is, however, more important is that, over the years, while the effect of the capacity variable has not shown much increase, the effort factor has been more responsible. Thus, the normalised (beta) coefficients for revenue-SDP ratio successively show higher values as compared to the coefficients of per capita SDP variable.

Thus, aggravation in horizontal fiscal imbalance seems to be largely due to fluctuating inter-State variations in revenue effort rather than in revenue capacity. This, however, has another interesting implication. Given that higher fiscal imbalances are due to variations in revenue effort and that inter-governmental transfers have substantially contributed to reducing inter-State variations in the provisions of public services as represented by per capita expenditures, it would seem that inter-governmental transfers have had disincentive effects on the revenue efforts of the States. As discussed earlier, given the method of making inter-governmental transfers in general, and working of the Finance Commissions in particular, this is not surprising.

4. Vertical and Horizontal Fiscal Imbalances: An Explanation

The increasing trend in horizontal and vertical fiscal imbalances can perhaps be analysed in terms of oligopolistic behaviour - the States representing oligopolists, each seeking to maximise net gains to their residents. This is done by maximising net of tax expenditures on public services for the residents, effected by (i) maximising inflow of inter-governmental transfers; (ii) tax competition and (iii) exporting tax to residents of other States. Maximising inter-governmental transfers is also, in effect, equivalent to tax exportation as central grants have to come from taxes raised from the residents of different States. Of course, these objectives are pursued until the losing States no longer perceive it to be gainful to continue in the federation or until the externalities are internalised vertically to rationalise inter-governmental transfers and horizontally to limit tax competition and tax exportation.

Both tax competition and attempts at maximising grants could result in increasing vertical fiscal imbalance in the absence of a rational arbitration mechanism. When each

State indulges in tax competition to attract capital, the effective rate of tax of the States as a whole will be lower than what would prevail in the absence of such competition. As the Central government has to effect larger inter-governmental transfers to meet the demands of the States, the effective rate of central tax required to be levied has to be much higher. The consequence of all this is increasing revenue centralisation over time and larger dependence of the States on the Central government to finance their expenditures -- in other words, accentuation of vertical fiscal imbalance.

The strategy of maximising net of tax spending on their residents by the States could lead to not only increasing vertical fiscal imbalance but also more severe horizontal fiscal imbalance, as has happened in the Indian federation. Although each State attempts to maximise its net gains as the 'powers' of the States differ, their success in this regard varies with their ability to practise tax competition, adoption of the right strategy to enhance their share in central transfers and capacity for tax exportation. Largely, this 'power' is positively related to the level of development of the States seen in terms of both levels of per capita income and degrees of industrialisation.

Aggravation of horizontal imbalance can result from any of the three factors enumerated earlier. Competition is resorted to essentially to attract capital from other States through various tax incentives. Empirical studies, however, show that higher fiscal incentives in the form of comprehensive and open-ended sales tax holiday or deferment by poorer States have not helped to attract capital, but have been expensive in terms of revenue forgone. Thus, these incentives have not only reduced the revenues of poor States but have also diverted investment in unintended ways, particularly to low-priority industries (Tulasidhar and Rao, 1986).

Inter-State tax exportation too has contributed to the aggravation of horizontal fiscal imbalance in no small measure. Inter-State tax exportation is not peculiar to India;14/ what is however important is that the process has resulted in the net exportation of tax burden to the residents of relatively poor States. Tax exportation is resorted to largely through sales taxes, and the more advanced States are able to collect their revenues from the residents of poor States due to two reasons: First, the exports of taxable commodities by the advanced States are greater than the exports of poor States and hence, their sales tax collections on inter-State trade are higher. Second, the proportion of finished manufactured goods in the total inter-State exports of the advanced States is generally higher. When tax relief on inputs and capital goods is not given, the effective rates of tax on the exports of the advanced States exceed nominal rates of tax on exported products (assuming that commodity taxes are shifted forward).

Several instance of States deliberately attempting to export the tax burden to other States can be pointed out.

While foodgrains are generally exempt in most of the States, food-surplus States levy sales tax at 4 per cent (maximum permissible). Similarly, in some States, tax relief on inputs is not applicable to sales outside the State. Some States are also known to reduce the rates of tax on some commodities having high elasticity of demand to encourage diversion of trade (from other, especially neighbouring, States) and thereby export the tax burden.[15]

Aggravation of horizontal imbalance in the process of maximising inter-governmental transfers takes place due to the advantageous position of more advanced States in getting matching plan transfers (for centrally-sponsored schemes). Not only that their resource position after meeting non-plan expenditures is better partly contributed by the devolution formulae adopted by the Finance Commissions, they are also able to raise more resources due to better economic base to finance matching requirements by raising greater tax effort.

The explanation of worsening trends in vertical and horizontal imbalances in terms of the oligopoly behaviour indicates that although a centripetal Constitutional bias has caused the initial imbalance, reassignment of either functions or finances in itself cannot bring about a satisfactory solution. Remedial action has to come from an awareness of the governments of different States of the larger benefits of liaison among themselves to play a cooperative game. The understanding among the States to forge better cooperation and mutual trust among themselves is a precondition for reducing both vertical and horizontal imbalances and only then, reassignment of functions and finance would be conducive for the further development of the Indian federation.

5. Conclusion

The paper attempts an analysis of the trends in vertical and horizontal fiscal imbalances in the Indian federation. Such investigations are important because of the low level of development of the country, wide inter-regional disparities and vast developmental potential of the large proportion of 'depressed' areas. In such an economy inter-governmental transfers assume great importance but, at the same time, they bring about accute fiscal imbalances.

The experience of more than three decades has revealed a number of weaknesses in the Indian fiscal federalism. The inherent centralist bias has necessitated massive central transfers (or devolution of resources to the States). The institutional mechanism to effect inter-governmental transfers has not proved equal to the task. The multiplicity of agencies has blurred the sense of objectivity and direction in the transfers. The criteria employed to effect transfers have been found to be wanting on both efficiency and equity grounds.

A notable feature of the Indian fiscal federalism is the aggravation of vertical imbalance over the years, or growing dependence of States on the centre to finance their expenditures, resulting in increasing intrusion of central priorities over the States' expenditures. It is also seen that the increasing trend in vertical fiscal imbalance was largely due to increasing degree of centralisation in revenues rather than a decentralising trend in expenditures.

Not only has the central control over States expenditures increased over the years, the disparities in the degrees of dependence among the States too have shown divergent trend. The worsening in horizontal fiscal imbalance too has been largely due to increasing inter-State divergence in raising revenues rather than variations in expenditures. The divergence in inter-State variation in revenues in turn was not so much due to growing variation in capacity as to increasing variation in the revenue effort undertaken by the States.

The growing vertical and horizontal imbalances can be rationalised in terms of the States' oligopoly behaviour. Attempts to maximise net gains to their residents by maximising inflow of inter-governmental transfers, indulging in tax-competition and inter-State tax exportation, could indeed result in such an outcome. This suggests that mere reassignment of functions and sources of finance are not likely to improve the fiscal balance. The precondition for this is that the States should develop effective cooperation among themselves to refrain from a 'beggar-my-neighbour' policy.

TABLE 1

Distribution of Income tax Recommended by Finance Commission

Finance Commission	Income Tax: Percentage devolved to the States	Income Tax: Total amount devolved Rs. million	Income Tax: Criteria for distribution: population (per cent)	Income Tax: Criteria for distribution: collection (per cent)	Excise Duty: Percentage devolved to the States	Excise Duty: Total amount devolved Rs. million	Criteria for Distribution (per cent): Population (per cent)	Reciprocal of per capita income	Difference from highest per capita income	Other backward indexes	Poverty ratio	Revenue equalisation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. First (1951-56)	55	2780 (44.0)	80	20	40 (3 commodities)	540 (10.1)	100	-	-	-	-	-
Second (1956-60)	60	2880 (27.3)	90	10	25 (8 commodities)	1150 (11.0)	90	-	-	10	-	-
3. Third (1960-64)	66	3950 (22.7)	80	20	20 (35 commodities)	2490 (14.3)	2/	-	-	2/	-	-
4. Fourth (1964-68)	75	5590 (19.7)	80	[illegible]	20 1/	[illegible]	80	-	-	20	-	-
5. Fifth (1968-73)	75	18010 (24.6)	90	10	20 1/	16260 (22.4)	90	-	-	20	-	-
6. Sixth (1973-79)	80	38050 (20.6)	90	10	20 1/	41690 (22.5)	75	-	25	-	-	-
7. Seventh (1979-84)	85	51920 (14.4)	90	10	40 1/	137510 (38.2)	25	25	-	25	25	25
8. Eighth (1984-89)	85 5/	-	-	10	45 1,4/	-	25 3/	25	50	-	-	-

Notes:
1/ All commodities
2/ Population and backwardness were considered - weights not specified.
3/ Population according to 1971 census has been considered.
4/ 40 per cent is distributed according to the four factors specified and 5 per cent according to budget deficit.

(figures in parentheses represent percentage to total current transfers).

5/ 10 per cent of the amount is distributed on the basis of collection, and the remaining 90 per cent is distributed according to the four factors used for the distribution of excises.

TABLE 2

Trends in Vertical Fiscal Imbalance

(Percentages)

Year	Ratio of States' own tax revenue to total tax revenue (revenue account)	Ratio of States' own revenue to total revenue (revenue account)	States' Expenditure to total expenditure (revenue account)	Ratio of States' own revenue to States' expenditure (revenue account)	Ratio of States' own revenue to total revenue (total)	Ratio of States' expenditure to total expenditure (total)	Ratio of States own revenue to States expenditure (total)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950-51	35.37	38.38	51.16	80.75	46.32	51.73	76.57
1955-56	36.80	41.17	59.02	68.85	50.60	61.70	57.79
1960-61	33.69	36.61	59.86	63.86	49.00	56.76	57.57
1965-66	29.47	32.58	55.62	63.46	43.92	53.33	54.97
1970-71	32.52	35.54	60.16	60.57	43.49	53.87	58.24
1975-76	31.95	33.54	55.05	70.39	39.21	47.55	60.29
1980-81	33.58	35.62	59.62	60.07	43.97	55.97	51.39
1981-82	34.38	31.45	58.12	64.26	41.54	54.57	52.86
1982-83	35.04	36.35	57.86	62.13	42.02	52.78	53.66
1983-84	34.27	36.82	57.98	59.98	45.14	52.77	55.67
1984-85	34.46	35.67	57.30	56.47	44.08	51.82	53.74
1985-86 (RE)	33.53	35.41	56.61	56.34	42.32	52.08	52.21

Source: Government of India, Ministry of Finance, Indian Economic Statistics, New Delhi.

TABLE 3

Inter-Governmental Transfers (Gross) in India (1951-85)

(Rs. million)

Plan periods	Statutory Transfers: Shared taxes	Statutory Transfers: Total	Plan transfers	Discretionary transfers	Total
(1)	(2)	(3)	(4)	(5)	(6)
1. First plan (1951-56)	3440 (24.04)	4470 (31.24)	3500 (24.46)	6340 (44.3)	14310 (100.0)
2. Second plan (1956-61)	6680 (23.29)	9180 (32.29)	10580 (36.89)	8920 (31.10)	28680 (100.0)
3. Third plan (1961-66)	11960 (21.36)	15900 (28.39)	27380 (48.89)	12720 (22.71)	56000 (100.0)
4. Annual plan (1966-69)	12820 (23.98)	17820 (33.33)	19170 (35.85)	16480 (30.82)	53470 (100.0)
5. Fourth plan (1969-74)	45620 (30.21)	54210 (35.90)	47310 (31.33)	49490 (32.77)	151010 (100.0)
6. Fifth plan (1974-79)	82720 (32.62)	109360 (43.13)	103750 (40.92)	40440 (15.95)	253550 (100.0)
7. Sixth plan (1979-85)	269520 (38.20)	287770 (40.79)	294790 (41.78)	122950 (17.43)	705510 (100.0)

Note: Figures in parentheses represent percentage to total transfers.

TABLE 4

Horizontal Fiscal Imbalance in India

	Per capita SDP		Per capita States' own tax revenue		Per capita States' own revenue		Per capita States' expenditure (revenue account)		Ratio of States own tax revenue to expenditure		Ratio of States' own revenue to expenditure		Ratio of own revenue to SDP		Ratio of expenditure to SDP	
	C.V.	L.R.	C.V.	L.R.	C.V.	L.R.	C.V.	L.R.	C.V.	L.R.	C.V.	L.R.	C.V.	L.R.	C.V.	L.R.
1965-66	18.09	0.1011	30.50	0.1744	28.16	0.1539	21.91	0.1218	22.31	0.1202	17.14	0.0826	17.27	0.1295	20.33	0.1110
1970-71	26.91	0.1475	44.03	0.2441	45.58	0.2511	22.46	0.1258	27.13	0.1519	28.85	0.1618	25.27	0.1438	15.43	0.0865
1975-76	30.04	0.1514	41.41	0.2334	40.47	0.2277	26.11	0.1465	22.58	0.1248	21.28	0.1195	21.26	0.1208	15.74	0.0995
1975-77	33.79	0.1805	43.39	0.2444	42.18	0.2354	26.23	0.1481	22.15	0.1219	20.21	0.1139	21.38	0.1202	18.78	0.1055
1977-78	32.82	0.1715	44.06	0.2478	41.35	0.2315	23.32	0.1278	24.41	0.1376	21.49	0.1214	19.11	0.1090	17.11	0.0972
1978-79	33.34	0.1757	45.73	0.2591	44.50	0.2475	24.56	0.1370	25.35	0.1441	22.37	0.1301	21.49	0.1208	15.19	0.0954
1979-80	35.79	0.1920	48.35	0.2749	45.91	0.2593	24.02	0.1347	28.59	0.1624	25.53	0.1452	23.34	0.1327	17.11	0.0946
1980-81	32.58	0.1723	49.55	0.2825	41.32	0.2343	23.97	0.1357	30.30	0.1707	20.14	0.1147	21.53	0.1210	14.20	0.0913
1981-82	33.35	0.1743	48.56	0.2783	44.87	0.2562	24.48	0.1391	29.05	0.1542	24.57	0.1380	27.76	0.1572	13.77	0.0763
1982-83	34.52	0.1774	48.46	0.2771	45.23	0.2566	22.70	0.1292	31.40	0.1767	27.09	0.1521	26.31	0.1487	15.25	[illegible]
1983-84	31.57	0.1574	46.35	0.2682	43.95	0.2496	22.31	0.1293	28.36	0.1636	25.49	0.1451	25.26	0.1474	14.39	0.0942

Notes: 1. C.V. = Coefficient of variation.
2. L.R. = Lorenz ratio.
3. The C.V. and L.R. have been computed for 15 normal States of Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. For 1965-66, Punjab and Haryana have been considered together.

TABLE 5

Regression Results

Dependent Variable - Log (R/E)

	Constant	Regression co-efficient-Log (R/SDP)	Regression co-efficient-Per capita SDP	$\bar{R}^2$	F	D.W. Statistics	Normalised Coefficients Log (R/SDP)	Log (Per Capita SDP)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1965-66	-1.4021 (-0.6565)	0.4734 (1.5790)	0.3715 (1.2334)	0.2084	2.6063	2.5559	0.4035	0.3149
1970-71	0.5542 (0.3730)	0.9583 (5.3101)	0.2313 (1.2486)	0.7700	24.4327	2.1697	0.7881	0.1852
1974-75	-1.4409 (-0.9543)	0.6286 (4.4047)	0.3919 (2.1118)	0.7724	24.7531	2.8910	0.6766	0.3239
1975-76	-0.6375 (-0.5075)	0.6567 (3.5738)	0.2774 (1.8793)	0.6285	12.8398	2.3801	0.6367	0.3341
1976-77	-1.6491 (-1.7596)	0.4698 (3.1281)	0.3541 (3.1519)	0.6375	13.3397	2.4674	0.5215	0.5253
1977-78	-2.4218 (-2.2847)	0.4483 (2.6008)	0.448 (3.862[illegible])	0.7110	18.2171	2.1002	0.4272	0.6095
1978-79	-1.6906 (-2.0888)	0.5506 (4.1584)	0.3977 (3.5005)	0.6842	29.7529	2.6013	0.5530	0.5184
1979-[illegible]	-1.9413 (-2.1352)	0.6492 (4.6599)	0.4256 (4.1756)	0.8331	35.9255	2.3999	0.5868	0.5040
[illegible]	-2.4080 ([illegible].4873)	0.5936 ([illegible].1342)	0.4319 (8.[illegible]171)	0.9441	119.1482	1.6246	0.5624	0.6014
[illegible]	[illegible] (-3.0456)	[illegible].677[illegible] ([illegible].2815)	[illegible] (5.87[illegible])	0.9372	1[illegible]5.44[illegible]8	2.8163	0.7394	0.4214
1982-83	-2.0549 (-2.4804)	0.7472 (7.3025)	0.437[illegible] (4.5607)	0.8814	[illegible]3.0216	2.3697	0.7084	0.4435
1983-84	-1.7946 (-2.0773)	0.7170 (7.0716)	0.3886 (3.9140)	0.8714	48.4496	2.2799	0.7245	0.3967

Note: R/E : Ratio of Own Revenue to Expenditures of the States.

R/SDP: Ratio of Own Revenue to State Domestic Product.

Figures in parentheses represent 't' values of the coefficien

NOTES

1. Hunter (1977), however, argues that vertical fiscal imbalance depends not merely on the extent of dependence on the total inter-governmental transfers but also on the extent of State control over State expenditures. He computes three alternative measures of 'coefficient of vertical balance' on the basis of presumed extent of central control on various types of federal transfers. For a detailed criticism of these measures, see Bird (1986).

2. Alternatively, it may be argued that decentralisation will be carried to the point where scale economies are reaped, externalities are internalised, diversified preference patterns of the people are met and arbitration costs minimised. On this, see Oates (1972).

3. On this issue, it may be worthwhile to recall the controversy between Buchanan and Scott. While Buchanan (1950) argued that transfers to poorer regions can be desirable on the grounds of both equity and efficiency, Scott (1950) highlighted the efficiency loss arising from equitable transfers to low-potential poorer regions and argued for the desirability of encouraging labour mobility from these regions.

4. This is particularly important as the structure of governments at the local level even in urban areas have not been satisfactorily developed to provide mixes of public goods to enable Tiebout type of preference revelation by the consumer-voters.

5. Over the years, however, some norms have come to be used for the admissibility of certain expenditures in assessing the gap; also certain minimum rates of return have been specified on investments in States' public undertakings.

6. The distinction between plan and non-plan expenditures does not depend on whether the expenditures are incurred for developmental or non-developmental purposes. In fact, a number of developmental schemes which cannot be included in the plan schemes are taken in the non-plan side. Similarly, committed expenditures on completed plan schemes become non-plan expenditures.

7. It is necessary to mention that the Eighth Finance Commission reduced the weight of population considerably in its devolution formulae and increased that of backwardness considerably.

8. According to the Gadgil formulae, distribution of assistance to the States was effected on the basis of (i) population (60 per cent); (ii) tax effort (10 per cent); (iii) per capita income below all-India average (Backwardness) (10 per cent); (iv) proportion of outlay on major irrigation and power projects (10 per cent); (v) and special problems (10 per cent). This was modified in 1980 by enhancing the weight of (iii) to 20 per cent and dropping that of (v) altogether.

9. Transfers recommended by the Finance Commissions are called statutory transfers whereas those by the Planning Commission and Discretionary transfers are considered non-statutory transfers.

10. There are a number of other non-fiscal reasons aggravating inter-State disparities which have not been gone into in this paper. In particular, mention may be made of the pattern of disbursal of credit by the nationalised banking system and institutional financial agencies. On this see, Gulati and George (1985).

11. The analysis of horizontal imbalance in this study is confined to 15 normal States, and 7 atypical States of Himachal Pradesh, Jammu & Kishmir, Manipur, Meghalaya, Nagaland, Sikkim and Tripura have been excluded.

12. Lorenz ratio is computed as:

$$L = 1 - \sum_{i=1}^{k} P_i (Q_i + Q_{i-1})$$

where L is the Lorenz ratio, Q_i is the variable for which Lorenz ratio is computed, k the number of States and P_i is taken as unity.

13. We do recognise that per capita SDP and revenue-income ratios only broadly represent capacity and effort variables. Nevertheless, for want of better proxies, we have employed them in our analysis.

14. For example, in the United States of America, McLure (1967) estimates that almost 25 per cent of State and local taxes are exported to the residents of other States.

15. Typically, these are high value-low volume commodities having tax advantage greater than the transport cost. See, Rao and Tulasidhar (1986).

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