Working Paper

INTERNATIONAL MONETARY FUND

WP/91/3

INTERNATIONAL MONETARY FUND

Fiscal Affairs Department

Measuring the Role of Subnational Governments

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January 1991

Abstract

To measure subnational governments, only external money flows are counted, excluding intra-level transactions in measuring a level of government and all intergovernmental transactions in measuring general government. Control, finance, and administration should be distinguished in measuring centralization and each level's share of general government, administered expenditures being net of grants given to other governments and financed expenditures net of grants received. Disparate decentralization of finance, control, and administration brings vertical imbalance, measured by the portion of a government's expenditures not covered by its own resources and by the ratio of intergovernmental grants to total government expenditures.

JEL Classification Numbers

220, 324, 325

*/ This paper was presented at the Forty-sixth Congress of the International Institute of Public Finance (Brussels, August 27-30, 1990) on "Public Finance with Several Levels of Government." It will be published in the proceedings of the conference. The author thanks John Brondolo, Barbara Jarvis and Chris Wu for statistical assistance and Beverly McKinney for documentary assistance.

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Summary

While the magnitude of government operations is best indicated by their ratio to GDP, and their structure or content by the functional and economic breakdown of expenditures and of revenues by type of tax, several separate indicators are utilized to measure the internal organization of government by level. After reviewing the basis on which all such measurements rest, this paper examines three such indicators.

First, centralization ratios measure subnational (state and local) government expenditures or revenues as a percentage of general government totals. Second, coefficients of vertical balance compare subnational governments' expenditures with receipts under their control. Third, the ratios of intergovernmental grants to total general government expenditures measure how important such intergovernmental finance is to overall government operations or to particular functions.

No single indicator, however, covers all three aspects of government operation: control, finance, and administration. The paper suggests a distinction between expenditures administered by a level of government, which exclude grants it gives to other levels of government, and expenditures financed by a level of government, which exclude grants it receives from other levels of government.

Data are presented permitting various comparisons of the operations of subnational governments. For revenues, they show the relative importance of subnational income taxes in Scandinavian and some other northern European countries, of subnational property taxes in countries with English-speaking administrative traditions, and of domestic taxes on goods and services at the state level in the United States, Canada, India, Brazil, and to a lesser extent, in Australia, Germany, and Colombia.

The ratio of intergovernmental grants to total general government expenditures varies among industrial countries from 6 percent in Belgium to 27 percent in Denmark. General purpose grants constitute the majority of grants in France, the United Kingdom, Germany, and Australia, but only 11 percent in the United States, and about 20 percent in Canada and Denmark.

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I. Introduction

For subnational government, as for most other organized activities, effective analysis requires measurement. Measuring the operations of a single subnational government is clearly critical to the successful conduct of its affairs. In a wider, national context, concerned with the equalization of burdens and benefits and the universal attainment of minimum standards, the comparability of measurement is important. Comparability, the measurement of an entire level of subnational governments, and measurement of all governments in the country take on additional importance in considering the appropriate assignment of resources and responsibilities, relations between levels of government, macroeconomic effects, and the lessons to be gained from international comparisons. At each level of analysis, though the same basic principles of measurement apply, additional issues arise.

This paper discusses these principles and the issues encountered in the measurement of an individual subnational government, a level of government, and all governments within a country. It then examines indicators of centralization and vertical imbalance utilized in international comparisons and presents a number of comparisons drawn from the International Monetary Fund's Government Finance Statistics Yearbook (GFSY). 1/

II. Measuring a Single Subnational Government

The first issue in the measurement of a subnational government is the delimitation of its borders, not geographically but functionally. In both the Fund's A Manual on Government Finance Statistics (GFS Manual) 2/ and the United Nations' A System of National Accounts (SNA) 3/, government is defined by its function, that is, the promotion of public policy by the production of nonmarket goods and services and the distribution of income, supported primarily by compulsory levies on other sectors, i.e., households and enterprises. The distinguishing feature of government is thus not public ownership or control; that feature defines the public sector, which includes also enterprises under majority government ownership or control. What distinguishes government is that it operates by political means rather than through a market mechanism in its collection of receipts and its distribution of goods, services, and funds. As a result, while the provision of a service, such as water supply, with general revenues is counted as a government activity, its distribution through sale is counted outside government and can be reflected only in the measurement of the industry involved or of the public sector if the enterprise is under majority government ownership or control.

1/ IMF (1988) and (1989).

2/ IMF (1986).

3/ UN (1968).

The second issue in measuring a subnational government is whether it is indeed subnational rather than an outlying branch of central government. The purpose of this distinction is to identify separately from the central government any units which because of their separate circumstances are likely to behave differently from the central government itself. The GFS Manual recommends that this distinction be based on whether the subnational government has its own separate existence, with sufficient discretion in the management of its affairs. As possible criteria which may indicate a government's lack of such a separate existence, the Manual lists: 1) dependence for all or a substantial portion of its income on appropriations or allocations made at the discretion of another government, 2) the lack of its own officers, 3) the need to submit budget estimates to another government entity which may in turn raise or lower them, and 4) control of important aspects of its administration (e.g., sites, contracts, personnel, scope of activities) by another governmental entity.^{1/} While these are the criteria recommended to the Fund's government finance statistics correspondents reporting data for the GFSY, judgments also take into account established political conventions within the country and difficult questions of degree. ^{2/}

The single denominator by which government activities, other than regulation, are registered is money. To measure the extent or performance of particular government services, one may register units of input -- such as teacher hours, police time, or hospital beds -- or units of output -- e.g., students taught, crimes solved, or patients treated. Such units, however, cannot be added together to reach a total or to calculate the portion of the total devoted to each. It is important to keep in mind, therefore, that the basic measurement of each government's operation is financial and that, whatever their wider implications, most measurements of government represent money flows.

To serve its purpose, measurement of the government's activities should be comprehensive, covering all of its transactions with the rest of the economy -- households, enterprises, nonprofit institutions, and other governments. However, it should not include transactions within the same government, that is, intragovernmental transactions. While such transactions may appear in budgets or accounts focussing on control of particular units or subunits, they do not form part of a government's receipts from or payments to the rest of the economy. If significant, they should appear as memorandum items.

The distinction between a government's own revenues and the grants it receives from other governments can sometimes be difficult to draw, though it forms a key dividing line in the study of relationships between levels of government. There is no difficulty in attributing to a government the proceeds of a tax it collects and retains, but questions

^{1/} IMF (1986) 14.

^{2/} For other criteria, see for example Mawhood (1983).

arise regarding taxes collected by one government and passed on to another. The GFS Manual recommends attributing tax revenue to noncollecting beneficiary governments when they (1) exercise some influence or discretion over the setting of the tax or distribution of its proceeds; or (2) automatically receive a given percentage of the tax collected or arising in their territory; or (3) receive tax revenues under a tax law leaving no discretion to the collecting government. 1/

To ensure continuity in the measurement of a government, four compilation tools are especially useful: (1) an inventory or listing of the various parts making up the government, referred to variously as institutional tables 2/ or the universe 3/; (2) a coverage note specifying which parts of the government are covered by the data; 4/ (3) a derivation table identifying the sources of the data and any adjustments made; 5/ and (4) classification keys relating the classifications used to those in the source documents. 6/

III. Measuring a Level of Government

To measure the combination of all governments at a particular level -- state or local -- one additional operation is necessary. This is the elimination of transactions between governments within this level, so as to portray only the level's transactions with the rest of the economy, including other levels of government. Only if the total includes transactions with other levels of government -- grants received and grants given, for example -- can the portrayal of the overall operations of this level of government be complete. When significant transactions take place between governments at the same level -- as with horizontal equalization grants between laender in Germany, for example -- they should be shown as memorandum items outside the overall totals for the level.

Not all government units aggregated within the same level of government can be expected to be homogeneous, and separate data for tiers, sublevels, or types of local government can be useful in many circumstances.7/ The structure of Canadian government, for example, has been represented by Anthony Scott as a federal pyramid, with a single block representing the single central government at the top, next down a wider band of blocks, each representing the government of a state or province with territories that do not overlap, and at the lower, local, government strata many units which to the architectural eye "look more

1/ IMF (1986) 53.

2/ See end of each country presentation in IMF (1988).

3/ Bureau (1987).

4/ See end of each country presentation in IMF (1988).

5/ Ibid. and IMF (1986) 71-87.

6/ IMF (1986) 235-8.

7/ Buglione (1983).

like rubble than the foundation blocks of a great pyramid, for they differ greatly in size, sometimes overlap territorially, and do not have a uniform height from the ground" but each lies within the territory of only one provincial government. 1/ Notwithstanding such heterogeneity at the local level, in most presentations of data for local government, as in the GFSY, all tiers or varieties of local government data are aggregated under the single local government heading. A separate presentation of data for state governments, however, is most important.

Treatment of social security funds can also affect delimitation of the levels of government. Such funds operate mainly at the national level but in a few countries also at the regional or local levels. Because the analysis of social security fund operations is important both in itself and as an integral part of central government fiscal policy when the funds are national, data on social security fund operations are best presented both by themselves and as part of the level of government at which they operate.

Within each member country, operations of the European Communities constitute a separate level of government, not subnational but supranational. Though they are nonresident institutions, forming part of the rest of the world sector, supranational authorities' operations must be taken into account. Otherwise, the tax burden in each member country would be represented as declining when taxes previously assigned to the national authorities are assigned to the supranational authorities. The GFSY treats supranational authorities as a separate level of government and includes them in general government totals.

Where the number of local governments in a country is large, the use of sample surveys for the collection of data, on a regular basis or between universal compilations in benchmark years, can be helpful. The use of such sample surveys was recommended by regional seminars on local government statistics convened under the auspices of the IMF and the World Bank for countries of Asia, Latin America, English-speaking Africa and the Middle East. 2/ Of the 67 countries providing local government data to the GFSY, however, the use of sample surveys is reported by only eight: Canada, Iran, the Netherlands, South Africa, Spain, Sweden, Switzerland, and the United States. 3/

IV. Measuring General Government

The combination of data for all governments in a country to obtain the totals for general government is no different from the procedures followed in combining individual governments' data to reach the totals for a single level of government. In this case, however, all

1/ Scott (1978) 2.

2/ IMF Survey (1987) 53-4, (1988) 146-7.

3/ IMF (1989) coverage notes in country presentations.

transactions between levels of government are eliminated to reach the totals for all government transactions with the rest of the economy -- households, enterprises, and nonprofit institutions, but no other governments within the country unless coverage is incomplete. Transactions with governments abroad, as with other nonresidents, would of course not be eliminated.

To compile general government totals when reports of intergovernmental grants by donor and recipient governments differ, the more valid figure is chosen and appropriate adjustments are made. Identifiable intergovernmental transactions other than grants, e.g., a government's employer contributions to social security schemes at other levels of government, are also eliminated.

Following compilation of general government data, problems arise when attribution of general government totals to different levels of government is necessary. With intergovernmental grants eliminated, to whom should their eventual use be attributed-- the grantor or grantee government? This question arises, for example, in calculating the share of each level of government in total government operations for use in comparing centralization or decentralization in different countries or over time.

V. Measuring Centralization or Decentralization

Much of the quantitative comparison of the role of subnational governments or of federalism has centered on a concept of the centralization or decentralization of government, calculated as the ratio of the central government or of subnational governments, respectively, to the totals for general government. 1/ Such a ratio has been employed as a measure of subnational governments, to be related to possible explanatory factors -- e.g., industrialization, per capita income, geographic extent, urbanization, openness, and federal structure 2/-- and to possible effects, such as larger overall government operations. 3/

Though various versions and combinations of centralization ratios have been used, persistent reservations have been raised regarding their meaningfulness and significance. Thus, in a paper presented to the 1962 Congress on Centralization and Decentralization in Public Finance of the International Institute of Public Finance, Alan Williams wrote: "I would like to state categorically that I do not regard crude indices, such as

1/ See, however, use of the ratio of subnational governments to central government in Bahl (1986) 5-7.

2/ A review of the literature on relationships between decentralization and various national characteristics is provided in Wasylenko (1987) 59-60.

3/ Oates (1985).

the ratio of grant receipts to total expenditure, or of local authority expenditure to total expenditure of the public sector, as an adequate representation of the degree of centralization or decentralization in the public finances of any particular country." 1/ More recently, Richard Bird referred to "such artificial and sterile exercises as comparing the degree of 'centralization'." 2/

The nature of such reservations regarding the measurement of centralization can perhaps be best understood in the framework of distinctions drawn by Kjeld Philip in 1954. 3/ Examining relationships between levels of government, he distinguished three aspects of each government function: 1) regulation or control, 2) finance, and 3) administration. He described the dynamics of gradual centralization in Denmark, Sweden, England, and the U.S., and showed how aspects of particular functions exercised initially by local governments were shifted gradually and separately to a higher level of government. The shift was led in some cases by central regulation, which strained local government resources and brought on grants to finance continued local administration of the function. 4/ The shift was led in other cases by central government grants, which were followed by regulation to ensure effective use of the funds in local administration. On the tax side, too, such separation could take place, with assessment, rate-setting, and collection taking place at different levels of government.

Much of the dissatisfaction with the measurement of centralization reflects the separation of regulation, finance, and administration in the exercise of some government functions. All regulation, whether of other levels of government, enterprises, or households, is difficult, and perhaps impossible, to measure. 5/ This prompts uneasiness, therefore, with any measure of financial or administrative decentralization, which cannot, by its nature, recognize central regulation or control. Both finance and administration can be measured. Because neither measure alone presents a full picture of how government

1/ Williams (1964) 280-1.

2/ Bird (1986) 21.

3/ Philip (1954) 18, 22, 36-7.

4/ See, for example, attribution of New York State's high per capita Medicaid expenses, which exceed those of all other states, to the fact that only in New York are increased services legislated by the state government but paid for by city governments. Letter from New York State Comptroller Edward V. Regan (1990) 20.

5/ Six nonquantitative indicators of the centralization of control are provided by Herbert Kaufman: 1) subordination to detailed central directives; 2) central selection, advancement, and disciplining of staff; 3) operation through a central treasury, requiring central authorization; 4) central inspection, book-keeping, and reporting requirements; 5) frequent referrals and consultations with the center; and 6) staff identification with the center, and central training of staff. Kaufman (1963) 12-3.

activities are carried out, however, it is important to clarify the distinction between them.

The difference between finance and administration occurs because of intergovernmental grants, which are financed by the grantor government and administered, in providing goods, services or income to the public, by the grantee government. To measure which level of government administers government operations, expenditures are measured net of grants given to other levels of government. To measure which level of government finances government operations, expenditures are measured including grants given to other governments but net of grants received. 1/ Thus, a state government receiving grants from the central government and making grants to local governments, administers its expenditures net of the grants it gives and finances its expenditures net of the grants it receives.

Centralization ratios comparing each level of government's tax revenue or general revenue, excluding grants received, are sometimes calculated to accompany centralization ratios for administered expenditures. While such revenue centralization ratios may approximate centralization ratios for financed expenditures, they omit expenditures financed by net borrowing and the use of cash balances, that is, the deficit, which may be more centralized than other government receipts in some countries.

Examination of eight published presentations on centralization shows that of the three concerned primarily with expenditures, one calculated the centralization of expenditures on an administered basis, 2/ and two on both a financed and administered basis. 3/ Of the other five, all calculated centralization ratios or shares on the basis of both administered expenditures and revenues. 4/

Centralization ratios calculated for government consumption, as measured in the national accounts, may be closer to administered expenditures than to financed expenditures in that they omit from the grantor's expenditures intergovernmental grants given, along with all other transfers given. However, such ratios may seriously understate the expenditure role of central government, for which transfers in pursuit of redistributive objectives are usually far more important than for subnational governments. Also critical in such calculations is

1/ Administered expenditures are referred to as "control of resources" and financed expenditures as "expenditures from own resources" in Madhusudhan and Burkhead (1987) 54-5. They are referred to, respectively, as "direct expenditures" and "own-financed expenditures" in Break (1970) 164.

2/ Pryor (1967) 413.

3/ Break (1970) 166-7, and Madhusudhan and Burkhead (1987) 54-5.

4/ Bahl (1986) 6-7; Bird (1986) 17-8; Oates (1972) 196-7; Oates (1985) 753; and Wasylenko (1987) 60-1.

whether social security fund operations are counted within or outside central government.

In practice, centralization ratios have been calculated for both total government outlays -- i.e., expenditure and lending minus repayments (the latter insignificant for most subnational governments) - and total revenues, as well as for their major components. Frederic Pryor, for example, comparing the centralization ratios of seven capitalist and seven communist countries as regards expenditures for education and for health and welfare, 1/ found the degree of centralization for education, health and welfare expenditures to be more dependent on institutional than economic factors. He concluded also that much of the change in the centralization of aggregate public expenditures was due to the changing composition of expenditures. 2/ Michael Wasylenko found that fiscal decentralization -- of either revenues or expenditures -- while higher among industrial countries than among developing countries, did not vary much among industrial or developing countries, and that neither per capita GDP, urbanization, population size, nor territorial extent explained variations in either subgroup, though federal structure and openness of the economy did have an effect. 3/

VI. Measuring Vertical Balance

One result of the disparate decentralization of control, finance and administration is the difference between subnational governments' own resources and their expenditures, which is sometimes referred to as vertical balance or imbalance. One measure of this difference is found in J.S.H. Hunter's coefficient of vertical balance. This is calculated as one minus the portion of a subnational government's expenditure provided for by receipts -- of its own taxes, shared taxes, nontax revenues, unconditional grants, conditional grants, and net borrowing -- controlled by the higher level of government. 4/ Calculation of the coefficient requires a quantified judgment as to the portion of each source of a government's funds controlled by a higher level of government.

While this measure compares the control of finance with expenditures, it does not deal with the element of control applied by the higher level of government to expenditures administered and fully financed by the lower level of government. Such an examination was undertaken by Richard Murray. He measured the share of local government expenditures in Sweden for tasks delegated on an obligatory basis, on a regulated basis, and under grants with regulations tied to them, and

1/ Pryor (1968) 177, 223.

2/ Pryor (1968) 295, and Pryor (1967) 417-8, 428-9.

3/ Wasylenko (1987) 68.

4/ Hunter (1977) 40-43.

found that about 20 per cent of total local government expenditures were altogether free from regulations and grant formulas. 1/

Another indication of the separation of finance and control from administration of government functions is to be found in the magnitude and character of intergovernmental grants. Intergovernmental grants are given for three basic purposes: 1) to correct vertical fiscal imbalance between levels of government, 2) to correct horizontal fiscal imbalance in the needs or resources of governments at the same level, and 3) to promote specific purposes. 2/

Without comparisons of individual governments, data aggregated by level of government cannot show the inequalities between governments within that level, nor the equalizing effects of the distribution of grants. 3/ Aggregated data can, however, show the overall importance of grants in each country in the ratio of total intergovernmental grants to total general government expenditures (see Table 1). Among industrial countries, this ratio varies from 6 per cent in Belgium to 27 per cent in Denmark.

In addition, data presented in the GFSY for some countries identify the functions for which intergovernmental grants are given. Grants assigned to no particular function, which may be taken to represent more general support for the correction of vertical or horizontal imbalance, 4/ represent the majority of grants in France, the United Kingdom, Germany and Australia, but only 11 per cent in the United States and a little over 20 per cent in Canada and Denmark.

It is also possible to relate grants given for each function to total administered expenditures for that function, so as to measure the separation between finance and administration of that function, keeping in mind, however, the more general grant support. These data show substantial intergovernmental grant financing of education in Canada, the U.S., Australia, Zimbabwe and Switzerland, but quite little in the

1/ Murray (1985) 307-9.

2/ Mathews (1980) 24.

3/ A study by Harold Wolman and Edward Page making use of disaggregated comparisons to examine the overall equalizing effects of grants to subnational governments found that such grants reduced disparities in Canada and Denmark quite extensively (by 73 per cent in each), moderately in Germany (by 38 per cent), and only marginally in England and the U.S. (by 15 and 8 per cent, respectively), and increased disparities in Australia. Wolman and Page (1987) 87.

4/ A comparison of the bases for determining the total of intergovernmental grants and for their distribution is contained in Bahl (1986) 3-22.

U.K., France, Germany, and Denmark. Intergovernmental grants cover some 20 per cent of total government health expenditures in the U.S. and Canada, but very little elsewhere. Grants cover almost half of social security and welfare expenditures in Denmark, and about one-tenth in the U.S., Canada, and Switzerland, but far less elsewhere.

Such data, where available, can usefully supplement the more basic data showing the magnitude of government education, health, and social security and welfare expenditures in each country and the shares administered by each level of government, appearing in Table 2.

Similar analysis is possible on the receipts side. Table 3 compares the importance of grant receipts to state and local governments in different countries. It then shows both the magnitude, in relation to Gross Domestic Product, of revenues from all taxes, income taxes, property taxes, and domestic taxes on goods and services, and their centralization, as measured by the share of each accounted for by central, state and local governments. What emerges is the relative importance of subnational income tax revenues in Scandinavian and some other northern European countries, of subnational property taxes in countries with English-speaking administrative traditions, and of domestic taxes on goods and services at the state level in the U.S., Canada, India, and Brazil, and to a lesser extent in Australia, Germany, and Colombia.

VII. Conclusion

Centralization ratios, coefficients of vertical balance, grants-to-expenditure ratios, and subnational shares of general government totals are internal dimensions, measuring the organization by level of general government. The magnitude of government operations, in relation to overall economic activity, is measured by their ratio to Gross Domestic Product, to regional or local product, or to other macroeconomic dimensions. The structure and content of operations -- of a single government, a level of government, or general government -- is measured by the ratios of receipt or payment components to the larger aggregates, such as the ratio of grants received to the sum of grants and own revenues, the ratio of each type of tax to total tax receipts, or the ratio of each function to total expenditures. With the results of such measurements, which bring precision to our ideas, analysis can proceed.

Table 1.
Portions of General Government Expenditure Financed by
Intergovernmental Grants

	Ending Year	Total Expenditures 1/ (as percent of general government expenditures)	Education	Health	Social Security & Welfare	Percent of Intergovt Grants Unclassified
Australia	1987	24.5	30.6	8.2	1.4	60.0
Austria	1987					
Belgium	1987	6.3				0.0
Canada	1987	16.7	50.2	22.9	9.4	21.8
Denmark	1986	27.1	9.1	6.2	47.6	23.5
Finland	1987	16.5				
France	1985	6.8	2.7	1.0	1.1	78.0
Germany	1983	10.3	10.9	3.5	3.5	52.6
Ireland	1987	16.5				
Luxembourg	1987	11.5	4.9	23.8		
Netherlands	1988	23.5				
New Zealand	1981	2.1				
Norway	1986	15.2				16.2
Spain	1986	9.8				
Sweden	1987	10.3				21.2
Switzerland	1984	14.9	21.9	7.3	9.4	19.4
United Kingdom	1987	13.3	3.9	0.0	6.5	66.4
United States	1987	14.9	42.8	18.7	13.2	10.9
Hungary	1988	10.4				
Poland	1988	10.6				
Romania	1985	10.3				
Yugoslavia	1987	7.2				
India 2/	1986	27.8				
Indonesia 2/	1988	17.6				
Israel	1986	3.7	18.1	0.7	2.4	51.2
Pakistan	1979	9.7				
Thailand	1982	3.9				9.8
Argentina 2/	1987					88.0
Bolivia	1986	0.4				
Brazil	1987	14.4				
Chile	1987	2.0			0.0	
Colombia	1984	19.1				
Mexico	1984	3.3				
Paraguay	1984	0.0				
Kenya	1984	4.3				21.1
Malawi	1984	6.1				
South Africa	1986	14.9				
Tunisia	1982	12.1				
Zimbabwe	1986	8.5	37.6	9.3	0.0	2.3

Source : International Monetary Fund, Government Finance Statistics Yearbook, 1989, Vol. XIII (Washington, D.C.).

1/ Includes supranational authorities share of general government expenditures in Belgium (2.2 percent), Denmark (2.2 percent), France (1.4 per cent), Germany (1.8 per cent), Luxembourg (2.7 percent), and United Kingdom (1.9 percent).

2/ Data for general government do not include local government.

Table 2.
Magnitude of General Government Expenditures and Portion
Administered by Each Level of Government 1/

(Average of Latest Three Years Available)

Country	Ending Year	Total Expenditure	Education	Health	Social Security & Welfare	Total Expenditures 3/			Education			Health			Social Security & Welfare		
						Central Govt.	State Govt.	Local Govt.	Central Govt.	State Govt.	Local Govt.	Central Govt.	State Govt.	Local Govt.	Central Govt.	State Govt.	Local Govt.
		(As percent of GDP)				(As percent of General Govt)			(As percent of General Govt)			(As percent of General Govt)			(As percent of General Govt)		
Australia	1987	39.1	5.5	5.5	9.6	52.9	40.4	6.8	8.5	91.3	0.2	43.5	55.6	0.9	92.8	6.2	1.0
Austria	1987	51.8				70.4	13.7	16.9									
Belgium	1987	56.7				85.9		11.9									
Canada	1987	46.0	5.8	6.0	12.3	41.3	40.3	18.4	4.8	34.5	60.7	2.6	89.5	7.9	65.8	31.3	2.9
Denmark	1986	57.6	7.1	5.2	23.1	44.9		52.9	46.8		53.2	7.1		92.9	26.1		73.9
Finland	1987	43.0				54.7		45.3									
France	1985	49.3	4.6	8.3	20.9	82.2		16.5	75.3		24.7	97.0		3.0	91.8		8.2
Germany	1983	50.2	4.2	8.0	21.2	58.7	21.5	17.9	1.0	73.8	25.2	74.4	11.2	14.4	79.0	10.9	10.1
Ireland	1987	55.8				72.5		27.5									
Luxembourg	1987	39.1	4.4	0.7	21.3	81.3		15.9	74.1		25.9	92.0		8.0	97.4		2.6
Netherlands	1988	59.2				70.1		29.9									
New Zealand	1981	43.2				86.9		13.1									
Norway	1986	47.2				66.4		33.6									
Spain	1986	38.2				78.8	9.9	11.3									
Sweden	1987	61.6				59.8		40.2									
Switzerland	1984	37.4	5.3	5.9	13.9	47.5	28.3	24.2	6.2	57.5	36.3	45.5	32.1	22.4	88.5	5.6	5.9
United Kingdom	1987	44.8	5.1	5.1	14.3	70.9		27.2	12.7		87.3	100.0		0.0	84.0		16.0
United States	1987	37.1	5.1	4.3	9.0	60.3	17.3	22.4	4.2	24.5	71.3	50.5	33.8	15.7	78.0	14.6	7.4
Hungary	1988	64.5	5.7	4.2	18.1	77.8		22.2	20.0		80.0	39.2		60.8	95.7		4.3
Poland	1988	48.1				71.1		28.9									
Romania	1985	32.3	2.1	2.1	8.9	77.0		23.0	28.0		72.0	10.3		89.7	99.3		0.7
Yugoslavia	1987	25.3	3.2	4.2	7.8	23.2	31.4	45.4	0.0	0.0	100.0	0.0	0.0	100.0	7.3	75.9	16.8
India 2/	1986	22.6	3.4	0.9	2.3	47.5	52.5		9.0	90.1		30.2	69.8		0.0	100.0	
Indonesia 2/	1988	22.8	3.1	0.5	0.4	88.7	11.3		65.3	34.7		72.8	27.2		0.0	100.0	
Israel	1986	62.9	5.3	2.0	10.0	90.8		9.2	67.2		32.8	97.0		3.0	94.9		5.1
Pakistan	1979	26.1				68.2	28.3	3.5									
Thailand	1982	21.2	4.1	1.1	1.2	92.3		7.7	94.8		5.2	93.5		6.5	97.4		2.6
Argentina 2/	1987	33.2	4.0	1.1	9.1	60.3	39.7		33.3	66.7		24.4	75.6		89.4	10.6	
Bolivia	1986	11.1				85.9	10.6	3.4									
Brazil	1987	34.1				65.8	24.5	9.6									
Chile	1987	32.3	4.9	1.9	8.8	93.8		6.2	81.7		18.3	98.1		1.9	100.0		
Colombia	1984	18.0	5.5	1.3	3.2	67.4	23.9	8.7	55.5	39.2	5.3	49.0	40.2	10.8	90.0	7.8	2.2
Mexico	1984	30.2				90.1	7.6	2.3									
Paraguay	1984	11.3				95.1		4.9									
Kenya	1984	29.3	5.2	2.1	1.4	94.3		5.7	94.0		6.0	91.9		8.1	75.9		24.1
Malawi	1984	29.1	3.7	2.2	0.6	93.7		6.3	98.7		1.3	82.9		17.1	100.0		0.0
South Africa	1986	33.3				74.8	12.5	12.7									
Tunisia	1982	34.0	5.1	2.5	4.7	94.6		5.4	100.0			100.0			100.0		0.0
Zimbabwe	1986	45.0	8.3	2.6	3.0	75.8		24.2	60.2		39.8	86.6		13.4	100.0		0.0

Source : International Monetary Fund, Government Finance Statistics Yearbook, 1989, Vol. XIII (Washington D.C.).

1/ Excluding intergovernmental grants.

2/ Data for general government do not include local government.

3/ Includes supranational authorities share of general government expenditures in Belgium (2.2 per cent), Denmark (2.2 per cent), France (1.4 per cent), Germany (1.8 per cent), Luxembourg (2.7 per cent), and United Kingdom (1.9 per cent).

Table 3.
General Government Tax Revenues as Percent of GDP, Portion Attributable to Each Level of Government,
and Grants as Percent of State and Local Revenue and Grants

(Average of Latest Three Years Available)

Ending Year		Total Tax Revenue	Taxes on Income	Taxes on Property	Domestic Taxes on Goods & Services	Grants as % of Total Revenue & Grants		Total Tax Revenue			Taxes on Income			Taxes on Property			Domestic Taxes on Goods & Services		
		(as % of GDP)				State Govt.	Local Govt.	Central Govt.	State Govt.	Local Govt.	Central Govt.	State Govt.	Local Govt.	Central Govt.	State Govt.	Local Govt.	Central Govt.	State Govt.	Local Govt.
						(as % of General Govt)	(as % of General Govt)	(as % of General Govt)	(as % of General Govt)	(as % of General Govt)	(as % of General Govt)	(as % of General Govt)	(as % of General Govt)	(as % of General Govt)					
Australia	1987	28.8	15.8	2.3	8.0	54.8	21.2	81.1	15.3	3.6	100.0			4.9	49.2	46.0	75.6	24.4	
Austria	1987	41.1	11.4	1.0	13.0	31.3	14.0	75.8	11.5	12.7	58.0	22.6	19.4	52.1	4.3	43.6	71.3	13.1	15.6
Belgium 1/	1987	46.0	18.5	0.9	10.6		60.3	93.5		5.0	90.0		10.0	100.0			95.9		3.3
Canada	1988	34.9	16.3	3.2	9.4	19.6	47.0	50.8	40.0	9.2	63.5	36.5			16.1	83.9	38.7	60.8	0.5
Denmark 1/	1987	50.5	28.5	2.3	17.2		46.2	71.2		28.2	54.0		46.0	57.0		43.0	99.4		0.1
Finland	1987	35.6					33.2	76.0		25.3									
France 1/	1988	41.6					34.7	90.0		9.2									
Germany 1/	1988	39.3	13.0	0.9	9.3	15.8	28.2	69.8	21.7	7.6	39.4	40.5	20.1	5.2	54.5	40.3	69.9	29.4	0.1
Ireland 1/	1987	38.9	14.2	1.6	13.2		72.0	96.0		2.3	100.0			42.9		57.1	98.7		
Luxembourg 1/	1987	39.2	18.7	2.5	9.5		46.1	93.3		6.2	87.6		12.4	92.0		8.0	99.2		0.7
Netherlands 1/	1988	46.8	13.1	1.1	11.1		84.0	97.8		0.8	100.0			100.0			99.4		
New Zealand	1981	33.2	23.1	2.4	6.4		18.5	93.5		6.5	100.0			17.9		82.1	98.8		1.2
Norway	1986	45.6	18.4	0.9	17.5		39.9	80.9		19.1	57.1		42.9	40.6		59.4	99.8		0.2
Spain	1986	28.5	7.6	0.8	7.5	66.0	25.3	87.7	3.3	9.0	84.3	1.2	14.4	56.7	23.9	19.4	76.1	7.4	16.5
Sweden	1987	44.8	21.9	1.3	11.9		22.1	77.7		32.6	33.2		66.8	100.0			100.0		
Switzerland	1987	31.8	13.1	2.7	4.6	25.7	16.3	60.5	22.8	16.7	22.8	42.2	35.0	32.6	42.2	25.2	87.7	11.8	0.5
United Kingdom 1/	1987	37.3	14.5	4.7	11.5		47.4	88.1		10.7	100.0			17.0		83.0	99.8		
United States	1987	27.0	12.4	2.9	4.6	20.4	38.0	66.7	20.6	12.8	81.6	16.8	1.7	5.6	7.2	87.1	17.1	68.0	14.9
Hungary	1988	53.8	12.5	1.6	18.7		47.8	91.7		8.8	73.2		26.8	55.5		44.5	99.2		0.8
Poland	1988	44.0	13.9	1.7	13.1		33.7	80.9		19.1	79.6			50.8		49.2	89.2		10.8
Romania	1985	11.7	0.3	0.4	0.1		43.2	80.2		19.8			100.0			100.0			100.0
Yugoslavia	1986	25.1	1.6	0.1	6.0	7.4		25.9	33.9	40.1		55.9	44.1		26.3	73.7	70.5	13.0	16.5
India 2/	1986	17.8	2.0	0.2	11.4	43.7	46.8	67.2	32.8		100.0			39.0	61.0		51.9	48.1	
Indonesia 2/	1988	15.4	9.2	0.4	4.4	77.6		97.3	2.7		100.0			55.4	44.6		95.4	4.6	
Israel	1986	47.1	20.1	2.6	15.9		9.2	95.5		4.5	100.0			22.9		77.1	100.0		
Pakistan	1979	14.7				18.8		76.9	18.5	4.6									
Thailand	1988	15.5	3.2	0.4	8.4		36.8	95.0		5.0	100.0			58.8		41.2	92.8		7.2
Argentina 2/	1987	21.4	2.4	1.8	8.1			86.4	13.6		49.8	50.2		68.3	31.7		93.5	6.5	
Bolivia	1986	8.7	0.1		5.0	14.1		78.6	18.4	3.0	99.2	0.8					60.1	36.2	3.7
Brazil	1987	22.3	4.3	0.3	10.1	20.0	71.4	71.4	26.6	1.9	100.0			2.8	51.9	45.3	43.7	53.4	2.8
Chile	1987	23.2	3.5	0.4	12.5		31.4	96.5		3.5	100.0			100.0			95.5		4.5
Colombia	1984	11.4	2.6	0.4	4.6	56.2	41.7	80.3	13.3	6.3	100.0			9.5		90.5	70.0	30.0	
Mexico	1984	18.2	4.5	0.1	9.4	6.5		84.6	12.7	2.7	98.2	1.6	0.2	8.7	52.4	38.9	99.4	0.3	0.3
Paraguay	1987	8.6					4.9	97.6		2.4									
Kenya	1986	18.5	5.9	0.5	8.1		1.8	96.4		3.6	100.0			1.4		98.6	97.6		2.4
Malawi	1984	17.6	6.6	0.7	6.2		6.9	95.9		4.1	99.7		0.3	1.9		98.1	99.8		0.2
South Africa	1986	24.6	13.3	1.4	8.4	84.8	7.7	94.4	1.5	4.1	100.0			27.7		72.3	95.6	4.4	
Tunisia	1982	25.6	5.1	0.8	7.5		50.7	97.9		2.1	96.9		3.1	81.3		18.7	97.6		2.4
Zimbabwe	1986	29.1	13.3	0.9	9.7		37.8	96.3		3.7	100.0			12.3		87.7	98.3		1.7

Source: International Monetary Fund, Government Finance Statistics Yearbook, 1989, Vol. XIII (Washington D.C.).

1/ Includes supranational authorities share of general government total tax revenues for Belgium (1.5 per cent), Denmark (.7 per cent), France (.7 per cent), Germany (.9 per cent), Ireland (1.7 per cent), Luxembourg (.5 per cent), Netherlands (1.4 per cent), and United Kingdom (1.2 per cent).

2/ Data for general government do not include local government.

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