

## Chapter 8

# Managing Local Government Expenditure and Fiscal Decentralization

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*So long as we do not ensure that expenditure of money upon local objects conforms with the needs and wishes of the locality, invest it with adequate power and assign to it appropriate finances, we will never be able to evoke local interest and excite local initiative.*

—Balwantray Mehta, 1959

### DISTRIBUTION OF FISCAL RESPONSIBILITIES BETWEEN CENTRAL AND LOCAL GOVERNMENT

**A**s mentioned in Chapter 7, each government level (central, provincial, municipal, etc.) should have its own budget, enacted according to constitutional provisions or law. However, there are strong links between the budget of the central government and the budgets of subnational governments that require particular attention.

#### “Fiscal Federalism”: Key Issues

The degree of devolution, assignment of expenditures, and revenue arrangements should be tailored to the country context and depend on policy and political issues, as has been pointed out earlier. However, certain key principles should govern these arrangements in any country. Chapter 5 explained the efficiency approach to decentralization. It is embodied in Oates’ decentralization theorem, which states that each public service should be provided by the jurisdiction that controls the smallest geographic area that would internalize the benefits and costs of such provision. This is a pretty tough test to devise and meet in practice. The European Union has adopted a more operational approach in the principle of subsidiarity for assigning responsibilities among its members. According to this principle, taxing, spending, and regulatory functions should be exercised by lower

levels of government unless a convincing case can be made for assigning them to higher levels of government.

The literature on fiscal federalism discusses the complexity of decentralization and gives hypothetical and real-life examples of expenditure assignments (Box 8.1).<sup>1</sup> The need for increased fiscal decentralization is generally admitted. Many observers, however, stress the risk of loss of expenditure control, increased corruption, and inefficiencies in resource allocation that would result from hasty fiscal decentralization, even when theoretically justified.<sup>2</sup>

### Box 8.1

#### Fiscal Management in Federal Systems

In the 1980s, Argentina and Brazil faced similar problems, with subnational deficits added to excess public deficits and high inflation. In the 1990s, both countries continued with fiscal decentralization and with the struggle to bring about macroeconomic stability. Argentina had greater success, partly because it imposed a harder budget constraint on the public sector at the national level and had stronger party control of the subnational governments and of the national legislators. For restraining local and state borrowings, getting the right incentives for subnational governments and particularly for its creditors in Argentina proved more effective than central government rules in Brazil.

In the People's Republic of China, the implementation of the Budget Law in 1994 strengthened the basis for fiscal operations. Central approval of local budgets was abolished and budgetary procedures were clarified, requiring the local and central budgets to be formulated in a consistent macroeconomic framework. Local governments were disallowed from financing any deficits through bond issues, bank borrowing, or grants from the central government. They were required to run balanced budgets or to use accumulated budgetary surpluses and extrabudgetary funds to finance deficits.

*Sources: Dillinger, W. and S. Webb. 1999. Fiscal Management in Federal Democracies: Argentina and Brazil. World Bank; Ahmad, E., G. Quiang, and V. Tanzi, eds. 1995. Reforming China's Public Finances. International Monetary Fund (IMF).*

## Broad Principles of National-Local Financial Interaction

Whatever the degree of devolution appropriate to the country, the legal framework that governs the relationships between the central and local governments and the arrangements for budgeting must be clear and

efficient. However, it is impossible to provide for every situation in a codified law or contract. Conflict resolution mechanisms are therefore important to assure smooth intergovernmental fiscal relations. Such mechanisms can operate through specialized bodies. In Australia, India, and Sri Lanka, for example, a finance commission deals with financial relationships between the central government and the other levels of the government; in Germany, a second chamber of Parliament with state representation contributes to intergovernmental policy coordination; and specialized sectoral coordination councils are common in many countries.

The following principles are required for transparency and efficiency of national-local interaction.

- Each level of government should have clearly assigned responsibilities, regardless of what responsibilities are assigned to government as a whole (Box 8.2). Overlaps should generally be avoided, and long concurrent lists of shared responsibilities are particularly ambiguous.
- Fiscal and revenue-sharing arrangements between the central and local governments should be stable. They may be amended from time to time, but renewed bargaining each year should be avoided at all costs.
- Subnational governments need to have a sound estimate of these resources before preparing their budgets. In some countries (e.g., the Ukraine in 1996–1997), local governments had to wait for the draft budget of the central government to be finalized before preparing their own budgets. Such lack of predictability hampers both efficiency and fiscal control at the local level. Without an indication of the amount of resources to be transferred to them, subnational governments cannot program their expenditures. Accordingly, forecasts of revenues should be transmitted to local governments as soon as they are set, and estimates of grants to local governments need to be prepared early in the budget process of the central government.
- Incentives for increased efficiency are needed. Often, the central government reduces transfers to subnational governments when they make economies in spending or improve their own tax collection. This evidently does not stimulate them to seek economies in service delivery or improve tax collection. Subnational governments must be allowed to benefit from savings they make, at least in large part.

The same argument applies with respect to the commercial revenue of state agencies.

- It could be desirable to agree on multiyear contracts between the central government and local governments covering both expenditure assignments and revenue arrangements (tax sharing, grants, etc.). These contracts could, if appropriate, include performance criteria, minimum standards for services rendered by local government, etc. They would define relationships in a transparent manner and would ensure predictability. As with any other contract, of course, the utility of this arrangement would depend largely on how well it is monitored and respected.
- National law should provide standard accounting and budgeting rules for subnational governments.

#### **Box 8.2**

#### **Defining Expenditure Assignments of the People's Republic of China**

To date, the People's Republic of China (PRC) has failed to work out a law that clearly defines expenditure responsibilities for different levels of government. Expenditure assignments are murky and often motivated by political expediency, shift between levels of government in ad hoc ways. The central government may shift its own expenditure responsibilities to provincial governments in times of difficulty and provincial governments may use their broader responsibilities to bargain for a larger share of revenue. Intergovernmental bargaining has weakened budgetary planning and control and contributed to the instability of the PRC's fiscal system. Without first deciding on expenditure assignment, the PRC authorities have found it difficult to reform tax assignment rules and revenue-sharing mechanisms between the central and provincial governments.

Expenditure assignments between the provincial government and lower-level authorities, such as municipalities and counties, are even more vague. Local governments are often forced to take the responsibility that should belong to higher-level government, accentuating the mismatch between local revenue and local expenditure responsibility. Unspecific and unpredictable, the system of expenditure assignments has created budgetary uncertainty for the central government and made fiscal planning an impossible task for provincial and local authorities, thus adversely affecting the quantity and quality of the public goods and services they supply.

*Source: Ahmad, Qiang, and Tanzi, eds. 1995. Reforming China's Finances. Washington, DC: International Monitoring Fund.*

For expenditure control and strategic allocation of resources

- Fiscal targets should cover the *general* government.
- Revenue assignment should be fully consistent with expenditure assignment, and sufficient resources should be assigned to subnational governments to allow them to fulfill their duties. When new duties or responsibilities are transferred to subnational governments, compensatory measures should be provided on the revenue side. On the other hand, of course, if some duties or responsibilities are removed, transfers to subnational government should be correspondingly reduced.
- Dumping of the fiscal deficit should not be permitted (defining fiscal targets for general government helps avoid this problem). When balancing its budget, the central government should avoid passing its financial problems to subnational governments through cuts in intergovernmental transfers or increased expenditure assignments, without compensatory measures. To do so would neither change the aggregate borrowing requirements of the general government, nor generate arrears.
- Special mechanisms are needed to control local government borrowing (see Box 8.3 for arrangements in various countries).
- In case of local government budget overruns or accumulation of arrears, the law should stipulate sanctions or emergency measures. For example, local authorities could be forced to cut expenditures or raise taxes, or local budgets could be placed under the authority of the central government for a limited time until the situation stabilizes. An exception should be explicitly provided for instances when the overrun or arrears are directly related to a dumping of central fiscal problems, as mentioned above.
- A sound reporting and accounting system is critical. Subnational government financial operations should be consolidated with central government operations. Systems for budget execution, internal control, and audit for subnational governments should be similar to those of the central government. This leads back to the central question of local government administrative capacity, and hence the issue of the desirable degree of decentralization.

## Box 8.3

## Arrangements for Controlling Borrowing by Subnational Governments

Country	Control Provisions
Argentina	The provinces may contract debt both internally and externally. The Central Bank oversees the impact on the financial system, and the Ministry of the Economy oversees maximum external interest rates.
Australia	The Australian Debt Council determines the total public debt and the distribution between the different government levels, but in practice market mechanisms operate.
Brazil	The Federal Senate sets overall limits on the amount of debt that states, the federal district, and the municipalities can contract, and establishes the rules and conditions for their external and internal credit operations.
Canada	No formal restrictions. Market mechanisms are in place.
Chile	Municipalities and state-owned enterprises can contract loans for special projects. But this requires a law that must also indicate how the loan is to be repaid.
Colombia	According to constitutional regulations, a local government may not borrow more than it can repay. There is a law that establishes graduated authorization procedures according to debt levels.
Mexico	The states may not in any case, directly or indirectly, contract obligations or loans with foreign governments, companies, or private parties, or loans that must be repaid in foreign currency. States and municipalities may contract loans only for productive public investments.
New Zealand	Generally speaking, local governments must finance current expenditures with revenues for the same year.
Sweden	A balanced budget is required. Local and municipal governments are responsible for their own debt.
United Kingdom	A balanced budget is required.
United States	All local governments must have a balanced budget. Most states have either a constitutional or a statutory requirement for a balanced budget.
Venezuela	Local and municipal entities may not contract loans without the authorization of federal authorities.

Sources: Ter-Minassian, ed. (1997); Petrei (1998).

- Consolidating the expenditure of the different levels of government is necessary also for policy analysis, especially in decentralized systems and federal countries. It would be very difficult to know what is being spent on key sectors if only the accounts of the central government were considered. For the purpose of consolidation, local and central governments should have a common functional and economic classification of expenditures.

## **FISCAL DECENTRALIZATION: BENEFITS AND PROBLEMS**

### **Prerequisites for Fiscal Decentralization**

Some key conditions must be in place for fiscal decentralization.

- Related to political decentralization, a subnational government entity should be responsible to the local population in some appropriate fashion (normally through elections).
- Chief local executives should be elected or appointed directly or indirectly by such a local government entity. It is difficult for the local government to implement its own programs if local executives are appointed or seconded by governments at a higher level, as is the case in many developing countries (Chapter 5).
- Local government must have some taxing powers of its own to have effective control over its budget. If all local government revenues are in the form of fiscal transfers from the central government, it is actually the central government that decides the local budget, impairing the essence of fiscal decentralization.
- Local governments must have adequate tax administration capacity. Poor tax collection defeats the advantage of having some revenue-raising powers.
- Local governments must have some degree of autonomy in determining their service levels before they can be made accountable for delivering services that are important to the local citizens.

### Potential Benefits of Fiscal Decentralization<sup>3</sup>

#### *Efficiency*

Fiscal decentralization can increase service efficiency and people's economic welfare, as local governments can better suit the differing tastes and preferences of residents and are more responsive to the public. More efficient services will be provided, since people can hold local officials accountable for service delivery at some acceptable quantity, price, and quality.

#### *Revenue mobilization*

A decentralized tax structure may lead to more effective tax administration and hence, with the same overall tax rates, greater revenue. Central governments typically exclude potential small taxpayers from the tax net because of the administrative difficulties associated with identifying them, and because the revenue gains are relatively small compared with the administrative costs of collection. Local governments, being closer to the people, may reach the lost potential revenues through some kind of user charges and other minor taxes. This is particularly applicable to subnational governments in transitional economies where small private business is a rapidly growing sector.

#### *Resource allocation and equity*

Because local government is closer to the users, it is in a better position to decide on appropriate user charges for some services and administer the system, thus improving the allocation of resources and fostering economic growth, while tailoring charges to ability to pay.

### Potential Costs of Fiscal Decentralization

The potential costs are an almost exact mirror image of the potential benefit argument. One of the other argument will be valid, depending on the specific country conditions and time.

#### *Efficiency*

The converse of the efficiency case for decentralization argues that fiscal decentralization can worsen efficiency when local bureaucracies are

unresponsive, technically and managerially deficient, and poorly motivated—as they are in many developing countries and several developed countries. Also, the assumption that people express their preferences through their votes is not always valid, considering local allegiances in many developing countries that reflect economic dependence, political loyalties, religious affiliation, cultural identities, etc., rather than public tastes and preferences for certain services and government efficiency.

*Poor resource mobilization*

The same negative effect on tax administration and resource allocation can occur when local capacity is limited. And local government may be more vulnerable to “capture” by powerful local elites. Any revenue gained by expanding the tax base to include small taxpayers can be more than offset by the loss of revenue from underpayment of tax by wealthy people.

*Regional inequality*

Fiscal decentralization fosters regional inequalities and may lead to unequal treatment of individuals, where persons or households with the same income but residing in different localities are treated differently because of dissimilar tax and expenditure policies of local governments. In decentralized allocation of public goods and services, taxes are collected and expenditures undertaken differently in different jurisdictions. Fiscal decentralization may heighten regional inequalities. Rich regions, with higher income from their larger tax bases, can lower tax rates and provide better public goods and services. The lower tax rates may induce mobile persons to settle in rich jurisdictions, further enlarging their tax bases and concentrating activities and growth in a few cities and localities; and the better public services (especially in education and health) will provide a continuing advantage for human capital formation, growth, and competitiveness. Thus, rich regions become richer and poor regions become poorer.

*Resource allocation*

Local governments may be unable to build to proper standards and adequately maintain infrastructure and services, primarily because of poor technical and managerial capacity. The case of Tunisia is instructive (Box 8.4). This resource allocation argument against fiscal decentralization is generally the weakest, however. (See Chapter 5 for a discussion of vertical coordination among different levels of government.)

**Box 8.4**  
**Decentralization in Tunisia: A Case Study**

Until 1974, local governments in Tunisia were responsible for the collection and treatment of used water. However, the quantity and quality of the service were bad. For one, local governments had very little technical expertise. A survey of people employed in the sector revealed that only 4 percent of the total workforce had any skills related to sewerage. Local governments kept no accounting information on service costs and no form of cost recovery was available.

Moreover, most local governments did not invest in the necessary equipment and technology useful for the sector. In 1970, only 20 out of 150 municipalities reportedly had some form of treatment plants, and all of these were overloaded and malfunctioning. Many sewer systems were also either poorly designed or poorly maintained. Manholes, grit traps, and other sewer accessories were out of service. Of the 27 sample lift stations inspected in 1974, only five were functioning.

The implications were serious. The Lake of Tunis, into which used and poorly treated water was discharged, was rapidly deteriorating. Infectious and parasitic diseases such as cholera therefore became prevalent.

Instead of helping local governments improve their systems, the central government of Tunisia decided to take over the provision of service from the local governments. In 1974, the Office National de l'Assainissement (ONAS), a specialized semiautonomous agency, was created and was given a monopoly over the service. ONAS' management was autonomous, it was appropriately staffed, and sound financial procedures were instituted. At first, ONAS operated only in the Tunis metropolitan area, then it gradually covered all other major urban centers of the country. In other parts of Tunisia, municipalities that had their own system continued to operate them but were later integrated into ONAS' operations.

With the help of foreign institutions such as the World Bank, ONAS developed into an effective and efficient institution. By 1987, many of its staff had become competent technical professionals and had replaced the foreign assistants who had been temporarily hired. Service costs had been recovered and the level of sewerage services had increased significantly. By 1988, ONAS was providing full sewerage services to the 30 largest cities, comprising about 50 percent of the urban population of Tunisia.

Most reports consider the centralization of the Tunisian sewerage system a success in terms of production or supply efficiency. Although the financial and technical assistance of foreign institutions and donor agencies may be a big factor in this success, it is also true that the resources for improving the system would have been more difficult to mobilize in a decentralized system. Also, it would have been more difficult and costly to train personnel and improve the financial and accounting procedures of 30 municipalities instead of a single institution.

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*Source: Prud'homme (1994).*

## **Implementing Fiscal Decentralization**

Given the various options for decentralizing expenditure and revenue assignments, problems arise as to their implementation. The major ones are fiscal gaps and fiscal inequities. They are summarized below and discussed in detail in the next two major sections.

Fiscal gaps (vertical imbalances) are the result of inconsistent tax and expenditure assignments. Most major taxes are typically assigned to the central government, resulting in a fiscal gap for local governments with growing spending responsibilities. As argued earlier, the central government is also often tempted to adjust to fiscal difficulties by downloading expenditure responsibilities to local levels without the resources required to carry them out. The mismatch of expenditure and revenue assignments that leads to vertical imbalances also leads to fiscal inefficiency, as differences in levels of services between regions caused by differential fiscal gaps can distort business and investment decisions.

Fiscal inequities (horizontal imbalances) among subnational governments arise from revenue differences between local governments with different tax bases, different technical and administrative capabilities to collect taxes, or different costs and demand for local public services. A grant system may be used to equalize fiscal capacities among subnational governments so that citizens residing anywhere in a country will receive the same level of basic service (see below).

Normally, subnational governments will not have the incentive to provide services whose benefits extend beyond their boundaries, and will therefore tend to underprovide these services. Fiscal transfers can supplement incentives for subnational governments. However, in practice, the extent of spillovers is difficult to gauge, so the matching between transfers and the spillover rate will be somewhat arbitrary.

### **VERTICAL IMBALANCE: EXPENDITURE AND TAX ASSIGNMENT**

#### **Expenditure Assignment<sup>4</sup>**

Chapter 5 discusses the principles governing the decision on which level of government should provide a particular public service. Generally, the main guiding principle is to assign each type of expenditure responsibility

to the level of government that would benefit only the residents that it represents. On the basis of this general principle of local benefit, purely local expenditure responsibilities should include water, sewer, waste, and fire protection services, while central expenditures should be those whose benefits extend nationwide. However, this principle is far easier to state than to apply. Most public goods and services do not fit neatly within either category. There are services whose delivery can be shared by the central and local governments, such as those with unclear benefit regions, externalities, or national redistributive implications. In such cases, different aspects of delivery of the same service—policy, financing, and actual administration—may be assigned to different levels of government.

The lack of guidelines for sharing responsibility for delivering a particular service (especially when it comes to social spending) has led to diverse practices in various countries. For example, pensions and unemployment benefits are generally a function of central government, but in the United States (US) they are provided by the state governments. The administration of social assistance is a function of local governments in a number of countries, but it is a function of central governments in others.

Public services can be assigned to local or regional governments based on considerations such as economies of scale, cost-benefit spillovers, proximity to beneficiaries, consumer preferences, and flexibility in choosing the composition of budgets for public spending. Generally, the following types of services are the responsibility of central government:

- services that are not differentiated by local demand, such as defense, justice, or international affairs;
- services that would benefit many jurisdictions and can be handled only by contracting or by grant design, such as public transport or air and water quality; and
- services whose local administrative costs significantly outweigh the local benefits, such as income tax collection.<sup>5</sup>

Note, however, that these services may still be administered locally even if the central government makes the policy and provides financing.

## Tax Assignment

### *Revenue sharing*

The tax assignment approach entails that subnational governments (i) choose the tax base, (ii) assess the tax base, (iii) decide the tax rate, (iv) collect the tax, and (v) retain the tax proceeds. Rarely are all these conditions met. Some local taxes might be really central grants to local governments, or a central tax and a related transfer program may actually be a local tax. For a tax to be truly local, subnational governments must have the power to both decide on the tax rate and receive the proceeds. Normally, the types of taxes assigned to local jurisdictions depend partly on the overall mix of taxes in the country as a whole.

It is generally recognized that assigning all or most taxing powers to subnational governments with upward revenue sharing is not advisable, since such an arrangement does not allow the central government to perform its redistributive and macroeconomic management roles. The arrangement is, however, carried out in a few countries like the People's Republic of China. Upward revenue sharing is also considered viable in loose confederations where stabilization and redistribution policies lie with the member states, as well as in countries where subnational jurisdictions have homogenous economic conditions and close tax policy coordination and harmonization. Examples are Germany and, of course, the member-states of the European Union.

On the other hand, assigning all taxing powers to the central government and relying entirely on downward transfers to local government is equally undesirable. The arrangement inhibits local governments from matching spending authority with revenue-raising power, hence reducing their fiscal accountability.

Some countries completely separate the tax bases for each level of subnational government, while others allow certain overlaps (Boxes 8.5 and 8.6). Tiers of government in Australia, India, and Germany, for example, have separate tax bases, while Canada and the US have a certain degree of overlap in their tax bases.

**Box 8.5****Peculiarity of Local Financing in Transitional Economies**

Transitional economies, in many ways, may be considered less decentralized than most countries. However, recent developments show that fiscal decentralization is on the way. Typically, their approach to local financing is revenue sharing on a derivation basis. The system may be considered somewhat decentralized, since local governments decide how they will spend their respective shares.

There are indications that transitional economies are moving toward the revenue assignment approach. For example, although the central government of the People's Republic of China determines all tax rates and bases, subnational governments collect the revenues from all income taxes and earmark a piggyback on the value added tax for local use. Russia allows its regional governments the option of levying the company income tax at a lower or higher rate.

One peculiar feature of decentralization in transitional countries is the backdoor approach to local government financing. Local governments in these countries, constrained by the limited transfers they receive to finance large expenditure responsibilities, resort to extrabudgetary financing. This can easily be done since local governments, which are responsible for tax collection, still have ties with the enterprises and can therefore exonerate them from taxes. Hence, local governments are able to hive off resources from the sharing pool, resulting in greater retention of revenues at the local level.

*Sources: Bahl (1998); Wong (1999).*

Revenue sharing can be on a (i) derivation basis, where sharing is based on the source of tax proceeds; (ii) grant basis, where the central government distributes the revenues to all subnational governments based on a formula or the cost of collecting the tax; or (iii) piggyback system, where subnational governments are allowed to add a rate onto the central tax and receive the full amount raised from the piggyback.

Most revenue sharing is made on derivation basis. One problem with revenue sharing, especially when different shares are established for different taxes, is that it gives the administering government the incentive to place more effort on collecting those taxes that will give it the most benefits. This has been the case in the People's Republic of China (PRC), India, and Russia. Creating a pool from which shared revenues can be distributed on a formula basis would avoid this complication. However, formula-based revenue sharing is problematic from the viewpoint of macroeconomic management.

*Several criteria for tax assignment*

In decentralized tax systems, tax policies must be coordinated between jurisdictions to avoid distortion in the free movement of economic resources (labor, capital, goods, and services) from one region to another, and prevent mobile taxable goods and services (such as capital) from migrating to attractive regions with low tax rates. Such migration would cause jurisdictions to compete with one another through lower taxes or other inducements, and thus create an inefficient and opaque fiscal system in the aggregate.

There should also be rules for allocating tax revenues among jurisdictions to avoid double taxation or no taxation at all. As noted, where the tax bases are relatively mobile, decentralized tax assignment opens opportunities for tax avoidance and evasion.

Taxes assigned to central government should

- *cover mobile tax bases* to avoid movements of factors of production and interjurisdictional tax competition;
- *be sensitive to changes in income* to provide the central government with stabilization instruments and to partly shelter the budgets of subnational governments from cyclical fluctuations; and
- *cover tax bases that are unevenly distributed across regions*. Taxes on natural resources are an example. In this case, however, since the exploitation of the environment will affect the local government concerned, the tax base should therefore be shared between the central and the local government.

Correspondingly, local taxes require

- a relatively immobile tax base;
- an adequate tax yield to meet local needs and the buoyancy to grow at least at the same rate as expenditures;
- a stable and predictable tax yield over time;
- relatively easy administration; and
- a nonexportable tax burden on nonresidents

Table 8.1 shows salient characteristics of four main groups of revenue sources to guide the choice of local taxes. The criteria refer to the above characteristics of an ideal local tax: *mobility* refers to the mobility of the tax base; *adequacy*, *buoyancy*, and *stability* refer to the tax revenues; *fairness*

refers to the conventional notion of tax progressivity; and *administration* refers to the ease with which the tax is administered at locally determined rates.

**A Menu of Revenue Instruments**

The following considerations apply to the major kinds of taxes. Table 8.2 provides the conceptual basis for tax assignment.

**Box 8.6  
Fiscal Federalism in the United States**

The United States provides a good example of how the revenue assignment system can work. The Constitution allows the states to perform all functions that are not expressly reserved to the Federal Government and do not violate the Constitution, and to levy any tax that does not restrict interstate commerce. For their part, most states have a self-imposed balanced-budget constraint, and determine the rights and powers of their constituent local levels of government. Federal grants, mainly for externalities and equalization, account for about 20 percent of state and local government expenditures.

**Table 8.1  
Local Taxes**

Criteria	Property Tax	Income Tax	Sales Tax	Business Tax
Mobility	+	-	-	-
Adequacy	-	+	-	?
Buoyancy	-	+	+	+
Stability	+	-	-	-
Exportability	+/-	+/-	+	-
Visibility	+	+	+	-
Fairness	+	+	?	-
Acceptability	-	-	?	+
Administration	?	+	?	+

+ good  
 - bad  
 +/- good to the extent that it falls on residents; bad to the extent that it falls on nonresidents  
 ? indeterminate

Source: Bird (1995).

**Table 8.2**  
**Conceptual Bases of Tax Assignment**

Type of Tax	Deter- mination of Base	Rate Setting and Collection	Adminis- tration	Comments
Customs Tax	F	F	F	International trade taxes
Corporate Income Tax	F, U	F, U	F, U	
Resource Tax	F	F	F	Very unequally distributed tax bases
Resource Rent (profits/income) Tax	F	F	F	
Royalties, Fees, Charges; Severance Tax;	S, L	S, L	S, L	Benefit taxes/charges for state-local services
Production, Output, and Property Tax	S, L	S, L	S, L	
Conservation Charges	S, L	S, L	S, L	To preserve local environment
Personal Income Tax	F	F, S, L	F	Redistributive, mobile factor, stabilization tool
Wealth Tax (tax on capital, wealth, wealth transfers, inheritance, and bequests)	F	F, S	F	Redistributive
Payroll Tax	F, S	F, S	F, S	Benefit charge, e.g., social security coverage
Multistage Sales Tax (value-added tax [VAT])	F	F	F	Border tax adjustments possible under federal assignment; potential stabilization tool
Single-Stage Sales Tax (manufacturers/wholesale/retail)				
Option A	S	S, L	S, L	Higher compliance cost
Option B	F	S	F	Harmonized, lower compliance cost

*continued on next page*

Table 8.2 (cont'd.)

Type of Tax	Deter- mination of Base	Rate Setting and Collection	Adminis- tration	Comments
"Sin" Tax				
Excise Tax on Alcohol and Tobacco	F, S	F, S	F, S	Health care a shared responsibility
Betting, Gambling Tax	S, L	S, L	S, L	State and local responsibility
Lottery Tax	S, L	S, L	S, L	State and local responsibility
Racetrack Tax	S, L	S, L	S, L	State and local responsibility
Taxation of "Bads"	F	F	F	To combat global/national pollution
Carbon Tax				
BTU Tax	F, S, L	F, S, L	F, S, L	Pollution impact may be national, regional, or local
Motor Fuel Tax	F, S, L	F, S, L	F, S, L	Tolls on federal/provincial/local roads
Effluent Charge	F, S, L	F, S, L	F, S, L	To deal with interstate, intermunicipal, or local pollution issues
Congestion Toll	F, S, L	F, S, L	F, S, L	Tolls on federal/provincial/local roads
Parking Fee	L	L	L	To control local congestion
Motor Vehicle Tax				
Registration, Transfer Tax, and Annual Fee	S	S	S	State responsibility
Driver's Licenses and Fee	S	S	S	State responsibility
Business Tax	S	S	S	Benefit tax

*continued on next page*

Table 8.2 (cont'd.)

Type of Tax	Deter- mination of Base	Rate Setting and Collection	Adminis- tration	Comments
Excise Tax	S, L	S, L	S, L	Residence-based tax
Property Tax	S	L	L	Completely immobile factor, benefit tax
Land Tax	S	L	L	Completely immobile factor, benefit tax
Frontage, Betterment Tax	S, L	L	L	Cost recovery
Poll Tax	F, S, L	F, S, L	F, S, L	Payment for local service
User Charges	F, S, L	F, S, L	F, S, L	Payment for services rendered

F = federal; L = municipal or local; S = state or province; U = supranational entity

Source: Shah (1998).

### Value-added tax

Local administration of a value-added tax (VAT) is problematic, as each local government could set its own standard tax rates and methods of administration. There are also opportunities for local protectionism by setting higher VAT rates on purchases from outside suppliers. But even if the VAT rate and base structure are determined by central government, VAT proceeds should not be shared between levels of government; otherwise, some resource-rich areas would benefit greatly, while others would collect little net revenue.<sup>6</sup>

Nonetheless, the VAT is a subnational tax in Brazil and some transitional economies (e.g., People's Republic China and Russia) where central and provincial governments share VAT proceeds on a derivation basis. The problems noted above are mitigated because the tax is collected by a central tax service, and (in the People's Republic China, at least) the central government makes up for low yield in exporting to the provinces. Still,

protectionist measures have been taken in some Chinese provinces. In Brazil, the decision to allow VAT as a subnational tax has led to administrative problems and economic distortions. Overall, one useful way to funnel VAT proceeds to subnational governments is for the central government to administer and collect VAT, and earmark a share of it for a distributable pool, to be allocated among the recipient local governments on a formula basis.

#### *Corporate income tax*

The corporate income tax must be levied by the central government since it fails all the tests of a good local tax: it imposes high compliance costs, generates incentives for tax avoidance, offers an opportunity to export the tax burden to other regions, and is an uncertain and volatile revenue source. Corporate income taxes are still levied at the subnational government level in many developing and transitional economies and especially in the latter, where this tax base is among the fastest growing. Problems have not yet arisen because businesses tend to operate in a single province, but they will become apparent once businesses begin to operate in more than one province. It would therefore be advisable to begin tax planning in preparation for a smooth shift in company tax administration responsibilities.

#### *Personal income tax*

The individual income tax is a popular tax instrument for central government in most countries. The tax is, however, assigned to subnational governments in some countries (the Scandinavian countries, Switzerland, the Baltic countries, Russia, and the other former Soviet Union countries). Assigning personal income tax to subnational governments has advantages and disadvantages.

The personal income tax does meet most of the tests of a good subnational government tax: it is relatively easy to administer, resident-based, buoyant, and has fairly stable yields. However, the personal income tax is related to the redistribution function of a central government and is therefore more appropriately left to the central government. Also, it is the single best instrument of countercyclical fiscal policy.<sup>7</sup> Finally, because of labor mobility, there is never a perfect correspondence between individuals' residence and the place where they receive their income.<sup>8</sup>

*Excise and sales taxes*

These are appropriate for subnational government if levied on businesses that operate within local boundaries. Local governments can thus recover the costs of “housing” these industries and public service costs. The tax is, however, not beneficial to local governments if levied against monopolistic industries because there is no correspondence between the tax burdens and expenditure benefits within local boundaries. Retail sales taxes are commonly used by local governments, as the burden falls on the taxing jurisdiction, administration is relatively easy, and revenue yield is significant and grows approximately in proportion to local public expenditure requirements.

*Motor vehicle tax*

Motor vehicle ownership and use represent an excellent but much neglected tax for urban governments in developing countries. Motor vehicles are easily taxable, and the tax burden falls on persons with higher incomes. All forms of vehicle taxation are likely to improve the distribution of income, and in terms of horizontal equity, most may be considered fair (Box 8.7). Vehicles used for public transport and financing for lower-income people can easily be exempted from such taxes.

*Property and land taxes*

Residential property taxes are often considered the ideal tax for local governments. Since property owners are the primary beneficiaries of local government services, the tax on *real* property is directly related to their benefits. Also, the tax is better administered by local governments rather than by the central government since it requires identifying each parcel of property and tracking improvements in those properties and changes in ownership. There are problems and limitations, however, when the quality of services is systematically higher in localities with higher property values and hence greater revenue (Box 8.8)

### Box 8.7 Tax on Motor Vehicle Ownership

There are different ways of taxing motor vehicle ownership and use. Each of these has advantages and disadvantages for subnational governments.

*Restricted area license charges* and *parking fees and taxes* are most desirable in terms of economic efficiency: they can be designed to approximate the excess of the social over the private cost of using congested streets without restricting the use of uncongested streets. *Local fuel taxes* and *unrestricted license taxes* can be expected to provide good yield, buoyancy, and stability. *Automotive sales and transfer taxes* are likely to be less effective in revenue performance because of the narrower tax base and the greater likelihood of year-to-year variations in the base. *Fuel taxes* are the easiest to administer and are relatively easy to impose because they are usually hidden in the sales price of the fuel. Road tolls are also likely to be accepted by the public since they are linked to the benefit derived from the use of the roadway. *Local fuel and sales taxes* can overlap substantially with the national taxing authority and require greater coordination with the central government. On the other hand, *license taxes* and *congestion and parking charges* in most cities can normally be imposed without interference from higher-level governments.

### Box 8.8 Local Property Taxes

The property tax is undoubtedly the most widespread form of local taxation. Unfortunately, experience suggests that such taxes are not easy to administer, particularly in countries where inflation is endemic (for example, Brazil), and that they are never politically popular owing to their visibility and certain inherent administrative difficulties. Even in the most sophisticated countries, local property taxes can seldom yield enough to finance local services. As noted elsewhere, no developed country that depends significantly upon property taxes for local fiscal resources has a local government sector that accounts for more than 10 percent of total public spending (Bird and Slack 1991). Similarly, property taxes seldom account for more than 20 percent of local current revenues—or less than 1 percent of total public spending—in developing countries. Moreover, despite substantial efforts in some countries and considerable foreign assistance, these figures have not changed (Dillinger 1991). The property tax, it appears, may be a useful, even necessary, source of local revenue, but it is most unlikely to provide sufficient resources to finance a significant expansion of local public services in any country. Indeed, countries have often been hard-pressed even to maintain the present low relative importance of property tax revenues in the face of varying price levels and political difficulties.

*continued on next page*

Box 8.8 (*cont'd.*)

A recent study (Dillinger 1991) concludes that a number of conditions must be satisfied for local property taxes to play a more important role in financing local activities. The political costs of relying on the property tax are so high that no government will willingly risk doing so provided it has access to cheaper sources of finance. Intergovernmental transfers, which can be spent as local governments wish (such as access to taxes on business which can largely be exported), must therefore be curtailed not simply to make property taxes more attractive, but more importantly, to confront local decision makers with the true economic and political costs of their decisions.

But even if this structural precondition is met, a number of other policy reforms are needed to turn the property tax into a responsive instrument of local fiscal policy. First, local governments must be allowed to set their own tax rates: very few developing countries give their local governments freedom in this respect. Second, the tax base must be maintained adequately. In countries with inflation, some form of index adjustment is therefore advisable. In other countries, the assessing agency must be provided with direct financial incentives to keep the tax base up to date. Finally, a series of procedural reforms is often needed to improve collection efficiency, valuation accuracy, and the coverage of the potential tax base (Kelly 1994). None of these steps are easy, either politically or, in some instances, in terms of available technical resources. Nonetheless, countries that want to have responsive as well as responsible local governments must follow this hard road. There are no shortcuts to successful local property taxation.

*Source: Bird (1995).*

*Nontax revenues*

Local governments may depend more on user and benefit charges, which can be efficient and relatively easy to administer, and can provide significant revenues. In the US, about one sixth of state and local government revenues comes from these sources. In most countries, however, revenues from user and benefit charges remain a distant potential rather than a reality. Often, revenue-generating essential local services are provided at subsidized rates. In the People's Republic of China and Russia, for example, public transit, utilities, and housing are not self-sustaining and, in fact, are part of national wage policy. The same holds true in many developing countries where the poor population is large, and affordability and politics are major problems.

Lottery proceeds are also sometimes a popular way of raising local revenue. Lotteries are easy to administer, and the tax is well hidden from public perception and generally produces no public resistance or resentment. However, lotteries are the most regressive form of taxation, falling almost exclusively on the poor, and should not be considered as an efficient and equitable source of local government revenue, especially in developing countries.

### **HORIZONTAL IMBALANCE: INTERGOVERNMENTAL FISCAL TRANSFERS**

Intergovernmental fiscal transfers are instruments to correct the horizontal or vertical imbalances in the fiscal capacities of different subnational governments. These fiscal transfers can be broadly grouped into revenue-sharing arrangements and grants. Revenue sharing was discussed earlier. Grants can be conditional or unconditional, and open-ended or subject to ceilings. The mix of these transfers depends on the objectives of policymakers.

#### **Policy Options and Conflict**

The policy options for countering vertical and horizontal imbalances are

- correct each imbalance separately;
- correct both imbalances in an integrated system of equalization grants;  
or
- correct only the vertical imbalance and largely ignore the horizontal imbalance.

In the first policy option, the vertical imbalance can be addressed through tax-sharing or grant arrangements, and the horizontal imbalance through transfer payments from rich to poor regions. This is the approach used in Germany. In the second option, used in Australia and Canada, horizontal and vertical imbalances are addressed simultaneously through a system of grants that includes both equalization payments and special-purpose grants. The last option makes use only of tax-sharing and grant arrangements. However, it can also be matched with special-purpose grants, as is broadly the case in the US, to reduce horizontal imbalance in specific functional areas (Box 8.9).

**Box 8.9**  
**Fiscal Transfers: Principles and Practices**

Objective	Grant Design	Good Practices	Practices to Avoid
To bridge fiscal gap	<ul style="list-style-type: none"> <li>• Reassigning responsibilities</li> <li>• Tax abatement</li> <li>• Tax sharing</li> </ul>	Tax abatement in Canada and tax base sharing in Brazil, Canada, and Pakistan	<ul style="list-style-type: none"> <li>• Deficit grants</li> <li>• Tax-by-tax sharing as in India</li> </ul>
To reduce regional disparities	<ul style="list-style-type: none"> <li>• General nonmatching</li> <li>• Fiscal capacity equalization transfers</li> </ul>	Fiscal equalization programs of Australia, Canada, and Germany	General revenue sharing with multiple factors
To compensate for benefit spillovers	<ul style="list-style-type: none"> <li>• Open-ended matching transfers with matching rate consistent with spillout of benefits</li> </ul>	RSA grant for teaching hospitals	
To set national minimum standards	<ul style="list-style-type: none"> <li>• Conditional nonmatching block transfers with standards of service and access conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Indonesia roads and primary education grants</li> <li>• Chile, Colombia, and South Africa education transfers</li> </ul>	<ul style="list-style-type: none"> <li>• Conditional transfers with conditions on spending alone</li> <li>• Ad hoc grants</li> </ul>
To influence local priorities in areas of high national but low local priority	<ul style="list-style-type: none"> <li>• Open-ended matching transfers (preferably with matching rate to vary inversely with fiscal capacity)</li> </ul>	Matching transfers for social assistance as in Canada	<ul style="list-style-type: none"> <li>• Ad hoc grants</li> </ul>
To stabilize the economy	<ul style="list-style-type: none"> <li>• Capital grants, provided maintenance is possible</li> </ul>	Limited use of capital grants and encouraging private-sector participation by providing guarantees against political and policy risks	<ul style="list-style-type: none"> <li>• Stabilization grants with no future upkeep requirements</li> </ul>

Source: Shah (1998).

Policy objectives in addressing vertical and horizontal imbalances may either agree or conflict with each other. They may include the following:

- ensuring overall fiscal stability for the national economy;
- providing an acceptable degree of equity between individuals in different regions;
- encouraging efficient use of resources across the country; and
- ensuring minimum standards for services provided.

To illustrate these conflicts, when the central government increases income taxes for financial stabilization, it will inevitably reduce the tax bases of local governments and, hence, local revenue. Conversely, reducing central expenditures may raise expenditure needs at the local level. The central government, hoping to raise education standards in a certain region, for example, may opt to provide the local government with larger education grants even if the subnational government has greater revenue than other subnational governments but has invested poorly in education in the past.

### **Fiscal Transfer Options**

The main transfer options may be grouped into two major categories: (i) conditional or specific-purpose transfers and (ii) unconditional transfers. In turn, conditional transfers may be matching grants, requiring a corresponding local contribution; or nonmatching grants for specific purposes. Unconditional grants may take the form of either revenue-sharing arrangements or block grants, general-purpose grants that are in effect budget support for local government. Close-ended distribution refers to grants with caps; open-ended distribution to grants without ceilings. The matrix in Table 8.3 summarizes these options.

Transfers may be given only to poor regions by central governments, or may be organized on a cooperative basis from richer to poorer regions. Both types of distribution can be transparent. Germany uses the latter type of distribution. Other countries will be able to replicate the German system only to the extent that they enjoy the same high degree of political cohesion. Elsewhere, the very visibility of the redistribution criteria may lead to strong political opposition by better-off provinces, particularly when regional ethnic differences are significant. In these cases, equalization transfers from the center to all provinces are preferable and may be politically inevitable.

**Table 8.3**  
**Fiscal Transfer Mechanisms**

Transfer Mechanism	Mode	Redistribution Criterion
Conditional Transfers	Matching grants	With or without equalization formula, Close- or open-ended
	Nonmatching grants or specific-purpose payments	
	Block grants	
Unconditional Transfers	Revenue-sharing arrangements	With or without equalization formula
	General-purpose grants	Open- or close-ended

Central governments use *conditional grants* to increase influence over local spending, to attain and maintain minimum standards of local services, or to ensure a socially optimal outcome, especially in cases of interjurisdictional spillovers. The extent to which central governments impose conditions on grants varies from one country to another. At one extreme, conditions may be such that subnational governments are reduced to acting as mere agents of the central government; at the other extreme, conditions may be limited to reporting, leaving subnational governments with wide elbow room for local innovation and experimentation.

*Matching grants* are particularly effective in addressing spillover problems. Matching grants generally alter local spending priorities, as local governments adjust their finances to take the central governments' expenditure preferences into account. Indeed, changing local priorities is an objective of matching grants. These grants however also improve the leverage of local governments with respect to the size of the grant because of the size of their own contribution.

*Capital grants* specifically finance public investment projects or the delivery of vital public services for subnational governments. They are normally used in countries where the capital markets are not well developed, or where subnational governments do not have the fiscal strength to access such markets directly.

As mentioned earlier, capital needs are normally excluded from consideration in formulating equalization grants because of the difficulties associated with measuring and assessing the relative investment needs of different regions. A prudent approach may consist of using *block grants* or a *general-purpose equalization grant* to finance large infrastructure projects (such as regional airports and irrigation projects), and some recurring investments (such as roads and housing) financed through capital grants, with smaller investments. (See Schiavo-Campo and Tommasi [1999] for an analysis of the process of public investment programming.)

Open-ended grants encourage local governments to internalize identified spillovers and to deliver the required level of services. Of course, such arrangements are dangerous for overall macroeconomic stability, and central governments generally prefer capped grants with absolute monetary ceilings.

Grants may have a built-in redistribution mechanism or simply be distributed on an equal per capita basis. Redistribution mechanisms are usually used for general-purpose transfer systems, but can also be part of conditional grants, as in cases where poorer regions with greater education or health needs receive more grants. However, this approach then requires an overall framework for evaluating whether grants formulated separately can actually achieve the aggregate equalization objective.

One risk with all types of transfers from the central to local government is inducing local government to overspend without a clear link to citizens' preferences—the so-called “flypaper effect”, which describes a situation where the direct link between the taxpayer or voter and the services provided is broken. This is based on an empirical investigation of a number of countries, where revenues shared with local governments tend to “stick” with the latter in the form of higher expenditure rather than being passed on to taxpayers in the form of lower taxes. Hence, overprovision of services is not an explicit manifestation of public choices for those services but only of the greater availability of funds from central government. Empirical estimates suggest that the magnitude of the flypaper effect in some countries is considerable (Ahmad and Craig 1997). Of course, the solution to this problem lies in the hands of the local population and depends on the strength of the accountability mechanisms at local level.

## **Fiscal Capacity Equalization Transfers**

More important than just filling fiscal gaps, fiscal transfer mechanisms should redistribute resources so that all regions will have the same financial capacity to provide the same standard of basic public services, assuming that they exert the same effort to raise incomes from their own sources and operate at an average level of efficiency. In an effort to equalize horizontal differences among subnational jurisdictions, the national government may try to resolve through unconditional equalization systems only regional differences in revenue or tax assignment, as in the case of Canada.

A more complicated formula is needed if both expenditure and revenue differences are simultaneously addressed, as in the case of Australia and Denmark, where the formulation of transfers incorporates the assessment of revenue capacities as well as expenditure needs (Box 8.10). The People's Republic of China introduced an interesting pilot scheme in that direction (Box 8.11).

In formulating such transfers, it is especially important to estimate expenditure needs independently of the actual expenditure of individual subnational governments. Otherwise, the transfers will be merely gap filling, with the obvious risk that recipient local governments will raise their expenditure to receive larger transfers. But such a system should also distribute lump-sum transfers so that even if equalization factors are taken into account, the recipient subnational governments can choose how to spend the money.

## Box 8.10

## Fostering Interregional Equity through Fiscal Equalization in Australia

Although Australia is a federal country comprising eight states and territories, most taxation power is assigned to the federal (Commonwealth) government, which accounts for almost three fourths of general government revenue. The federal nature of the system is preserved through large-scale intergovernmental fiscal transfers: in 1998–1999, these totaled about US\$20 billion equivalent, about half of which came in the form of unconditional block grants.

The fiscal transfer mechanism is designed to address both vertical and horizontal fiscal imbalances (see text). The vertical imbalance is addressed by transferring enough resources to permit states and local governments to spend almost 50 percent of general government expenditure (while raising about one fourth of revenue). The Australian system also has a mechanism to partly remedy the horizontal fiscal imbalance—differences in revenue capacity among the states—by focusing on equal access for all citizens to certain basic social services.

Until World War II, the annual negotiation between the states and the federal government concerned both the total amount of grants to be allocated and their distribution among the states. This generated a great deal of contention and the zero-sum nature of the allocation system made a national consensus very difficult. In the system introduced since then, the annual negotiation has centered only on the total amount. As soon as that figure is agreed, the allocation among the states follows a formula designed to equalize access to basic social services (thus providing a greater per capita amount to poorer states).

According to the allocation principle, each state is given “the capacity to provide the average standard of state-type public services, assuming it does so at an average level of operational efficiency and makes an average effort to raise revenue from its own sources.” This simple and powerful principle sets all the incentives in the right direction. Because these averages are *assumptions* used in the allocation formula, each state has a positive incentive to raise its revenue effort and its service efficiency above the national average. If it succeeds, it retains the increase in revenue and all the cost savings, and the national averages for the following years are automatically raised, adding a dynamic dimension to the fiscal and efficiency incentives.

In 1997, one of the authors asked the Chairman of the Australian Grants Commission whether the efficiency of the system depended on the relative interregional equality of income evident in Australia. He replied, rightly, “And how do you think it got that way?” Assuring that each citizen has access to quality basic education and health is probably the best single route to remedying both interpersonal and interregional income inequalities in the long term.

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Source: Frank Jotzo (to be published); author’s interview with the Grants Commission chairman, January 1997.

**Box 8.11**  
**Pilot Equalization Scheme in the People's Republic of China**

As a first step toward a formula-driven redistributive system, the People's Republic of China (PRC) introduced in 1995 a pilot transfer payments scheme. It was aimed at solving the urgent problem of meeting payroll in some provinces. Initially, the formula had two parts: an objective factor that attempted to measure the gap between standard expenditures and local fiscal capacity, and a factor for subsidies to regions with large ethnic minority populations. The latter was in line with the PRC policy for improving the welfare of its minorities.

The fiscal shortfall was determined by standard expenses on wages of civil servants, standard administrative expenses, agriculture and other productive expenditures, and other expenditures such as price subsidies. On the other hand, special transfers to provinces with minority regions were determined by the fiscal gap between the minority regions and the national average.

In 1996, another factor was added to the formula to reward the provinces for good tax effort. Tax effort is now measured by provincial tax collection relative to the national average. Generally, the transfers that a province was expected to receive in 1999 would be based on its fiscal gap and tax efforts in 1998.

There is large room for improving the PRC fiscal transfers system. For one, stronger links still need to be established between a province's fiscal need and its transfers. Also, there should be a better means of measuring provincial revenue growth, since it depends on a number of factors other than tax effort. Finally, over the long term, there is a need to measure fiscal needs more appropriately to include factors other than government personnel and costs of government.

For a detailed elaboration of the pilot transfer payments scheme in the PRC, refer to Annex IV of this chapter.

As repeatedly stressed in this book, one should be very skeptical of imported "models" of public administration. However, the Australian fiscal equalization system described in Box 8.11 comes close to the notion of a good "model" to be considered by other countries because it provides positive incentives to the constituent states for fiscal mobilization and for efficiency in basic social services. Moreover, it takes the politics largely out of the contentious issue of geographic allocation of resources. It does so through a mechanism of grants to the states, calculated *as if* each state had average efficiency in local resource mobilization effort and in service provision. States with greater than average efficiency retain all of their higher-than-average revenue or cost savings. This system is

worth considering even in developing countries, particularly those where different ethnic groups are concentrated in different regions. However, because the effectiveness of the system depends largely on solid data about local revenue and unit cost of services, countries must first ensure that such data are available and have wide credibility. Annex III elaborates on an equalization grant system.

### Designing Intergovernmental Fiscal Transfers

The following provides pointers (Shah 1994) on designing fiscal transfers. Some criteria may conflict with others. Policymakers must therefore assign priorities to the various factors.

- *Autonomy*—Subnational governments should have complete independence and flexibility in setting priorities and should not be constrained by the categorical structure of programs or uncertainty associated with decision making at the center. Consistent with this objective is tax-base sharing (which allows subnational governments to introduce their own tax rates on central bases), formula-based revenue sharing, or block grants.
- *Revenue adequacy*—Subnational governments should have adequate revenues to discharge their designated responsibilities.
- *Equity*—Allocated funds should vary directly with fiscal need and inversely with the taxable capacity of each province.
- *Predictability*—The grant mechanism should ensure predictability of the subnational government's shares by publishing five-year projections of funding availability.
- *Efficiency*—The grant design should be neutral with respect to subnational government choices or resource allocation among different sectors or different types of activity. The current system of transfers to finance lower-level public sector wages in countries such as Indonesia and Sri Lanka contravenes this criterion.
- *Simplicity*—The subnational government's allocation should be based on objective factors over which individual units have little control. The formula should be easy to comprehend so that "grantsmanship" is not rewarded, as has apparently occurred with plan assistance in India and Pakistan.
- *Incentive*—The proposed design should provide incentives for sound fiscal management and discourage inefficient practices. There should be no specific transfers to finance the deficits of subnational governments.

- *Safeguards for the grantor's objectives*—The grant design should ensure that the grant recipients adhere to certain well-defined objectives of the grantor. This is accomplished through proper monitoring, joint progress reviews, and technical assistance with the help of a selective matching transfer program.

## SUBNATIONAL GOVERNMENT BORROWING

Local borrowing has become an important issue in intergovernmental fiscal relations. Aside from the growing share of local debt and deficits over time, local borrowing has spurred macro concerns because of the debt crisis in some subnational governments in Brazil, the inflationary impact of subnational financing in Argentina, and city-level bankruptcies in the US.

### Types of Local Financing

Borrowing is a major source of funds for the capital requirements of subnational governments, especially if large capital investment responsibilities are decentralized. Increases in current tax revenues will normally not suffice to finance public investments that are lumpy in nature. Also, since the benefits of public investments presumably last for decades, public borrowing allows future beneficiaries to share in financing such investments. Borrowing may also serve as a useful stopgap for local deficits caused by a vertical imbalance in subnational government revenue and expenditure assignments.

Subnational governments may obtain financing in four ways: (i) borrowing through the central government, (ii) borrowing through another public intermediary, (iii) borrowing directly from the capital markets, or (iv) financing through private participation in the delivery of public services. This last element is discussed in Chapter 6.

Borrowing through the central government ensures subnational governments of long-term credit. A major disadvantage, however, is that credit allocation through this channel will most likely become enmeshed with politics, possibly resulting in inefficient borrowing for unproductive public investments, as politically attractive investments are not necessarily the productive ones. To a lesser extent, the same is true for borrowing through a public financial intermediary, with the additional disadvantage that the debt of a financial intermediary is an implicit liability of the central government and thus less transparent.

In contrast, subnational governments' direct access to capital markets allows for the development of a more transparent and market-based relationship with lenders, and a greater chance for the central government to enforce a hard budget constraint. This is easier said than done in developing countries and transitional economies, where capital markets are nonexistent or are highly imperfect. It may still be possible, however, to explore possibilities for some local governments to access the international capital markets. Evidentiary requirements will be heavy and interest rates higher, of course (unless a central government guarantee is provided—which would be entirely inconsistent with the principles discussed here), but a good track record of timely repayment will lessen these problems in time for the local government concerned.

The main issue here is moral hazard. Subnational government access to capital markets involves implicit central-government guarantees, which allows imprudent action by both lenders and subnational governments, creating contingent fiscal liabilities for the central government. (On the general issue of fiscal risk, see Schiavo-Campo and Tommasi [1999], and for an in-depth analysis, Polackova [1998, 1999].) Accordingly, imprudent behavior carries no penalty, and good local fiscal discipline earns no reward. The key to appropriate policies on subnational borrowing is the proper design of fiscal decentralization in general, and the design of the mechanism for controlling local borrowing powers, in particular.

Three important considerations must be taken into account in designing decentralized borrowing powers: (i) minimize, if not eliminate, the implicit central government liability; (ii) insulate credit allocation from political influence; and (iii) strengthen capital markets as the preferred channel for local government credit.

### **Control of Subnational Borrowing**

A good system of decentralized borrowing is one in which the regulatory framework controls excess borrowing through the following.

- Subnational governments should be required to disclose adequate and timely financial information based on standard accounting to both potential lenders and the central authorities.
- Explicit bankruptcy procedures should ensure that delivery of basic services continues, even at a reduced level, during the debt management and restructuring period.

- Local borrowing in excess of specified amounts or for violation of specified criteria should be subject to penalties.
- Subnational governments must be assured of access to revenue sources to serve as collateral for their debts. Without such collateral, lenders will rightly assume an implicit guarantee from the central government.

Various countries use different mechanisms to control subnational borrowing. These mechanisms may be broadly grouped into four categories: (i) control through market discipline, (ii) cooperation among different levels of government, (iii) controls based on administrative rules, and (iv) direct controls by the central government. Most countries use a combination of these approaches. Box 8.12 presents a comparative summary of control mechanisms in various countries.

#### *The market discipline approach*

Relying on the capital markets to control local borrowing assumes that a capital market exists and functions reasonably well; the government lets the capital market operate freely, without favoring government borrowers; and a bailout in case of default is perceived to be unlikely. As noted earlier, the realities in developing countries suggest that these countries cannot rely on market discipline. Most developing countries have widespread experience with central government intervention to prevent default by subnational governments. Also, because of short-term electoral cycles, local politicians tend to be unresponsive to warnings from the credit market.

#### *The cooperative approach*

Local borrowing can also be controlled through negotiation between the central and subnational governments. As argued at the start of this chapter, fiscal deficit targets should be set to cover the general government, prevent downloading of the central deficit, and improve overall fiscal transparency. For this to be realizable, however, subnational governments should be allowed to participate in some appropriate fashion in formulating macroeconomic programs and of the fiscal framework. This approach may slow the process somewhat, but has the greater advantage of promoting the flow of information among levels of government, thereby increasing awareness among subnational government officials of the fiscal implications of their actions and improving the overall effectiveness of the public expenditure management system. The cooperative approach can work best

Box 8. 12  
Subnational Borrowing Controls in Selected Countries<sup>a</sup>

Country	Market Discipline		Cooperative Control		Administrative Control		Rule-Based Control		Borrowing Prohibited	
	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic
Industrial Countries										
Australia			■	■						
Austria					■					
Belgium			■	■						
Canada	■									
Denmark		■	■	■						
France	■									
Germany							■			
Greece					■					
Ireland					■					
Italy							■			
Japan										■
Netherlands							■			
Norway										
Portugal	■				■					
Spain							■			
Sweden	■									
Switzerland										
United Kingdom					■				■	
United States									■	

<sup>a</sup> Classifications indicate the predominant form of control. Some countries may use a combination of several techniques.

Box 8. 12  
Subnational Borrowing Controls in Selected Countries<sup>a</sup>

Country	Market Discipline		Cooperative Control		Administrative Control		Rule-Based Control		Borrowing Prohibited	
	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic
Developing Countries										
Argentina					■		■			
Brazil					■		■			
Bolivia					■		■			
Chile					■		■			
Colombia					■		■			
Ethiopia							■			■
India							■			
Indonesia					■		■			
Korea, Republic of					■		■			
Mexico							■			■
Peru							■			
South Africa			■							
Thailand									■	
Transitional Economies										
Albania									■	
Armenia									■	
Azerbaijan									■	

<sup>a</sup> Classifications indicate the predominant form of control. Some countries may use a combination of several techniques.

Box 8. 12  
Subnational Borrowing Controls in Selected Countries<sup>a</sup>

Country	Market Discipline		Cooperative Control		Administrative Control		Rule-Based Control		Borrowing Prohibited	
	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic	Overseas	Domestic
Belarus									■	■
Bulgaria									■	■
China, People's Republic of									■	■
Estonia					■					
Georgia						■				■
Hungary					■					
Kazakhstan									■	■
Kyrgyz Republic									■	■
Latvia					■					
Lithuania						■				
Poland									■	■
Romania									■	■
Russia	■									
Slovenia									■	■
Tajikistan									■	■
Ukraine									■	■

<sup>a</sup> Classifications indicate the predominant form of control. Some countries may use a combination of several techniques.

Source: Ter-Minassian, ed. (1997).

in a situation where local officials are reasonably competent and representative, and where there is strong national leadership in economic and fiscal management. (Box 8.13.)

**Box 8.13**

**Cooperative Approach to Controlling Local Borrowing in Australia**

Australia uses the cooperative approach through its Loan Council, a long-established forum for the negotiation of state debts. Comprising representatives from all the Australian states and one from the central government, the council discusses the global debt limits of each state and monitors compliance with such limits. Monitoring is done through a before-and-after analysis of outstanding debts.

State borrowing was characterized by attempts to elude debt limits by resorting to off-budget operations, innovative financing techniques, and through borrowing by state-owned enterprises. Therefore, the Loan Council, in 1993, decided to shift its focus to prior analysis and subsequent monitoring of the net financing requirements of each state. It requires the states to present detailed projections of their yearly budgetary operations to show developments in their finances. To strengthen market discipline on state borrowing, the council facilitates the collection and timely dissemination of this information.

*Source: Ter-Minassian and Craig in Ter-Minassian, ed. (1997).*

*Rule-based approach*

This approach makes use of the constitution and laws to restrict and guide subnational government borrowing. Among other things, rules for borrowing commonly set absolute limits for subnational government indebtedness; specify the purpose or conditions for borrowing; and prohibit certain types of borrowing that involve macroeconomic risks, such as borrowing from the central bank.

The rules may be determined more by political considerations than by sound macroeconomic management. Also, the approach lacks flexibility and thus fosters practices circumventing the rules, including reclassifying current expenditures as investment; creating off-budget entities whose debts are not included in debt ceilings; borrowing through local government-owned enterprises; using hidden debt instruments (e.g., sale and leaseback arrangements of the so-called “private revenue” bonds in the US); and accumulating payment arrears to suppliers.

*Direct control*

Particularly in unitary countries, the central government may directly control subnational borrowing in different ways: setting limits on subnational debts; authorizing individual borrowing operations; or centralizing all government borrowing, with onlending to subnational governments. Administrative controls must be more stringent for foreign than for domestic borrowing, for several reasons. The Asian financial crisis has demonstrated however that only fully centralized control of foreign borrowing can prevent the contagion effect of a deterioration of the credit ratings of one borrower on the ratings of other borrowers, and on the country as a whole. The Republic of Korea provides a good illustration of this (Box 8.14).

In developing countries and transitional economies, therefore, direct central control of subnational borrowing appears preferable. But it is very important to avoid cumbersome and intrusive controls. The national authority must not micromanage local government through the back door of controlling its borrowing. There is no substitute for restraint and common sense in the practical implementation of this approach.

**Box 8.14****Key Features of the Local Borrowing System in the Republic of Korea**

Local autonomous bodies in the Republic of Korea are allowed to borrow, subject to an elaborate regulatory framework that details the conditions for all debt instruments. The regulatory framework has the following general objectives: (i) to limit the aggregate amount of local borrowing; (ii) to expand the responsibilities of local bodies, given the short period of service of local officials compared with the maturity of debts; and (iii) to spread economic activities to poorer regions of the country.

The regulations for local borrowing in the Republic of Korea include detailed eligibility criteria. Local governments with a history of sound financial policies, such as those with no overdue obligations, a low debt-service ratio, and low fiscal deficit, may borrow. There are also regulations determining the types of projects that can be financed by borrowing. They include capital projects, disaster rehabilitation projects, and welfare improvement projects (not clearly defined). However, there is no preordained central government ceiling on the overall amount of borrowing.

A particular feature of borrowing regulations in the Republic of Korea is compulsory bond placement, a practice introduced in 1979. Cities, through an

*continued on next page*

Box 8.14 (cont'd.)

ordinance, can decide that those who will benefit from projects financed through borrowing should share in their financing. Aside from compulsory bond placements, local governments can issue bonds on the international market, particularly in Japan and the United States. Bonds are offered at well below domestic market rates, even after considering movements in exchange rate.

The functions and responsibilities of the Government of the Republic of Korea at different levels may be said to be historically closely integrated. This close integration extends as well to the borrowing process. Hence, the risks of borrowing are also shared in the sense that central government approval of any local borrowing automatically implies a state guarantee.

Despite the detailed and strict regulatory framework for borrowing, however, local borrowing could still have adverse macroeconomic effects. The absence of an overall ceiling on borrowing could lead to excessive or poorly timed borrowing, or to the inefficient use of borrowed resources.

*Source: Chu and Noregaard in Ter-Minassian, ed. (1997).*

## KEY POINTS AND DIRECTIONS FOR IMPROVEMENT

### Key Points

The *distribution of fiscal responsibilities* between central and subnational governments should be governed by the principles of

- clear responsibilities for each level of government;
- stable and predictable revenue-sharing arrangements;
- providing incentives for increased efficiency of local government; and
- uniform accounting and budgetary rules for subnational government entities.

It is also important for expenditure control and good resource allocation to define fiscal targets to cover general government as a whole, thus avoiding the temptation to dump fiscal problems on local governments; put in place mechanisms to control local government borrowing, and sanction expenditure overruns as well as accumulation of arrears; and assure sound accounting, reporting, and audit.

The potential benefits of *fiscal decentralization* include higher service efficiency—as local government is closer to the users; more effective tax administration; and improved resource allocation and equity. The potential costs are a mirror image of the potential benefits. Fiscal decentralization can worsen service efficiency when local authorities are unresponsive; reduce resource mobilization when local authorities are less honest or capacity is weaker; and foster inequities when local government is “captured” by powerful local interests. The cost-benefit balance of fiscal decentralization depends therefore on the specific country and local situation. Generally, as mentioned earlier, the key influence is the relative quality of governance at central and local levels of government. When local government is more representative and accountable than national government, fiscal decentralization can be presumed to carry a net benefit. Local capacity however needs to be expanded commensurate with the new responsibilities.

How to deal with *fiscal imbalances* is the key implementation issue in fiscal decentralization. Vertical imbalances between central and subnational governments result in general from a mismatch between revenue and expenditure assignments. Horizontal imbalances between subnational government entities at the same level result from differences in wealth and tax revenue between different regions and localities in the country.

Concerning *vertical imbalances*, expenditure responsibilities should in principle be assigned to that geographic level of government where they would benefit only the residents of the region. In practice, however, many public services have unclear benefit regions or carry implications for the country as a whole. Generally, the central government should be responsible for national functions (e.g., defense and international relations), services that benefit several jurisdictions, and services whose local administrative costs would outweigh the local benefits.

Tax assignment to local governments must be accompanied by coordination across jurisdictions—to avoid distortion and undesirable competition in offering tax incentives—and by rules preventing double taxation or tax loopholes. Accordingly, taxes assigned to central government should cover mobile tax bases and tax bases that are unevenly distributed across regions; taxes assigned to local government should be those that cover immobile tax bases as well as tax bases that are easily administered. Therefore, local value-added taxes are generally to be avoided as they carry the risk of competitive tax reduction or, conversely, of local protectionism by setting tax rates higher for purchases from outside suppliers. The corporate income

tax, too, fails the tests of a good local tax, with its high compliance costs, incentives for tax avoidance, and uncertainty of revenue. Assigning personal income taxation to local government has advantages as well as disadvantages. Sales taxes are well suited for local government if they are levied on local businesses. The revenue sources best suited for local administration are local property taxes and motor vehicle taxes, as well as user charges.

As a general rule, *revenue sharing* to remedy overall vertical imbalances should be from the top down, because assigning most taxing power to local government and then sharing revenue upward would weaken the key macroeconomic and redistributive functions of central government. On the other hand, relying entirely on downward transfers would reduce local financial accountability and disempower local government. Local government revenues should therefore comprise an appropriate mix of own-tax revenues as well as some revenue sharing from the top. Revenue sharing can be on a derivation basis, whereby revenue is shared on the basis of where it was collected; on a grant basis, whereby the revenue is redistributed according to a formula or to the cost of collecting the tax; or on a piggyback basis, which allows subnational governments to add a percentage amount to the central tax.

*Horizontal imbalances* are corrected by intergovernmental fiscal transfers, which can be conditional or unconditional, and open ended or subject to caps. A variety of considerations apply to the different types of transfers. More important than just filling fiscal gaps, however, is the role of fiscal transfers in redistributing resources to assure that all regions have the same financial capacity to provide *basic* public services, assuming they exert the same effort to raise income from their own sources and operate at an average level of efficiency. (The Australian system of grants from the center to the states is particularly effective in this regard.)

As noted earlier, good fiscal federalism requires robust controls on expenditure overruns, arrears, and borrowing by subnational government. When local borrowing carries an implicit national government guarantee, it creates a contingent liability for the national government while encouraging imprudent behavior by both local government and the lenders. In principle, therefore, central government guarantees for local borrowing should be minimized, at the same time as local credit allocation is insulated from political influence from the center, while private capital markets are strengthened as the preferred channel for credit to local governments. This

is particularly difficult to accomplish in developing countries and transitional economies, where capital markets are undeveloped and direct central control of subnational government borrowing remains generally necessary.

### **Directions of Improvement**

The first priority in this area is to review the distribution of fiscal responsibilities between levels of government to make sure that it is clear and explicit. Next, it is necessary to verify that the formal assignment of responsibilities is in fact carried out and, where it is not, to assess whether the lack of implementation derives from insufficient local capacity or from central government interference.

It is also important to combat the temptation to “download” fiscal problems by devolving expenditure responsibilities to local governments without the means to carry them out. This practice makes it difficult for local governments to operate, and at the same time gives them an alibi for bad performance. Defining fiscal targets for general government instead of only for the central government (as recommended in the International Monetary Fund Code of Fiscal Transparency) would help accomplish this purpose. In developing countries and transitional economies, therefore, improving fiscal statistics at the local government level is important not only to promote a healthy fiscal policy overall, but also to help protect local governments against unfunded mandates.

Because fiscal decentralization carries costs and risks as well as benefits, it is essential to examine, *case by case*, whether a specific move toward fiscal devolution is likely to carry a net benefit. Such an examination should rest in part on the feedback of informed persons from local government and civil society, rather than a mere desk review by a central entity. Local administrative capacity is an important determinant of the effectiveness of decentralization. Weak local capacity is not necessarily a reason to keep expenditure responsibilities centralized. However, every move toward fiscal decentralization should be accompanied by measures to strengthen local capacity and governance, and should assure that independent channels of feedback and complaint between the local population and the central government are open.

It is especially important to consider the impact of fiscal decentralization measures on poverty, income distribution, and regional inequalities. Although all major policy changes entail shifts in the

interpersonal and interregional allocation of resources, when a loss is likely for poor and vulnerable groups, appropriate compensatory measures must be incorporated in the design of decentralization and forcefully implemented. Again, there is no substitute for ascertaining the views of local civil society in this respect.

When assigning taxes to local governments, it is necessary to encourage coordination across jurisdictions to avoid undesirable competition in offering tax incentives, double taxation, or tax loopholes. Such coordination can also exploit scale economies in tax administration and improve local administrative capacity by benefiting from the experience of other jurisdictions. Coordination in the tax area can thus become a testing ground for greater general cooperation and, to that extent, can alleviate local capacity constraints and build regional social capital.

Property taxes are the most suitable for assignment to local government, especially in developing countries where the only alternative may be overreliance on transfers from central government. Taxes on certain types of property, such as automobiles, are inherently progressive and relatively easy to administer. However, taxes on land and buildings, which can yield much greater revenue, are difficult to administer and are a frequent source of corruption. Improvements in this area are therefore important for effective fiscal decentralization in developing countries, but always difficult—especially in regions with weak governance and powerful local elites. Directions of improvement include mainly

- giving local governments the freedom to set their own property tax rate;
- improving the property tax valuation system;
- giving the assessing agency direct financial incentives to maintain the tax base and keep assessments up to date;
- strengthening procedures for collecting real estate taxes, normally including the power to seize the concerned property for nonpayment of taxes;
- assuring effective external audit of tax valuations and the assessment process; and
- introducing robust measures to raise the cost of corruption.

The objectives of fiscal transfers are often in conflict—between stabilizing and reducing of regional disparities, or between compensating for benefit spillovers and setting national service standards. Hence, it is important

to ensure that the fiscal transfer system as a whole is internally consistent and trade-offs between objectives are explicit. In practice, this entails relying not on a single type of grant but on a judicious combination of conditional and unconditional, capped and open-ended, and capital and current grants.

In revenue sharing, it is advisable to move away from annual bargaining (which is time-consuming, heavily politicized, and a potential source of corruption) and toward a rule-based arrangement, whereby only the overall amount to be transferred is decided annually, with the distribution to regions and localities governed by explicit criteria. In addition, the tax assignment and revenue-sharing rules must provide the right incentives for efficiency and fiscal discipline by local governments. For example, certain tax-sharing arrangements can lead local governments to put all efforts into collecting those taxes that give them the most benefit, and neglect the rest. A review of the actual behavior of local government in response to central rules, based partly on a survey of informed local opinion, can help pinpoint those rules that have had a disincentive effect, and can be a good basis for improving the fiscal regulatory framework.

Rule-based mechanisms, e.g., centrally set limits on local debt, borrowing, expenditure arrears, and approval of major loans, are also used to assure fiscal discipline in local government. In developing countries, where capital markets are undeveloped and there is an implicit assumption that the central government will bail out local governments if they get into trouble, such direct controls are unavoidable. It is important, however, to exercise them efficiently, avoiding cumbersome and intrusive controls that micromanage local government under the guise of controlling its borrowing.

### Annex III

## EQUALITY IN DIVERSITY: FISCAL EQUALIZATION IN AUSTRALIA

by Frank Jotzo

### INTRODUCTION

The Australian fiscal equalization system is often seen as a model for other countries because of several reasons. Fiscal equalization manages to overcome large imbalances between own sources of revenues and own expenditures at the regional level. In doing so, the transfer system aims to distribute the funds so that all states have equal capacity to fulfill their fiscal responsibilities. Further, the grant system is designed to allow the states to decide how they use the funds and to avoid central government interference in state policy choices. This article examines the fiscal relations between the federal and state governments in Australia, looking in particular into the design of the grant system. It should be stressed here, that for incentive reasons, it is preferable to assign sufficient own sources of revenues to regional governments. However, a well-designed grants system can be a reasonable second-best solution for overcoming fiscal imbalances.

### FISCAL IMBALANCES IN AUSTRALIA

#### Revenues

Australia is a federation of eight states and territories. There are three layers of government, namely, the federal, state, and local governments. The Australian tax system has evolved in a way that has given the central level ever more taxation powers. Today, all major taxes are levied by the federal government. Of these, the income tax is the most important. In a tax reform effective from July 2000, a value-added tax will be introduced. The states levy a variety of smaller and often inefficient taxes, such as payroll tax (on wage payments by employers), transactions taxes (stamp duties and taxes on financial transactions), as well as taxes on tobacco, alcohol, petrol and gas, motor vehicles, and gambling. These taxes are regulated by the states and vary between states (Australia 1998a). After introducing the value-added tax, some of these taxes will be abolished.

The federal government (Commonwealth) levies 76 percent of the total tax revenue, and accounts for 72 percent of total government revenue in Australia. The States account for only 24 percent and local government for 4 percent of revenue (Figure 1, left pillar).

## Expenditures

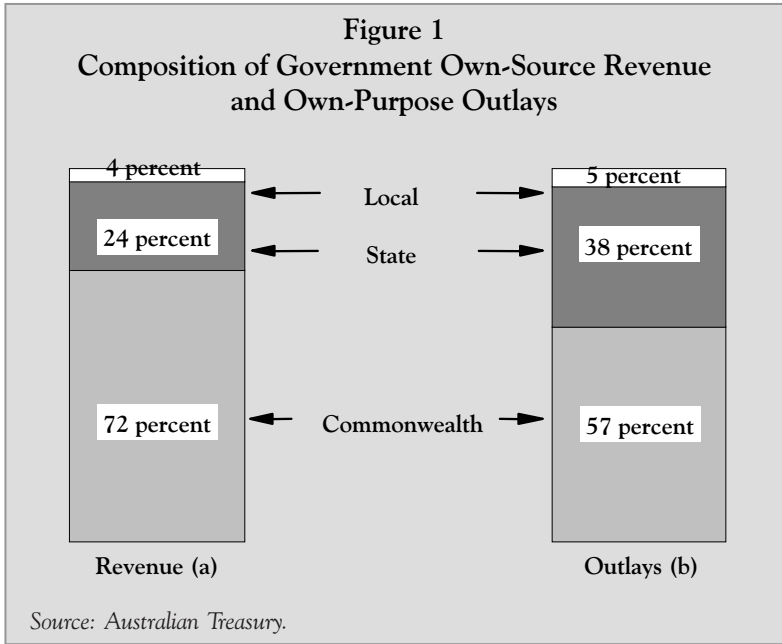
The structure of expenditure differs markedly between levels of government. For the federal government, more than one third of total expenditures is on social security payments. Other significant own-purpose expenditures occur in the areas of debt servicing, defense, and general public service. The states are responsible for expenditures on education, health, and the police. The largest expenditure category is education, followed by health, with the largest outlay for hospital funding. Other significant areas of state outlays are for debt servicing and transport (road and rail). Transport infrastructure and housing, as well as recreational and cultural amenities, are in the realm of both state and local governments. Public servants' salaries are paid separately by each level of government for its employees. The expenditure that the states make to meet their responsibilities account for 38 percent of total government outlays, which far exceeds their revenue raising capacities. By contrast, the central level accounts for 57 percent of expenditures for central level functions, which is much less than its share in total revenue (Figure 1, second pillar).

### *Vertical fiscal imbalance*

The persistent mismatch between the revenue raised and expenditure undertaken at the federal and state government level is called vertical fiscal imbalance (VFI). If the imbalance cannot be remedied by changing the assignment of taxes and other sources of revenue, then a system of intergovernmental fiscal transfers is necessary. This is the case in Australia (James 1992).

### *Horizontal fiscal imbalance*

Horizontal fiscal imbalance (HFI) arises when governments at the same level have different per capita capacities to raise revenue and unavoidable differences in their per capita costs of providing services. Such differences occur naturally between states that differ in their structural characteristics. The extent of HFI between states in Australia is probably lower on average than in many other countries, and certainly lower than in



Indonesia. The major states do not differ too much in structure; each has one or more metropolitan centers, some service manufacturing and heavy industries, and contains a significant rural area under agriculture.

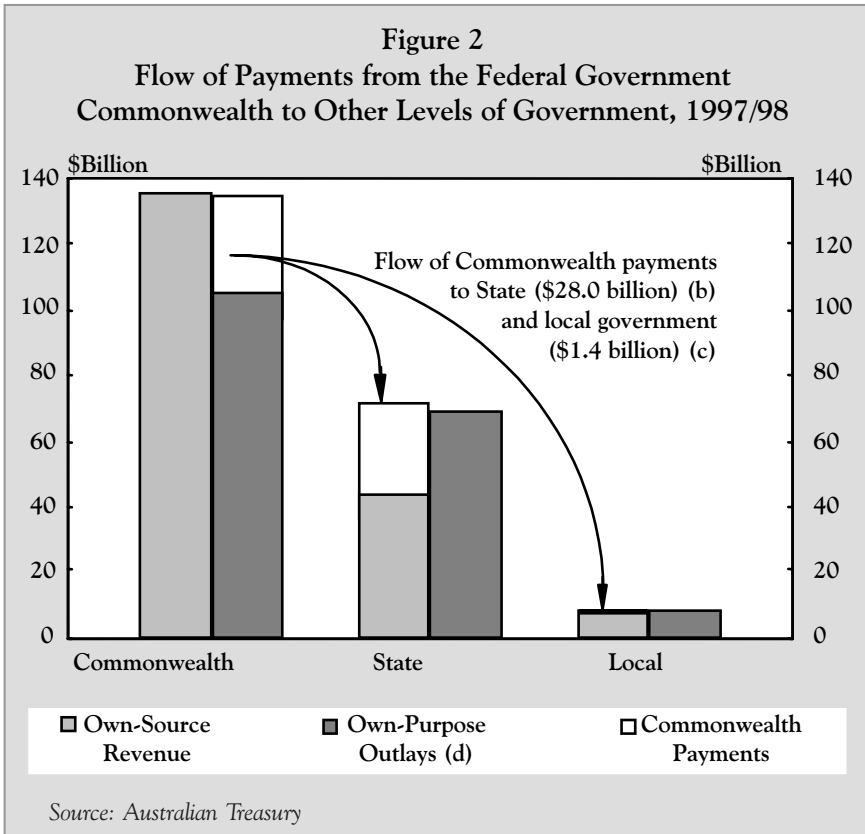
HFI is defined not in terms of actual revenue raised and cost of services provided, but on the basis of the *potential* of state governments to raise revenue and to provide services (Searle 1996). *Actual* revenue and outlays depend on each state's

- structural characteristics,
- policy on public spending and taxation (high or low levels of service, provision and tax rates), and
- efficiency of service provision and revenue collection.

### Intergovernmental Fiscal Transfers

The Australian fiscal transfer system has to overcome a high degree of VFI and at the same time aims to remedy HFIs between the states. The main instruments are specific grants (specific purpose payments, SPPs) and block grants (general revenue grants) from the federal to the state and local governments. In the financial year 1997/98, total transfer payments

from the central level to the states and local governments was Australian dollar (\$A) 29.4 billion. Of this, just over half was in the form of block grants, and about one third as SPPs. The rest is made up of specific grants paid through the states (to be handed on to universities, local government, etc.) and some direct payments to local governments.



*Specific grants*

SPPs are meant to enable the federal government to pursue national objectives in areas that are part of the states’ fiscal responsibilities. SPPs can be used to capture spillover effects between states, support standardization, provide seed money, and channel expenditure through the states in activities that are better performed by state administrations. Examples are interstate roads, higher education, and support programs for indigenous people, all of which might not receive adequate state funding from a national point of view. SPPs are generally unpopular with the states

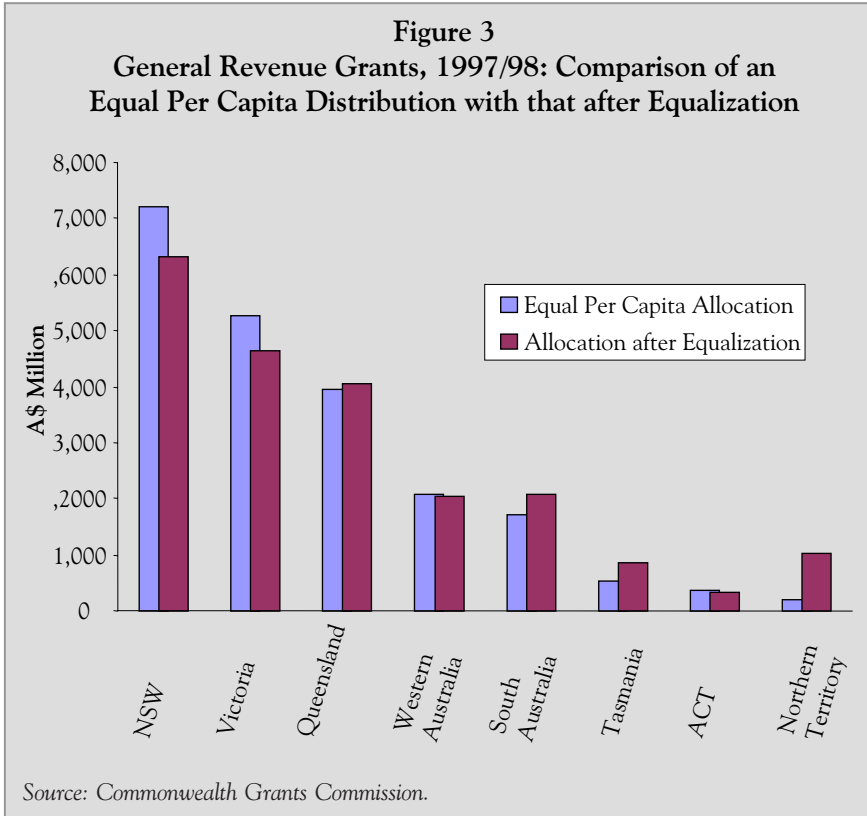
because they are seen as an intrusion of the central level in functions that are constitutionally assigned to the states. SPPs are paid both directly to the states and through the states, which means that state governments pass the funds on to local governments and universities. The largest functional category is health with A\$6 billion, followed by education. Other important categories for SPPs are housing, social security, and transport.

### *Block grants*

Block grants (general revenue grants) are paid without any conditions on their use by the states. They are used to remedy any remaining VFIs and to address HFIs by allocating different per capita shares to individual states. All states receive payments, but the per capita amounts differ. The allocation system for these grants is examined in detail below.

The total pool of block grants is principally a matter of negotiation between the federal and state governments. For the last few years it has been indexed to inflation, so the real level of block grants has remained the same. After the tax reform, the pool will consist of the revenue generated by the value-added tax, which will rise with the growth of the economy (Australia 1998b).

Figure 3 shows the distribution of general revenue grants between the States and the effect of differentiating the per capita payments to remedy HFIs. New South Wales and Victoria, the two most populous states, get much less in block grants than they would if the money were distributed on an equal per capita basis. For example, in the last financial year New South Wales received A\$6.3 billion in general grants, but would have received A\$7.2 billion if there were no horizontal fiscal equalization. South Australia, Tasmania, and the Northern Territory receive substantially more than their equal per capita share. The Northern Territory receives A\$1 billion instead of A\$0.2 billion. For the other states, the effects of horizontal equalization are not very large.



### Fiscal Equalization through Block Grants

#### *The principle of fiscal equalization*

The principle of horizontal fiscal equalization applied in Australia is that “each State should be given the capacity to provide the average standard of State-type public services, assuming it does so at an average level of operational efficiency and makes an average effort to raise revenue from its own sources.” (Commonwealth Grants Commission [CGC] 1998a).

There are three crucial aspects to this definition. First, fiscal equalization aims to achieve equal *capacity* among the states to provide public services, not equal results. It is left to the states to determine how much service they provide, how efficiently they provide it, and how much own revenue they raise. Second, using Australia-wide *averages* as the reference means that no particular level of services and taxes is prescribed. The standard is defined by what the states actually do, not by what some

authority might consider to be the correct spending level. Lastly, the states are free to decide what kind of services they provide, and in which manner.

Consequently, a state's policy choices do not directly affect the amount of revenue assistance it receives. Horizontal equalization is based solely on differences in the structure of the states. For example, if a state opts for lower tax rates, the shortfall in revenue will not be made up by increased fiscal transfer payments from the Commonwealth. That state will have to provide less services to its residents, provide them more efficiently, or borrow. By contrast, if equalization were based on performance rather than capacity, or on external standards rather than averages, then judgements would have to be made on the correct level of services and tax rates to determine transfer payments.

It is one of the principles of the Australian federation that states should be free to pursue individual policies in the fields of their responsibility. The design of the fiscal equalization system is in keeping with this principle. However, the fact that the states have only a limited range of taxes they can levy and regulate means that the leeway for differentiation in taxes is small. In practice, the states do not differ very much in their tax structure. Differences in service provision are larger.

#### *Equalization in practice: the result*

The pool of general revenue assistance is distributed between the states to achieve horizontal fiscal equalization according to the principles set out above. Each year an independent authority, Commonwealth Grants Commission CGC (see Appendix 1 of this book for description and interview), determines the grants allocation per capita in each state (CGC 1998a).

The allocation of block grants is determined by each state's costs of service provision, revenue-raising capabilities, and receipt of SPPs relative to the average of all states. The distribution of grants is determined by these three factors (for details see below). Starting from a hypothetical equal per capita distribution across the states, the amount paid per capita (Table A3.1, column [1]) is adjusted for expenditure needs, revenue needs, and receipt of specific grants.

As can be seen from the Table, the grants for New South Wales for example are adjusted downwards because of lower cost of service provision

Table A3.1  
Disaggregation of 1997/98 General Revenue Grants Distribution

Province	Equal Per	Expenditure	Revenue	Financial Assistance		Total (6) \$ m
	Capita Grants (1) \$ p.c.	Needs Per Capita (2) \$ p.c.	Needs Per Capita (3) \$ p.c.	Grants Per Capita (1)+(2)+(3)+(4) (5) \$ p.c.	Grants Per Capita (1)+(2)+(3)+(4) (5) \$ p.c.	
New South Wales	1,145.39	-60.52	-97.26	1,005.09	1,005.09	6,326.1
Victoria	1,145.39	-228.97	68.02	1,008.26	1,008.26	4,639.5
Queensland	1,145.39	-24.08	40.04	1,170.24	1,170.24	4,046.2
Western Australia	1,145.39	251.62	-196.25	1,125.19	1,125.19	2,037.1
South Australia	1,145.39	65.35	202.65	1,399.38	1,399.38	2,082.5
Tasmania	1,145.39	254.05	406.08	1,776.05	1,776.05	840.8
Australian Capital Territory	1,145.39	-178.17	88.48	1,089.61	1,089.61	339.2
Northern Territory	1,145.39	4,886.89	-28.87	5,518.41	5,518.41	1,016.5
<b>Australia</b>	<b>1,145.39</b>	<b>0.00</b>	<b>0.00</b>	<b>1,145.39</b>	<b>1,145.39</b>	<b>21,327.9</b>

Source: Commonwealth Grants Commission.

(expenditure needs, -A\$60.52 per capita) and higher revenue-raising capability (revenue needs, -A\$97.26 per capita), but adjusted upwards because of lower-than-average receipt of SPPs from the federal government (adjustment for SPPs, -A\$17.48 per capita). The net effect is a lower-than-average amount of block grants per capita. The disaggregation also shows that the favorable treatment of the Northern Territory is entirely due to higher expenditure needs, while the high level of specific grants substantially reduces the amount of general revenue assistance to the Northern Territory.

The grant allocation tends to be higher for the less populous states. The more densely populated eastern states of New South Wales and Victoria have the lowest allocations, while the Northern Territory with its extremely small and dispersed population and particular socioeconomic structure (high share of aboriginal population) receives a disproportionately high share. Payments of block grants per capita to the Northern Territory are almost five times as high as in the national average. The allocations have changed over time, both because of changes in the structure, expenditures, and revenue of the states, and because of changes in the assessment methods. The overall pattern in the distribution of funds however has remained stable.

*Equalization in practice: the methodology*

CGC has developed an elaborate methodology to determine the allocation of general revenue grants. At the core is a comprehensive assessment of disabilities in revenue-raising capacity and expenditure needs for each state relative to the average of all states.

If a state raises less (or spends more) than the average, this is due either to a deliberate policy choice, less efficiency in revenue raising (or service provision), or structural factors (called disabilities). A *disability* is defined as “an influence beyond a government’s control that requires it to spend more (or less) per head of population than other governments to achieve the same objective, or reduces (or increases) its relative capacity to raise revenue from the same effort” (CGC). Fiscal equalization is concerned only with disabilities, not with the effects of policy choices or administrative efficiency. Revenue and expenditure needs can be either positive or negative, depending on whether structural characteristics put a state in an unfavorable or a favorable position relative to the Australian average. Table A3.1 details revenue and expenditure needs due to disabilities.

*Expenditure assessment*

Expenditure assessment is at the core of the Australian fiscal equalization system. CGC currently determines the cost and level of service provision in a total of 49 categories. The assessment is thus very detailed; education expenditure for example is analyzed in seven separate subcategories (Table A3.2).

**Table A3. 2**  
**Categories for expenditure assessment (1998)**

**Education**

Preschool education, government primary education, nongovernment primary education, government secondary education, nongovernment secondary education, technical and further education, transport of rural children

**Health**

Hospital services, nursing home services, mental health services, community health services

**Law, Order, and Public Safety**

Police, administration and justice, corrective services, public safety and emergency services

**Welfare**

Family and child welfare, aged and disabled welfare, other welfare services

**Culture and Recreation**

Culture and recreation, national parks and wildlife services

**Community Development**

Planning and environment, aboriginal community services

**General Public Services**

Superannuation, other general public services

**Services to Industry**

Agriculture and fisheries, Brucellosis eradication, mining, fuel and energy, tourism, soil conservation, other services to industry

**Transport**

Road maintenance, other transport

**Economic Affairs and Other Purposes**

Debt charges, other services

**User Charges**

Technical and further education user charges, hospital patient fees, fees and fines, property titles, other user charges

**Trading Enterprises**

Urban transit, nonurban transit (freight), nonurban transit (passengers), country water supply and sewerage, country water supply and sewerage user charges, housing, housing user charges, other trading enterprises

*Source: Commonwealth Grant Commission.*

Expenditure assessment consists of three steps: (i) examining the characteristics of each state's population, economy, and physical environment; (ii) determining whether and how these characteristics influence the need for or the cost of public services; and (iii) deciding whether there are disabilities. Analogous to revenue assessment, the result is *expenditure needs*, which is the difference between the per capita amount a state needs to spend to provide the standard level of services and the Australian average per capita expenditure.

The cost of providing public services depends mainly on socio-demographic and geographic characteristics. Examples for such structural factors are the relative number of school-age children (education), the relative number of aboriginals (health), and the population density and dispersion (various services). Taking the subcategory road maintenance as an example, the Northern Territory is assessed to need 2.3 times as much money per capita of its population than the national average to provide road maintenance of the average Australian quality. This is because the Northern Territory has a very low population density that results in a high road length per capita, and because it is costly to maintain roads in remote parts of the state. If the policy of the state government is to provide road maintenance at below or above average quality, this does not affect the assessment. The Northern Territory has much higher-than-average costs of service provision in almost all expenditure categories, which is the reason for the very high assessed expenditure needs of A\$4887 per capita (Table A3.1, column [2]). As can be seen in the Table, expenditure assessment has a significant impact on the distribution of grants.

In many cases, the definitions of disabilities and what might be suitable indicators are debatable, and some necessary data are not readily available even though the Australian statistical system is comparatively comprehensive. The question of which expenditure categories should be included in the assessment is an issue of debate between the states, too. Such difficulties tend to affect the assessment of expenditures more than that of revenue. Consequently, the work of CGC requires a great deal of judgement as well as thorough economic and statistical analysis. This part of CGC's work uses up substantial resources.

### *Revenue assessment*

For each state, CGC determines the revenue raising capacity and the revenue raising effort for 20 revenue sources, of which 14 are taxes and 6 are nontax revenues (Box A3.1).

For each revenue source, indexes are calculated by putting each state's assessment in relation to the Australian average. The results of the categories are then weighted with their share in average expenditure to yield aggregate revenue needs.

The results of revenue assessment can be expressed as *revenue needs*, defined as the difference between the per capita amount a State needs to spend to provide the standard level of services and the average Australian per capita expenditure. Revenue needs can be positive or negative. This is the measure presented in Table A3.1, column 3. Revenue-raising capacity depends on the available revenue base. In the assessment of revenue capacities it is not relevant whether a revenue source is actually levied in a particular state, at what rate, and how efficiently. Differences in revenue bases between states can be due to differences in the structure of industry and demand, the value of property, natural-resource availability, and so forth.

An example for a characteristic that affects revenue disabilities is mining revenue, which consists largely of royalties. The assessed revenue raising capacity for Western Australia and the Northern Territory in this category is around four times as high as in the Australian average. This is because these states are rich in minerals and have a large area per capita. By contrast, the revenue capacity in mining is assessed lower than average in the more populous states, where mining plays a less important role.

**Box A3.1**  
**Categories for Revenue Assessment (1998)**

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**Taxes**

Payroll taxation, land revenue, stamp duty on conveyances, financial transaction tax, stamp duty on shares and marketable securities, gambling taxation, insurance taxation, vehicle registration fee and tax, stamp duty on motor vehicle registration and transfer, drivers' license fee, tax (business franchise fees) on petroleum products, tobacco and liquor, other tax revenue.

**Nontax revenue**

Interest earnings, mining revenue, electricity and gas, metropolitan water supply, metropolitan sewerage, other enterprises.

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*Source: Commonwealth Grant Commission.*

*Adjustment for specific grants*

The fact that SPPs from the Commonwealth to the states are at a relatively high level presents a difficulty for fiscal equalization. The receipt of a specific grant changes both a state's revenue and its expenditures. It is debatable however to what extent SPPs represent disabilities according to the definition above. To achieve full equalization, other grants received from the federal government need to be counted as revenue. However, this runs counter to some of the intentions behind specific grants because the recipients of SPPs are subsequently punished by receiving less in block grants. However, there is no evidence yet that any state has refused a specific grant offered to it for this reason. This may be because CGC bases all its assessment on a period of five years, averaging out year-to-year fluctuations. The money received through SPPs thus reduces block grants only after a lag of several years.

CGC is now including most SPPs in the calculations, so that differences in the per capita allocation of specific grants between states are almost fully compensated by the allocation of block grants. The adjustment for SPPs has the effect that the states that benefit from equalization receive slightly less than they would if SPPs were excluded (Table A3.1, column [4]). This is because the states that need more financial assistance generally also receive more specific grants.

## CONCLUSION

The Australian grants system is a technically sophisticated way to address vertical and horizontal fiscal imbalances. However, it has to be kept in mind that the system of intergovernmental fiscal relations in Australia exists in a very favorable environment. The nature of relations between the federal level and the states, and to a certain extent between states, is generally cooperative. The Australian federation as a whole is relatively homogenous and stable. The small number of States and the fact that there are only two levels of government that are important fiscally, help to make the system workable. Applying the same principles in a different environment may not be possible politically, or may not yield similar results.

Regarding the technical implementation of fiscal equalization, the Australian example shows that it requires a substantial amount of technical resources. Australia has a sophisticated statistical system both on the national and the regional levels, which is essential for equalization. Even

with this superior statistical base in a relatively small country, CGC is quite a large organization, taking up substantial resources. It is far from clear how a similar system would perform under less favorable conditions. In Indonesia, a similar system of fiscal equalization would probably be only feasible if the assessment of revenue and expenditure were restricted to some core categories.

Studying intergovernmental fiscal relations in Australia can provide important insights and ideas for reform in Indonesia. Ultimately however each country needs a system tailored to its specific requirements.

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## Appendix

### THE COMMONWEALTH GRANTS COMMISSION

#### Background and Interview with Bob Searle, Secretary of the Commission

The Commonwealth Grants Commission (CGC) is an independent statutory authority that provides advice to both the Commonwealth and state governments on the distribution of the pool of general revenue assistance. It is only concerned with the distribution, not with the total amount of block grants paid to the states. The size of the pool is negotiated annually between the federal and state governments.

CGS's motto is "equality in diversity," expressing the aim of providing states with equal financial capacity while leaving them free to make their own decisions on taxation and service provision.

CGC was established in 1933, in the wake of the attempted secession of Western Australia, to assess claims made by states for financial assistance. It was thus concerned only with claimant states' minimum financial need, not overall fiscal equalization. The role of CGC changed and was expanded with the introduction of general revenue-sharing arrangements in 1976 that necessitated the calculations related to horizontal fiscal equalization. It conducts a full review of relative attributes (relativities) and the methodology used to calculate them at five-year intervals. In between these reviews, the relativities are updated annually, using the latest available data but retaining the same methodology. CGC does a substantial amount of statistical analysis, and it even conducts some original data collection, mainly in the area of expenditure assessment.

The commission is headed by four part-time members who are appointed for a limited period by the federal government after consultation with the state governments. The commission has a permanent staff of around 50.

Overall, CGC is considered an integral part of Australia's federal structure, with an important role in promoting fiscal and political stability between the state governments and the Commonwealth government. It can be credited with fulfilling its role as a competent technical advisory body, in effect acting as an impartial arbiter between state governments.

*Interview with Bob Searle, CGC, Canberra, 10/12/98*

**How many out of the 50 staff of the Commonwealth Grants Commission are technical?**

*All but four or five of the 50 staff work in a technical environment, their background mainly being in statistics, economics, and accounting.*

**How important is technical work relative to negotiating the state's interests?**

*The Commission is not involved in any negotiations with the states. All its work is on technical aspects of fiscal equalization.*

**How close is the cooperation with the states?**

*The states are involved in the technical aspects of the Commission's work, and there is communication with the states at all stages of the process of determining the relativities. The states are particularly involved in the reviews of methodology, to a lesser extent in the annual updates.*

**With which state institutions does the Commission have contact?**

*The states communicate with the Commission principally through their state treasuries. All other arms of government channel their participation through the treasuries. Submissions are the main instrument for the states to put their arguments forward. There is a formal process for these submissions to the Commission, and states also comment on each other's submissions. The Commission also has some contact with other state departments, for example, education, health, and police. This is important for expenditure assessment.*

**How closely does the Commission keep the states informed of its work?**

*In the three years leading up to the review of methodology to be published in February 1999, there have been approximately eight conferences with the states on technical matters. The Commission also produces detailed working papers on past assessments. These were originally exclusively for the use of the states but are now distributed to reference libraries also.*

**Do the states have an influence on Commission methodology?**

*Yes, they do. It is necessary to find a basis of assessment which is fair to all states. The most important influence the states wield is by proposing areas to be used to identify disabilities.*

**Do the losers accept technical arguments?**

*There is general consent on the technical ability of the Commission. Whether states agree on particular assumptions underlying the relativities calculations in another*

matter. Generally speaking however, the states are very accepting of the Commission's judgements. They know that they are dealing with an expert body, and that they themselves could not do it any better.

**How does the appointment process for the Commissioners work, and is there proportional representation in terms of party politics?**

*Commissioners are appointed for their particular expertise rather than their representational role. The only condition is that the commissioners cannot be full-time employees of a state or the federal government, since they might then be seen as being biased.*

*What happens in the appointment process is that the heads of the Commonwealth and state treasuries get together and consider names. It is a cooperative movement—if any of the parties involved has an objection to a particular candidate, that person will have little chance of becoming a commissioner.*

**Have there been swings in the Commission's position on equalization?**

*No. The Commission developed the concept of fiscal equalization in the 1930s. There has been a development process over time, but as for changes in the federal government, there has been no political involvement.*

**The Australian parliament is currently debating a tax reform proposal. It includes the introduction of a value-added tax levied by the central government, the revenue of which will be distributed to the states. Will there be changes in the Commission's role after the tax reform?**

*There will be very little difference for our work. The revenue from the new value-added tax will be distributed to horizontal fiscal equalization principles, and the Commission will continue to determine the equalization formula. The only difference is that the states will have less own revenue, because they will have to stop levying some of their taxes.*

**From the Commission's point of view, should there be less specific grants?**

*The Commission is not concerned about the extent of special purpose payments, as long as they can be included in the Commission's assessment. Currently, they are accounted for in the calculation of relativities and do not negatively affect horizontal fiscal equalization. In fact, SPPs can serve good purposes, and the Commission acknowledges that.*

**From the point of view of the Commission, would it be desirable if the Commission had influence over the amount of general revenue to be distributed, too?**

*That really has never been a concern. For horizontal fiscal equalization, control over the amount of funds to be distributed is not necessary, as long as the level of funding available is high enough. That is of course the case.*

*We deliberately do not see ourselves as giving economic policy advice, such as on the total amount of grants payments. Otherwise, we might be seen as an arm of government. We need a high level of independence for our work.*

**Can or should the Commission be a model for other countries?**

*I think all federations are different, so they should have different systems of fiscal transfers and equalization. There has been a continuous stream of interest from other countries in the Australian system, and it has frequently been studied. That probably speaks for itself.*

**Can the Commission assist countries that want to reform intergovernmental fiscal relations, and how?**

*We frequently have officers from other countries visiting, and some are staying with us for some time. The topic they usually focus on is expenditure equalization. Our involvement is through technical cooperation programs, organized by international agencies such as the World Bank and the IMF, or AusAID.*

**What are the most recent examples for technical assistance to developing countries?**

*South Africa has modeled its new system of intergovernmental fiscal transfers on the Australian system. The ANC had contacts with us even before Mandela was elected. After the election, members of the South African commission came here.*

*More recently, China has initiated an international search for suitable models of intergovernmental fiscal relations, and is now concentrating heavily on the Australian system.*

Annex IV

THE PILOT INTERGOVERNMENTAL  
TRANSFER SCHEME OF 1995-1996  
IN THE PEOPLE'S REPUBLIC OF CHINA<sup>1</sup>

A transitional transfer payments scheme was introduced in 1995 as the first step toward a formula-driven redistributive system. The initial formula had two parts: an objective factor that attempts to measure the gap between standard expenditures and local fiscal capacity, and a policy component that directs subsidies to regions with large ethnic minority populations. In 1996 a third factor was added to the formula to reward good tax effort. Since then more tinkering has been done.

The 1996 formula for transfer was as follows

*Transfer to province i = f(measured fiscal shortfall of province i) + g(special transfer to province i as a minority region) + h(province i's good tax effort)*

The fiscal shortfall is measured as

*Standard expenditure = standard wage expenses + standard administrative expenses + agriculture and other productive expenditures + other expenditure*

where

- *standard wage expenses* are derived from standard wages, number of civil servants, and a regional wage factor;
- *standard administrative expenses* are those for government administration, police and security, and other government agencies. In 1995 the actual expenditures for all government units were included. In 1996 this was shifted to include personnel and running costs for fully funded units, and lump sum costs for units that received only partial funding from the budget.
- *agriculture and other productive expenditures* are expenditures for agriculture and other productive departments.
- *other expenditure* includes price subsidies.

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<sup>1</sup> World Bank.1998. Managing Public Expenditures for Better Results. Washington, D.C. Annex 9.

The policy component, or special transfers to province *i* as a minority region, also calculates the fiscal gap between the minority regions and the national average as

$$(NR - PR_i) \times POP_i$$

where

$NR$  = national per capita revenue;  $PR_i$  = province *i*'s per capita revenue;  
 $POP_i$  = population of province *i*

The coefficients  $a_1$  and  $a_2$  are determined ex post, as the ratio of funds available for transfer divided by the size of the gap. For example, in 1996 the central government had Y2.2 billion to devote to equalization transfers, compared with a fiscal gap of Y63 billion. So  $a_1$  was derived as 0.035. Similarly, the total fiscal gap for minority regions was estimated at Y13 billion in 1996, while the amount allocated to filling the gap was only Y1.2 billion in the central budget; the coefficient  $a_2$  was derived as 0.09.

Finally, the tax effort reward was derived in 1996 as follows: if province *i* had revenue growth in 1995 that exceeded the national average, then the total transfer to province *i* would be supplemented by the coefficient  $a_3$ , where

$$a_3^i = 0.5 \times (r^i - r)$$

and

$r^i$  = revenue growth of province *i*

$r$  = national revenue growth

so that

$$(\text{Transfer to province } i)_t = \{(1 + a_3^i) \times [a_1 \times (\text{standard expenditure}_i - PR_i \times POP_i) + a_2 \times (NR - PR_i) \times POP_i]\}_{t-1}$$

and  $t$  = current year,  $t - 1$  = previous year

In other words, the transfer to province *i* for 1997 will be based on its fiscal gap and tax effort in 1996. The system should be recognized as transitional and does not obviate the urgent need to get a more appropriate transfer scheme installed.

## Recommendations for Improving the Pilot Scheme

For the transfer scheme to be effective, it must be more adequately funded. The scheme was allocated only Y2 and 3.46 billion in 1995 and 1996, respectively. These comprised just over 1 percent of the total of nearly Y300 billion in central transfers to the provinces in 1996 and was dwarfed by the tax rebates of Y195 billion. Because of the small sums allocated, their effect on the distribution of fiscal resources is marginal: the coefficients  $a_1$  and  $a_2$  are very small, so that the scheme provides only a very weak link between a province's fiscal need and their transfers.

At present the scheme mixes two sets of considerations: fiscal need and support for ethnic minority regions. These objectives should be kept separate, with one equalization scheme that provides transfers according to need (plus a tax effort factor), and the other scheme to support ethnic minorities reported separately. The total of Y3.46 billion spent on the pilot scheme in 1996 was in fact split into Y2.2 billion for the equalization scheme, and Y1.2 billion for the minority's scheme.

The transitional scheme duplicates the old pre-1994 equalization transfers under quota subsidies, which totaled Y11.1 billion in 1996 and were heavily biased toward minority regions. These schemes should be merged as soon as possible—if the pilot scheme is considered an improvement over the quota subsidies, then it should simply absorb and replace the quota subsidies.

The tax effort measure takes the gap between national revenue growth and the provincial revenue growth. This is a convenient proxy that should be replaced by better measures as better data become available. Provincial revenue growth depends on too many factors other than tax effort, most notably economic growth and structural change.

Finally, it is urgent that the pilot transitional scheme be replaced by a model that measures fiscal needs more appropriately. At present, the measured fiscal gap only considers the personnel and running costs of government, with wage costs weighing heavily. This reflects the short-term concern in meeting payroll requirements. In the long run, however, it is more appropriate to look at fiscal needs in terms of the costs of providing services such as education, health care, government administration, public transport, water, sewerage, and sanitation services. This package of fiscal needs should contain not only wages and running costs but also some capital

costs for building schools, clinics, roads, etc. Regional cost differentials in providing these services must also be included in the calculation of fiscal need—the present regional factor contains only a small differential for wage supplements and is insufficient.

## NOTES

- <sup>1</sup> See Shah (1994) and Ter-Minassian, ed. (1997).
- <sup>2</sup> See Prudhomme (1994).
- <sup>3</sup> Drawn in part from Bahl (1999), Ebel and Yilmaz (1999), and Prud'homme (1994).
- <sup>4</sup> This section and the following are drawn from a number of authors: Rodden (2000), Ter-Minassian (1997), Bahl (1998, 1999), Shah (1998), Bird and Wallich (1993), Wallich, ed. (1994), Ebel and Yilmaz (1999).
- <sup>5</sup> Bird and Wallich (1993).
- <sup>6</sup> See McLure (1998), cited in Bahl (1998).
- <sup>7</sup> Problems have however been experienced in the US where subnational governments regularly raise tax rates during periods of economic contraction, thus worsening the situation.
- <sup>8</sup> US cities compensate for this by levying local income tax on commuters as well as residents. In Russia, the personal income tax is fully returned to the local government of the place of employment and none to the place of residence. As labor mobility increases and housing becomes less scarce, this will become a significant problem with personal income tax sharing in Russia.