Chapter Five

Intergovernmental Revenue Sharing and Transfers

5.1 The roles of revenue sharing and transfers

Federal governments raise more revenues from taxes and borrowing than they need for their own direct spending. Federal governments always share some taxes or make fiscal transfers to help constituent-unit governments meet their revenue needs, to effect redistribution within the country, or to promote federal government program objectives. The importance and manner of such revenue sharing and transfers differs greatly among federations.

The logic of centralizing revenue collection is generally stronger than that of centralizing expenditure responsibilities. While the extent of devolution of revenue collection (including borrowing) and expenditure varies greatly among federations, in all cases the federal government assumes part of the responsibility for financing constituent-unit (and even local) government responsibilities. This can be done either by sharing certain (or all) federally collected taxes or by making transfers from the federal government's own budget.

Revenue sharing and transfers serve various purposes. They can contribute to the **general financial requirements** of all constituent-unit (and local) governments, and can be used to **reduce disparities** in the fiscal means of these governments. Federal governments can also make conditional transfers that promote their **policy objectives** with the other tiers of government. Health care, social services, and education are among the largest drivers of government spending in modern welfare states, and these responsibilities are usually heavily borne by constituent-unit governments with some federal assistance.

Tax sharing and transfers combined account for over 90 percent of constituent-unit finances in Nigeria, Mexico, and South Africa; for just under half in Austria, Germany, India, and Australia; and for 13 to 25 percent in Canada, Switzerland, and the United States. Constituent units that have a larger degree of self-financing are typically more autonomous.

5.2 Legal provisions governing revenue sharing and transfers

Constitutions and laws can be permissive or directive regarding revenue sharing and transfers.

The legal basis for revenue sharing and fiscal transfers is found in constitutions, federal laws, and intergovernmental agreements. A legal instrument may be mandatory or simply enabling. Constitutions can set out certain broad principles, such as uniform living standards (Germany), reasonably comparable public services at reasonably comparable levels of taxation (Canada), or equitable sharing of revenues (South Africa). They can also set up commissions to recommend the details of such sharing (India, Nigeria, Pakistan, South Africa), but this can also be done outside the constitution (Australia). In three cases (Germany, Ethiopia and South Africa), the constituent units have a formal role through the upper house in deciding the sharing of revenues.

The relative costs and priorities of major programs change over time so there is a need for periodic adjustment in revenue sharing and transfer agreements. For this reason, the precise details of such arrangements are rarely found in constitutions, though the courts may play a significant role in interpreting constitutional provisions (Nigeria, Germany). In many cases, the arrangements are determined in federal laws.

5.3 Tax sharing versus fiscal transfers

Federations differ in their approaches to tax sharing versus transfers. The approach chosen can have implications for the criteria of financial support, for the autonomy of constituent units, for certain economies of scale, and for fiscal stabilization.

Tax sharing and fiscal transfers are the two principal means by which constituent units receive revenues from federal governments. **Tax sharing** usually designates a part of a federal tax or taxes for allocation to the constituent units; in some cases, these sums do not appear in the federal budget because they are treated as constituent-unit revenues. **Fiscal transfers** are made from the federal government's general revenues and do appear in the federal budget as an expense.

There is a great variety of approaches to both tax sharing and fiscal transfers, but the following are some ways in which they compare:

- **General-purpose versus program-specific purposes**: Tax sharing almost always provides general revenues to constituent units, as opposed to financing for a particular purpose. Fiscal transfers are also frequently for general purposes (in which case they are unconditional), but they can also be made for particular programs (and subject to very specific or quite general conditions).

- **Formula versus discretionary**: Tax sharing is usually done by an established formula, which may be in place for a number of years (five in India and Nigeria). Such sharing formulas can be legally entrenched so that the federal government cannot change them during the designated period. When this is so, the revenue share is transparent and predictable, though its absolute level may fluctuate widely. Transfers, too, can be based on long-term formula arrangements, but they are also frequently short-term and more discretionary. Even when nominally long-term, they may be subject to change within the designated period if the federal government so decides (as happened in Canada in the 1990s when the federal government dramatically cut transfers as well as its own spending).

- **Capped versus uncapped**: Tax-sharing arrangements are less likely to include revenue caps than are fiscal transfer arrangements. Thus, as revenues from a shared source rise, the share going to the constituent units usually rises directly with it. Fiscal transfers, by contrast, are more likely to involve specified amounts or amounts tied to some measure of need or expense, but with a ceiling on the size of the transfer.

These points describe tendencies in the form and use of tax sharing versus fiscal transfers, but with ingenuity both approaches can be—and have been—designed in almost any way imaginable, so that, for example, there can be tax sharing that is conditional, discretionary, and capped. As well, the boundaries between the two can blur: in the United States, the federal excise tax on gasoline is reserved for sharing with the states for the interstate highway system, but this is done through conditional transfers not direct tax sharing; Canada's federal government now does something similar in indirectly providing gasoline excise-tax revenues to municipalities through the provincial governments.

Constituent units can have a high level of dependence on shared taxes or transfers. Some experts believe this is not a problem so long as the rules are clear and subject to "hard" constraints that induce constituent units to behave responsibly by not running large deficits and expecting to be bailed out by the federal government. Other experts argue that, whatever the rules, a very high degree of constituent-unit dependency on federally sourced revenues effectively creates a liability for the federal government to bail them out in extreme circumstances, and can encourage irresponsible policies on the part of constituent units.

In regimes where tax sharing is important but only some federal taxes are shared, the federal government can have an incentive to raise those taxes it does not have to share, and this can affect the structure of the tax regime. Such **gaming** of taxes happened in Brazil. In India, the Union Government had engaged in tax gaming, but it has since put all federal taxes into the pool for sharing to avoid this problem. Gaming may also be a factor in the Argentine federal government's imposing heavy export taxes on agricultural and energy commodities; these taxes are not shared with the provinces. As well, Argentina's sharing scheme has different sharing arrangements for different taxes, so there are winners and losers according to which taxes are changed.

The mix of support flowing to constituent units from tax sharing versus transfers varies greatly, but inconsistencies in data collection make it impossible to give precise numbers.

5.4 Tax-sharing criteria

When large pools or sources of taxes are shared, there are usually multiple criteria for sharing, including some measure of need. The principle of derivation holds that some or all of the revenues raised in a jurisdiction should stay there and provide a net benefit. Federations balance the principles of derivation and equity in different ways.

When taxes are shared, there must be decisions made on the respective vertical shares to the two (or sometimes three) orders of governments, as well as the horizontal shares among the constituent units (and perhaps local governments). The formulas for such sharing can be quite simple (e.g., a percentage share going to the constituent units, based on population), but very often they are complex and bring in several factors, such as where the taxes were collected (derivation), population, territory, equality of constituent units, and other measures of fiscal capacity or of need.

The concept of derivation relates to a broader set of issues of "fiscal flows" into and out of each constituent unit. Calculating such flows can present major difficulties. Should import taxes collected at a port, or corporate taxes collected from a headquarters, or an excise tax collected at a distillery, or even a personal income tax collected where an individual resides (but does not work) be attributed to the jurisdiction where they are collected, even though what is being taxed may come from or be destined for other jurisdictions? In countries that use the derivation principle, technical answers to such questions must be found. (Similar issues exist on the spending side of fiscal flows: Should federal spending on a military base or a highway be seen as benefiting only the jurisdiction where it occurred? Which constituent unit benefits from a major purchase, the one where it was produced or the one where it will be used?)

Tax Sharing in Various Federations

The **German** and **Austrian** systems are based overwhelmingly on tax sharing, with Länder having very limited own-source revenues over which they have discretion. **Nigeria** is similar, with the special dimension of a huge reliance on oil revenues collected in only a few states. **Canada**, **Switzerland**, and the **United States** are at the opposite extreme, with constituent units essentially controlling their tax revenues and with negligible or no tax sharing (but some fiscal transfers). In **Belgium** and **Spain**, constituent units get 35 to 45 percent of their tax revenues from tax sharing; their other revenues are own-source and federal transfers. **Australian** states share all of the federally levied value-added tax, but also receive other significant fiscal transfers. Both **Brazil** and **Argentina** rely heavily on tax sharing with significant revenues going into the sharing pool; however, the federal governments have favoured the development of certain non-shareable taxes (notably export and import taxes in Argentina, and corporate and turnover taxes in Brazil), which has increased their fiscal latitude and centralization. Where taxes are shared, the criteria for apportionment among the constituent units vary greatly. In **Nigeria**, most federally levied taxes are shared with the states according to a formula that includes equality of states, population, area, and fiscal capacity; for the huge oil revenues there is also a special allocation of 13 percent to the producing states. **Pakistan** shares most federally levied taxes on the basis of population, despite major differences in wealth. **India** currently shares all federal taxes based on a formula that includes population, per capita GDP, area, tax effort, and fiscal discipline. Fiscal transfers supplement tax sharing in all these cases.

Tax-sharing arrangements frequently result in significant inequalities between constituent units. When a significant portion of shared taxes are allocated to all states equally, regardless of population, this can create a demand for the creation of new, small states (as has happened in Nigeria). Inequalities in tax sharing can sometimes be addressed by complementary arrangements for equalization transfers and for program specific transfers.

5.5 Sharing natural resource revenues

Natural resource revenues, which are very important in some federations, can be shared or not, in differing degrees, depending on considerations of ownership, derivation, and equity. They can also be treated in various ways in equalization arrangements.

Natural resources tend to be located very unevenly among the constituent units of federations. As well, their cost of development can be very low relative to their value in the market. Thus, natural resources can be a major source of governmental revenues in federations, but these can be distributed in very different ways.

The sharing of natural resource revenues is a source of tension in many federations. There are two opposing principles: **equity** and **derivation**. Equity calls for broad sharing, derivation for a special (or even exclusive) part to go to the producing region. The principle of derivation may be tied to constituent-unit ownership of resources (as in Canada), but it can apply even where the federal government owns the resource (as in Nigeria). Resource-rich federations can have very significant fiscal disparities among constituent units, depending on the sharing arrangements.

There are two distinct issues. First, which governments get what direct access to resource revenues? Secondly, are there equalization arrangements, and, if so, how do they deal with resource revenues?

Either constituent-unit or federal governments can own resources, and ownership does not necessarily confer control or the greatest access to revenues. In Canada, Australia, and the United States, constitutent units get the major revenues from resources they own, whereas in Argentina, India, and Malaysia the federal government usually gets the larger share of revenues from resources owned by the constituent units. When federal governments own the resources, they may provide a share of resource revenues to the constituent units where the resource is produced (as in Brazil, Nigeria, Russia, and for federal lands in the United States). As well, some federations provide all (Canada) or a significant share (Brazil and Nigeria) of revenues from federally owned offshore petroleum resources to constituent units (and in Brazil's case, municipalities) that are contiguous with the producing zones.

(In a number of federations, natural resources have been managed with objectives such as low prices for consumers, industrial development, and import substitution, as well as revenue generation. Such approaches, particularly subsidized prices for consumers, can be extremely expensive and result in governments foregoing major revenues. This is true not only of oil and gas, but also of hydroelectricity.)

The allocation of resource revenues can clearly create major fiscal disparities among constituent units in federations. Some federations (Mexico, Venezuela) address this by essentially giving no share of resource revenues to the constituent units where they are produced. Russia gives a small, capped share. Nigeria gives an uncapped 13 percent of federal petroleum revenues to the producing states, so they have much greater fiscal capacity than non-producing states. In Canada, the combination of provincial ownership of onshore resources and the federal transfer of offshore-resource revenues to provinces means that the major resource producing provinces have a significant fiscal advantage with this class of revenues.

Canada has made the unusual decision to treat resource revenues differently from other revenues for purposes of equalization. The argument for doing so stresses the significance of constituent-unit ownership, the non-renewable nature of these revenues (which makes them somewhat comparable to realizing a capital asset as opposed to ordinary income), and the possible disincentives to resource development if these revenues are treated like others. The argument against doing so stresses "a dollar is a dollar," and that ability to spend (or actually spending) is more important than the source of revenue, the risk of economic distortions from discounting such revenues, and the lack of evidence of disincentives to development. Canada's equalization program now gives non-renewable natural resource revenues a 50 percent weighting in calculating equalization entitlements, which means that resource-rich equalization-receiving provinces end up with a higher fiscal capacity than resource-poor equalization-receiving provinces. Australia's program treats resource revenues like other revenues.

5.6 Conditional versus unconditional transfers

Federations vary in the extent, number, and types of fiscal transfers. Fiscal transfers are particularly important in federations that do not have extensive tax sharing, but some federations mix both about equally. Transfers may have no conditions, or minor or major ones. Conditional transfers, especially those requiring matching funds, can skew the priorities of constituent-unit governments.

Fiscal transfers are the alternative to tax devolution and tax sharing as a means to increase constituent-unit fiscal capacity. In some federations, such as Canada, Mexico, Switzerland, and the United States, transfers from the federal budget are the main form of fiscal support from the central government to the constituent units (in each of these cases except Mexico, the constituent units have significant own-source revenues). Other federations, such as Australia, Belgium, Brazil, India, and Spain, make roughly equal use of tax sharing and fiscal transfers. Still other federations, such as Austria, Germany, and Nigeria, heavily favour tax or revenue sharing, though in Germany's case fiscal transfers are also important.

Fiscal transfers can have different characteristics:

- They can be **legal entitlements** or **discretionary**. In the former case, constituent units can appeal to the courts to enforce them, while in the latter the federal government has the power to decide. Typically, large grants are legal entitlements, while smaller program grants can be more discretionary. In many federations, intergovernmental agreements cannot legally bind the federal government.

- They can be **conditional** or **unconditional**. Conditional grants must be spent for a particular purpose, though the degree of conditionality can vary considerably from highly detailed to very general. Unconditional grants are for general spending purposes and they include equalization transfers. "Block" transfers fall somewhere between conditional and unconditional grants, in that they may be linked to a specific program area (such as health), but have only very general principles or terms associated with how the money is spent and minimal reporting requirements.

- Conditional grants can be **cost-shared** or **contributory**. Cost-shared grants require the receiving constituent units to match federal financial support for a program in a prescribed manner. Contributory grants occasionally cover all of the costs of a constituent-unit program that the federal government wishes to see implemented, but more usually they are a contribution to the general costs of programming in a specific area. Large "block grants" for major areas such as health or education can take this form.

Conditional grants can encourage constituent units to spend more on programs that are priorities for the federal government. In some cases, the federal government gives such grants because the constituent units may under-spend in program areas (such as education, research, and major infrastructure) where only part of the benefit of a program may be experienced locally while other benefits spill over across the country. In other cases, it may want to encourage common equity standards, or more coherent program designs that facilitate individual or corporate mobility across constituent units. Or a federal government may simply wish to support a particular program, activity, or investment that its legislators or executive favour for ideological or voting-seeking reasons.

Federal governments cannot ensure that all of the funds they provide for a particular purpose go to increase what the constituent units would have spent anyway, and the empirical evidence suggests that typically there is some leakage. As for unconditional grants, evidence indicates that they result in a higher overall level of constituent-unit program spending than would happen if the equivalent money were transferred directly to residents, with the constituent units then having to tax it back. Good grant design provides incentives for constituent units not to drive up program costs (so federal grants are tied not to actual spending but instead to some established norm for costs) and to spend efficiently (so grants are tied not to inputs but to outputs); there may also be caps on the grants. Conditional grants have been more common in dualist federations, where federal governments do not have the legal power to establish framework policies within which constituent units must operate.

Conditional Grants in Various Federations

The **United States**, driven by its congressional system, imposes at least some conditions on all transfers to the states; it has 600 categorical and typically very detailed grant programs and 17 block grants. In addition, each year Congress approves several thousand "earmarked" projects (such as a bridge), which individual legislators append to laws as a condition of their support; these may be cost-shared with states. While the **Swiss** constitution does not permit federal conditional grants, in practice certain grants are made for particular programs, though largely with the consent of the cantons (which could challenge such conditions through a referendum). The largest grants in **Canada** are now block transfers targeted to "established programs" such as health care and social assistance, with minimal conditions. While **Indian** states' main support from the federal government comes through unconditional shares of federal taxes, they also receive fiscal transfers, and less than half of these are conditional grants for development plans and various centrally determined projects. In **South Africa**, the constitution requires transfers of an equitable share of federal revenue to provinces, to which the federal government can and does attach conditions for its expenditure. **Australia** has large unconditional transfers to the states, but also some 100 conditional programs, which are to be transformed into a handful of less conditional transfers. Most grants are conditional in **Austria**, **Switzerland**, and **Germany**, while rarely so in **Brazil**, **South Africa**, **Russia**, and **Belgium**. Conditional versus unconditional grants are roughly balanced in **Mexico**, **Australia**, **India**, and **Malaysia**.

5.7 Horizontal fiscal inequalities

The wealth and fiscal capacity of constituent units in federations varies considerably, especially in developing countries. The issue

of sharing wealth within a federation is closely tied to citizens' sense of solidarity with the federal and regional communities. There are also economic arguments for (and against) redistribution to poorer regions. Sharing can be done in various ways.

All federations have disparities in the average wealth of the populations of their constituent units. These disparities range from quite small to very large: for example, the ratio of the poorest constituent unit's gross domestic product per capita to that of the richest unit is about one to 1.4 in Australia, one to two in Austria, Canada, and the US, one to three in Germany, one to seven in Brazil, one to nine in Argentina and in India. Such major disparities bear directly on the revenue-raising capacity of constituent units, and the prospects for balanced economic development and equitable availability of public services. The result is tensions between better-off and less well-off regions.

The principles of derivation and equity conflict in terms of how much sharing there should be in a federation. In practice, there is a large cultural element in how the populations of federations view their "sharing communities": countries such as Australia and Germany put a high premium on trying to equalize standards, while others, such as the United States, Brazil, Nigeria, and India, accept much greater regional differences and put more emphasis on self-reliance. Clearly, federations with very large disparities between constituent units face a greater challenge in promoting equalization than do those with lesser disparities.

The arguments for some measure of equalization are both philosophical and economic. The philosophical arguments have to do with the culture of sharing or solidarity in a federation, which in turn reflects the sense of community at the different levels, as well as attitudes to self-reliance and claims on local resources. The economic arguments are based on the inefficient allocation of labour and reduced productivity in the national economy that can result from some privileged constituent units having a more attractive combination of taxes and services. This **net fiscal benefit** may induce citizens to migrate for purely fiscal reasons. The argument that equalization provides net benefits for the whole economy runs up against the counter-argument that there may be net costs for the richer regions that are paying for the program. Thus, in richer federations that have very strong equalization programs, the commitment to equalization seems to result more from a sense of national solidarity than from arguments about economic efficiency. (Arguments about sharing exist as well within unitary countries and within constituent units. However, central governments in unitary countries typically tax consistently and deliver much the same level of services across the country, though differences can exist at the level of municipal or regional governments.)

5.8 Equalization programs

Most federations promote some measure of horizontal redistribution to reduce disparities among their constituent units. Some have "equalization" policies, programs, or systems that take an integrated view of government finances and bring constituent-unit governments up to a defined fiscal standard. Others have no integrated approach, though some transfers and tax sharing may include redistributive criteria. Such standards can include revenue capacity or some overall measure of fiscal need. Designing such programs involves significant practical challenges and choices.

Federal systems can redistribute wealth among constituent units in three ways:

- The federal government's direct spending on its own programs can be significantly redistributive in that its revenues come disproportionately from the richer (or more resource-rich) parts of the country, while many of its spending programs tend to be fairly equal throughout the country or even targeted at poorer regions with greater needs.

- Tax sharing and major fiscal transfers can also be equalizing by giving weight to population, need, or other measures that favour redistribution, (though these criteria may also include further criteria, such as derivation, that are not equalizing).

- Finally, there can be equalization programs as such. Federations that promote equalization do not try to equalize the average *income* of populations across the country; rather, they focus on raising the *fiscal capacity* of poorer constituent-unit governments up to a specified standard, which may include need and costs. Equalization programs or policies address inequalities between constituent-unit governments, not populations.

Some federations have no equalization objectives as such. Mexico has various sharing and transfer arrangements but no coherent equalization. (However, it, like Argentina, requires that the federal budget show the geographic incidence of spending.) Nigeria allocates its revenues on the basis of a number of criteria, the net result of which is major disparities between states. Similarly, Brazil shares federal personal and corporate income taxes (while the VAT levied by the states belongs to them), but the system results in large inequalities between states. While Belgium has substantial net transfers to the poorer communities and regions, the allocation of the shared portion of personal income tax is based on derivation, not equalization. As well, many federations base their main transfers on a number of criteria, some of which relate to equalization while others do not. India weighs population, per capita income, area, infrastructure needs, and tax effort. Spain's formula is based on population, area, personal income, fiscal effort, and other factors (and is highly controversial because it results in inversions, with some poorer autonomous communities ending up with greater resources per capita than richer ones). Transfers based on population are effectively equalizing, given that they are financed out of general revenues, but factors such as area and a minimum per constituent unit are often not equalizing.

Sometimes, particular programs may have a special equalizing component, in that poorer constituent units receive a large proportion of federal matching funds for earmarked programs. This is the case in the United States for Medicaid and states' education grants, and was the case in Switzerland for some programs. In both countries, the poorer jurisdictions spent less than richer ones on the matching programs, so the overall equalizing effect was minor. This was part of the reason Switzerland overhauled its transfer regime.

Equalization programs can be designed to address disparities in revenue capacity, or a combination of revenue capacity and expenditure need:

- Each constituent unit's total **revenue capacity** can be estimated on the basis of a representative level of effort for each source. In developing countries with weaker tax administration and data, it is necessary to use proxies such as gross domestic product or income per capita, adjusted if necessary to take into account particularly lucrative revenue sources (such as oil or gas).

- Each constituent unit's **expenditure needs** can also be estimated on the basis of a representative expenditure system, analogous to a representative tax system. Alternatively, proxies for program expenditure needs can be used—from very broad measures such as population and income, to more refined breakdowns that include school-age and aging populations, poverty, and physical terrain.

Both alternatives involve technical challenges and subjective judgments, but these seem greater in assessing expenditure need. A particular issue with assessing need is whether differential costs are included (for example, because of difficult terrain or dispersed population): some economists argue against doing so in a way that would neutralize underlying differences in real costs. Equalization programs should not interfere with incentives for constituent units to spend and tax responsibly. Typically, this means basing the program on **representative** (average or appropriate) taxes and expenditures, not on actual performance, because the latter could result in constituent units gaming the system to achieve an advantage. Whether an equalization program targets revenue capacity alone, or includes expenditure needs, a decision is required on the standard to which the poorer units will be raised or on the formula for sharing a determined pool of equalization funds. These standards or formulas themselves can be complex.

Equalization programs can be of two types:

- **Gross equalization programs** bring poorer constituent units up to some nationally defined standard. Most systems (Austria, Canada, Germany, Russia, and Switzerland) are of this type.

- **Net equalization programs** bring all constituent units up or down to a common national standard. Australia's system is effectively net and takes an integrated view of the entire envelope of central and state revenues and needs. Germany's system was fully net before reunification, but the cost of bringing in the poorer Eastern Länder put a major strain on the system.

Most equalization programs, such as those in Austria, Canada, Germany, and Switzerland, make special transfers to even up fiscal capacity of the poorer constituent units once other revenue sources and transfers are taken into account. Thus equalization programs as such can be relatively small when compared with other transfers or revenue sharing, which can also be equalizing. In Australia, by contrast, the equalization dimension is integrated into the much broader system of transfers to all states. While equalization programs are frequently funded entirely by the federal government, in Germany significant equalization transfers are also made between Länder, and in Switzerland the federal transfers are supplemented by transfers from richer to poorer cantons. Such transfers between units can also enhance transparency about who pays for and receives equalization.

Equalization programs can have perverse effects, though, normally, good design can address them:

- Equalization entitlements can be highly volatile and unpredictable. This situation can be addressed by basing entitlements on longer-term averages and having caps and floors on how much they can vary from year to year.

- Entitlement formulas can provide disincentives for constituent units to raise taxes (for example, if doing so would have little or no impact on their net revenues) or to control costs (for example, if equalization considers actual expenditures). These issues can be addressed respectively through careful design of the formula and the use of normalized revenues and costs.

The United States is an interesting case of a rich federation that does not have an equalization program. Some programs, such as Medicaid, provide extra assistance to poorer states, though their impact does not seem significantly redistributive because poorer states have lower uptake. (As well, some federal programs, such as education assistance, require **intra-state** equalization, mainly to ensure that poor populations and visible minorities receive a fair share.) In terms of broad fiscal flows, federal revenue raising and spending by state does not seem coherently redistributive and seems rather to reflect the strategic positioning of senators and representatives in Congress. Defenders of the American system argue that it has been effective in bringing adjustments in the real economy, as people and jobs migrate. Certainly, the relative wealth of the 50 states has changed greatly over time.

Equalization Transfer Programs in Various Federations

Australia's program addresses both revenue capacity and expenditure need using a large, separately determined pool of revenues to fully equalize all states to a national-average standard. **Canada's** program considers revenue capacity alone (though it discounts natural resource income by 50 percent). It aims to bring poorer provinces up to a national-average standard, subject to constraints on the growth of equalization payments and the overall fiscal capacity of equalization-receiving provinces with significant natural resource revenues. **Germany** has a four-step process: tax sharing; special VAT sharing with the poorest Länder; fiscal transfers from richer to poorer Länder; and, a final federal adjustment, grants/payments, for the poorest Länder. **Austria** has a per-capita federal grant to the Länder to bring average per-capita tax revenue to the national average. **Switzerland** brings poorer cantons up to 85 percent of a national average calculated on capacity and need through payments by both the federal government (two-thirds) and the richer cantons (one-third); smaller, related grants include a federal component that addresses higher costs of urban, mountainous, or poor cantons, and a transitional fund financed by the federal and richer cantonal governments. **Russia** allocates 6 percent of the federal budget to equalization grants for about 60 to 65 regions (of 83) that are below a national-average measure, including capacity and costs. The grants take into account population, revenue capacity, and also the relative cost of the provision of public goods, which varies several times across the regions; the grant raises the poorest regions to a minimum standard.

5.9 Transfers to local governments

Municipal and local governments are most often a responsibility of constituent-unit governments, but they can be a constitutionally established third order of government. In either case, they usually have a weak tax base, requiring significant transfers from the other orders of government. Direct political relations between the federal and local governments can create a complex trilateral dynamic.

In most federations, local government is a responsibility of the constituent units, which largely decide the roles of local government, their access to own-source and shared taxes, and any grants they might receive. However, in a few federations—Brazil, India, Nigeria, South Africa, and Switzerland—the municipal level of government is established in the national constitution as a third tier of government, with various defined rights and responsibilities.

Whatever their constitutional status, municipal or local governments tend to have a weak revenue base relative to their responsibilities, and therefore they depend on significant transfers. (Switzerland is an important exception in that its communes raise about a third of all taxes and rely on transfers from cantons and the federal government for less than a sixth of their funding.) Such transfers may come from either order of government, but typically they come predominantly from the constitutent units when local governments are their constitutional responsibility. Nigeria provides for federal revenue sharing with the municipal governments, but these funds must pass through the state governments, which sometimes do not make the onward transfer as they should.