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Revenues and Revenue Assignment: Intergovernmental Fiscal Relations in the Russian Federation

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Revenues and revenue assignment: intergovernmental fiscal relations in the Russian Federation

Roy Bahl

There is no single best way to finance subnational governments—it typically depends on a country's history and objectives. Countries around the world have chosen widely differing paths, the most suitable depending on the objectives a country sets for itself. In most, however, it is a combination of the assignment of (or shares in) national taxes, local taxes (usually property tax and business tax), user charges and benefit levies, and transfers from higher-level governments. Where the central government is federal, the state or provincial governments are usually given broader taxing powers—often on sales and personal income. Whatever the fine print, this fiscal relationship between central and subnational governments, if mishandled, can be a source of future friction and political tension. Like much else in Russia the intergovernmental fiscal relationship is in transition, and the outcome, perhaps more than any other issue, will define the nature of the Federation, at least for the foreseeable future.

In early 1993 Russia's oblast and rayon governments were financed by a negotiated system of shared taxes and ad hoc grants—subventions, in Russian fiscal terminology. Of all taxes collected within their boundaries oblasts retained about 20 percent of the value-added tax (VAT), 60 percent of enterprise income tax, 50 percent of excise duty on vodka, and 100 percent of personal income and other excise taxes. If these revenues did not match spending needs as negotiated with the Ministry of Finance, then a "deficit grant" or subvention was made. Within an oblast the arrangements for tax sharing and the allocation of subventions with rayons were left to the oblast government. The present negotiated system, however, is not sustainable, and there are calls for reform from both central and subnational governments.

By some accounts the Russian government has decided how it wants to proceed with its system of intergovernmental finances. Under a 1992 law, the Basic Principles of Taxation, the present system should be replaced by a pure "tax assignment" system—that is, central government will define the tax bases, set all tax rates, and assign corporate and personal income taxes to subnational government and VAT to central government. But will that happen? Certainly there are no immediate plans to implement the Basic Principles, and some officials doubt whether they ever will take effect. More recently the Law on the Budgetary Rights of Local Self-Governments (1993) has legislated sharing of most taxes and has assigned a few others but has failed to specify the sharing rates.

Whether the government moves to this new assignment system, simply makes adjustments to the present transitional system, or designs a new model, some fundamental questions must be answered:

- How does the tax system of the Basic Principles compare with the one operating at present?
- Will tax assignment (versus tax sharing) provide subnational governments with enough revenue to meet spending responsibilities?
- Can subnational governments provide adequate services, under either the present system or under the Basic Principles?
- Is the federal government's macroeconomic policy compromised by either the Basic Principles or the present system?
- Do oblast and local governments have enough fiscal incentives to increase revenue mobilization and efficiency in delivering public services?
- Is either the proposed new revenue-sharing structure or the present system sustainable in the long run? If not, what other forms of intergovernmental arrangement might be considered?

In a real sense the resolution of the current revenue-sharing debate will define the nature of the Russian Federation, at least for the foreseeable future. One extreme is continued fiscal centralization, with relatively little subnational autonomy and continued central direction of the activities of the subnational government sector. The other extreme is a heavy involvement of oblast governments in establishing priorities for investment and social services and in raising revenues. In between are various forms of tax base sharing; schemes that make provision for special regimes where some regions will have more fiscal powers than others; and heavier use of grants to give subnational governments more autonomy on the expenditure side while continuing to keep the revenue instruments under the control of the center. This chapter is about how such options fit the Russian context.

Revenue sources for subnational governments

Intergovernmental relationships across the globe come in many shapes and sizes. Generally the system chosen will be the one that best helps central government's political ideology or economic aims. The government may, for instance, focus on the importance of economic efficiency or technical efficiency, equalization or macroeconomic control. In federalisms with heterogenous populations, and with ethnic or cultural diversity, autonomy may also be an issue. One system cannot simultaneously achieve all these aims, and governments must decide on priorities, which will dictate the system chosen. Each has its drawbacks. Tax assignment, for example, gives subnational governments fiscal sovereignty that may not be revoked. Tax sharing of the Russian variety, based on "derivation" of revenues, and in which revenues accrue to the regional government that has collected them, may be more flexible but could compromise equalization goals.[1]

Tax assignment

Taxes are assigned when one level of government has sole rights to collect and use the tax and, usually, to set its rates and define the tax base. Strictly speaking, if subnational governments cannot set the base or choose the rate of the assigned tax, the system is more akin to 100 percent sharing of a federal tax. Thus, for purposes of this analysis, we consider the Russian personal income tax (which is "shared" 100 percent with the oblasts) to be a shared tax, since the oblasts cannot adjust either its rate or base. However, one might also see it as 100 percent assigned. The distinction is to some degree grey.

Sometimes, in the United States for example, subnational governments have broad discretion to tax income, consumption, and wealth. But in industrial countries that are more centralized, and in most developing countries, central governments keep the income, sales, and international trade taxes (they may share some with lower levels), while subnationals are assigned taxes that yield less, such as property tax and certain excises. One advantage of this division of revenues (from the central government's viewpoint) is that local governments are kept on a short leash. One drawback is that revenue from these taxes is unlikely to cover subnational spending and extra transfers (grants for example) from central to subnational government are usually needed.

Revenue sharing

Even if the central government collects most taxes, some can be formally shared with subnational governments. This approach is simple and guarantees subnational governments a percentage of revenues. One method is retention according to where the tax was collected (the derivation principle). Another is for some fixed portion of revenues to be pooled and redistributed by formula or by cost reimbursement of eligible activities.

Tax base sharing (surcharges)

Subnational governments may be allowed to levy surcharges on national taxes, perhaps up to a ceiling. This piggybacking on the national tax base is simple and works best when a consistent definition of the tax base is used by all levels of government. Subnational governments can usually rely on the superior administrative machinery of the central government to collect these surtaxes. In the United States many (but not all) state governments use the federal income tax base and coordinate with the federal Internal Revenue Service, but assessment and collection are done by the state governments.[2] Some taxes lend themselves better to piggybacking than others. VAT is notoriously inappropriate; personal income tax is perhaps the best.

Concurrent tax powers

Both central and subnational governments may tax the same activity or tax base, but according to different definitions of the base. Switzerland is an example: both federal and canton governments tax personal income and corporate profits, but the exact definition of the tax base differs. A similar system is used in some U.S. states. This tends to complicate matters and can lead to overlapping and conflicting incentives.

Designing an intergovernmental system

In designing the best system of intergovernmental fiscal relations, the first step is to assign expenditure responsibilities to subnational governments. As noted in chapter 4 the considerations that go into assigning expenditures in a heterogenous federation such as Russia's may differ from those in a homogenous one. Only when expenditure responsibility has been assigned is it possible to select the financing structure that fits these expenditure responsibilities, based on the expenditure assignments and the objectives of the government. Unfortunately, the cart is often put before the horse and the revenue-sharing issue is taken up independently. Such is the case in Russia.

This being the reality, there are some principles of intergovernmental finance that offer useful guidelines for deciding on the division of revenues among levels of government.[3] One begins with a principle of correspondence between expenditure responsibility and revenue needs. Subnational governments must have a revenue base (and an ability to tap it) that generates enough funds to provide adequate services. Often central governments will offload deficits without consideration (or even knowledge) of the impact on state and local government budgets. Such was the case under the fend-for-yourself federalism of Presidents Reagan and Bush in the United States, and in Russia in 1992.

Appropriate assignment of taxes

Where taxes are assigned, it is good practice for central governments to keep and control those taxes that are crucial to macroeconomic stabilization policy or income distribution, as both of these functions are generally thought to be a more proper function of central than of subnational government (Musgrave 1983). These taxes usually include progressive personal income taxes, corporate taxes and taxes on capital gains, indirect taxes on luxury consumption, and payroll taxes to support social programs. Many countries have national sales taxes (the VAT is increasingly common) too.

Customs duties almost always are (and should be) national taxes because of their strategic importance to foreign trade policy and national industrial development. As a subnational tax (or a derivation-based shared tax), they would accrue to only a few jurisdictions, which would be unfair. Also, customs taxes may be too unstable to be a suitable basis for revenue sharing. The same would be true of natural resource taxes (chapter 6).

Which taxes make good subnational taxes?

Subnational governments, then, are left with sources of revenue that are neither principal macroeconomic stabilizers nor major instruments for changing the distribution of income. Subnational governments need stable revenues because they cannot finance extensive deficits through borrowing and must provide essential services. In principle, they should rely on taxes whose burden is not easily "exported" beyond local boundaries (Break 1980; Oates 1972). In other words the burden of local taxes should fall on the local population.

In the more centralized industrial economies and in the developing countries, the central government usually controls taxes that have important effects on national-level resource allocation. Thus, corporate income taxes are often central government taxes because of the importance of achieving standard incentives with respect to investment, technological change, labor practices, and so on. Location decisions should not be tax-driven. If subnational governments levy taxes on enterprise income in an uncoordinated way, the result may be tax exporting—that is, one region taxes enterprises whose goods are sold to another region. For example, subnational taxation of corporate profits can give rise to fairness concerns relating to tax exporting. If one assumes that most of the burden of profits taxes falls on shareholders, this tax would in effect hit shareholders living in many other jurisdictions. Tax "competition" can also result if localities compete with each other by offering tax incentives to attract enterprises. Thus, subnational governments should be given tax bases that are not mobile and do not distort location decisions in production or consumption. As Musgrave (1983, p. 19) eloquently put it ". . . income and profits taxes are least suitable to the local level, questionable at the middle and preferred at the central level."

Despite these problems some industrial countries (such as the United States and Canada) have given subnational governments the authority to levy company income taxes. The argument is that the economy can benefit from state and local governments competing for industrial development, that local governments are entitled to recoup the cost of public services used by business, and that, in any case, many companies do most of their production and sales within a single jurisdiction.

There is a related issue: taxation of natural resources (minerals, fuels, forests, and the like). One argument says that subnational taxation of these resources is fair because the local population deserves some of the bounty from its natural wealth and because extraction often imposes economic and environmental costs on the locals. Without local resource taxes these costs would go uncompensated. There is an equally convincing argument for federal taxation. Since natural resources are unequally distributed, subnational taxes would greatly benefit well-endowed regions at the expense of others. The issue is more fully discussed in chapter 6.[4]

Personal income tax is usually a central government levy because it is used both for stabilization and for redistribution. It is also a reasonable state-level tax. It is more difficult, however, as a local tax (city or county) because people may not live and work in the same area. If one accepts the notion that state and local governments cannot have a major impact on income distribution, then subnational government income taxes should be a simple flat rate tax (on payrolls, for example).

Single-stage retail sales taxes are a good subnational tax, because they yield relatively stable revenues. However, they are efficient only if the region is big enough to avoid leakages (that is, consumers crossing to provinces with lower taxes). Even so, sales taxes are better for states and big cities than for smaller local governments. The multistage VAT, however, is a different story. It is best levied nationally because of complications in interstate crediting of VAT payments and the difficulties of administering different rates for each subnational government. Canada is an example of a country with a national VAT, as well as provincial retail sales taxes levied by the provinces.

User charges and benefit fees, as well as motor vehicle taxes and charges, are particularly attractive for local (city and county) governments. Property taxes are a common local tax because revenue is relatively stable. Moreover, since such taxes finance local services that help to increase property values, beneficiaries of this public spending are made to pay. Such taxes can also be equitable, since the better-off have better housing and pay more taxes, while the poor are often excluded. One possible arrangement of tax assignment that reflects these principles is shown in table 5.1.

Intergovernmental transfers

Perfectly matching the revenues and spending of subnational governments via assigned or shared taxes is virtually impossible. In most countries, therefore, fiscal transfers are needed to make up revenue shortfalls. Such fiscal deficits may be closed in other ways: transferring tax powers to subnational governments, transferring responsibility for spending to central government, or reducing subnational spending and service standards.

Even when taxes and transfers together finance the expenditures of subnational governments in aggregate, not all of the individual subnational governments will have balanced budgets. Some will have deficits; some will have surpluses. Some localities will be at a disadvantage for reasons beyond their control: few natural resources, a disproportionate number of young, old, and poor people, lower per capita income. Differences will emerge between large and small cities, urbanized and rural municipalities, rich and poor regions. If it is agreed that poor regions should not provide their people with worse services than rich ones, equalizing transfers can be used. One risk of this is that it may reduce recipient governments' incentives to collect

Table 5.1 Possible tax assignments for each level of government

Central-level taxes	*State-level taxes*[a]	*Local-level taxes*
Value-added tax (VAT)	Individual income tax	Property taxes
Individual income tax	Surcharges on national taxes	Vehicle taxes
Corporate income tax	Retail sales taxes	User charges
Excise taxes	Excise taxes	Licenses and fees
Natural resource taxes	Property taxes	
Customs duties	Vehicle taxes	
Export taxes		

a. Some of these taxes may also be appropriate for large cities.

revenues—that is, their "tax effort." Transfers are thus at the heart of subnational finances. But designing a transfer system is difficult, not least because of the many goals that such systems might set out to achieve. One system cannot simultaneously achieve all of these ends, and governments must decide which are the most important.

So what are the requirements and pitfalls in Russia? First, transparency is paramount. Second, there could be a risk of excessive equalization in the system—if it leads the better-off oblasts to opt out in response. Third, special regimes, once granted, are almost impossible to reverse. So a comprehensive but flexible formula-based transfer with limited equalization may have much to offer.

Formula grants versus ad hoc approaches to transfers

Should Russia's transfer system be based on distribution rules, or should it be ad hoc? If only the federal government's ability to pursue macroeconomic policy were a consideration, an ad hoc approach would give the center the greatest flexibility. Indeed, this is done in many fiscally pressed countries. However, to allow subnational governments to plan fiscal operations, a formal, formula-based approach (both for the *volume* and *distribution* of grants) is preferred. Rules can, of course, be changed, and have been changed in countries as diverse as Canada, India and, recently, Germany. By contrast, where ad hoc approaches have been common (such as Nigeria, Indonesia and, of course, Russia) there have been political tensions and accusations of favoritism to favored regions (chapter 7).

Formulas and indicators. What indicators should be included in the formula? In other countries that use a formula-based approach, a broad estimate is made of expenditure needs and of subnational revenues available to finance these needs. Depending on how much equalization is wanted, transfers are used to fill all or part of any gap. The most difficult task is defining expenditure needs for each jurisdiction.

There are two basic approaches to the estimation of expenditure needs, a crucial element in any formula-based system. One approach begins with concrete expenditure norms, and then seeks to cost them out. In Russia this could be done by using the existing (or modified) expenditure norms, for example, the per pupil cost of education, as described in chapter 4. And, as pointed out earlier, since in Russia expenditures may be affected by elements such as transport costs, one cannot assume that the costs of providing a service are equal across all jurisdictions. Establishing norms may be both difficult and costly. A different and far simpler way of defining expenditure needs uses umbrella variables such as population, per capita income, city size, poverty rates, density, centrality of a city, and so on. Such an approach is used in Germany and for some grant programs in the United States. The population figure is weighted higher for larger German cities to reflect their function as a center of activity that goes beyond the urban district itself, and the like. These factors and the total weighted population are used to distribute the available equalization funds.

Many countries also include an estimate of the local government's "revenue capacity" in the formula. Revenue-raising capacity is important because if actual revenues and not tax *capacity* is used, an oblast could reduce tax effort and collections and receive correspondingly higher transfers. An appropriate indicator of taxable capacity might include any of the local tax bases over which the local government has discretion—in Russia these are (now) tax bases such as property values, business turnover, and local fees. To estimate the revenue potential of an oblast, the estimate of each tax base may be multiplied by the average oblast tax rate for each base. Undertaking this calculation for each tax and adding them up is one means of estimating "taxable capacity."

Other grants. In addition to general "gap-filling" transfers, many countries also provide other types of grants to local governments. "Specific grants" are designed to finance only those expenditures chosen by the grantor—and may sometimes finance all of the expenditure. If they finance only a part of the expenditure, they are known as "matching grants" and require a parallel contribution from the local government receiving the funds.

Matching grants have important advantages: first, they economize on scarce central government resources, since local governments share in the cost of financing the desired levels of certain services. Second, matching grants are an efficient way of encouraging local expenditures. From the local government's viewpoint the fact that the center pays part of the cost makes it seem cheaper to provide the service. As a result the local governments are likely to provide more of it. Matching grants are often used where expenditures in one locality benefit residents in another and where local government may consequently "underspend" on this item.

Unfortunately, clear guidelines are not available to assist the center in determining the precise matching rate for particular expenditure programs or how those rates should be varied in accordance with the characteristics of different local governments. The matching rate for each program may be thought of as having two components. First, the basic matching rate for each service should reflect the degree of central government interest in the provision of that service. Second, the rate applicable to any locality should be closely related to the need (income level or capacity) of the local government. The matching rate for any particular locality for any particular program would then be higher: (1) the greater the degree of central interest and (2) the lower the (expected) degree of local enthusiasm and ability to support that program or investment. The exact structure of the final formula for any service can likely be determined in any country only after a period—perhaps a prolonged period—of trial and error and of observing the results and adjusting the shares as necessary to approximate more closely the (centrally) desired outcomes (Shah 1991).

Transfer formulas in Russia

In Russia developing a transfer system is especially complex. Because all revenues are collected subnationally, one question is what share of aggregate national revenues should be retained by the oblast level *in aggregate* (the so-called vertical balance issue). Another is how revenues should be allocated among the oblasts—by formula or by another means (the horizontal balance issue). The present system of negotiated tax shares basically addresses both issues with one instrument—the negotiated tax-sharing rate—which differs across oblasts.

In Russia the basic ingredients of most revenue-sharing formulas—expenditure needs and revenue capacity—are not easy to define. It is hard to identify who is rich or poor in Russia—that is, where expenditure needs are high in relation to means. Also, compressed wages and distorted prices make it difficult to interpret statistics on per capita income. In some remote areas the costs of providing basic services may be high indeed: in the north, food and raw materials may have to be delivered by icebreaker. Some areas in Siberia are up to 1,000 miles from a railhead and are snowed in for many months of the year. On the revenue side a region's tax base and revenue capacity can change radically—for example, if energy and input prices change (Craig and Kopits 1993).

Thus, in Russia *simplicity* should be the watchword—at least for now. Russia may not be ready for a formula based on per capita income as an indicator of fiscal capacity, partly because existing measures of income are unreliable. However, it should be possible to identify some *broad indicators.* Some industrial countries, for example, use the size of the population, the concentration of high-cost citizens (pensioners, say), and urbanization. Others base formulas on key indicators of public service needs—miles of substandard roads, deficiencies in school and hospital space. A few, notably Denmark, quantify expenditures, item by item. In Russia, this could be done by using the existing (or modified) expenditure norms—for example, per pupil cost of education, given the standard cost of a teacher, classroom operation, and the like—to derive a cost figure in rubles. Performing this calculation for each expenditure function can build up each jurisdiction's expenditure need. The precision of this approach has much appeal; however, it is complicated and costly to keep current. In Russia, as in some other countries that have made major changes, a "transitional factor" will also need to be brought in to smooth the move from one system to another.

The initial construction of a revenue-sharing formula is an arbitrary process: a "grants commission" that develops the formula is the way that countries such as Australia and India have chosen to deal with this problem (chapter 7). One reason for this choice is that developing a formula, although technically complex, is not *only* a technical exercise. Political considerations often arise, and the "grants commission" is thought by many to be a relatively objective adjudicator of interests. Furthermore, its permanent secretariat is available to carry out the concrete and complex empirical work—including the ongoing data gathering—that such an exercise requires. In Russia, particularly, top-down executive decisionmaking may not receive much support from oblasts.

For this reason it would be premature to say which indicators or which formula(s) are appropriate for Russia, or to go beyond suggesting that the formula should include needs-based and capacity-based indicators. First, the overall system chosen for Russia must be the outcome of policy debate within Russia—following on from the work of the "blue-ribbon commission" mentioned in chapter 1. Second, it is a complicated, data-intensive exercise, ultimately involving a census of governments (as outlined later in this chapter) and simulation of alternative options. Only then can the appropriate choices be made.

Equalization and sharing formulas

How much equalization is attempted through the intergovernmental fiscal system is a strategic decision in any country, more so in Russia. Equalization will penalize those better-off regions that have the greatest industrialization and growth potential. Many oblasts—those rich in natural and industrial resources, for example—resent the (perceived) cross-subsidies in the present system and would like to opt out (chapter 7). However, if any one oblast is granted an exemption, others may demand similar treatment, leaving only the poorer oblasts in the system. Ironically then, overemphasis on equalization could, at present, prompt the wealthier to withdraw and reduce the potential for implementing any equalization.

At this point in Russia's history it is probably best to let the intergovernmental fiscal system give significant scope to the initiatives and fiscal energies of the better-off areas, in the interest of more economic growth. This could be achieved by letting oblasts retain a relatively large share of the revenues they collect. Limiting the scale of resources shared by formula, while still using a formula-based system to distribute some revenues, can help address this tension.

Evaluating alternative revenue-sharing and tax-assignment models

How does a government take these pros and cons into account in structuring its intergovernmental fiscal system? Among the more important factors that enter into a government's decisions about how much taxing power to give subnational governments and which taxes to assign to which level of government are revenue adequacy, economic efficiency and local autonomy, equity, macroeconomic policy, and administrative feasibility. The weight a government gives to each factor determines the kind of fiscal decentralization that will emerge.

The principal lesson here is that there is no one best system of intergovernmental finance, in terms either of how much taxing power to assign to subnational governments or which taxes to assign. The right choice depends on the goals the central government most wants to achieve. Some general principles should, however, be taken into account in designing the intergovernmental system:

- Designing a tax-sharing or assignment system should begin with a full understanding of the budgetary implications of expenditures assigned to subnational governments. These costs determine both the level of revenue and the revenue elasticity subnational governments will need.
- If economic efficiency is an important goal and the central government wants to encourage subnational revenue mobilization and efficient state and local government operations, some taxing power must be delegated to subnational governments.
- If equity is a dominant goal, a formula grant should weigh more heavily in the system, and a premium should be placed on finding (or developing) formula indicators to achieve such equalization.
- Macroeconomic considerations suggest that countries with chronic deficits and unstable economies are less able to dedicate a significant share of their revenues to subnational governments.

The realities of Russia's system of subnational taxation

With the Russian economic and political system in turmoil, it is hardly surprising that intergovernmental fiscal relations are not running smoothly. Although a new intergovernmental financing arrangement is provided for in the Basic Principles, the system of negotiated tax sharing inherited from the previous regime has continued to operate. The retention rates for the various taxes have been changed in significant ways throughout 1992 and 1993. Up to the first quarter of 1992 retention rates for VAT varied across oblasts. Since then, fixed shares of VAT have been adopted and then given up again, and an increasing share of the corporate income tax has gone to subnational governments.[5] The rate of sharing still varies (by tax and across oblasts) but on average, subnational governments retained about 40 to 45 percent of taxes they collected (tables 5.2 and 5.3). When subventions and transfers are factored in, however, the share is probably closer to 50 percent.[6]

Table 5.2 Distribution of subnational government tax and nontax revenues, Russian Federation, 1992
(in billions of rubles)

Revenue source	*Total revenue*	*Percentage of total*
Personal income tax	431.3	16.7
Enterprise income tax	920.9	34.5
Value-added tax	498.1	18.6
Excise taxes	110.8	4.2
Land and property tax	108.6	4.0
Natural resources: royalties and payment	104.7	3.9
Stamp duties and other nontax revenues	—	—
Revenues from privatization	43.4	1.6
Other local taxes	125.6	4.7
Subventions	142.5	5.3
Federal transfers to autonomous regions	186.1	6.9
Total revenue	2,672.3	100.0

—Not available.
Source: Data provided by the Ministry of Finance of the Russian Federation, July 1993.

Table 5.3 Revenue structure and revenue sharing, Russian Federation, 1992
(in billions of rubles)

Revenue source	*Total collections*	*Subnational amount*	*Subnational share (percent)*
Personal income tax	431.3	431.3	100.0
Corporate income tax	1,566.8	920.9	58.8
Value-added tax	1,998.9	498.7	24.9
Excises	211.5	110.8	52.3
Foreign trade taxes	460.0	8.0	1.7
All other taxes[a]	565.0	312.0	n.a.
Total tax revenue	5,231.0	2,280.0	43.6

n.a. Not applicable.
Source: Data provided by the Ministry of Finance of the Russian Federation, July 1993.

Tax administration problems

If subnational taxation is to be effective, subnational governments must have capable tax administrations. Many countries argue that subnational tax administration is so weak that further decentralization of taxing powers would reduce revenue mobilization. In addition, skilled fiscal analysts, accountants, valuation experts, and tax collectors may be too scarce, nationally, to be shared between central and subnational governments. Moreover, because oblast and rayon politicians are closer to the local population and businesses, and because subnational governments compete with one another for economic activity, there is less incentive for good local tax administration. However, it can also be argued that assigning or giving the *right* taxing powers (property tax, business and vehicle taxes, licenses) to subnational governments can increase overall revenues (Bahl and Linn 1992, chapters 4 and 12).

In most Western market economies there are distinct central and subnational tax administration authorities. However, most economies in transition (China, Hungary, Poland, Romania, Viet Nam, and the former U.S.S.R. republics, Russia included) have only a *single* administration. In these countries tax assessments and collection are carried out by this single tax service, through its decentralized offices at the local government (rayon) level, and revenues are "shared up" to provincial and central governments. In China, the CIS, Russia, and Viet Nam the decentralized tax offices are formally part of the central government's administrative system. In these countries, however, the tax offices' "dual" responsibilities as parts of both the local government apparatus and the central administration give rise to substantial conflicts of interest, as outlined in chapter 2 (Bahl and Wallich 1992).

Although such a single nationwide administration eliminates duplication, it also makes it difficult to "assign" taxes exclusively to subnational governments. In such a case the central government tax administration would be in the uncomfortable (and incentive-incompatible) position of being asked to collect subnational taxes with the same vigor and efficiency as it collects central taxes, even though the central government does not share in those revenues.

Certainly the centralized approach administered by Russia's State Tax Service has not been overly successful in generating compliance. That there are tax administration problems during this transition period comes as no surprise. Not only are the tax structure and the system of tax sharing new, but the central State Tax Service is also relatively new. (It was formed in 1990, mostly with former employees of the local governments' finance departments, and it achieved ministerial status in 1991.) Moreover, some longstanding flaws in the system of tax administration have been magnified by economic liberalization. These flaws include the difficulty of taxing the newly emerging private sector, uncertainty about the tax laws (some local tax officers complained that they had little information on tax laws and had to rely on information published in the newspaper), inadequate staff to carry out duties assigned, weak recordkeeping and inefficient tax administration procedures, and an antiquated paper-based system and poor information flow. Strengthening the State Tax Service is a priority, as emphasized later in this chapter.

To complicate matters further, oblast and rayon governments are taking matters into their own hands. Some rayons in Nizhniy Novgorod, for example, are holding on to all taxes instead of sharing them with the federal government, as required. This case is still under review. The autonomous okrug of Khanty-Mansiiskii in 1992 unilaterally decided to retain 20 percent of the VAT instead of its 1 percent agreed entitlement. Other oblasts also are said to be withholding large sums.

Revenue adequacy and revenue-expenditure correspondence

Most transitional (and developing-country) governments are fiscally hard-pressed. Few of them give subnational governments access to broadly based income taxes (personal or corporate) or major consumption tax bases. This fiscal starvation of subnational governments ensures that they depend heavily on the center and on intergovernmental grants for finance. Developing countries with a federal structure rely more heavily on subnational governments to raise their own revenues and frequently empower states to collect sales or income taxes. Witness Brazil, India, and Nigeria. But this approach has not been without its problems, notably tax coordination and complexity (chapter 7).

In reforming socialist economies it is particularly important that subnational governments have an adequate revenue base, whether this comes from their own taxes, shared taxes, or grants. Otherwise, they may turn to economically undesirable sources of revenue, such as profits from direct public ownership of local businesses or the savings gleaned from pushing local public services onto enterprises. Another temptation to be avoided is giving local government only minor taxes on a wide range of products and activities. These are expensive to administer and unpopular and usually raise little revenue.

Subnational governments need an adequate—and "elastic"—revenue base; that is, one that automatically grows in step with incomes and spending needs. How does one define "adequate"? If demand for government services and the cost of providing them increase roughly in proportion with a region's GDP or income, a revenue-GDP elasticity of one would maintain that relationship.[7] The aim of government then would be to design a subnational revenue system whose base would increase along with GDP.

The same criteria must be applied to central government. If national revenue is more or less fixed in the short run, increasing the revenues assigned to subnational governments will weaken the budgetary position of the central government. Likewise, an increase in the elasticity of subnational government revenues may be met by a reduction in the elasticity of the central revenue base, leaving lower revenue growth to cover central spending.

Has Russia met these revenue adequacy tests? Despite the reassignment of spending responsibilities to subnational government budgets, oblast and rayon governments have not yet received a revenue adjustment that matches their new responsibilities. A look at the fiscal outcome for subnational governments in the first quarter of 1992 is revealing. Ministry of Finance data for early 1992 show that, of the eighty-nine oblasts, fifty-seven oblasts had a revenue shortfall (equivalent to R 99 billion) and thirty-two oblasts had a surplus (R 48 billion). Because the Ministry of Finance does not have the power (as it did in the past) to extract the surpluses and use them to finance deficit oblasts, the revenue cost to central government (the costs of funding the deficit grant) was the whole R 99 billion (not the net amount). This cost may be understated, because some deficit oblasts did not deliver adequate services to the population and some deferred payments. Moreover, the cash surplus of the thirty-two oblasts may not be money in the bank but a reflection of unfinished work and spending commitments made but not yet executed. Some Ministry of Finance officials say that the surplus simply reflects the oblasts' inability to spend more than 80 percent of what was planned.[8]

Another way to examine revenue adequacy is to look for a systematic relationship between revenues distributed to each oblast and that oblast's expenditure needs, as measured by such variables as population, density, and urbanization. A systematic positive relationship would be evidence that revenue allocations match the oblast's relative expenditure needs. No relationship or a weak relationship would suggest that revenues might not be distributed according to expenditure needs. (There are many ways to explain the absence of a systematic relationship between the distribution of revenues and the needs indicators used here. One possibility is that other, perhaps more important, needs variables were excluded from the regression.)

A multiple regression analysis was carried out for the sixty-four oblasts for which data were available, using first quarter 1992 data, with per capita retained revenues as the dependent variable. Expenditure needs were proxied by population, percentage of population living in urban areas (urbanization), and per capita value of gross industrial output (per capita GVIO). Similar independent variables were used to show the fiscal capacity variations among oblasts (equation 1 in table 5.4). An alternate specification replaces per capita GVIO with the average monthly wage, and urbanization with population per square kilometer (population density) (equation 2 in table 5.4). The same two specifications are reestimated with data for the first two quarters (equations 3 and 4 in table 5.4).

For the first quarter, four results stand out. First, less than half the variation in oblasts' retained revenues can be explained, suggesting that there are other important determinants of per capita revenues accruing to oblasts besides expenditure needs—or that the process of allocating revenues is random. Second, oblasts with a smaller population retain more revenues per capita. Third, oblasts with a higher average wage retain much *more* on a per capita basis. (There appears to be little relationship between per capita revenues retained and per capita gross industrial output.) Fourth, more highly urbanized oblasts retain more per capita. All this suggests that in early 1992, revenue distributions were driven largely by the strength of the economic base (wage levels and urbanization), not by expenditure needs.

When the same analysis is done for the first six months of 1992, the results are slightly different. (See chapter 2 for a discussion of policy changes between the first and second quarters of 1992 and beyond.) Even less of the variation in per capita retained revenues across oblasts can be explained by these factors, and only the average wage shows a significant (positive) relationship to the revenues received. This is important. It shows that none of

Table 5.4 Determinants of subnational government per capita revenues, by oblast, Russian Federation, first and second quarters 1992
(ordinary least squares estimates)

Per capita subnational retained revenues[a]	*Constant*	*Per capita value of gross industrial output*	*Population (thousands)*	*Percentage of population living in urban areas*	*Population per square kilometer*	*Average monthly wage*	$\bar{R}^2$	*N*[b]
1. First quarter	400.99	-0.04	-0.08	8.01			0.22	52
	(2.69)	(-1.35)	(-3.87)	(2.82)				
2. First quarter	298.58		-0.60		0.62	1.76	0.52	64
	(3.01)		(-3.36)		(0.61)	(6.16)		
3. First and second quarters	-117.70	0.09	-0.07	42.79			0.09	73
	(-0.10)	(0.25)	(-0.30)	(1.70)				
4. First and second quarters	-905.04		0.04		4.23	14.15	0.22	73
	(-1.00)		(0.18)		(0.49)	(4.36)		

Note: t-statistics are shown in parentheses below the regression coefficients.
a. Data for the second quarter are revised budget estimates.
b. Some observations were dropped because data for all eighty-nine oblasts were not available.
Source: Estimated from data provided by the Ministry of Finance of the Russian Federation, March and July 1992.

the factors commonly thought to indicate demand for higher public spending (urbanization, population density, and population) are systematically related to per capita revenues retained by an oblast. And it suggests that the present allocation is not equalizing (see below). More recent analysis suggests that in 1993 similar results apply, which is not surprising since the underlying system has changed little (Bahl, Martinez-Vazquez, and Wallace 1993).

Equalization

Ideally, central government transfers or grants, together with subnational taxing powers or tax shares, should be such that all subnational governments can provide basic services with the same level of tax effort. (Tax effort is defined as the extent to which a jurisdiction exploits its tax base, or its taxable capacity. Thus, a poor jurisdiction with a weak tax base might be making better tax effort than a richer one, even though its actual revenue collections are much lower.) Under this model, where own revenues and tax shares fall short for providing basic services, grants make up the difference, enabling outlays to take place on a more or less comparable scale.

The advantages of this equalizing approach to subnational finance are clear enough—by diverting resources from rich to poor regions, the quality of life for all can be evened out. But there can be disadvantages. Financing subnational governments by transfers (instead of by their own local taxes) not only discourages subnational governments' tax effort but also reduces local officials' accountability and inevitably brings on more central government interference in subnational spending. By contrast, under a system of purely assigned taxes, those subnational governments with the strongest economic base can raise more revenue with the same (or lower) tax effort than their poorer neighbors. The goal of revenue mobilization would be well served, but fiscal disparities between some regions would be greater.

These disparities can be offset with grants (or shared taxes) to the poorest jurisdictions, but grants themselves are not without difficulties. One problem is the appropriate scale of the grant—finding the right balance between giving subnational governments tax shares or some taxing autonomy (and thereby encouraging revenue mobilization but increasing disparities) and providing grants that equalize (but that may dampen tax effort). Another formidable problem is finding an objective way to transfer central resources to subnational governments. A shared tax, for example, could be counterequalizing if it is retained (as in Russia) where the tax is collected, that is, on a derivation basis. Even formula grants are not always equalizing, because it is hard to find measurable indicators that reflect differences in fiscal capacity and spending needs. This may be especially the case in Russia today (see below), although this will change as data become available.

In designing an equitable system, government planners must be able to measure and understand the disparities in fiscal capacity and expenditure needs across regions. They must also determine by how much these disparities would be increased (or reduced) by the various other ways of distributing central transfers or other forms of local taxing powers—or, in Russia, by changing administered prices (or freeing prices) of major inputs.

Equalizing aspects of Russia's new system

There is no a priori reason to expect that the tax sharing in effect in Russia before or since 1992 has been equalizing. The corporate income tax, shared on a derivation basis, will favor higher-income oblasts (with their more active economies) and areas where past government investment in enterprises has been heavy and therefore profits and tax revenues are higher. The same is true of the personal income tax, since areas with large industrial cities will have more employment and pay higher wages. The issue is a little less clear for the VAT, since central government's variable sharing rates are intended to favor poorer oblasts, hence some equalization might be expected. Indeed, VAT may have had an equalizing effect in the first quarter (and again in 1993) because its distribution by the federal government was on an ad hoc basis with negotiated sharing rates that varied across oblasts and presumably reflected needs. There were clearly wide variations in VAT retention rates in the first quarter (table 5.5) and again in early 1993. However, the switch to a fixed 20 percent VAT sharing rate in the second and third quarters of 1992 reduced any potential for redistribution from this source.

Table 5.5 Value-added tax retention rates, by oblast, Russian Federation, first quarter 1992

Retention rate (percent)	Number of oblasts	Percentage of oblasts
Less than 10	14	15.7
10–20	11	12.4
20–30	19	21.4
30–40	17	19.1
40–50	5	5.6
50–60	4	4.5
60–70	5	5.6
70–80	0	0.0
80–90	1	1.1
90–100	13	14.6
Total	89	100.0

Source: Data supplied by the Ministry of Finance of the Russian Federation, March 1992.

But just how equalizing (or not) has the Russian system been since its recent changes? Most analysts would agree that the objective of equalization is to subsidize oblasts whose fiscal capacity is not sufficient to support adequate levels of expenditures, even if the local area makes a reasonable tax effort. Because data constraints will not allow a thorough analysis of this issue here, general indicators of expenditure need and fiscal capacity are used to examine the distributional features of the present system. Higher levels of per capita GVIO and the average wage are used to indicate stronger taxable capacity; urbanization, population density, and population size are used to indicate greater expenditure needs.

The tax-sharing system in place in the first quarter of 1992 featured a variable VAT sharing rate and other shared taxes. Many analysts in Russia see variable sharing rates as a proper approach to dividing (regulating) revenues between the subnational and central governments, and there is some nostalgia for that system. The relationship between the retention rates of VAT and of total revenues and indicators of fiscal capacity and spending needs in oblasts is shown in table 5.6. (The retention rate, that is, the ratio of revenues retained by oblasts to revenues collected, ranged from 18 to 60 percent depending on the oblast. The average VAT retention rate was 24 percent, but ranged from zero, or no retention, to 100 percent, or full re-

Table 5.6 Simple correlations of tax retention rates with selected independent variables, Russian Federation, first quarter 1992

Dependent variable	Total retention rate	Percentage of population living in urban areas	Average wage	Population	Population per square kilometer	Per capita gross value of industrial output
1. Value-added tax retention rate, first quarter	0.77[a]	-0.60[b]	0.01[b]	-0.42[a]	-0.11[c]	-0.68[c]
2. Total retention rate, first quarter		-0.50[b]	0.07[b]	-0.57[b]	-0.14[c]	-0.51[c]
3. Percentage urban			0.40[b]	0.41[b]	0.23[c]	0.69[b]
4. Average wage				-0.13[b]	-0.30[c]	0.36[c]
5. Population					0.62[c]	0.26[c]
6. Population density						0.04[d]
7. Per capita gross value of industrial output						

Note: Retention rates are for first quarter 1992, and all other variables are for 1989. The retention rate is the amount of tax retained in the oblast expressed as a percentage of the amount collected in the oblast.
a. *N*=88.
b. *N*=70.
c. *N*=68.
d. *N*=66.
Source: Estimated from data provided by the Ministry of Finance of the Russian Federation, March and July 1992.

tention.) The average retention rate was found to be much higher in less urbanized and less populous oblasts and in those that have lower per capita GVIO. The retention rate for *all* revenues taken together is unrelated to either average wage or population density. The same pattern holds true for VAT shares. Moreover, the distribution of VAT retentions and total revenue retention are themselves highly correlated. Apparently, both were distributed by roughly the same criteria in the first quarter.

These results do not make it easy to reach a conclusion about the implicit equalization in the first quarter. If per capita GVIO is taken as a measure of the taxable capacity of an oblast, the tax-sharing formulas are equalizing: oblasts that have a larger per capita GVIO retain a significantly *lower* share of the revenues they collect. If, however, average monthly wage is seen as a better indicator of income level, the data show no equalizing tendency for either total revenue or VAT sharing. Notably, there is no close correlation between the average wage and per capita GVIO (see table 5.6).

Another way to look at equalization is to measure the relationship between tax retentions and expenditure needs, as proxied by income (per capita GVIO and the average wage), taking into account such things as population, population density, and urbanization.[9] The multiple regression results for the first quarter of 1992 give the same mixed results as the simple correlation analysis (table 5.7). Even allowing for variations in expenditure needs, tax retention is much higher where per capita GVIO is lower and where the average wage is higher. Moreover, both total retention rates and VAT-sharing rates tend to be higher in less urbanized and less populous oblasts. More than half of the variation in retention rates may be explained by this simple model.

Although these results suggest that first-quarter tax sharing did redistribute resources toward oblasts with a lower per capita GVIO and toward those with a higher average wage (the strength of this effect is greatest for the VAT-sharing scheme, in which the federal government made the distributions on an ad hoc basis), this is not an equalizing scheme. Per capita GVIO is not necessarily an accurate indicator of fiscal capacity. (Ideally, one would want to include enterprise profits, value added, and wages, for example. And in Russia, where prices are distorted, GVIO does not properly measure output.) The average wage is probably a fair indicator of the personal income tax base, and possibly of the household consumption element of the VAT base. However, whether higher average wages in an oblast indicate that the local enterprises are more profitable, or that they produce with a higher value added, is debatable. If higher average wages do indicate a larger VAT and income tax base, then these results would seem to show that the Russian system of tax sharing in the first quarter was not equalizing.

Table 5.7 Determinants of subnational governments' total tax and value-added tax retention rates and per capita subventions, Russian Federation, first and second quarters 1992
(ordinary least squares estimates)

Dependent variable	*Constant*	*Per capita value of gross industrial output*	*Population*	*Percentage of population living in urban areas*	*Population per square kilometer*	*Average monthly wage*	$\bar{R}^2$	*N*
1. Total retention rate, first quarter	46.501 (14.950)	-0.002 (-2.920)	-0.002 (-4.180)	-0.113 (-2.070)	0.040 (1.630)	0.022 (2.809)	0.51	64
2. Value-added tax retention rate, first quarter	83.080 (6.135)	-0.013 (-5.225)	-0.003 (-2.100)	-0.699 (-3.126)	0.239 (2.370)	0.136 (4.163)	0.66	65
3. Per capita subventions, first and second quarters	394.78 (1.45)	-0.28 (-3.44)	-0.30 (-5.23)	24.96 (4.18)			0.32	73
4. Per capita subventions, first and second quarters	116.69 (0.51)		-0.24 (-4.12)		2.77 (1.26)	3.79 (4.61)	0.34	73

Note: t-statistics are shown in parentheses below the regression coefficients.
Source: Estimated from data provided by the Ministry of Finance of the Russian Federation, March and July 1992.

As the system changed in the second quarter, one would expect it to become (theoretically) less equalizing because uniform retention rates distribute revenues directly in proportion to taxable capacity and not expenditure needs. Even so, the system may have had an equalizing element. As the first quarter closed, it became clear that some subnational governments would run big deficits and would have to be subsidized. For the first quarter alone subventions totaled R 99 billion (about the same as estimated total subnational revenues). Subventions were not allocated by formula but were designed to fill ex post oblast deficits. These were estimated by taking normed expenditures (as determined by the Ministry of Finance) and subtracting revenues retained to arrive at the subvention. (By some accounts the normed level of expenditures is last year's amount adjusted by some proper level of inflation.) Among seventy-three oblasts studied the average subvention was 22 percent of revenues, ranging from 0 to 75 percent.

Were the subventions equalizing? To answer that we need to estimate the relationship between per capita subventions for the first two quarters and the independent variables that measure taxable capacity or expenditure need, as above. The regression results show that per capita subventions are much higher in oblasts with a lower per capita GVIO (equations 3 and 4 in table 5.7). Hence, they are equalizing to the extent GVIO is a measure of fiscal capacity. But they are also significantly higher in oblasts where the average wage is higher, suggesting they are not equalizing. Finally, per capita subventions tend to be much higher in oblasts with smaller and more urbanized populations. About a third of the variation among the seventy-three oblasts could be explained, suggesting that distribution is driven to a significant extent by other factors.

In sum, there is no strong evidence that either the first-quarter or the second-quarter system is equalizing, even if the subvention is taken into account. In fact, the distribution patterns for tax retentions and for subventions are similar. On the broader question of disparities among oblasts in resources available *after* revenue sharing, per capita revenues are much higher in oblasts where the average wage is higher (see table 5.4).

Efficiency and autonomy

An economically efficient system of intergovernmental finance (as outlined in chapter 4) is one in which local preferences determine the level and mix of public services offered, given the price that must be paid for these services, limited income, and externalities (Bergstrom and Goodman 1973). Thus, local residents will choose the service level they prefer and be taxed accordingly.

Efficiency depends on three conditions being satisfied. First, taxes can be adjusted up (or down) by the subnational government according to shifts in public spending. Second, subnational governments must have some control over the tax rate or base, and the burden of taxes must fall on local residents. Third, spending responsibility must be clearly assigned, and local government must be able to deliver efficiently any chosen level of expenditures. Obviously, these efficiency theories were developed for industrial countries, with a tradition of local self-governance. These conditions for efficient local self-government may not be satisfied in many developing or transition economies.

The present tax system in Russia gives subnational governments little revenue autonomy. All major tax rates and bases are decided by central government. And with borrowing rights strictly circumscribed, subnational governments have little scope to increase revenues to pay for more services. There are two exceptions: subnational governments may reduce revenues by opting for lower enterprise income tax, and they may levy some local taxes, although these have little revenue potential.

In a decentralized fiscal system, the revenue flow should also be certain enough to allow local governments to plan the use of funds. This is just another form of autonomy. Officials in Nizhniy Novgorod pointed out that fiscal planning is difficult because the sharing formula had been changed three times in the previous twelve months: "We do not know from one quarter to the next what the level of revenues will be." And the same uncertainty holds true for rayon and city governments.

Macroeconomic policy issues

When subnational governments are assigned taxing powers or a share in federal taxes, the central government's ability to use fiscal policy is weakened (chapter 3). For example, the greater the revenue guaranteed to subnational governments, the less the revenue available for the center's own macroeconomic stabilization purposes, for grants to backward regions, or for a subsidy or industrial location policy favoring certain regions. Does Russia's decentralized system of finance compromise its ability to formulate and implement macroeconomic policy? Russia's subnational governments clearly do not have enough fiscal autonomy to offset central government goals for the allocation of resources, since subnational governments have no control over the rates or the base of any taxes. But do present tax shares and assignments compromise the budgetary position of the central government? And are revenues dedicated to subnational governments so large as to mean a central government budget deficit?

Shared taxes are a big claim on federal revenues (table 5.8). Based on the first-quarter budget, the federal government spends 37.3 percent of GDP directly to meet its own needs. This compares with revenue (before sharing) equivalent to 37.8 percent of GDP. In other words the central government budget would be roughly balanced if *no* revenue were shared with subnational governments. After sharing, the central government has only 29.3 percent of GDP to meet its own needs, leading to a deficit of 8 percent. To this should be added any year-end subnational government revenue shortfall (ex ante subnational deficit) met by central government subventions. The situation in 1993 is broadly similar. Clearly, the central government's macropolicy objectives (including balancing its own budget) are compromised by the need to share revenues with the subnational level.

Table 5.8 Center-oblast revenue balance, Russian Federation, first quarter 1992

Federal revenue	*Percentage of GDP*
Total revenue collections	37.8
Shared with subnational governments	8.5
Estimated central budget deficit	8.0
Federal government direct expenditures	37.3
Estimated additional subnational shortfall	4.0
Amount available for direct central government expenditures	29.3

Source: Calculated from data provided by the Ministry of Finance of the Russian Federation, April 1992.

Revenue mobilization

Subnational governments need an incentive to increase revenue mobilization. Under the present system in Russia this could happen in two ways. Subnational governments might (indirectly) strengthen tax enforcement. They have some influence with local State Tax Service offices, and there is a close relationship between local governments and the state enterprises that make up the largest part of the tax base. Subnational governments might also help increase the profitability of their public enterprises.

Whether the Russian system has stimulated revenue mobilization or dampened it is an open question. On the one hand subnational governments have few incentives to collect aggressively since they retain only a fraction of tax collections. And since any shortfall will be made up by a deficit grant, why make a great effort? On the other hand subnational governments *do* have an incentive to increase tax collections because experience in 1992 and 1993 shows that oblasts can successfully negotiate larger retention rates on an ad hoc basis. So which describes their behavior better?

A wide variation in the tax efforts across oblasts (meaning that oblasts use their fiscal capacity to varying degrees) might be some evidence that there are revenue mobilization disincentives in the system. Indeed, there is a wide variation in the effective rates of tax collection among Russia's oblasts (we measure the effective tax rate as the ratio of tax collections to GVIO—see appendix 5.1). However, even if one takes other factors into account (such as the fact that a higher average wage or a more heavily urbanized oblast might have a greater capacity to tax), our studies show that there is, surprisingly, no significant relationship between the tax effort ratio and the tax-sharing rate. There is no evidence that an oblast with higher retentions makes a significantly greater tax effort—that is, that retentions provide an incentive to improve collections.

Possible impacts of the new tax and tax-sharing laws

The Basic Principles of Taxation Law would replace the present tax-sharing arrangements with a "pure" tax assignment system, without any transfers. Subnational governments are given the revenues from certain taxes, but not the power to set rates or bases. The Basic Principles also specify and assign some "local" taxes, over which subnational governments have full control.

Under the Basic Principles (or any other assignment-based system), the revenues assigned to the subnational government sector in total, and to the individual oblasts in particular, would be determined by the size of their taxable bases—primarily their capacity to raise corporate and personal income tax. This assignment will not necessarily be adequate to allow subnational governments (or the federal government) to meet their expenditure responsibilities at "normal" levels. The bases of the corporate and personal income tax may be quite unrelated to expenditure needs, either for individual subnational governments or for the subnational sector as a whole, depending on their expenditure responsibilities. If the new regime results in an overassignment of revenues to the subnational sector, there is no provision for an extraction back to the central government; if it results in underassignment, there is no provision for a subvention to make up the difference. No mention is made of a compensating system of intergovernmental transfers.

Clearly, under the Basic Principles the distribution of revenues would change significantly from the previous system. A simulation, based on 1992 first-quarter data, shows how selected oblasts would fare, in absolute and relative terms, under the current system and under the Basic Principles (table 5.9). For example, the Republic of Bashkortostan received R 627 per capita under the actual system of tax sharing but would receive only R 592 per capita from the taxes assigned under the Basic Principles. The loss, R 35 per capita, is equivalent to 5.65 percent of its first-quarter revenues. Bashkortostan, which received 2.46 percent of all shared taxes in the first three months of 1992, would receive only 2.19 percent under the Basic Principles.

What about the subnational government sector as a whole? On the revenue side the Basic Principles system seems to favor subnational governments with a greater net transfer when compared to the transitional (1992–93) system. Subnational governments would have given up about R 30 billion in VAT revenues but would have gained R 66 billion from personal and corporate income tax, to take the first quarter of 1992 as an example. Under the transitional system, 28.9 percent of total revenues went to subnational governments. Had the Basic Principles been in use, the figure would have been 31.3 percent.

The variations across oblasts would also be significant (tables 5.9 and 5.10). The median oblast would lose R 29 per capita, equal to 4.29 percent of revenues. Of the sixty-nine oblasts analyzed, forty-one (60 percent) would lose an average of R 118 per capita—fully 20 percent of their revenues. Some oblasts would lose as much as a third of their revenues. For twenty-eight oblasts revenues would increase under the Basic Principles. The median per capita increase would be R 139, about 18 percent of their revenues. Some oblasts' current revenues would increase by more than 30 percent. Oblasts with a higher average wage, a lower rate of urbanization, and a smaller population would, ceteris paribus, gain more revenue on a per capita basis with the switch to the Basic Principles (table 5.11). In some cases, the "wage

Table 5.9 Revenue impact of Basic Principles, estimated, by oblast, Russian Federation, first quarter 1992

(in rubles)

Oblast	Actual per capita oblast revenue	Estimated per capita revenue under Basic Principles	Difference per capita	Percentage difference	Revenue shares (percent) Actuals, transitional system	Estimated, Basic Principles	Difference in share
Republic of Bashkortostan	627	592	-35	-5.65	2.46	2.19	-0.27
Republic of Buryatiia	890	525	-365	-41.02	0.92	0.51	-0.41
Republic of Dagestan	448	197	-251	-56.08	0.80	0.33	-0.47
Kabardino-Balkar Republic	652	415	-237	-36.35	0.49	0.30	-0.20
Republic of Kalmykia	883	268	-614	-69.59	0.28	0.08	-0.20
Republic of Karelia	835	837	2	0.19	0.66	0.62	-0.04
Republic of Komi	830	1,079	250	30.07	1.04	1.28	0.24
Republic of Marii-El	713	484	-230	-32.22	0.53	0.34	-0.19
Mordovian Republic	699	550	-149	-21.30	0.67	0.50	-0.17
North Osetien Republic	747	503	-244	-32.66	0.47	0.30	-0.17
Republic of Tatarstan	567	721	154	27.18	2.05	2.46	0.41
Republic of Tuva	—	—	—	—	0.19	0.06	-0.13
Udmurt Republic	686	550	-136	-19.81	1.09	0.83	-0.27
Chechen Republic and Ingush Republic	574	256	-318	-55.40	0.73	0.31	-0.42
Republic of Chuvash	664	586	-78	-11.73	0.88	0.73	-0.15
Republic of Sakha (Yakutia)	1,744	1,168	-576	-33.03	1.87	1.18	-0.69
Altaiskii krai	661	489	-172	-26.05	1.85	1.29	-0.56
Krasnodarskii krai	471	456	-15	-3.16	2.39	2.18	-0.21
Krasnoiarskii krai	603	810	207	34.42	2.15	2.72	0.58
Primorskii krai	—	—	—	—	1.54	1.51	-0.03
Stavropolskii krai	463	417	-46	-9.96	1.31	1.11	-0.20
Amurskaia oblast	772	536	-236	-30.62	0.81	0.53	-0.28
Khabarovskii krai	727	630	-97	-13.34	1.31	1.08	-0.24
Astrakhanskaia oblast	640	528	-113	-17.59	0.63	0.49	-0.14
Belgorodskaia oblast	659	584	-75	-11.44	0.90	0.75	-0.15
Brianskaia oblast	610	607	-4	-0.59	0.89	0.84	-0.06
Vladimirskaia oblast	538	814	276	51.20	0.88	1.26	0.38
Volgogradskaia oblast	581	604	23	3.97	1.49	1.46	-0.03
Vologodskaia oblast	649	773	125	19.23	0.87	0.98	0.11
Voronezhskaia oblast	564	501	-63	-11.21	1.38	1.16	-0.22
Nizhniy Novgorod oblast	529	775	246	46.58	1.95	2.69	0.75
Ivanovskaia oblast	591	884	293	49.55	0.77	1.09	0.32
Evenkiiskii AO	—	—	—	—	1.85	1.92	0.07
Kaliningradskaia oblast	334	322	-12	-3.45	0.55	0.50	-0.05
Tverskaia oblast	—	—	—	—	0.92	1.11	0.20
Kaluzhskaia oblast	594	477	-117	-19.64	0.63	0.48	-0.15
Kamchatskaia oblast	1,069	910	-159	-14.84	0.49	0.40	-0.10
Kemerovskaia oblast	768	815	47	6.11	2.42	2.42	0.00
Kirovskaia oblast	679	650	-29	-4.29	1.14	1.03	-0.11
Kostromskaia oblast	675	913	238	35.24	0.54	0.69	0.15
Samarskaia oblast	535	719	184	34.49	1.73	2.20	0.47
Kurganskaia oblast	690	461	-229	-33.14	0.76	0.48	-0.28
Kurskaia oblast	631	636	5	0.80	0.84	0.80	-0.04
Leningradskaia oblast	566	600	33	5.87	0.93	0.93	0.00
Lipetskaia oblast	637	648	11	1.76	0.78	0.75	-0.03

(Table continues on the following page.)

Table 5.9 (continued)

Oblast	Actual per capita oblast revenue	Estimated per capita revenue under Basic Principles	Difference per capita	Percentage difference	Revenue shares (percent): Actuals, transitional system	Estimated, Basic Principles	Difference in share
Magadanskaia oblast	1,095	791	-303	-27.72	0.59	0.40	-0.19
Moskovskaia oblast	445	665	220	49.54	2.95	4.16	1.21
Murmanskaia oblast	979	640	-339	-34.58	1.11	0.69	-0.43
Novgorodskaia oblast	755	683	-72	-9.58	0.56	0.48	-0.08
Novosibirskaia oblast	616	514	-101	-16.44	1.70	1.34	-0.36
Omskaia oblast	673	592	-81	-12.09	1.43	1.18	-0.24
Orenburgskaia oblast	624	635	12	1.86	1.34	1.29	-0.05
Orlovskaia oblast	664	603	-61	-9.19	0.59	0.50	-0.08
Penzenskaia oblast	587	470	-118	-20.07	0.87	0.66	-0.22
Permskaia oblast	548	713	165	30.09	1.68	2.07	0.38
Pskovskaia oblast	723	490	-233	-32.27	0.61	0.39	-0.22
Rostovskaia oblast	493	595	102	20.69	2.11	2.40	0.29
Riazanskaia oblast	570	660	90	15.85	0.76	0.83	0.07
Saratovskaia oblast	543	519	-24	-4.39	1.45	1.31	-0.14
Sakhalinskaia oblast	1,180	902	-278	-23.56	0.83	0.60	-0.23
Sverdlovskaia oblast	630	787	157	24.92	2.95	3.48	0.53
Smolenskaia oblast	626	645	19	3.04	0.72	0.70	-0.02
Tambov oblast	592	528	-64	-10.77	0.78	0.65	-0.12
Tomskaia oblast	797	654	-144	-18.00	0.79	0.61	-0.18
Tul'skaia oblast	524	636	112	21.39	0.97	1.11	0.14
Tyumenskaia oblast	381	411	30	7.78	1.17	1.19	0.02
Ulianovskaia oblast	583	548	-36	-6.10	0.81	0.72	-0.09
Cheliabinskaia oblast	579	696	118	20.31	2.08	2.36	0.28
Chitinskaia oblast	667	407	-260	-39.04	0.91	0.52	-0.39
Iaroslavskaia oblast	532	764	233	43.75	0.78	1.05	0.28
St. Petersburg	828	1,008	180	21.73	4.12	4.73	0.61
Moscow City	1,132	1,398	266	23.47	10.07	11.73	1.66
Republic of Adygeya	—	—	—	—	0.26	0.21	-0.05
Republic of Altai	—	—	—	—	0.14	0.05	-0.09
Evreyskaya AO	—	—	—	—	0.21	0.10	-0.11
Karachai-Cherkess Republic	—	—	—	—	0.24	0.12	-0.12
Republic of Khakasia	—	—	—	—	0.37	0.42	0.04
Aginskii-Buryatskii AO	—	—	—	—	0.06	0.02	-0.04
Komi-Permyatskaia AO	—	—	—	—	0.11	0.05	-0.07
Koriakii AO	—	—	—	—	0.03	0.03	0.00
Nenetskii AO	—	—	—	—	0.03	0.02	-0.01
Taimyrskii (Dolgano-Nenetskii)	—	—	—	—	0.06	0.03	-0.04
Ust'-Ordynskii-Buryatskii AO	—	—	—	—	0.06	0.03	-0.04
Khanty-Mansiiskii AO	—	—	—	—	1.59	2.55	0.96
Chukotskii AO	—	—	—	—	0.26	0.11	-0.15
Evenkiiskii AR	—	—	—	—	0.03	0.01	-0.02
Yamal-Nenets AO	—	—	—	—	0.91	1.43	0.52
Arkhangelskaia oblast	682	565	-117	-17.21	1.06	0.83	-0.23

— Not available.
AR Autonomous republic.
AO Autonomous okrug.
Source: Author's calculations based on data provided by the Ministry of Finance of the Russian Federation, 1992.

effects" dominate and the big "winners" include large cities and higher-income oblasts, such as Moscow and St. Petersburg.

All this probably means that the change to tax assignment as proposed in the Basic Principles would so shock the present system that there would likely be calls for further adjustments. There would be no relationship between revenues accruing to an oblast and its expenditure needs. Compensating transfers, and perhaps a system of horizontal transfers, would be needed. Moreover, the Basic Principles would be less equalizing and would transfer resources to higher-income regions.

On the other hand, any change away from "ad hocery" would give subnational governments some budgetary certainty and would therefore allow improvements in fiscal planning. Moreover, the Basic Principles and tax assignment are more transparent than the transitional system with respect to which revenues belong to federal and which to subnational government, so its appeal in present-day Russia is understandable.

The Basic Principles may now be a dead issue, but the idea of tax assignment is not. This analysis, based on early 1992 data and on a plan that was not feasible for implementation, nevertheless can provide some basis for thinking through the pitfalls associated with tax assignment and the kind

Table 5.10 Summary of illustrative revenue impact, Basic Principles, Russian Federation, first quarter 1992

	Gain (loss) from change		
Revenue impact	*Difference per capita*	*As a percentage of current revenue*	*As a percentage of total shared taxes*
Median revenue change (in rubles)	(29)	(4.29)	
Number of oblasts with a revenue reduction	41	41	62
Median revenue loss (in rubles)	(118)	(20)	(0.15)
Number of oblasts with a revenue increase	28	28	27
Median revenue gain (in rubles)	139	18	0.29

Note: Parentheses indicate negative values.
Source: Author's calculations.

Table 5.11 Determinants of differences in per capita revenues, by oblast, under transitional system and Basic Principles, Russian Federation

Dependent variable	*Constant*	*Per capita value of gross industrial output*	*Average wage*	*Percentage of population living in urban areas*	*Population*	*Coefficient of determination*	*N*
Difference in per capita revenues[a]	371.69 (4.08)	-0.11 (5.77)	1.43 (6.86)	-4.31 (-2.41)	-0.03 (-2.23)	0.68	64

Note: OLS regressions. t-statistics are shown in parentheses below the regression coefficients.
a. Difference in per capita revenues is taken from table 5.9, third column.
Source: Author's calculations.

of analysis that is necessary to support the development of a new intergovernmental financing system.

Options for further reform

The analysis above suggests that both the tax assignment model of the Basic Principles and the continuation of the present negotiated revenue-sharing system have weaknesses with respect to administration, macroeconomic consequences, revenue adequacy, revenue mobilization, and the granting of subnational autonomy. There are also some problems with a pure system of tax assignment that are peculiar to, and that may be fatal for, Russia. First, there are only three major taxes that can be assigned (VAT and the personal and corporate income taxes), and there are major pitfalls in earmarking any of these fully to any one level of government (see below). Moreover, a strict system of assignment may not fit the Russian system of tax administration because responsibility for tax collection rests with the decentralized State Tax Service offices, not an integrated federal government tax administration. The tax assignment of the Basic Principles would ask the State Tax Service to collect personal income tax, corporate income tax, and some minor local taxes (which accrue to subnational government) as efficiently as it collects VAT (which accrues to central government).

The choice of taxes for assignment

Have the right taxes been assigned to federal and subnational governments? Under the Basic Principles the corporate and personal income taxes will become revenue sources for oblasts, cities, and rayons. VAT will be assigned to the federal government.

The assignment of VAT. Assigning VAT to subnational governments is inappropriate. It is an origin tax, meaning that the tax is applied at the point of production, not the point of sale.[10] Thus, some oblasts would see their revenue bases enhanced (or compromised), depending on the stage of the production process in which their enterprises are specialized: whether, for instance, they import raw materials. Those oblasts heavy in export industries could also have a weak base because exports are zero-rated under Russia's VAT. Moreover, it could (and probably would) be disastrous if subnational governments were allowed to make discretionary changes in VAT rates and bases.

Any discretionary changes to the VAT by the federal government also could be a problem and affect the revenue yield of oblasts. Such changes are in fact contemplated as a part of the general and ongoing tax reforms in

Russia. These would have important revenue effects for different regions in different ways, depending on their economic structures. Thus, assigning VAT to subnational governments would likely cause them much revenue uncertainty.

The assignment of corporate income tax. Assigning corporate income tax to subnational governments raises major concerns about resource allocation. Income taxes in Russia come mostly from enterprises, and the regulation of enterprises is the responsibility of oblast, city, and rayon governments. Assigning corporate income tax subnationally is therefore likely to lead to substantial differentiation in enterprise taxation. While such differentiation exists in many industrial countries (such as the United States), it may be especially damaging in Russia at the present time. Differentiating the corporate income tax will not help to establish the common market desired across Russia and could create a tax jungle. It may influence enterprise location in ways that are inconsistent with national policy, and it may cause enterprise location decisions to be tax-driven. Tax competition has its virtues, but in present-day Russia (where there are substantial barriers to entry and distorted prices, as well as price decontrol and privatization) such competition may not be desirable.

Most countries with subnational corporate taxes have also had to address the issue of how to prorate revenues when the company operates in more than one jurisdiction. As Russian enterprises enter the market system, multiplant firms (operating in different oblasts and without separate accounts) will be more common. Subnational company taxes are applied in other countries, but they have more of a tradition of local governance and more experience in the administration of the complexities. Russia can do without such complications at the present time.

The assignment of the corporate income tax is, however, still a problem if the rate and base are decided centrally. As with VAT, subnational revenues may be vulnerable to discretionary changes by the central government. If the federal government changes the corporate income tax, subnational governments could face a revenue cut (or windfall) that bears no relation to changes in their expenditure needs. In addition, the enterprise income tax base is very sensitive to changes in federal industrial policy, and changes in such policies would put subnational revenues at risk. For example, central decisions (about, for example, wage rates, commodity and input prices, foreign exchange restrictions, and interest rates) could lead to direct reductions or increases in subnational government revenues, and the impacts could vary greatly across oblasts. This may be especially important in a transition economy, where input and output prices are still being liberalized and large-scale privatization is ongoing.

Moreover, the profits of many companies tend to be cyclical, and so are taxes on those profits. Assigning more stable revenues to the subnational government sector is preferable, if only because many essential services (health and education) are financed and delivered locally. Spending on these services should be supported by stable revenues. Finally, a subnational corporate tax is likely to be highly counterequalizing and would mean a greater need for some mechanism, such as grants, to offset this. In the much longer run, it may be feasible to consider some form of subnational corporation tax.

The assignment of personal income tax. The personal income tax is probably the best candidate for assignment to oblasts (the law "shares" it 100 percent with oblasts). Workers are more or less immobile (for the time being), and there is little taxable income outside wages and salaries. However, assigning personal income tax to the subnational level is inherently counterequalizing. As wages are liberalized, the tax base will grow faster in some areas than in others and the revenue disparity will widen. It is likely, too, that many low-income workers will ultimately be outside the tax net. As Russia moves more fully to a market economy, there will also be more cyclical instability in the tax. On the other hand the personal income tax is inherently elastic and, in a market economy, will grow in line with inflation and real income.

As in the case of VAT and corporate income tax, subnational revenues are vulnerable to discretionary changes in personal income tax by federal government. Personal income tax is an important instrument of social and macroeconomic policy in many countries and its rate and base can change often. Such changes are almost certain to occur in Russia, with a big impact on subnational government revenues.

One of the major problems with subnational assignment of personal income tax has to do with the intraoblast distribution of revenues. At present, personal income tax is distributed among subnational governments according to place of work. In the case of workers who commute this seems unfair because the rayon of *residence* provides basic services (health, education) to the workers but is not compensated.

Tax assignment and tax sharing: pros and cons

Much depends on *which* taxes are chosen for assignment to local government. There is typically little debate that property taxes and land tax, vehicle taxes, and some excises, business licenses, and fees are appropriately assigned to subnational governments. The discussion above suggests that of Russia's major taxes—VAT, corporate tax, natural resource tax, and personal income tax—only the personal income tax would make a good candidate for assignment. More generally, despite the appeal of transparency—each tax "belongs" to one level of government—the disadvantages of a system such as the Basic Principles, which relies wholly on tax assignment, seem overwhelming.

Given the many shocks, both external and internal, now besetting Russia's economy, the time is not right for another radical change. The fact that the Basic Principles Law was never implemented (and that the Law on the Budgetary Rights of Local Self-Governments, passed only in June 1993, codifies a modified sharing of major taxes and assignment of minor ones) hints at the problems and suggests that Russian policymakers are also searching for a new approach. Why is complete reliance on assignment of Russia's major taxes unwise in present-day Russia? First, the Basic Principles assign corporate income tax and personal income tax revenues to the subnational level but leave the authority to adjust the rate and base of each tax with the central government. The result is that all tax policy changes made by the central government—whether for macroeconomic or social policy reasons—could make the revenue position of subnational governments vulnerable. The recent changes in the VAT and personal income tax, which took effect in early 1993, are examples of policy changes that had critical and unintended impacts on subnational revenues.

Second, there is no necessary correspondence between the expenditure needs of a subnational government and the size of its tax base under this particular tax assignment system. The Basic Principles do not link resources with expenditure assignment, nor is there provision for a grant or subvention system to offset disparities.

Third, the corporate income tax and personal income tax would give subnational governments an unstable revenue base. More generally, the concern here is the unstable and unpredictable nature of these individual revenue sources and what this means for subnational and central governments in the transition. As the results of the first quarter of 1992 show, one tax (VAT) significantly underperformed, while two taxes (the personal and enterprise income taxes) overshot revenue estimates by substantial margins. (While these taxes have performed differently in subsequent periods, the basic point—revenue volatility—remains.) The experience of Hungary, Poland, and other Eastern European countries suggests that this volatility of tax bases and revenues is not the exception but the rule in economies in transition. A system that pools revenues (the volatility of the pool will be less than that of individual taxes) and then shares them, or that shares the major taxes, will avoid this. In addition, the State Tax Service might not collect federal and subnational taxes with the same level of efficiency.

Finally, enough taxes will have to be assigned to bring about revenue-expenditure correspondence, based on the oblasts' expenditure responsibilities. Given the magnitude of their expenditure responsibilities, oblasts will need access to about half of all revenue collections—that is, access to more than just one major revenue source—and there are only four taxes to choose from: VAT, corporate tax, personal income tax, and perhaps excises. It is not clear that the federal budget would be willing (or should be willing) to part in full with most of these revenues. In fact, it is likely that it would not, as its revenue needs are such that giving away a major tax—in toto—may not be an option. More generally, the overwhelming importance of macroeconomic stabilization in Russia today argues for protecting the integrity of the federal budget, and against depriving the center of major tax sources for the time being. Finally, giving oblasts rate-setting autonomy on some of these taxes is not easily workable in the case of VAT.

Most important is that the timing of this change might not be right: this major reform would be introduced at a time when there is an ongoing process of price liberalization and privatization and when the political and constitutional structure of the Federation and the government is not yet settled. The time may not be right to introduce fixity—in fiscal regimes—until a larger political change takes place.

In sum, the shift to a pure assignment system, as proposed in the Basic Principles, would provide few of the advantages normally ascribed to this approach. In particular, because no subnational rate or base setting is proposed in the Basic Principles, there really would be no true subnational component of the personal income tax, corporate income tax, or VAT. Transparency, in this case, means only that revenue sharing is less ad hoc. But "ad hocery" can be removed as easily under a shared as under an assignment system. Continuation of an (improved) tax-sharing-cum-grant system—building on the Law on the Budgetary Rights of Local Self-Governments—is the best path for providing the bulk of oblast finances over the next few years. In addition, there may be room for assignment of some taxes to Russia's oblasts, as discussed below.

Reforming the revenue-sharing system

The flaws in the present system might be sufficient for the Russian government to reconsider introducing reforms. If so, a new system of intergovernmental finance is needed. Where to begin? First, by identifying and prioritizing the objectives of the government. The determination of these priorities is a political decision. It is possible, however, to outline various objectives and suggest intergovernmental financing schemes that meet them. Most countries would have the following objectives:

- Correspondence between expenditures necessary to finance a minimum level of services and revenue assigned to the subnational governments.

- Equalization to offset fiscal capacity differences or to reflect differences in expenditure needs.
- Incentives for increased subnational revenue mobilization.
- Involvement of the local population in subnational budget decisions and increased accountability of subnational officials to their constituents.
- Minimization of the cost of administering the system.
- Gains in public acceptance and confidence through a system that is transparent, objective, and understandable.

One option for reform is an intergovernmental financing system that retains many of the good features of the present one, but attempts to remove weaker ones as well as ambiguities. The system would have four dimensions. First, the national revenue pie would be notionally divided between the federal and subnational governments based on their respective expenditure assignments. As for the oblast revenue portion, some would come (as now) by way of shared taxes, allocated on a derivation basis; the remaining oblast revenues would be distributed more or less as a grant, according to a transparent and fixed formula. In addition, oblasts would have some assigned local taxes and surcharges. A separate feature might be specific regimes to deal with the problems of ethnic minorities, natural resource–generating regions, and other special cases (chapters 6 and 7).

The subnational share. All revenues from the four major federal taxes would be notionally considered as a common pool. The central and subnational shares would be determined according to pre-agreed expenditure assignments. The Ministry of Finance's 1992 and 1993 budget estimates imply that about 55 percent of the national fiscal resources would have been allocated to the federal government and 45 percent to the subnational governments. Such clarity and transparency in establishing the size of the subnational pool are preferable to ad hoc decisions by the Ministry of Finance. They allow subnational governments to budget and plan.

Sharing on a derivation basis. Part of the oblasts' portion of the national revenue pool would be shared, as at present, according to derivation (or origin). That is, oblasts where taxes are collected would receive a share (which could range from 0 to 100 percent) of the taxes raised in their jurisdiction. (It should be noted that where the tax-sharing rate is 100 percent some would say that the distinction between tax sharing and tax assignment is to some extent semantic and relates only to rate-setting authority.) The sharing rate would be uniform for all oblasts and fixed for an agreed period. The rule could be simple. For example, suppose it were decided that half of subnational revenues should flow to them on a derivation basis. A portion of each major tax collected would be retained by the oblasts, with these proportions calculated to exhaust, in aggregate, the derivation-shared portion. The (uniform) tax shares (which might be different for different taxes) should be fixed for three to five years. The more the revenues that come to subnational governments by way of derivation-based sharing, the more the resources that will be channeled into (better-off) regions that have a larger taxable base.

This derivation-sharing aspect of the proposal is easily understood since it is similar in concept to the existing system. It differs only in that sharing rates are uniform and that only a portion of oblasts' revenue needs would be met this way. Moreover, it is not costly to administer and monitor. And as long as the retained shares do not differ too much by tax, it does not give the State Tax Service an incentive to collect one tax more efficiently than another. It would reward oblasts that are successful in attracting and promoting industry, and (with uniform sharing rates across oblasts) it would remove the negotiation and bargaining in today's sharing system. It would also provide subnational governments with a more certain flow of revenue and promote efficient budget planning. One possible drawback is that since taxes are assigned to the jurisdiction where they are collected, higher-income territories will receive more. This will be counterequalizing and will require an equalizing ("grant") component in the distribution formula (see below).

Another issue is that VAT may not easily lend itself to derivation sharing as the Russian economy changes in the next few years because oblasts with industries with a high value added will be at an advantage. This problem can be solved by removing VAT from the derivation-sharing system. The tradeoff is that eliminating VAT from the subnationals' revenue pool would make the derivation-sharing revenue pool more vulnerable to the business cycle (VAT revenues are relatively more stable than income taxes), and it would mean that personal income tax and corporate income tax sharing rates would have to be set higher, possibly increasing the State Tax Service incentive problem. That being said, the revenues for derivation sharing could consist of these two or three taxes, and some of the VAT could be used for the equalization-sharing portion (see below).

A derivation-shared (or locally assigned) corporate income tax will also eventually have to be allocated among jurisdictions for enterprises with branch operations. This is not yet a major problem because in Russia there are relatively few enterprises operating in more than one oblast. But the government must begin planning for an economy where these are commonplace. The solution will inevitably require a more complex tax system, yet the tax administration is already overburdened. Adjustments will also need to be made for the present assignment of all personal income tax revenues to the rayon of employment, and none to the rayon of residence.

Sharing through a transfer formula. If it is decided that VAT does not lend itself to derivation-based sharing, an appropriate portion of it could go into the revenue pool designed for equalization (which would also contain some fraction of other major national taxes). This part of the subnational revenue pool would be allocated using an equalizing transfer formula that explicitly takes into account expenditure needs and tax capacity. This would play the role of the "grant" in most revenue-sharing systems. The distribution formula would provide sufficient funds for all subnational governments to provide "minimum" levels of service (which are far from being defined in Russia). Such a formula-based sharing system, or grant, also makes receipts for subnational governments more certain, and therefore makes planning more efficient. If equalization is desired, distributions via the equalization formula can be designed to direct resources toward oblasts with low fiscal capacities or high levels of need or both. The more of the subnational revenue share that is allocated via the formula grant component (and the less via derivation), the more equalizing the system could be (assuming the formula is equalizing).

What indicators should be included in the formula? In most countries using this approach, the formula consists of (1) an estimate of expenditure needs; (2) an assessment of revenues to finance these needs; and (3) a rule about how much of the remaining gap is to be filled, that is, how far the equalization is to go. The formula typically looks something like this: *grant* equals *expenditure need* minus *revenue capacity at a constant level of tax effort.* The most difficult part is defining expenditure needs for each jurisdiction. As outlined earlier in this chapter, the overriding concern in designing such a formula for Russia today should probably be simplicity. Population-based indicators or physical indicators (number of students, hospital beds) have the advantage of being both simple and equalizing in their effect. But once expenditure needs and revenue capacity are estimated, the formula-based distribution would be allocated across oblasts, as would any transfers to fill (or partially make up) the estimated shortfall.

Accommodating special regions and special demands within a formula. The design of fiscal federalism is made more complex in Russia because some territories are demanding greater political and fiscal autonomy, greater devolution of responsibility for expenditures, and special tax regimes. These include Russia's ethnic oblasts and republics, which claim such rights based on their different culture and history. They also include areas rich in natural resources, which view themselves as entitled to a share in what they perceive as their heritage (chapter 6). Finally, some well-developed regions with good growth potential feel they are being held back by the current fiscal system, which appears to them to redistribute resources to the poor.

Oblasts in each of these groups have sought out special fiscal treatment and special regimes, often unilaterally (chapter 7). Once given, these are hard to "claw back." So far, Russia has responded to these demands in an ad hoc and piecemeal manner.

Demands for special treatment could be addressed through the formula, with any number of specific factors and any choice of weights built into the design of the formula. For example, the politically sensitive state of Punjab in India receives additional funding through a component of the sharing formula that recognizes the difficulty of being a border state. Also, as part of India's grant formula, "backward" areas are assigned a special weight that gives them extra compensation. Australia incorporates the special needs of the Northern Territories into the expenditure-needs equation. Similarly in Russia, a high concentration of ethnic minorities could be assigned a weight in the formula-based pool, in line with the arguably greater needs of ethnic areas. Areas rich in natural resources, but which have suffered underdevelopment and environmental degradation, could also be targeted in an objective way through a formula.

The idea of meeting special needs through a formula is appealing for several reasons. While the formula is uniform for all oblasts, its component parts permit special treatment of certain areas where deemed appropriate by policymakers. It can appease disgruntled groups by incorporating special circumstances in the grant formula while maintaining the transparency necessary to prevent a sense of injustice. Chapter 7 provides more discussion of this approach in other countries and its relevance for Russia.

Derivation sharing and formulas: some issues. How large should the derivation and formula portions be? Because some equalization is appropriate, a sizable formula-based component may be needed, especially if there is a national consensus that service provision should not differ much across oblasts. And if responsibility for the social safety net is passed to subnational governments, there may be more of a case for equalization. (For example, the current deterioration of Russia's health system, with numerous outbreaks of communicable diseases in 1993, suggests that poor, underfunded oblasts may no longer be able to provide basic health infrastructure to an acceptable standard.) But there are tradeoffs, as noted earlier. At this time in Russia's history the intergovernmental fiscal system should probably give more weight to the initiatives and fiscal energies of the better-off areas, in the interest of more rapid economic growth. This could be achieved by allocating more revenues on a derivation basis. It could also be supported by giving oblasts and larger cities powers to set some tax rates, possibly through surcharges (described below).

The scope for tax assignment: enhanced subnational taxes

Until subnational governments make tax as well as spending decisions, they will not be fully accountable to local taxpayers. Moreover, local populations should have the opportunity to pay more taxes if they want better services. Both birds can be killed with the same stone—enhanced subnational taxes, which in effect assign a subset of taxes to subnational governments. There are three subnational taxes that Russia could reasonably assign oblast and rayon governments at the present time and that could yield significant revenues at the margin:

- A surcharge on personal income tax, up to a federally prescribed limit
- A tax on land values in urban areas
- A tax on motor vehicles.

All have the advantage of falling only on local citizens (thereby increasing accountability of local officials). And they might also have a lower compliance cost and reap more revenue than the twenty-one local taxes proposed in the Basic Principles or the Law on Budgetary Rights. The disadvantages are that property and vehicle taxes would require some investment in setting up an administration; and both would be collected, in the near term at least, by the State Tax Service, which would not share in revenues.

Tax-base sharing (that is, surcharges) gives subnational governments some power to set tax rates through, say, a surtax on the national personal income tax or, less desirably, the enterprise income tax. This surtax would allow oblast and local governments to undertake some incremental spending, and it would make them more accountable to their constituents, since the surtax would be paid only by citizens of that oblast, who would want to know what they are paying for. A surtax on the personal income tax could easily be implemented through the State Tax Service and the added administrative burden imposed would be small. Each year the oblast would establish the rate for the following year. Subnational tax offices would apply it (together with the federal tax rate) to the income tax base. The amounts collected would then be remitted to central and subnational government in the usual way.

VAT should not be surtaxed. An oblast specializing in intermediate goods sold mostly outside the oblast would almost certainly prefer to "export" taxes to other oblasts (putting on high surcharges) rather than to tax its own citizens. A true *destination* VAT (levied at the point of sale) would require some adjustment for taxes on "imported" goods, as is now the case in the European Union (EU). However, it is doubtful that subnational governments would wish to give credit for "foreign" import taxes on purchases from suppliers in other oblasts. In Brazil, where VAT is a provincial tax, there are huge problems in administration, collection, and fairness, even though federal government sets maximum rates. It is doubtful that a regional VAT could operate much more satisfactorily in Russia.[11]

Candidates for tax assignment in the longer run. In many countries excise taxes and retail sales taxes are thought to be good local taxes. In Russia in the near term excise taxes (those on oil and liquor are the most important ones) would not make good local taxes because both are collected at the point of production (not sale) and produced in only a small number of oblasts, and revenues would therefore accrue very unevenly. Moreover, since both goods are exported, either domestically or internationally, their assignment to the oblast level would violate the principles of a good local tax. However, as these excisable goods become more widely produced, they are good candidates for assignment to subnational governments. Retail sales taxes do not exist at present in Russia, and none are planned. Were they to come into existence, they could in principle be oblast taxes, although coordination with VAT would be necessary and possibly problematic. (Canada has a national VAT and regional sales taxes, for example.)

Increasing revenues from local property, land, vehicle, and other taxes at the subnational level in Russia is crucial because other sources of revenue are shrinking. The local tax base is weak. Many subnational governments still receive revenues from the profits of enterprises, including some new joint ventures. With privatization, they may also receive revenues from enterprise sales. But both will decline (and eventually disappear), since privatization will leave all earnings in private hands. Most cities have huge amounts of taxable real estate (so a property tax has a broad base), but most subnational governments do not raise much from the tax. This is because valuations are out of date and have been eroded by inflation. Moreover, cadastral surveys and registration are poor. So, too, are collection and enforcement, and thus arrears are high.

Currently assigned local taxes. The Basic Principles of Taxation prescribes a long list of taxes assigned purely to subnational government. Except for land and property taxes, the time may not be right to push ahead with these twenty-one local taxes. They are unlikely to raise much revenue, even in the best of circumstances. They will also strain the collection capacity of the State Tax Service. And some of these taxes have high compliance costs that slow the workings of the economy. Moreover, they are likely to divert the attention of policymakers from more productive potential sources of revenue, such as surcharges, tax-base sharing, and increased user charges.

The flexible sharing framework and its advantages in present-day Russia

The four-dimensional structure outlined above provides a flexible framework for Russia's intergovernmental finances. It permits using a combination of strategies that can change over time. First, it is compatible with shifts in expenditure responsibilities between the federal and subnational governments: if additional expenditures are shifted downstairs, the subnational portion of national revenues can be increased. Second, it is compatible with the changing emphasis on growth versus equalization over time: if greater emphasis on equalization is desired at some later stage, the portion of subnational revenues distributed on a formula grant basis can be made larger; if the decision is made to allow the better-off areas to reap the benefits of their larger fiscal capacities, the derivation sharing could be enlarged. The choice of "how much equalization" is essentially a political judgment, made differently in different countries, and is changeable over time. Third, by assigning a more robust set of taxes (surcharges and land and property taxes) to subnational governments and giving them greater rate-setting discretion on their assigned taxes, the system is also compatible with increased local fiscal discretion and autonomy.

Finally, it is compatible with regional diversity. As will be argued in chapter 7, the special needs (or demands) of Russia's regions can be better met via a formula-based approach that takes their needs into account than via the present ad hoc approach to responding to their demands. More generally, there would be no need for special regimes that could become very risky.

Such an intergovernmental system, if it is seen to be based on fair criteria and to be equitable, can defuse other difficult resource allocation issues—such as the sharing of revenues from natural resources and the demands for fiscal autonomy by some oblasts. A transparent and objectively managed system means that oblasts need not hold on to these few bargaining chips. In sum, at a time when nation building is paramount, a well-designed intergovernmental fiscal system is essential.

Designing the new system: concrete requirements

Further development and quantification of any options for redesigning Russia's system of intergovernmental relations will require detailed empirical work. The design (and later the monitoring of the performance) of the new system of intergovernmental relations will be a long-term, data-intensive exercise. But the data required are not readily available at present. For example, investment data for Russia's oblasts have not been published since 1975. Although a formidable task, it should be a priority for the central government, the oblasts, and the League of Russian Cities to begin developing data bases, such as a "census of governments." These should include tax collection and tax-base statistics, expenditure composition and expenditure-needs measures, socioeconomic characteristics of the population, and the stock of physical infrastructure and its state of maintenance. Subnational governments' poor record in data collection and the lack of tradition in this area point to a need for bold action at the highest level of government.

To complete the design of the new system, there has to be detailed accounting of the costs to subnational governments of the newly transferred responsibilities, as well as for traditional services. Without a rigorous effort on this front, the adequacy of subnational revenue needs will simply remain a matter of conjectural discussions. Similarly, the design of a system of intergovernmental transfers, with the objective of equalizing opportunities across oblasts, will require accurate information on expenditure needs, tax bases, and subnational tax effort. In contrast to Russia most industrial countries have standardized tax data that are regularly used for policy and research purposes.

Technical assistance could assist Russia in this complex area. This would focus both on the data-gathering side and on developing and designing the complex simulations that go into any revenue estimation model or expenditure system. This is not likely to be a quick or easy exercise. China has been modeling its revenue-sharing system (with foreign assistance) since 1988. The data collection and analysis underlying the development of Hungary's (much simpler) formula grant system took an initial two years of intensive preparatory work, and continued revisions to the system are still ongoing two years later. In Russia, while work on both data collection and modeling can and should begin, the important first step—making concrete assignments of expenditures—has yet to be taken. Thus, any "quick estimates" are likely to be as flawed as the Basic Principles. The need for the concrete exercise to begin soon cannot be overstated.

Additional dimensions of the intergovernmental framework

In addition to the major task of determining the adequate oblast revenue base, complex questions also arise with respect to tax administration (see below) and the special needs of Russia's large cities. Hitherto, little mention has been made of user charges, often thought to be the mainstay of local finances. Their role in Russia clearly needs to be expanded (as outlined below), but doing so will not be without problems.

Tax administration responsibilities

The tax assignment of the Basic Principles requires the State Tax Service to collect both taxes that accrue to subnational governments and minor local taxes (from which the central government derives no revenue) with the same efficiency as it collects taxes accruing to central government. A reasonable fear is that since local-level State Tax Service offices have scarce resources, they might devote these more heavily to collection of central taxes.

A switch to separate subnational and central tax administrations would, however, be ill-advised at the present time. Russia's scarcity of administrative resources makes it hard to argue for a separate tax service in each of the eighty-nine oblasts and 2,000-plus rayons. Rather, administrative constraints argue strongly for a continuation (and significant strengthening) of the single State Tax Service. Even so, government should move to eliminate the implicit "dual leadership" of the State Tax Service. This could be done by rotating top officials, as in many other countries; by federal assumption of financing responsibility for all the fringe benefits and noncash compensation of State Tax Service officials; and by providing office arrangements and the like. The elimination of this dual loyalty is essential, since the State Tax Service is taking on a larger role in collecting and remitting taxes to the central government. In Tyumenskaia oblast, for example, the State Tax Service has taken on the previous role of commercial banks in remitting taxes to the federal budget; conflicting loyalties are sure to create additional difficulties.

Over the longer run one might envisage some local collection and administration of taxes such as the property and vehicle taxes. However, international practice is mixed here also. In Canada and Australia provincial governments are responsible for property valuation and administration. In Germany and New Zealand valuation is national and rate setting and administration local. In the United States both rate setting and valuation are undertaken locally in most states.

Fiscal discretion for large cities

Special treatment could be given to large cities in the Russian system. In Russia, as in most countries, big cities have a greater taxable capacity—and more complex (and, it can be argued, expensive) spending needs. They could be given additional taxing powers (a bigger surcharge on central taxes, for instance); special support in implementing the property tax; or the right to set prices (user charges) for municipal services. Special investments could be made in better tax administration for big cities, and in the future these cities could be accorded greater borrowing powers. In Russia such special treatment could be given to all oblast seats, or other large industrial centers, where expenditure needs are high and where there is a willingness to tax citizens to provide better services.

User charges

Russia has not made much use of fees or user charges for services provided by subnational governments or subnationally owned utilities and enterprises. In 1990 nontax revenues, such as charges, fees, and fines, accounted for about 3 percent of their total revenues. Little seems to have changed since then on this score. For both industry and households, much greater use should be made of user charges (transport fees, charges for water, gas, and the like). Sometimes, weak accounting leads to underpricing of these services and needs to be strengthened. Sometimes, central government sets ceilings on any such fees or prices, and its record is less than impressive. The ceiling on urban transport fees, for instance, was recently raised by the Ministry of Finance from 10 kopecks (the original 1956 price) to 50 kopecks—only about 30 percent of operating costs in early 1992. Many housing rents are still at nominal levels (set in 1928) of 13 kopecks per square meter, although recent law allows subnational governments to fix rents at any level. It would be more appropriate to allow subnational governments to set rents at cost-recovery levels, since fiscal autonomy is an objective.

However, the extraordinarily low level of most such charges at present means that a move toward greater cost recovery (for example, through long-run marginal cost price setting in the case of utilities) could imply significant price increases. (In one Eastern European country it was estimated that cost-recovery electric power rates would absorb 40 percent of household disposable income, assuming no change in power demand.) Clearly, the phasing of changes in such prices and their structure (lifeline rates and the like) requires careful thought. Another approach might be to emphasize allocative efficiency by raising prices to appropriate levels and rebating a lump sum to consumers to partly offset the impact on household incomes (although this would compromise revenues [Bird and Wallich 1993]).

Intraoblast fiscal relations: oblasts and their rayons

The oblast soviet is responsible for the allocation of financial resources among its rayons and municipalities. It determines the share of taxes retained by each, and it may allocate extra subsidies, thus determining spending by each subnational government.

There are some constraints, however:

- Tax rates and tax bases are fixed by the center and may not be adjusted.
- Some minor taxes and charges are prescribed as fully local.
- A national law, passed in April 1992, prescribes revenue sharing from oil and specifically mandates the local (rayon) share to be 30 percent for oil and 50 percent for nonhydrocarbon minerals (chapter 6).

Should the federal government allow oblasts to have full control of and responsibility for all affairs within the oblast? There are advantages. First, it gets the central government out of the business of having to make fiscal decisions concerning the revenue needs of thousands of subnational governments. Second, it makes the oblast soviet more accountable to the local population. Third, it is clearly a step toward fiscal decentralization, bringing government decisions closer to the people. However, there also are some problems raised by this approach.

Issues and problems in oblast-rayon finances

Designing a system of intraoblast fiscal relations will require coming to grips with a number of important issues, notably, the fiscal disparities *within* oblasts, which are, some argue, greater than those between oblasts. How much revenue autonomy, and which revenue sources, should be accorded to oblasts are also important questions.

Disparities among oblasts. There are wide variations in economic well-being and fiscal capacity within each oblast. This means that each oblast must make difficult decisions about fiscal equalization. The oblast soviet cannot simply extend the central-oblast revenue-sharing scheme, which is based on the derivation principle, because that would exacerbate the economic disparities among the rayon governments. For example, within Riazanskaia oblast (which has thirteen rayons and two cities) per capita spending in the highest-spending locality was more than three times that in the lowest. Per capita expenditures were 50 to 100 percent greater in the cities of Riazan (the oblast capital) and Skopin than the average of all of Riazanskaia's rayons.

The oblast government must also allocate to itself some retained revenues. This leads to the enactment of equalization features in the revenue-sharing system by the oblast soviet but also raises tensions with the better-off local governments—particularly the urban centers, which feel they are unduly discriminated against to underwrite equalization. The situation is made more complex by the great public servicing needs in the urban areas. At present at least some oblast governments have opted to use uniform-rate tax sharing (which is counterequalizing) along with equalizing subventions (box 5.1).

Box 5.1 Intraoblast revenue sharing

Based on field work in Tyumenskaia, Nizhniy Novgorod, Riazanskaia, and Moscow oblasts and in Khanty-Mansiiskii okrug, it appears that oblast governments vary widely in how they allocate revenues among local governments. These oblasts are similar, however, in that all use a derivation principle as the primary instruments of revenue sharing.

After the central government changed its revenue-sharing program on VAT to a flat 20 percent and increased the corporate income tax locally retained share from 15 to 19 points on the 32 percent rate, all the oblasts visited in the course of field work also adjusted the oblast-rayon sharing formulas. All three of the oblasts visited after the change switched to uniform-percentage sharing for all local governments. These shared taxes were supplemented with various types of subventions. The examples in the table below give some idea of the variety in sharing arrangements as of July 1992.

Revenue sharing in three oblasts, Russian Federation, July 1992
(percentage of revenues accruing to each level)

	Moscow oblast		*Tyumenskaia oblast*		*Khanty-Mansiiskii okrug*	
Tax	*Rayon*	*Oblast*	*Rayon*	*Oblast*	*Rayon*	*Okrug*
Personal income tax	100	0	100	0	92.5	7.5
Corporate income tax	63	37	74	26	53	47
Value-added tax	0	100	75	25	75	25

Source: Ministry of Finance of the Russian Federation.

Revenue-raising efforts. A second, and closely related, problem is that the need to equalize may dampen efforts to increase the rate of revenue mobilization. The State Tax Service staff is closely linked with the subnational governments (rayon and cities), and assessment and collection efforts may be less successful if the local community sees that it will not receive an adequate return from its increased revenue effort.

Both of these issues point to a major underlying concern—that oblast soviet decisions may not reinforce central government economic policy. An example: suppose that the central government decided to base its economic strategy for the next ten years on the development of urban centers and on the development of industries that require skilled labor and call for infrastructure at a certain level of provision. Under the present system the central government could not easily implement this strategy. The oblast soviet could still choose to allocate resources away from urban areas (toward rural areas) and could choose whatever focus on education it wanted. Thus, in truly decentralized systems the central government loses control over the implementation of national programs.

Planning certainty. Oblast and other subnational governments need to know their revenue flow with enough certainty to plan budgets. The present revenue-sharing system changed markedly and frequently in 1992, and efficient fiscal planning has been nigh impossible. And because the tax sharing is done on a derivation basis, the oblast soviets have also changed the intraoblast fiscal arrangements each quarter.

Subnational autonomy. Even leaving decisions on fiscal distribution to the oblast soviet is not enough for those who are the strongest advocates of fiscal decentralization. They would argue in favor of giving more autonomy to local (rayon and municipal) soviets. After all, the oblast may have millions in population, and the oblast soviet is far removed from the needs of the local populations. The local soviets are closer to their people and problems. Thus far, the lowest-level soviets have not been given much say in determining their local budgets.

Reform possibilities for oblast finances

The government is at a crossroads in intraoblast relations. The Basic Principles Law is ambiguous and so is the Law on Budgetary Rights. At present, revenue allocation choices rest with the oblasts, and some have opted to redistribute substantial amounts of revenues away from the urban centers to less-developed rayons. The issue is contentious, and calls have been made for a federal formula that identifies the share of each subnational government, either to enhance the position of the rural rayons or to protect the larger revenue base of the cities.

In general, there are three strategies. The first is complete centralization—making intraoblast relations a responsibility of the central government. The second is to maintain the status quo and let each oblast work out its own difficulties. The third is to leave the oblast soviet to decide on the basic fiscal structure, but to prescribe central mandates to constrain the decision so that it better matches central objectives. There appear to be advocates of each.

Centralizing oblast finances. Centralization may be the least desirable. In a country as large and diverse as Russia, it is unrealistic to believe that public servicing needs for every local area can be properly assessed from the center. There are no data that describe the fiscal situation in subnational government areas, and there is no capability to monitor the fiscal outcomes in subnational areas. Perhaps the greatest drawback is that this would be a step away from fiscal decentralization and would make local-level officials less accountable for fiscal decisions.

Federal-subnational fiscal relations should *not*, in fact, go below the oblast level, for two reasons. First, this would imply a federal program that purports to manage and equalize Russia's 2,000-plus rayons. Second, such an approach would have to apply the same formula to all suboblast equalization. A better route would be to leave the distribution to each oblast. If Russia sees itself as a federation, such center-rayon relations would be inappropriate. The federal government should concentrate on finding a proper relationship with its oblasts and regions and leave intraoblast matters to the subnational councils.

Maintaining the status quo. Continuing with the present framework would seem an option. It would involve less shock to the system at a time when the system is fragile and undergoing major changes. It would continue to leave accountability for fiscal decisions with the oblast soviet. It would be consistent with the reality that some republics will be given greater autonomy. Oblast soviets can shape an equalization program for the rayons and assign the oblast governments those services where there are major externalities or economies of scale.

A framework and central guidelines. The central government may feel that the problems with oblast autonomy in this area are great enough that some adjustments are necessary. The new Law on the Budgetary Rights of Local Self-Governments proposes important changes in revenue sharing and expenditure autonomy. One basic principle in this law is to give "structure to the relationship between the rayon government and its oblast government." The proposal is that the oblast guarantee funding for 70 percent of the amount required for a "minimum" level of public services in each rayon (but these minimum expenditures are not defined). The advantage is that it allows the central government to set minimum standards in the delivery of services. It also gives the rayon and city governments some certainty in planning budgets, since the 70 percent guarantee would be for five years. The disadvantages are that such mandates restrict the autonomy of the oblast in planning its own economic development and that the minimum needs of oblasts may not be defined in a reasonable manner.

The problem of finding the right fiscal relationships between central and subnational governments plagues countries around the world, not just Russia. Many different solutions have been found. The United States gives autonomy to the states to decide on the proper relationships between state and local governments, much as the present-day Russian system does. Both Nigeria and Brazil have defined the specific roles of local versus state governments, and many European countries (France, United Kingdom) take a unitary approach, whereby the central government plays a direct role in determining local fiscal outcomes.

For Russia some "framework law" (perhaps a variation on the Law on the Budgetary Rights of Local Self-Governments) may be appropriate, in which oblasts are required to pass through some revenues to the rayon or city, according to agreed guidelines. One alternative is to specify guidelines, for example, on the minimum amount of the shared taxes that must be passed through to the subnational governments. This approach was used by the United States in the distribution of revenue-sharing assistance to state and local governments in the 1970s and early 1980s.

Appendix 5.1 Empirical estimates of tax effort in Russia's oblasts

Whether the Russian system has stimulated revenue mobilization or dampened it is an open question. On the one hand subnational governments retain only a fraction of what is collected; hence, they have some *disincentive* to promote collections aggressively. And if any shortfall will be made up by a deficit grant, why make a greater effort?

On the other hand local governments *do* have an incentive to increase tax collections because they retain a significant percentage of what is collected. Moreover, the experience in 1992 shows that oblasts can be successful in negotiating larger retentions on an ad hoc basis.

The issue is treated here as an empirical one. We attempt to estimate the variation in tax effort among the oblasts. A wide variation (that is, a finding that oblasts use their fiscal capacity to varying degrees) might be some evidence that there are revenue mobilization disincentives in the system. Indeed, there *is* a wide variation in the "effective rates" of tax collection among the oblasts (where the effective tax rate is measured as the ratio of oblast tax collections to the value of oblast gross industrial output, or GVIO).[12] But this measure does not give a fair comparison of tax *effort* variations across oblasts, because GVIO alone is probably not a proper measure of taxable capacity. Even for a given per capita GVIO, an oblast with a higher average wage for its workers and a more heavily urbanized population might have a greater capacity to tax. We attempt to take such factors into account in this analysis.[13] We have estimated:

$$T/\mathrm{GVIO} = f(\mathrm{GVIO}_p, W, U, P)$$

where T/GVIO is the ratio of total taxes collected in the oblast to gross value of industrial output, GVIO_p is the per capita gross value of industrial output, W is the average monthly wage, U is the percentage of population living in urban areas, and P is the population size.

The results for the first quarter of 1992, presented in equation 1 of appendix table 5.1, show that the ratio of tax collections to annual GVIO is significantly higher in oblasts with a higher average wage and a lower per capita GVIO. About half the variation across the sixty-four oblasts for which data are available can be explained.

The same regression analysis is repeated for the combined data for the first six months of the fiscal year, with the results reported in equation 3 of appendix table 5.1. The results are similar: the shares of taxes in total output are higher in oblasts where per capita output is lower, and where the average wage is higher. However, a much smaller proportion of the variation in the tax ratio can be explained for this period. This might be interpreted as showing some weakening in the relationship between tax collections and taxable capacity.

The regression-estimated value of the dependent variable from this equation, $\hat{T}$, is a measure of taxable capacity, that is, the amount that an average oblast with a given endowment of $GVIO_p$, W, U, and P would raise. The amount actually raised is T. The equation $E = T/\hat{T}$ is an index of tax effort, E, and can be computed for each oblast. An index of 1.0 would describe an average tax effort. An index below 1.0 would describe a low tax effort, and so on.

The results of this analysis for sixty-six oblasts for the first two quarters are presented in appendix table 5.2. Komi autonomous republic, for example, has a tax effort index of 1.27, that is, it raises 27 percent more taxes than we would expect given its taxable capacity. It is ranked fifth-highest among the oblasts compared here. The tax effort indexes range from

Appendix table 5.1 Determinants of tax collections, for oblasts, Russian Federation, first and second quarters 1992
(ordinary least squares estimates)

Dependent variable	*Constant*	*Per capita value of gross industrial output*	*Average monthly wage*	*Percentage of population living in urban areas*	*Population*	$\bar{R}^2$	*N*
Taxes collected, as a percentage of GVIO, first quarter	0.57 (5.48)	-0.14 (E-03) (-6.56)	0.63 (E-03) (2.66)	0.37 (E-02) (1.81)	-0.12 (E-04) (1.26)	0.48	64
Per capita tax collected, first quarter	-73.43 (-0.30)	0.08 (1.46)	1.16 (2.08)	15.87 (3.32)	-0.04 (-1.23)	0.47	64
Taxes collected, as a percentage of GVIO, first and second quarters	0.74 (2.75)	-0.22 (E-03) (-3.71)	0.14 (E-02) (1.98)	0.61 (E-02) (1.11)	1.47 (E-05) (0.40)	0.21	72
Per capita tax collected, first and second quarters	-487.50 (-0.72)	0.31 (2.11)	1.64 (0.93)	22.30 (1.62)	0.07 (0.73)	0.35	72

GVIO Gross value of industrial output.
Note: E numbers in parentheses are exponents. t-statistics are shown in parentheses below the regression coefficients.
Source: Estimated from data provided by the Ministry of Finance of the Russian Federation, March and July 1992.

Amurskaia and Ivanovskaia oblasts (each more than twice the average) to Tyumenskaia oblast and Khabarovskii krai (60 percent below the average). In Tyumenskaia oblast, for example, this low effort may be accounted for by its (relatively) high level of GVIO, combined with low taxes on its major tax base—the natural resource sector. Surprisingly, there is no significant relationship between the tax effort ratio and the tax-sharing rate. The simple correlation between the total sharing rate and the tax effort index is -0.21. We cannot say that an oblast with a higher retention rate acts on this incentive to make a significantly greater tax effort.

Appendix table 5.2 Summary of tax capacity and tax effort, estimated by oblast, Russian Federation, first quarter 1992

Oblast	*Tax effort ratio*	*Tax effort ranking*	*Oblast*	*Tax effort ratio*	*Tax effort ranking*
Ivanovskaia oblast	2.53	1	Rostovskaia oblast	1.00	35
Republic of Kalmykia	1.79	2	Belgorodskaia oblast	0.99	36
Sakha Republic (Yakutia)	1.33	3	Sakhalinskaia oblast	0.99	37
Kostromskaia oblast	1.28	4	Orlovskaia oblast	0.98	38
Republic of Komi	1.27	5	Brianskaia oblast	0.97	39
Vladimirskaia oblast	1.25	6	Omskaia oblast	0.97	40
Vologodskaia oblast	1.21	7	Republic of Buryatiia	0.97	41
Amurskaia oblast	1.21	8	Republic of Marii-El	0.96	42
Nizhniy Novgorod oblast	1.20	9	Pskovskaia oblast	0.95	43
Cheliabinskaia oblast	1.20	10	Volgogradskaia oblast	0.95	44
Samarskaia oblast	1.19	11	Tambovskaia oblast	0.94	45
Krasnoiarskii krai	1.18	12	Kamchatskaia oblast	0.92	46
St. Petersburg	1.16	13	Altaiskii krai	0.91	47
Republic of Tatarstan	1.15	14	Kurganskaia oblast	0.90	48
Novgorodskaia oblast	1.09	15	Tul'skaia oblast	0.90	49
Moscow City	1.09	16	Voronezhskaia oblast	0.90	50
Iaroslavskaia oblast	1.08	17	Penzenskaia oblast	0.88	51
Lipetskaia oblast	1.08	18	Stavropolskii Krai	0.87	52
Orenburgskaia oblast	1.08	19	Saratovskaia oblast	0.86	53
Kurskaia oblast	1.07	20	Udmurt Republic	0.86	54
Republic of Bashkortostan	1.06	21	Ulianovskaia oblast	0.85	55
Kemerovskaia oblast	1.05	22	Novosibirskaia oblast	0.83	56
Riazanskaia oblast	1.05	23	North-Osetien Republic	0.81	57
Permskaia oblast	1.04	24	Arkhangelskaia oblast	0.81	58
Tomskaia oblast	1.04	25	Kaluzhskaia oblast	0.80	59
Republic of Karelia	1.04	26	Khabarovskii krai	0.77	60
Chitinskaia oblast	1.03	27	Magadanskaia oblast	0.76	61
Astrakhanskaia oblast	1.03	28	Kabardino-Balkar Republic	0.74	62
Republic of Chuvash	1.02	29	Republic of Dagestan	0.71	63
Smolenskaia oblast	1.01	30	Murmanskaia oblast	0.71	64
Kirovskaia oblast	1.01	31	Tyumenskaia oblast	0.69	65
Mordovian Republic	1.01	32	Chechen Republic and Ingush Republic	0.65	66
Leningradskaia oblast	1.00	33	Kaliningradskaia oblast	0.49	67
Krasnodarskii krai	1.00	34			

AO Autonomous okrug.
AR Autonomous republic.
Source: Author's estimates.

Notes

1. For a discussion of the intergovernmental arrangements in industrialized market economies, see Bird (1986) and Fisher (1989). For a review of arrangements in the developing countries, see Bahl and Linn (1992), chapter 13.

2. The income tax base for all American states is described in ACIR (1992).

3. Good discussions of the principles for dividing fiscal responsibilities among levels of government can be found in Musgrave (1961) and Oates (1977).

4. A good discussion of the case for federal taxation of natural resources is found in Mieszkowski (1983).

5. It was noted in several interviews with government officials that the Supreme Soviet felt uncomfortable with a system where the Ministry of Finance made an ad hoc distribution to the oblasts in the form of variable VAT sharing rates. The move to a uniform VAT retention rate was an attempt to make the system more transparent.

6. Tabular data have been made available to the authors by the Ministry of Finance of the Russian Federation and have not hitherto been published. Data may not correspond fully to other sources or to data from the same source obtained at a different time as revisions are ongoing (dates have been specified whenever possible). This is especially so for oblast-level data. Furthermore, categories undergo definitional changes and may not correspond from source to source.

7. The revenue-income elasticity is defined as the percentage increase in revenues divided by the percentage increase in income. The numerator does not include increases brought about by discretionary changes, but only automatic revenue increases due to changes in the tax base (income).

8. This information was provided to a World Bank mission during interviews with Ministry of Finance officials from the Territorial Department in July 1992.

9. The reason for doing this is to find the association between the retention rate and the income level (fiscal capacity), while adjusting for interoblast differences in expenditure needs. Simple correlations, as shown in table 5.6, indicate only gross relationships. Of course, the normal caveats hold in this regression analysis: the independent variables are assumed to reflect expenditure needs and not to be highly correlated, and the direction of causation is assumed to run from the independent variables to the retention rate.

10. Although in principle this could be overcome by switching to a "destination-based" VAT, there are no plans to do so in Russia at present.

11. See Tait (1988) for a discussion of the problems with VAT rate differentiation.

12. Another problem is that the numerator is a first-quarter estimate for 1992, while the denominator is an annual value for 1989. The absolute values of the dependent variable, therefore, have little meaning, but we assume that the variation in this index approximates that in the true tax ratio. It would have been possible to inflate the denominator using a national index and to annualize the numerator for purposes of presentation, but this would not have changed the pattern of variation in the dependent variable and therefore would not affect the significance levels or the explained variation in the regression.

13. This approach to tax effort analysis is described in Bahl (1971).