Financing Metropolitan Governments *in* Developing Countries

Edited by

Roy W. Bahl, Johannes F. Linn, and Deborah L. Wetzel

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Local Nonproperty Revenues

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JORGE MARTINEZ-VAZQUEZ

This chapter focuses on the current theory and practice of nonproperty tax assignments to local urban governments in developing and developed countries. Bahl and Linn (1992) concluded that if urban government revenues were to be viable for financing urban public service delivery, broad-based taxes other than the property tax would be needed in the revenue assignment mix. How good a prediction has this been?

Although the theoretical rationale is clear for the presence of a basket of tax instruments, since the marginal resource costs are increasing for any single source, and many urban governments rely on a variety of revenue sources other than property taxation and transfers, the international experience in both developing and developed countries, as described in this chapter, is mixed and uneven. While a few urban governments have introduced economically attractive tax sources other than the property tax, a vast majority of urban governments in developing countries, and also in many developed countries, still struggle with the imperative of revenue adequacy to cover their growing expenditure needs and obligations. The good news is that examples of best practices are not scarce; the bad news is that there is still an extended failure in applying those best practices in the vast majority of urban governments around the world.

This chapter is organized as follows. First the theoretical foundations for the use of taxes other than the property tax in local governments are reviewed. The discussion includes the kind of guidance provided by optimal tax theory and the issues to be considered in making tax administration choices (e.g., central vs. local). Next, actual practices in tax assignments are surveyed; special attention is paid to political

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economy and institutional capacity issues as potential drivers for the observed differences between an optimal metropolitan revenue system and those that are actually observed. The chapter concludes by extracting lessons from the global experience with nonproperty tax revenue sources and exploring reform directions for urban finance in developing and developed countries.

Theoretical Foundations of Subnational Revenue Assignments

Although over the last several decades there have been significant advances in the development of a theoretical framework for tax assignments to subnational governments, a complete general framework is still lacking.

The Relevance of Revenue Assignments

The fundamental promise of fiscal decentralization is that public spending will become more efficient because decentralized governments will be not only more informed (Hayek 1945) but also more responsive and accountable to citizens' needs and preferences (Oates 1972). At the same time, there is general agreement among experts in decentralization that increased accountability is best assured when subnational governments have an adequate level of autonomy and discretion in raising their own-source revenues.

Thus, if effective fiscal decentralization requires meaningful revenue autonomy at the subnational level, which taxes should be allocated at these levels? How much revenue autonomy is needed? This is what is known as the "tax assignment problem" (see, e.g., Bird 2000b; Martinez-Vazquez, McLure, and Vaillancourt 2006; McLure 1998).[1]

The basic role of revenue assignments is to provide adequate financing to subnational governments so they can implement the functions they have been assigned. However, revenue adequacy per se is not a guide for tax assignments because adequate financing can be obtained from many different tax assignments or even without them through intergovernmental transfers.

The "Benefit Principle": How Far Does It Take Us?

To answer the question of how to tax at the local level, the public finance literature has used the "benefit principle" (Lindahl 1919; Musgrave 1938): those that use the service should pay for its costs. If it could be fully used, there is no other approach to urban local finance with the same potential to organize the financial architecture of local governments. The benefit principle tells us how services should be priced, who should pay for them, and how much of the service should be provided. However, the power and simplicity of the benefit principle are diminished by a series of factors.

First, within the complexity of institutional arrangements in many urban settings, it is not always necessarily obvious who should be paid because it is unclear

[1]Part of this section builds on Martinez-Vazquez (2008).

which governmental organization is in charge of providing particular services.[2] Second, it is not always easy to identify those that are using the service, unless it is possible to employ user charges and fees and exclude from the service those that do not pay. Third, it is difficult to target users with alternative revenue-raising instruments. Some taxes, such as the property tax, can fit the benefit principle well by targeting taxpayers that directly benefit from an array of services. Other taxes can be used, such as individual income taxes or sales levies, even though they can be hard to design, but in the best of cases the link between benefits from services and tax payments tends to be diluted and even lost, depending on the final economic incidence of the tax.

There are some other limitations to the practical application of the benefit principle, including equity issues, the presence of service externalities into other jurisdictions, and the presence of tax externalities where the actions of some jurisdictions may affect the tax bases of other local governments. All these cases may require different types of corrective transfers from upper-level governments.[3]

However, the benefit principle can offer very useful guidance for the direction in which institutional reforms should move. Those jurisdictions and entities providing the services should be paid by those individuals using the services, regardless of where they reside. The place of residence still can be used as shorthand for approximating where individuals consume most their public services, but the assignment of revenue sources cannot be restricted to the universal use of that proxy (the place of residence). However, there is also little question that, in order to make the benefit principle operational, governments must face the challenge of finding those taxes (when direct use of fees and services is not feasible) that would best approximate a direct payment by users and that, at the same time, would meet other desirable economic properties, or at least avoid undesirable ones.[4]

In Search of a General Theory of Revenue Assignments

Since the application of the pure benefit principle is not possible, a theory of tax assignments is still needed. Significant progress has been made in laying out the desirable economic properties of taxes to be assigned at the subnational level, but up to now a complete theory of tax assignments at the subnational level is still lacking.

[2]The issues are complex in this context because of the potential of extensive tax exporting, the presence of special districts and public enterprises with managers that are not elected and thus lack direct accountability mechanisms, and boundaries of elected governments that may not be clearly delineated. As Bahl (2011) points out, tax assignment in metropolitan areas is not independent of how those jurisdictions are structured. And metropolitan areas show diverse and often complex organization structures. For example, Bird and Slack (2004a) identify four models of governance structure for metropolitan areas: (1) one-tier governance, with a single government providing all the local services within the area (e.g., Toronto, Bogotá, Quito); (2) two-tier governance, with one upper-tier government (metropolitan unit) providing some regionwide public services and lower-tier municipalities providing public services of a more localized nature (London, Santiago de Chile); (3) voluntary cooperation, with the existing units of governments creating formal or informal cooperation mechanisms to provide certain services and retaining full autonomy for other services (e.g., Vancouver, São Paulo); and (4) special-purpose districts, created for the purpose of providing a single public service in the area and with all other services provided separately by the existing jurisdictions (e.g., special districts in the United States, Buenos Aires). All these types in reality show a wide array of financing combinations involving user charges, own taxes, and transfers.

[3]Ideally, a benefit tax may reflect the different types of externalities.

[4]See Ebel and Taliercio (2005) for a discussion of the broader interpretation of the benefit principle, including general taxes.

Before examining these issues, note first that the pure application of the benefit principle, utilizing user charges to finance public services, delivers two important things: (1) establishing the right amount of public services demanded by local residents; and (2) efficiently financing those public services with user charges: prices. When moving from user charges to taxes, substitute arrangements must be found for these two issues: (1) how to assure the efficient level of service provision; and (2) how to use alternative tax sources to finance those services, which exhibit different marginal resource costs.

The public finance literature reflects two fairly unconnected strands, each separately addressing one of the sets of issues that needs to be addressed by a theory of tax assignments. The first strand of the literature, grounded on the tradition of Musgrave (1959) and Oates (1972), focuses on the desirable attributes of taxation to foster optimal expenditure decisions, emphasizing the importance of tax autonomy to bring accountability among subnational decision makers. From this perspective, accountability is key to having public officials provide the level and mix of public services desired by taxpayers. This happens automatically when user charges can be used but generally can be lost when moving to use of taxes, with financing decisions being divorced from public service delivery decisions. Under this category are a number of useful and widely accepted rules. First is McLure's (2000) rule that subnational governments require tax autonomy at the margin to fulfill the allocation function efficiently, even though "inframarginal" expenditures can be financed with transfers or other sources. A second widely accepted rule is that the accountability of government officials, and of public expenditure efficiency, increases with the share of own-source revenue collections in the subnational budgets, and thus tax autonomy should be high enough to finance all, or most, expenditure needs of the wealthiest subnational governments. Increasing the share of expenditures that is financed with own taxes also has the benefit of increasing fiscal responsibility by subnational officials, avoiding overspending by making them face the full costs of their decisions. Thus, this strand of the literature can also include those contributions that have emphasized the importance of a "hard" budget constraint to control the "tragedy of the commons" and inefficient expenditure decisions at the subnational level (Rodden, Eskel, and Litvack 2003).

The second strand of the literature, based on optimal taxation theory, has focused on deriving the optimal conditions for an efficient assignment of subnational revenue sources (Dahlby 2009; Dahlby and Wilson 1996; Smart 1998). These use the concept of the marginal cost of funds to characterize optimal distribution of equalization transfers among subnational governments.

In all, the first strand of the literature delivers useful principles and rules for tax assignments, but it falls short of fully informing the choice of optimal subnational tax structure. The second strand of research provides interesting insights about the optimal subnational revenue structure, but it does not directly discuss the tax assignment problem. Martinez-Vazquez and Sepulveda (2011) build on those two strands of the literature in an attempt to develop an integrated theory of tax assignments. For optimal taxation, the optimal solution to the revenue assignment problem is characterized by an identical marginal cost of public funds for all government units. In particular, the optimal mix of revenue sources can be seen as the solution to a classic multiplant problem, where the government uses several revenue sources, or "plants," in order to "produce" a certain amount of revenue at minimal cost. All revenue sources must be used, up to the point where the optimal marginal cost of public funds is reached.[5]

This framework allows the analysis of optimal revenue composition beyond own taxes to include nontax instruments, such as revenue sharing and other intergovernmental transfers. The role of each revenue type depends on its distinctive marginal cost function. Own-source revenues are costly for government authorities, so when their cost is equal to the optimal marginal cost of funds, this allows efficient autonomous decisions about the amounts of public services to deliver. In contrast, intergovernmental transfers (including revenue-sharing schemes) have, in principle, a negligible marginal cost for the local authorities. For this reason, they do not provide the information required for efficient expenditure decisions. However, they can play the important role of "shifting" the marginal cost function to the position at which the government authorities are faced with the optimal marginal cost of public funds when making decisions. For example, equalization grants (reducing fiscal disparities in expenditure needs and fiscal capacity) can help achieve not only a fairer but also a more efficient solution for public good provision. Martinez-Vazquez and Sepulveda (2011) also show that the gains in efficiency due to greater accountability justify a more intensive use of own-source revenues, and thus also a greater marginal cost of public funds.

Why, in Reality, Do Levels of Tax Autonomy Tend to Be Low?

Although decentralized systems in some developed countries have high levels of tax autonomy, in reality, especially among developing countries, significant taxing powers are rarely devolved to subnational governments at the onset of decentralization. From a political economic perspective, low subnational tax autonomy is an equilibrium outcome desired by the two main players involved. Central governments are reluctant to devolve taxing powers for fear of having to compete with local governments for the same tax bases and/or fear of losing control of fiscal policy. At the same time, subnational governments are reluctant to take on the responsibility of making politically unpopular decisions to raise their own taxes. Thus, using intergovernmental transfers to finance subnational government functions is most often the preferred solution for all the parties concerned.

Technical issues may also play a role. Low levels of revenue autonomy may be associated with low levels of administrative capacity in some subnational governments. Uneven administrative capacities could in theory be addressed via asymmetric tax assignments: providing more tax autonomy to larger subnational governments and letting smaller ones "grow into this role" over time. Because of their higher expenditure needs and generally higher administrative capacity, a good case

[5]The marginal cost of public funds captures the economic losses to society associated with raising additional revenues to finance government spending (Dahlby 2008). The concept of marginal costs of public funds includes the excess burdens of taxes, and it can be adapted to consider a wide range of possible determinants of revenue collections, such as political costs (as in Hettich and Winer 1984), administrative and compliance costs (as in Slemrod and Yitzhaki 1996), and mobility (as in Wildasin 1998). Thus it provides a great deal of generality to model both the normative and positive aspects of revenue collections.

can be made for an asymmetric assignment of tax sources to metropolitan areas. Asymmetric decentralization design is the exception rather than the rule, and more so in terms of tax authority.[6]

Implementing Revenue Assignments: What Form of Tax Autonomy?

Regardless of actual practice, it is unquestionable that a goal for revenue assignments should remain the granting of a high level of tax autonomy to subnational governments. In practice, the implementation of tax autonomy requires addressing two questions: (1) what type of revenue autonomy is desirable; and (2) what kind of tax instruments should be used to provide tax autonomy.

With respect to the form of tax autonomy, four dimensions have been identified in the literature: (1) who selects the taxes; (2) whether tax bases should be exclusive to each level of government or used by several levels; (3) which level of government should legislate on tax base and tax rate; and (4) what level of government should administer the tax (see Bird 2000b; Boadway 1997; McLure 1998; 2000; Musgrave 1983; Norregard 1997).

With respect to the selection of taxes, there are good reasons for some limits to the ability of subnational governments to introduce certain types of levies, such as in the case of the prohibition of internal tariffs for domestic trade in the U.S. Constitution. Two general approaches are followed: subnational governments can choose from either an open list of taxes, with general limits and restrictions, or a closed list of allowable taxes, determined at the national level. Even though a closed-list approach is more restrictive in terms of autonomy, it may be preferable because it can avoid the introduction of highly distortionary taxes, nuisance levies, and so on. The choice of approach is often specified in the constitution. Closed lists are used more frequently in unitary systems of government. Open lists are used in some federal systems, although a number of federal countries (e.g., India, Pakistan, and Switzerland) clearly delineate what taxes can be used at different levels of government.[7]

The second step is whether the base of specific taxes should be used exclusively by one level of government or simultaneously by several levels of government. Cohabitation has the advantage of providing subnational governments with more choices and meaningful sources of revenue, which may otherwise be monopolized by the central government. It has the disadvantage of introducing vertical tax externalities because one level will not typically take into account the impact its policies may have on the tax base and revenues of the other level of government (see Boadway, Marchand, and Vigneault 1998; Dahlby and Wilson 1996; 2003; Keen 1998). These externalities can be only partially addressed by intergovernmental grants or even by increasing the number of subnational governments (see, e.g., Boadway, Marchand, and Vigneault 1998; Dahlby 1996; Flowers 1988; Keen 1998). In the

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[6] See Bird and Ebel (2007) for the possibilities and problems associated with asymmetric fiscal decentralization design in a large number of countries.

[7] Where those choices have not been updated in many decades, such as in India and Pakistan, where the federal governments can tax services but only subnational governments can tax goods, this has led to significant difficulties in the implementation of functional value added taxes (VATs).

international experience, when an open-list approach is chosen, generally cohabitation of bases is allowed. In contrast, the selection of a closed list is often made precisely to eliminate cohabitation of tax bases. All things considered, it appears that a hybrid approach with a closed list allowing for the cohabitation of tax bases and using intergovernmental transfers to correct for vertical externalities may capture most advantages and avoid most problems.

The third step in the design of tax autonomy is to assign authority to legislate over the structure of the tax bases and tax rate levels. In general, autonomy to define tax bases is less desirable than autonomy to set tax rates.[8] Variations in the definition of the tax base, either exclusions, deductions, or credits, can lead to more complexity and higher compliance costs across jurisdictions. Autonomy to set tax rates is generally simpler to deal with for taxpayers and administrators in multijurisdiction settings. It is also more transparent in inducing political accountability of subnational officials.

One last dimension of tax autonomy considers which level of government should be charged with administering the various taxes. Although it has been often overlooked, this dimension is quite relevant to autonomy and accountability.

Tax Administration: Administrative Efficiency Versus Added Accountability

What is the most appropriate approach to organizing the vertical structure of tax administration? That a particular tax has been assigned at the local level does not necessarily mean that it should be administered at that level; under some circumstances, it may be more advantageous to have that tax centrally administered, with the subnational government still making the policy decisions of setting tax rates, and so forth.

What are the determinant factors that may make an approach (centralized versus decentralized) more or less optimal for any particular tax?[9] The international experience shows a variety of approaches to the organization and degree of decentralization in tax administration. Countries with considerable decentralized revenue authority may have highly centralized tax administration (e.g., Scandinavian countries), and countries with little decentralized tax autonomy may have highly decentralized tax administration (e.g., Germany). Outside those polar cases are situations with separate tax administrations (each level of government administers its own taxes) or mixed models (the central government administers some local taxes, and much less frequently, local governments administer some central taxes).

From a technical perspective, several factors affect the choice of centralized versus decentralized structure, including (1) economies of scale and scope, informational

[8] Autonomy can of course lead to tax competition among subnational governments (Wilson 1999), with both positive consequences, offering more choice to taxpayers and increasing accountability, and negative consequences, a "race to the bottom" and inefficiently low services. Tax competition can also lead to "horizontal" fiscal externalities, whereby the tax policies of one jurisdiction can affect the tax bases and revenues of other jurisdictions. These externalities can be corrected via intergovernmental grants (Arnott and Grieson 1981; Gordon 1983; Wildasin 1983; 1989).

[9] The literature on this issue is not large. See Ebel and Taliercio (2005), Martinez-Vazquez and Timofeev (2010), Mikesell (2007), and Vehorn and Ahmad (1997). Some of the discussion in this section builds on Martinez-Vazquez and Timofeev (2010).

externalities, and so on; (2) compliance costs due to nonuniformity of tax procedures; and (3) accountability to the residents. Political economy factors, such as opportunities for corruption and the creation or control of public employment, can also become relevant.

A supposed primary advantage of centralized tax administrations is the ability to operate with lower costs through a more efficient use of inputs because of economies of scale in production, greater specialization of staff, and more sophisticated uses of capital inputs, especially information technology systems. Nevertheless, some subnational jurisdictions may be large enough to realize at least some of the advantages related to economies of scale, and new developments in hardware and software have reduced the previous advantage of centralized information and processing systems. Unfortunately, so far, the available empirical evidence is still very scarce.[10]

Taxpayer compliance costs generally can be reduced more via centralized tax administration because of fewer offices to visit, less information to process, and so forth. However, decentralization may provide more proximity to subnational offices. Here again, the empirical evidence is scarce and fragmented, although some issues are rather apparent.[11]

On the other side of the balance, there is the basic question of whether a separate local tax administration regime can enhance the accountability of local officials to residents and taxpayers (Mikesell 2007) beyond the accountability that may exist when decentralized local taxes are collected by the central authorities but local government have an appropriate degree of policy discretion, in particular, control over tax rates (e.g., Bird, Burki, and Perry 2000). The particular mechanics of collection and enforcement of each tax are likely to make a big difference in this respect.

From a political economy perspective, subnational officials are sure to care about other issues, such as control of taxes and enforcement levels, assurance of the cash flow, obtaining and leveraging information on tax bases and collections, power over employment decisions, and opportunities to receive bribes or use this power for other kinds of self-benefit.[12] And there is the important question of incentives to collect the taxes of other administrations.[13]

Because of the different objectives that can be pursued, which can be weighted in different ways by decision makers, and because of the variety of political economy issues at play, a large variety of organizational models for tax administration in decentralized systems can be expected. This conjecture is fulfilled in reality. The

[10] Overall, that central tax administrations are always able to operate more efficiently should not be assumed. For example, Ebel and Taliercio (2005) report subnational tax administrations in East Asia that operate quite efficiently.

[11] As Vehorn and Ahmad (1997) point out, in the United States a big corporation typically has to file as many as 15,000 sales tax returns in any given year.

[12] This is highlighted in Casanegra de Jantscher's (1990) well-known dictum, "Tax administration *is* tax policy." There is some empirical evidence that the budget situation does affect tax administration effort (Esteller-Moré 2005; Toma and Toma 1986). There is evidence that more centralized collections can delay the flow of cash to local authorities (Bird, Wallich, and Peteri 1995; Mikesell 2007).

[13] Dillinger (1991, 29), for example, argues that the choice between centralized and decentralized tax administration was a choice between "indifference and incompetence."

international experience in the vertical organization of tax administration shows a large variety of models and practices.[14]

Although there is always some arbitrariness about which countries fall into each category, the international experience suggests four main models for the vertical structure of tax administration found in practice: (1) a single centralized tax authority enforcing all national and subnational taxes, which is the experience of Scandinavian countries and other countries, such as Russia and Belgium, and also common in more centralized unitary countries; (2) independent tax authorities at different levels of government, with varying degrees of cooperation, which is common in large federal countries, including Brazil and the United States; (3) fully decentralized tax authorities, with all taxes, both national and subnational, collected at the subnational level, which in practice is the rarest, with examples in Germany and Laos, and historically in the Soviet Union and China before 1994; and (4) mixed models of tax administration featuring variations of centralized and decentralized characteristics, which can be found in Canada, Spain, and Switzerland.

Which model fits better is likely to depend on the specific tax assignment in a country. Separate tax administrations, for example, will not be needed in the case of revenue sharing and piggyback arrangements.[15] Overall, there is a need for flexibility in setting an approach since the desirable level of decentralized administration will vary from tax to tax.[16]

From a purely administrative perspective, because of information externalities, cost structures, and skill levels required, such taxes as income taxes, a destination value added tax (VAT), customs duties, some natural resource taxes, and social security taxes may be more efficiently administered by central tax administrations, while excise taxes, property taxes, user charges, taxes on common natural resources, and so on, may be more efficiently administered at the subnational level (Rubinfeld 1983). A complementary way to arrive at this conclusion is that decentralized tax administration will tend to be more efficient, the less important cross-border transactions are in the tax base (Boadway, Roberts, and Shah 1994). In multilevel tax administration settings, there is ample room for coordination, especially in the areas of taxpayer information and audits. However, generally, less coordination takes place than is desirable (for a review, see Martinez-Vazquez and Timofeev 2010).

What Tax Instruments Are Best Suited for Subnational Governments?

Beyond financing the provision of public services, taxes can also be used as policy instruments to achieve other government objectives, such as income redistribution or macroeconomic stability. Since Musgrave's (1959) seminal contribution, there is

[14] The information on individual country cases is drawn from Martinez-Vazquez and Timofeev (2005), Mikesell (2007), and Vehorn and Ahmad (1997), as well as other sources cited throughout this section.

[15] There are examples of upward collection of shared taxes, but in most cases they represent a response to political circumstances rather than of technical nature, such as separatist threats and historical rights in Italy and Spain; constitutional tax sovereignty in Canada, Germany, and Switzerland; and political transformations in China and Russia. In all cases, there have been important incentive issues. But the international experience also shows that the centralized administration of shared taxes is not free from incentive, information sharing, or cash flow issues.

[16] A good example of flexibility in the vertical structure of tax administration is presented by Canada's Revenue Agency, which collects some provincial and territorial sales, corporate income, and individual income taxes, but not for all provinces and not necessarily in the same way for a given tax in all provinces.

wide consensus that these other objectives are better pursued by central governments alone. At the subnational level, the focus needs to be on allocative efficiency (how to best use the resources available to provide goods and services assigned to local governments) in attempting to apply the benefit principle.[17]

Besides the suitability of particular taxes to approximate the benefit principle, there are several properties for all taxes that are also desirable at the subnational level: (1) buoyancy, with revenues changing roughly in proportion to the economic base; (2) horizontal equity, providing equal treatment to taxpayers in similar circumstances; (3) relative efficiency, causing low distortions in economic activity; (4) relatively low administration and compliance costs; and (5) political acceptability.

In addition, several other properties are desirable for subnational taxes, which make them more adaptable to the benefit principle (see, e.g., McLure 1998). They should be geographically neutral in the sense of not distorting the location of economic activity, not interfering with domestic or international commerce, and not being exportable so that the burden is not borne by residents of other jurisdictions, unless matched by benefits to nonresidents.[18] They should also have tax bases that are evenly distributed across jurisdictions, relatively immobile, and relatively stable over the business cycle; be highly visible and transparent to increase accountability; and be administratively feasible.

The typically fragmented structure of metro areas may impose additional constraints in the assignment of revenue sources. For one, tax base competition among the different jurisdictions in the metro area is likely to limit the choices of taxes (on capital and labor income) with highly mobile bases within the metro area. However, quite different equilibriums are possible in tax competition, and some of those taxes may be used, although at rates that are lower and more uniform than may be optimal. Nevertheless, differences in rates and taxes may be expected within fragmented metropolitan areas if jurisdictions can justify them to taxpayers as benefit taxes. For this reason, a more intense utilization of well-defined user charges and fees within fragmented metropolitan areas is expected.

Selecting Tax Instruments for Assignment at the Subnational Level

Few revenue sources fulfill all the desirable properties, and a compromise is generally needed. The criteria reviewed above, at the least, allow us to select among better local tax assignments.

Charges and Fees

There is ample consensus that user charges and fees are the most appropriate source of revenue for local governments, fitting perfectly within the benefit principle

[17] But as Bahl and Linn (1992) argued, the distributive impact of local taxes (and expenditures), of course, still would need to be explicitly considered as part of the overall assessment of the distributive impact of the public sector and in the national fiscal policy design.

[18] Tax exporting is generally undesirable because it can lead to an overexpansion of the public sector and to inequities in the distribution of tax burdens. In contrast, the expansion effect may help compensate for the underprovision of public services from several causes, including the lack of good tax handles, tax competition across jurisdictions, public goods problems, or deficits where user charges are used for financing.

(Musgrave 1983; Oates 1972). A considerable array of services are amenable to being financed with user charges and fees, including water and sewerage, electricity, parking, garbage collection, urban transportation and road use, kindergarten and residential care for the elderly, museums, parks, and sport facilities. Other services, such as health and education, can be partially financed with user fees. In addition, user fees can be charged to cover the public costs of registration and monitoring for a wide range of activities, including business establishment, real estate titling and registration, and driving permits. Betterment levies, paid up front by developers and owners for local infrastructure improvements, such as sidewalks, lighting, additional road construction, and water and sewerage access, can be considered a variation of user fees.

Besides the economic efficiency advantages of benefit charges, from a political economy perspective they also offer the advantage of not directly competing for any tax base with central governments, so central authorities tend to be much more generous in granting autonomy to subnational governments to set charges and fees.[19] One disadvantage is that they may be perceived as unfair to the poorer groups, and on this basis, often fees and charges for excludable services, such as water and sewerage, in developing countries are set below full cost recovery for service provision. However, in essence, to consider user charges regressive is tantamount to considering food prices or other private commodities regressive. Income redistribution and equity are, of course, important objectives of any public finance system, but they are better pursued by other levels of government through more appropriately targeted policies. Maintaining user prices at too low a level leads to waste of the resources and unnecessary subsidies for higher-income residents and squanders one of the few good sources of revenue for local governments.

User charges and fees tend to represent significant shares of total revenues in the city budgets of developed countries.[20] However, they tend to represent a much smaller share of total city revenues in developing countries. However, there are some important exceptions; for example, user charges and fees represent more than one-third of total revenues in Cape Town.

However, it is not generally feasible to finance all local services with user charges. Sometimes it is not possible to identify the users; other times it becomes too

[19] With price or benefit charges, which exclude from consumption those that do not pay, local government providers can set the charge at the marginal cost of provision. Given that there is a "voluntary exchange," users will utilize the service to the point where their marginal willingness to pay for the service is equal to the price or benefit charge. Direct pricing of these services allows local authorities to get the necessary information on supply capacity at the same time it rations user demand for the services. Besides using the marginal cost of provision, which can be hard to quantify and can lead to financial losses when marginal costs are below average costs, there are several other pricing options. These include average cost pricing, going-rate charges adapting to the user's demand elasticity, and multipart tariffs consisting, for example, of a fixed charge to cover fixed infrastructure costs and an additional charge for using the facility. The choice of pricing method depends on the nature of the service and the type of infrastructure that is needed to deliver the service, and the administrative feasibility of the different pricing options. This latter can be significantly affected by technological innovations; for example, nowadays it is entirely feasible to charge electronically varying fees for the use of highways, depending on the degree of road congestion during the day. Even though the pricing of many public services is generally not complicated, in some circumstances it can become a difficult issue. See Bos (1987) and Weare and Friedman (1998) for further discussion of the issues.

[20] In the United States, local user fees and charges represent one-fourth of own-source revenues (35 percent when local public utilities are included). Canadian local governments similarly raise one-fourth of their own-source revenues from user fees and charges (Fox and Slack 2010). See also Bahl (2011).

expensive to charge the fee or to exclude those that do not pay from using the service.[21] In these cases, services need to be financed through taxes. And ideally, many of these taxes are "benefit taxes," designed so that those that pay are the same as those receiving the benefits from the public services. For example, the value or size of a residential property may be seen as a proxy for the benefits received by residents from street improvements; in this case, a property tax acts as a user charge.

Better Choices of Local Taxes

PROPERTY TAXES AND BETTERMENT LEVIES

There is ample consensus in the public finance literature that property taxes and betterment levies are closest to being benefit taxes, entirely appropriate for local government financing. Because property taxes are analyzed in chapter 7, they are not further addressed here.

VEHICLE AND TRANSPORTATION TAXES

These are generally an attractive form of local taxation because of the strong link between the ownership of vehicles, on the one hand, and the use of local services and infrastructure (particularly roads), on the other. In addition, vehicle and transportation taxes offer the advantage of being "green" taxes, with the double dividend of reducing negative externalities associated with traffic congestion and air pollution in the local area. These are also revenue elastic, relatively stable, and nonexportable taxes.[22] On the down side, owners will tend to register their cars where it is cheapest, and generally it may be difficult to prevent this from happening through ordinary enforcement measures. Motor vehicle taxes remain underutilized relative to the potential and the "goodness" of a tax handle that they represent, especially in developing countries.

LOCAL BUSINESS TAXES

Business taxes and business license fees are justified levies at the subnational level as an indirect but administratively easier way to tax income of business owners but acting as a benefit tax for the services and infrastructure provided by subnational governments.[23]

These levies range from several forms of broad-based taxes to operation licenses and charges. Broad-based levies that are neutral toward the factor mix in production are most desirable, as in the case of the origin-based business value tax (BVT) discussed in Bird (2003).[24] The closest example to a BVT in practice was Italy's

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[21] In fact, service charges are often collected more like a tax than a market price; for example, charges for garbage collection are collected through the property tax.

[22] Some of those properties also make them attractive to central governments; in some developing countries, vehicle taxes are wrongly assigned at the central level.

[23] The term *business tax* may be confusing because businesses are also taxed with more general taxes on income and profits and on sales. The term is typically used in the more restricted sense of rough or approximated taxes on business entities.

[24] The base of the BVT would resemble that of the VAT, although, in contrast to the destination-based VAT, the BVT would be origin based, therefore taxing exports (and not imports). This better serves as proxy for the benefits businesses receive from subnational government services accruing at the place of production (not consumption).

regional business tax (*imposta regionala sulle activita produttive*, known as the IRAP) prior to the elimination of payroll from the tax base in 2003.[25] More often, different types of business license levies vary by type, size, or location of the business. For example, some South American countries have used taxes on "industry and commerce," and Nairobi and other local governments in Kenya have used a form of this tax, the single business permit, since 1999.

EXCISES AND SALES TAXES

Subject to the constraints imposed by the size of the jurisdiction and cross-border trade and smuggling, excise taxes have potential as piggyback taxes or special taxes at the subnational level. The extent to which excise piggyback surtaxes can be used at the local level depends on the size of the jurisdiction, the technology of product distribution, and points of sales. Excises tend to be more politically acceptable, can be easily administered in coordination with national wholesalers as withholding agents, and allow for rates differentiated by jurisdiction. Moreover, the benefit principle accords well with the assignment of (destination-based) excises on alcohol and tobacco to the subnational level (to the extent that the latter is responsible for health care) and on vehicles and fuel (to the extent of subnational government involvement in road construction and maintenance).

Another attractive form of excise at the subnational level is taxation of public utility services. There is significant revenue potential in some of these services, as in the case of electricity and phone services. Excises on public utility services can fit the benefit principle well because electricity and phone service consumption tend to be good proxies for local public services use by households and businesses. Compared with other commodities, taxation of public utilities would be associated with relatively low distortions because of low price elasticity of demand. Their relatively high income elasticity tends to yield revenue buoyancy and some elements of progressivity (Linn 1983).

Final retail sales taxes can also provide an elastic and high-yield source of revenue for local governments. However, final retail taxes, as opposed to the distortionary general turnover sales taxes, which are not recommendable, can be difficult to implement. More generally, local retail sales taxes can conflict and complicate the operation of the central VAT, which with some few exceptions most countries in the world have adopted.

FLAT-RATE PIGGYBACK INCOME TAXES AND OTHER INCOME TAXES

There is wide consensus that progressive income taxes are best assigned at the central level, because given the mobility of taxpayers, the goal of income redistribution is best pursued by the central government. Another reason for this assignment is

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Also, in contrast to the typical VAT calculated by the credit method (the tax on gross receipts minus the tax paid on intermediate goods and services), the BVT would be calculated by adding payroll, interest, rents, and net profits on the basis of annual accounts.

[25] The IRAP was origin based and was actually calculated by a subtraction method (sales minus the sum of material purchases and depreciation). It is centrally administered, and the regions have discretion on rates. Despite its many good features, this has proven to be quite unpopular with taxpayers. See Keen (2003).

that progressive income taxes tend to act as automatic economic stabilizers, and macroeconomic stabilization should primarily be a responsibility of the central government.

However, there are several possibilities for the taxation of individual income by subnational governments. The most commonly used form of subnational income taxation internationally is a flat-rate income tax as a surtax or "piggyback" tax on the base (not the tax liability) of the central government individual income tax. This type of tax is almost always collected by the central government administration and the revenues allocated to subnational governments on a derivation basis.[26] To enhance revenue autonomy, local governments are allowed discretion in setting the flat rate, often between centrally legislated minimum and maximum rates.[27] A flat rate local piggyback income tax easily satisfies the benefit principle, and being quite visible, it promotes political responsibility and accountability at the subnational level. This is also an elastic source of revenue.

Another form of income taxation is a payroll tax, as in the case of Mexico City, or, in a wider form, a tax on labor income. However, payroll taxes have the drawback of being potentially more distortionary. Subnational payroll taxes can yield high revenues even at low rates and are not difficult to administer. In particular, payroll taxes may be easier to administer and enforce than general income piggyback taxes in some developing countries with less advanced tax administrations. However, they tend to distort optimal factor composition in production and also discourage employment in the formal sector, an issue of high importance in most developing countries. The tax base of payroll taxes can be quite mobile, especially if they are not applied in a metrowide area. This is also a tax base carefully protected and already highly taxed by most central governments in the form of social security taxes (see Bird 2000a).

NATURAL RESOURCE TAXES (WHEN RESOURCES ARE EVENLY DISTRIBUTED)

There is at least a partial link between taxes on natural resource extraction and the benefit principle at the local level.[28] Extraction activities use local infrastructure (e.g., roads), place stress on other local infrastructure (temporary worker camps, health facilities, etc.), and pollute the environment. But there are also arguments against the local taxation of natural resources. When economically significant resources (e.g., petroleum) are geographically concentrated, which is usually the case, local taxation could cause extensive horizontal fiscal imbalances, inefficient population migration and location of businesses, and internal conflict. Also, given the high volatility of world commodity prices, the yield of natural resource

[26] Generally speaking, a local income tax should be levied at the place of residence because that is where most taxpayers consume subnational government services. However, because of administrative convenience, subnational piggyback taxes are often withheld at the place of work by employees. Despite this, it is often quite feasible to distribute the funds according to where workers reside.

[27] Other, less desirable, forms of tax autonomy are practiced, such as modifying tax bases by providing additional deductions, exemptions, and so on.

[28] There has been growing interest in the fiscal decentralization literature in the pros and cons of the assignment of natural resource revenues to subnational governments. See, for example, Bahl and Tumennasan (2004) and McLure (1996).

taxes can be highly unstable and thus not appropriate for local governments.[29] Overall, however, natural resource taxes are generally less relevant to metropolitan areas.

More Controversial Choices for Subnational Taxes

As noted above, the theory of tax assignment is also helpful in identifying those taxes that will not be good choices for assignment at the subnational level. As just remarked, a progressive individual income tax is not recommendable at the subnational level. Another tax that is ill-equipped for application at the subnational level is the corporate income tax or profit tax. Some of the reasons, for example, its role in income redistribution and macroeconomic stabilization, are identical to those of the progressive individual income tax. In addition, it is unlikely that incorporated businesses benefit more from public services than unincorporated ones or that the benefits received vary with profits. At an operational level, it is extremely difficult to apportion the profits of enterprises across subnational jurisdictions where they operate.[30]

The VAT is also generally thought to be a poor choice for assignment to the subnational level. Since the debiting and crediting of the VAT are likely to take place in different jurisdictions, the apportionment of revenues is arbitrary, generally favoring the location of headquarters. The problem has been thought to be that there is no good way to handle the issue of interjurisdictional trade. These difficulties may be aggravated with autonomy to introduce differentiated tax rates.[31] Nevertheless, more recently, developments at the theoretical level and in practice have demonstrated that subnational VATs on a destination basis using the invoice-credit method are feasible, provided the central government levies a VAT.[32]

There are also some directly outright bad choices of taxes. This list would include the *octroi*, a local border tax still used in Mumbai, and general turnover sales taxes, as in the case of Bogotá and Manila. Because these taxes tend to produce significant revenues, they are very difficult to eliminate once they are introduced. This may explain the endurance of the octroi in India despite all the economists' lamentations on their impact on the local economies.

[29] In Peru, the "canon," a local sharing in natural resource taxes, is a sharp example of this type of issue; similar situations exist in Indonesia, Nigeria, and Russia.

[30] To this end, some countries use apportionment formulas, for example, a weighted index combining the geographical location of workers, assets, or sales. At the end, the allocation of profits remains somewhat arbitrary. In some cases, if not correctly performed, the apportionment of taxes tends to benefit the jurisdiction where the business headquarters are located.

[31] However, it is perfectly feasible to share VAT revenues with subnational jurisdictions using a formula; for example, the VAT can be shared on the basis of population (as in Germany and Belarus) or on the basis of the regional shares in aggregate consumption (as in Canada's maritime provinces, Japan, or Spain). But, of course, tax sharing does not allow revenue autonomy among subnational governments. The Canadian harmonized sales tax may no longer deserve to be called tax sharing, because since 2010 individual provinces can choose their tax rate.

[32] See Bahl et al. (2005), Bird and Gendron (1998; 2001), Keen (2000), Keen and Smith (1996), McLure (2006; 2010), and Varsano (1995; 1999). See also Martinez-Vazquez (2008) for a discussion of this literature and the experiences of Brazil, Canada, and India with subnational VATs.

The Practice with Urban Nonproperty Taxes on a Global Scale

The international experience with revenue assignments shows great diversity of approaches.

Tax Assignments for Capital Cities

In the practice of tax assignments, it is interesting to note that, in general, capital cities get no special taxes for their special status. If there is any special financial treatment, it is generally in the form of transfers. However, the important exception is for those capital cities that also enjoy the status of regional (intermediate) level of government (e.g., Beijing, Moscow, Tokyo, and Seoul), in which case the tax assignments to regional/provincial governments also apply to the cities.[33]

Actual Practice with (Nonproperty) Tax Assignment in Large Cities

Very little systematic information is available on the actual assignment of (nonproperty) taxes in urban areas around the globe. The information reported here was gathered on a piecemeal basis from a very long list of diverse sources. The review of practices focused on big urban areas and large cities in a large number of developing and developed countries. Table 8.1 lists the large urban areas surveyed, classified as belonging to high-, middle-, and low-income countries. Table 8.2 lists examples of cities in large metropolitan areas, in developing and developed countries, that use the different taxes, both good and more problematic choices, discussed above. On the list of "good choice taxes" are numerous examples in developing and developed countries. However, the particular structure of these taxes can often fail to be desirable. For example, in some cases sales taxes take the form of gross receipt cascading taxes (e.g., Buenos Aires); in other cases, instead of individual income taxes, potentially distorting payroll taxes are used (e.g., Mexico City).

The category of "business tax" is frequently used and takes a variety of forms, such as business licenses to operate and levies based on turnover (e.g., gross receipts), or net income, and they receive a variety of names. In the case of Chinese cities, there is both a local business levy, in the form of a gross receipts tax, and a corporate income tax on locally owned enterprises. In the case of German cities, the business tax is called the *trade tax* and is determined by deducting a tax-exempt amount from trading profits and multiplying it by a tax assessment figure, which is usually 5 percent and fixed by a federal law. This amount, known as the tax assessment amount, is then multiplied by the respective municipal tax rate, which has been slowly growing and is close to 500 percent. In the case of Budapest, the business tax is based on sales revenue net of the cost of goods sold, including

[33] Sometimes it becomes difficult to differentiate between metropolitan/city governments and regional governments because both take the same name, as in the case of Madrid or Moscow. But while there is no difference between the city and regional government in the case of Moscow, in the case of Madrid they are entirely disconnected, with the regional government providing services to many other municipalities in the region besides the city of Madrid.

TABLE 8.1
Metropolitan areas surveyed, by income level

Category*	Cities reviewed
High income	Barcelona
	Berlin
	Birmingham (U.K.)
	Chicago
	Frankfurt
	London
	Los Angeles
	Madrid
	Montreal
	New York
	Paris
	Rome
	Seoul
	Tokyo
	Toronto
	Vancouver
Middle income	Bangkok
	Beijing
	Bogotá
	Buenos Aires
	Cape Town
	Guangzhou
	Istanbul
	Johannesburg
	Lima
	Mexico City
	Moscow
	Rio de Janeiro
	Santiago de Chile
	São Paulo
	Shanghai
Low income	Cairo
	Dar es Salaam
	Delhi
	Jakarta
	Kiev
	Kolkata
	Lagos
	Manila
	Mumbai
	Nairobi

*The high-income group corresponds to the high-income Organisation of Economic Co-operation and Development member and nonmember countries. Middle income corresponds to the upper-middle-income classification. Low income corresponds to lower-middle- and low-income groups from the World Bank country classification.

TABLE 8.2

Main types of taxes, with example cities by income level

Tax	High income	Middle income	Low income
Good tax choices			
Business tax	Berlin, Chicago, Frankfurt,[1] Los Angeles, Lyon, New York, Seoul, Tokyo	Bangkok, Beijing,[2] Budapest, Guangzhou, Shanghai	Dar es Salaam
Individual income and payroll taxes	Cleveland, Copenhagen, Milan, New York, Paris, Rome, Stockholm, Zagreb	Beijing, Bucharest, Budapest, Guangzhou, Mexico City,[3] Moscow, Riga, Shanghai	Dar es Salaam, Lagos
Sales tax	Barcelona, Chicago, Los Angeles, Madrid, New York	Bogotá, Buenos Aires, Rio de Janeiro, São Paulo[4]	Manila[5]
Vehicle tax	Barcelona, Chicago, Los Angeles, Madrid, New York, Seoul, Tokyo, Toronto	Bangkok, Beijing, Bogotá, Budapest, Buenos Aires, Guanzhou, Lima, Mexico City, Santiago, Shanghai	Delhi
Transportation tax	Chicago, New York, Paris, Rome, Seoul		Cairo, Jakarta
Excise taxes			
Alcohol tax	Frankfurt		
Electricity tax	Chicago, Los Angeles, Milan, Rome	Cape Town, Istanbul, Johannesburg	Delhi, Jakarta
General excise tax	Berlin, Chicago, New York, Seoul, Tokyo	Bangkok, Beijing, Guangzhou, Moscow, Shanghai	Dar es Salaam, Jakarta
Gasoline tax	Chicago, Montreal, New York, Lyon, Tokyo	Istanbul,[6] Lima, Rio de Janeiro, São Paulo	
Green tax	New York, Paris, Seoul		
Telecommunications tax	Chicago		

Possibly bad choices			
Corporate income tax	Geneva,[7] Lisbon, New York, St. Louis, Tokyo[8]	Moscow[9]	
VAT	Seoul[10]	Bangkok, Moscow[11]	
Miscellaneous[12]			
Amusement tax	Chicago, New York, Seoul, Tokyo	Istanbul, Lima	Cairo, Jakarta
Advertisement tax		Bangkok, Istanbul	Jakarta, Kiev, Manila
Financial tax[13]	New York[14]		Dar es Salaam, Lagos
Fire insurance tax		Istanbul	
Gambling tax	Chicago, New York	Bangkok, Lima	
Construction tax	Barcelona, Madrid, Milan, Montreal	Beijing, Bogotá, Buenos Aires (metro)	
Natural resource tax		Beijing, Guanzhou, Shanghai	Manila[15]
Slaughter tax	Seoul	Bangkok, Beijing, Guanzhou, Shanghai	
Stamp tax		Beijing, Budapest, Guangzhou, Shanghai	
Inheritance and wealth tax	Paris	Beijing, Guangzhou, Shanghai	

The high-income group corresponds to the high-income Organisation of Economic Co-operation and Development member and nonmember countries. Middle income corresponds to upper-middle-income classification. Low income corresponds to lower-middle- and low-income groups from the World Bank country classification.

[1] In Germany this is called the trade tax. [2] Chinese cities levy local business taxes in the form of gross receipts taxes and corporate income taxes on any locally owned enterprise.[3] This is a payroll (wage) tax. [4] For both Brazilian cities it is a tax on services (ISS). [5] For Bogotá and Manila these are gross receipts taxes. [6] Istanbul charges the "environmental sanitation tax" as a sales tax on gasoline. [7] New York City has revenue and administration autonomy over its budget, but all tax laws are passed at the state level. The corporate enterprise tax is levied as a "corporate inhabitant tax" on corporations having offices or business establishments located within the Tokyo metropolitan prefecture. Both Geneva and Lisbon have a surcharge on the central corporate income tax. [8] The Corporate Enterprise tax is levied as a "corporate inhabitant tax" on corporations having offices or business establishments located within the Tokyo Metropolitan Prefecture. [9] Moscow acts as city and regional government and is allowed to set a surtax on the corporate income tax. [10] Seoul charges a surtax on top of the national VAT. [11] Moscow has a VAT surcharge because it is also a regional government (subject of the federation). [12] Some of these taxes, such as the stamp tax, could also be classified among the "bad "taxes above. [13] In Lagos there is a withholding tax on interest generated by savings. In New York City, however, this is an additional business tax on banks operating within the city. A bank pays an extra percentage of taxes on profits earned while operating in New York City. [14] New York City levies separately a business tax on insurance companies of 2 percent. [15] Tax on sand, gravel, and other quarry resources: tax is levied on extractors of listed resources within the territory of jurisdiction, with a limit of 10 percent of fair market value in the locality per cubic meter of resource. The revenue has to be shared with *barangays* (the equivalent of boroughs) where the resource is extracted (at 40 percent).

SOURCE: Compiled by the authors from various data sources listed in the references.

the costs of materials. The business tax in Seoul is based on the size of real estate property and number of employees, and in Tokyo it varies by the type of business.

Individual income taxes are also present as assigned sources of revenues in a number of cities in both developed and developing countries, but it is not as common as may be desirable. Sometimes this tax takes the form of a surcharge (piggyback) on state or national taxes. New York City, for example, charges a percentage above the existing state income tax being collected from the residents of the five New York City boroughs; Rome and Milan charge an extra 5 percent onto the national personal income tax. Similar taxes are uses in Moscow and Lagos. In Mexico City, a separate payroll tax is levied on residents. In Dar es Salaam, there is a 10 percent income tax on interest earned by residents.

Sales taxes are typically levied at the retail level (Chicago or Los Angeles). However, in Buenos Aires a gross receipts sales tax is added on the national VAT. Similarly, in Rio de Janeiro and São Paulo there is a gross receipts tax on services. Under "excise taxes," the international practice includes general excise taxes with levies on the usual variety of excisable commodities, but also on specific goods only, such as alcoholic beverages (Frankfurt) or gasoline (e.g., Istanbul and Lima), or specific services such as electricity (e.g., Cape Town, Delhi, and Jakarta) and phone services (Chicago). Green taxes are pollution charges taking many forms, including carbon emission taxes or taxes on businesses that generate pollution.[34] For example, in Seoul the tax is paid by any business "exploiting natural resources." In some cases, the green tax is just an excise, as is the case with Istanbul, where the "environmental sanitation tax" is a sales tax on gasoline.

Many cities, especially in developed countries, have also been assigned the motor "vehicle tax." For example, in the cases of Barcelona, Budapest, Istanbul, and Madrid, city governments tax the ownership of vehicles by residents based on the value of the vehicle. In Toronto, the personal vehicle tax is a levy on residents of the city who own or lease a personal vehicle, paid when they renew their vehicle license plate validation. Tokyo charges a tax on the purchase of a vehicle, called the *automobile acquisition tax*. Seoul charges an automobile tax paid by owners of cars based on their use and their capacity. Shanghai, Guanzhou, and Beijing all levy the local level vehicle and vassal utilization tax, which is a tax based on the use of vehicles. A number of metropolitan areas levy a variety of "transportation taxes," with the proceeds earmarked for the development of transportation infrastructure; for example, Chicago levies a tax on taxi operators based on each cab and its capacity, and in Jakarta it takes on the form of a public transportation tax.

There are some other miscellaneous taxes, many of which have been assigned to urban centers around the world. These are taxes that generally offer a good tax handle and that can at times be interpreted as benefit charges, although they generally do not represent much revenue. For example, "financial taxes" take different forms; in Lagos this is a withholding tax on interest generated by savings accounts, but in New York City this is an extra business (profit) tax on banks operating

[34] Special taxes on businesses that generate pollution can be difficult to implement. For example, a local cap-and-trade policy is very unlikely to work since an origin-based tax would be anticompetitive and a destination-based tax would be impossible to implement.

within the city. New York also charges an additional 2 percent profit tax on insurance companies operating in the city. Istanbul has a tax on fire insurance premiums. "Gambling taxes" also take different forms: in New York the tax is a percentage of winnings; in Lima, a percentage of the original bet; in Chicago, an off-track betting tax; and in Bangkok, a surcharge on top of the VAT being charged on horse-racing bets. "Construction taxes" can take the form of permits to build but also tax the costs of construction. "Hotel taxes" generally take the form of an added sales tax on the hotel bill. "Advertisement taxes" and "amusement taxes" are charged on the use of sign boards and the like and on admission to amusement parks, respectively. "Natural resource taxes" are charged on extraction activities, such as quarries. "Inheritance taxes" are applied in Chinese cities and in Paris, and the "stamp tax" and "slaughter tax" are also applied in Chinese cities.

On the list of "possibly bad choices" of local taxes, the assignment of the corporate income tax at the local level is rare. Moscow is allowed to use a surtax on the national corporate income tax in its role as a regional government as opposed to a city government. In the cases of Tokyo, Lisbon, Geneva, and St. Louis, the city governments also have a surcharge on the central corporate income tax. The assignment of the VAT at the local level is even rarer. Three cities, Bangkok, Moscow, and Seoul, have their own surtax on the national VAT.

Overall, the survey of actual practice in the sample of cities shows a wider use of "good choice" taxes in developed countries than in developing countries. The reason that more developing countries do not use good choices of local taxes, such as individual income taxes, business taxes, or even vehicle taxes, has a lot to do with political economy issues. Most important seems to be the reluctance of the central authorities to share or cohabitate productive and elastic tax bases with subnational governments. Even though there are some issues with administrative capacity, this seems to be less valid for large urban centers and cities, where that capacity is likely to be present.[35] And in any case, piggybacking on central taxes or allowing for the central administration of local taxes can generally overcome capacity issues related to administration and enforcement.

Information on tax structure is scarce, and whatever is available is challenging to summarize in any reasonable way.[36] Information on actual collections for the surveyed cities can be even harder to collect. Table 8.3 presents tax structures for nine cities for the most recent year available. Note that even the reporting of taxes for these cities does not coincide in all cases with a strict definition of own taxes. Nevertheless, even a small cross section of cities shows considerable diversity in the number and relative importance of local taxes being used. The tax structures differ in the level of diversification of tax sources. For example, Chicago relies on a dozen different tax sources, each yielding some sizable revenues. By comparison, Lima relies only on two own-tax sources: property taxes and vehicle taxes. The property tax is important in cities like Barcelona or Delhi, but it is not as important in Tokyo, Buenos Aires, or Beijing. The individual income tax is the most important tax source

[35] But note also that there is a marked reluctance everywhere, in both developing and developed countries, for using asymmetric tax assignments, for example, by providing large cities with additional tax sources over those assigned to all local governments regardless of size and capacity.

[36] These data are not shown here, for space reasons, but are available from the author on request.

TABLE 8.3

Distribution of tax revenues for select cities, for the most recent year available (percent)

Tax	Barcelona (2009)	Beijing (2009)	Buenos Aires (2007)	Cape Town (2009)	Chicago (2009)	Delhi (2010)	Lima (2010)	São Paulo (2010)	Tokyo (2008)
Property tax	64.72	8.11	8.97	31.82	39.34	88.79	58.75	38.16	18.95
Sales tax	11.80	39.32			8.45			53.86	
Vehicle tax	8.58	0.57	8.72				22.58		2.01
Construction tax	2.88	3.72							
Resource tax									
VAT share	12.02	9.39	78.47						
State income tax share					8.18				
State sales tax share					9.62				
Individual income tax		9.29						6.56	42.36
Corporate income tax		22.49							23.92
Stamp tax		1.68	3.84						
Deed tax		5.39							
Utilities tax				68.18	8.32	11.20			
Transportation tax					3.98				
Advertisement tax						0.01			
Amusement tax					3.31				
Excise tax					2.70		8.25		5.60
Gambling tax							7.90		
Hotel tax					2.03				
Gasoline tax					6.67				
Telecommunication tax					5.96				
Other tax					1.03		2.52	1.42	7.15

SOURCE: Compiled by the authors from various data sources listed in the references.

in Tokyo, whereas for São Paulo the sales tax represents more than half of all tax revenues.

In the end, what score should be given to the actual practice in tax assignments in the group of large cities surveyed in this chapter? Table 8.4 attempts this, indicating the high, medium, and low potential of each tax in supporting a set of desirable characteristics, such as revenue potential, ability to fit the benefit principle, and nonexportability.[37] With some caveats, the scores presented in table 8.4 can work as a guideline for policy makers interested in identifying desirable traits in a long list of potential taxes that are used in the international practice to provide large cities with tax autonomy. Those taxes dubbed "good choices" expectedly tend to score higher, with more of the desirable properties. But it is obvious from table 8.4 that there are no perfect choices. The caveats in reading table 8.4 include, first, the fact that not all sales taxes, income taxes, or business taxes assigned at the local level are created equal. Better and, indeed, worse choices can be made for tax structure within each of those categories, and those choices need to be an important part of the selection process. The scores provided in table 8.4 are those that would correspond with the more desirable structures of each tax. The second important caveat is that there is no scientific way to assign the scores; rather, they represent one out of several possible interpretations.

Summary and Conclusions

Effective fiscal decentralization requires meaningful levels of revenue autonomy at the subnational level. Efficient spending decisions at the local level require that decision makers face the true marginal cost of funds. Besides providing revenue sufficiency, tax autonomy brings political accountability and higher fiscal responsibility (hard budget constraints) at the subnational level.

This chapter has focused on the current theory and practice of nonproperty tax assignments to local urban governments in developing and developed countries. The good news is that examples of best practices with economically attractive tax sources other than the property tax are not scarce and that providing adequate revenue autonomy is not a complex issue since it involves simply the power to set tax rates along with the availability of adequate tax handles. The bad news is that a large number of urban governments in developing countries, and also in many developed countries, have failed to adopt those best practices and continue to struggle with adequately financing their growing expenditure needs.

Meaningful subnational revenue autonomy typically requires the cohabitation of productive tax bases with the central government and discretion to set tax rates for taxes selected from a closed list. Subnational administration of subnational taxes can be desirable to enhance accountability, but some flexibility is desirable to allow centralized tax administration to take advantage of economies of scale in management and information.

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[37] The list of desirable and relevant characteristics is by no means limited to those in table 8.4. For example, to get revenue assignments right, it may be important to pay close attention to the "starting points," including the tax culture, history, and the fiscal architecture of the country.

TABLE 8.4
Advantages and disadvantages of observed local taxes (excluding property taxes)

Tax	Revenue potential	Buoyancy-elasticity potential	Mobility of tax base	Potential efficiency costs	Sensitivity to cycles	Adaptability to the benefit principle	Even distribution of tax base
Good choices							
Business tax	M		M/H	M/H	H		L
Individual income and payroll taxes	H	H	L/M	M/H*	M/H	H	L
Sales tax (excluding gross receipts taxes)	H	H	L	L/M	M/H	M/H	H
Vehicle tax	L/M	M	L/M	L	L	M	M/H
Construction tax	M	M/H	L	M/H	H	M/H	M
Transportation tax	L	L/M	L	M	L/M	M/H	L
Excise taxes							
Alcohol tax	L	M/H	L	L	M	M	H
Electricity tax	L/M	H	L	L/M	M	H	M/H
General excise tax	L/M	M/H	M/H	M/H	M	M/H	L
Gasoline tax	M	H	M/H	M	M/H	H	M/H
Green tax	L	M	L/M	L	M	M/H	L/M
Telecommunications tax	L/M	H	L	M	M	M/H	M
Possibly bad choices							
Corporate income tax	M/H	H	H	H	H	L	L
VAT	H	H	M	M	H	M/H	L
Miscellaneous							
Advertisement tax	L	M	L	L	M	M	L
Amusement tax	L	M	M	M	H	M/H	L
Financial tax	H		M	H	H		L
Gambling tax	L	H	H	L	M	L/M	L
Hotel tax	L	H	M	M	H	H	L
Insurance tax	L	M	L	M	L	M	L
Natural resource tax	L	H	L	M	M	M/H	L
Stamp tax	L/M		M	H	M		L
Inheritance/wealth tax	L	L	M/H	L	L	L	M

Abbreviations: H, high potential; M, medium potential; L, low potential.

*In the case of payroll (wage) taxes, the distortion effects will tend to be higher.

**If levied on the place of work, it may be exported to nonresidents. This is not inappropriate, if the tax reflect services provided to nonresidents, such as commuters.

SOURCE: Computations building on Inter-American Development Bank (2010) and Artana et al. (2011).

Few revenue sources fulfill all the desirable properties for local taxes reviewed in this chapter; a compromise is generally needed. There is ample consensus that user charges and fees are the most appropriate source of revenue for local governments, fitting almost perfectly within the benefit principle. Nevertheless, it is not generally feasible to finance all local services with user charges. Better choices of local taxes

Vertical equity/ fairness	Cost of administration (by subnational government)	Compliance costs	Potential for corruption	Acceptability: By politicians	Acceptability: By the private sector	Exportability	Visibility/local accountability
	M	M	L/M	M	L/M		M/H
H	H	M	M/H	H	L	L**	H
L	M	M/H	M/H	H	M	M	M/H
H	M	M	L	M/H	M	L	H
M/H	M	M	M/H	H	L/M	L	H
M	H	M/H	M	M	L	L	M
L/M	L	L	M	H	M/H	M	M/H
L/M	L	L	L	H	L	L	H
L/M	M	L	L	L/M	M/H	M	M
H	L	L	L	H	L/M	L/M	H
M	M/H	M	L/M	H	H	M	H
M/H	L	L	L	H	M	L	H
M/H	H	M/H	M/H	H	L/M	H	L
L/M	M/H	L/M	L/M	L/M	L/M	L/M	M
M	M/H	M	M/H	H	M/H	M	M
M	L	M	M	H	L	M	H
	L	L	L	H	L		L
M/H	L	L	H	H	M/H	M/H	M
M	L	M	L/M	H	L	H	L
M	L	L	L	H	L/M	L	M
M	M	L	M	H	L	H	H
	L	L	L	H	L		L
H	M	M	M/H	L	L	L	H

include property taxes and betterment levies, vehicle and transportation taxes, local business taxes, flat (piggyback) individual income taxes, and final sales and excise taxes. Undesirable choices include corporate income taxes and the VAT.

The international experience with revenue assignments shows great diversity of approaches. User charges and fees tend to represent significant shares of total revenues in the city budgets of developed countries but not in developing countries, which typically underutilize user charges and fees as a financing source.

On the list of "good choices" are numerous examples in developing and developed countries. However, the particular structure used in the application of these taxes can often fail to be a desirable one, for example, with the adoption of gross receipt cascading taxes or distorting payroll taxes. On the list of "possibly bad choices" of local taxes, the assignment of the corporate income tax at the local level is rare, as is also the assignment of the VAT. A few large cities have been assigned these two taxes because of their dual roles of regional and local governments.

Two puzzles remain in the practice of revenue assignments that require additional research. Although there is a role for historical factors such as colonial roots (the "dead hand of history," as examined by McLure 2001), it remains difficult to explain why inappropriate assignments and bad design have proved so difficult to reform over the years in so many countries. A separate puzzle has to do not with their design but their actual implementation. Often the revenue autonomy provided in the revenue assignments goes unused by the same subnational governments demanding additional funding from their central governments. Future research should pay closer attention to the political economy of revenue assignments.

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