2008

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Over the past two decades there has been an unprecedented move toward decentralized governance all over the world. The changes have taken on special significance in many developing and transitional countries where centralized systems were perceived to have failed to deliver improved general welfare. The promise of political, administrative, and fiscal decentralization is that it can strengthen democratic representative institutions, increase the overall efficiency of the public sector, and lead to improved social and economic welfare for countries that decide to adopt it. One critical assumption behind those expectations is that decentralized governments will generally be more accountable and responsive to citizens' needs and preferences. At the same time, there is general agreement among experts in decentralization that increased accountability can be ensured only when subnational governments have an adequate level of autonomy and discretion in raising their own revenues.

Thus, if effective fiscal decentralization requires meaningful revenue autonomy at the regional and local levels of government, the question is which taxes should be allocated at those levels. This is known in the fiscal decentralization literature as the "tax assignment problem" (see Martinez-Vazquez, McLure, and Vaillancourt 2006). Although there is some variation in the type of taxes recommended as desirable for providing subnational governments with revenue autonomy, virtually every student of intergovernmental finance and a myriad of reports on fiscal decentralization design have identified the property tax as one of the best candidates for a mainstay at the subnational level, especially for local governments.

TABLE 2.1 Property Tax Revenues as a Percent of GDP

	1970s	1980s	1990s	2000s
OECD countries	1.24	1.31	1.44	2.12
(number of countries)	16	18	16	18
Developing countries	0.42	0.36	0.42	0.60
(number of countries)	20	27	23	29
Transitional countries	0.34	0.59	0.54	0.68
(number of countries)	1	4	20	18
All countries	0.77	0.73	0.75	1.04
(number of countries)	37	49	59	65

Note: The data for 2000s are for the years 2000 and 2001.
Source: International Monetary Fund, *Government Finance Statistics Yearbook*, various years.

Something else makes the property tax peculiar in the revenue assignment problem. Almost without exception, revenues from the property tax are assigned to local governments. The degree of discretion given to local governments to manipulate the tax may vary, but the thinking that it belongs to local governments seems well entrenched. That is not generally the case with other taxes that fiscal decentralization experts recommend be assigned to subnational governments—for example, motor vehicle taxes or piggyback personal income taxes.

Despite what seems to be a generally accepted argument that the property tax is local, subnational governments in developing and transitional countries make relatively little use of it. On average, the property tax revenues they raise are equivalent to only about 0.6 percent of GDP (see table 2.1).

This is a big puzzle and, in one way or another, the main subject of all the chapters in this book. There are many potential explanations of why the property tax is not used more intensively as a source of financing public services in developing and transitional countries. Not the least of these is the fact that it is a "difficult" tax, which from a rather cynical viewpoint may explain the apparent willingness or "generosity" of central authorities to hand it over to subnational governments. Rather than offering a general explanation, the more modest goal of this chapter is to examine the current practice in developing and transitional countries and identify some of the factors behind the light demand for this tax.

ADVANTAGES AND DISADVANTAGES

As noted, there is a general presumption that the property tax is an ideal tax at the subnational government level in decentralized systems. We might challenge that view by listing the advantages and disadvantages associated with that choice.

Advantages

The a priori case for heavier use of the property tax at the subnational level in developing and transitional countries is a strong one. There is much to recommend a greater reliance on this revenue source.

Revenue Potential and Stability. First, and most important, the property tax is potentially a significant revenue producer for subnational governments. In the case of Canada and the United States, property tax revenues reach between 3 and 4 percent of GDP. The value of land and improvements constitutes a broad base that is growing in virtually all countries at a fast rate, and even a modest statutory tax rate can yield significant amounts of revenue.[1] However, the realization of large amounts of revenue requires a willingness to impose the property tax at higher levels than now exist in most developing countries, plus a good valuation system and a high rate of compliance (which implies a strong program of enforcement). As we discuss below, industrialized countries have realized this revenue potential to a much greater extent than developing and transitional countries have, not only because of their valuation and enforcement systems, but also because of the extent to which they have embraced fiscal decentralization.

Another positive feature of property taxation, and one that makes it especially attractive for subnational governments, is the relative stability of its tax base. Fluctuations in the business cycle tend to have a much bigger impact on tax bases such as earned wage income and profits or even sales. However, the relatively greater stability of market values is of little consequence if they are not accurately reflected in assessed property values. As we discuss below, the valuation of property is one of the key problems with effective use of the property tax in developing and transitional countries.

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[1]For example, Hernando de Soto (2000) estimates that the total value of Africans' informally owned houses and farmland in 1997 was roughly $1 trillion, or nearly three times sub-Saharan Africa's annual GDP. However, much of the tax base in developing countries is subject to informal property rights, which does not help with the willingness to pay taxes. As reported in *The Economist* (January 15, 2004), "In Africa . . . less than 10% of the continent's land is formally owned, and barely one African in ten lives in a house with title deeds."

Fairness and Equity. The property tax might be seen as a rough kind of benefit charge, and therefore not only as an efficient tax, but also as a fair tax. Businesses and some residential owners may perceive that they benefit from certain public investments approximately in proportion to the value of their properties. For example, property values may be higher, ceteris paribus, in areas where street lighting is functional, policing is better, schools are of higher quality, and so on. It follows that there is a sense in which property taxes roughly correspond to benefits received. That, of course, assumes that property is correctly valued to reflect the betterment associated with public investments and regularly provided public services, that valuations are regularly updated, that land markets function, and that benefiting properties are not routinely exempted through the political process. It also assumes that property owners and taxpayers believe that the link between tax base and benefits received is more or less accurate.

The property tax might also be seen as vertically equitable in developing and transitional countries. In fact, it can be progressive in developing countries and, therefore, can increase the overall vertical equity of the tax system (Bahl and Linn 1992; Bahl 1998; Sennoga, Sjoquist, and Wallace 2008). There are several reasons for this. Property ownership is heavily concentrated among the wealthy in developing countries, and landlords are often not reached by the income tax system. The property tax has the potential of filling the gap. On the basis of the high level of concentration of ownership, a tax on the land value base would seem to be the most progressive. At the other end of the income distribution spectrum, public housing and low-valued properties are generally not taxed at all, which also adds to the progressivity of the tax.

However, property taxes in less developed countries (LDCs) can be made regressive by exemption policies that target the well-to-do, such as policies that exempt owner-occupied properties, as practiced in some countries. Preferential assessment (or exemption) of certain commercial or industrial properties may have the same effect. The distributional effects of the property tax, then, are heavily influenced by the rate and base structure of the tax, as well as its administration. These are factors that government can control to some extent.

Tax Exporting. The property tax has the desirable feature that much of the tax burden is likely borne by residents in the jurisdiction where the services financed by property taxes are provided (i.e., there is a "correspondence" between the location in which the tax burdens are borne and the location in which the expenditure benefits are enjoyed). In such cases, the local governments that levy the tax are more likely to be fiscally responsible, that is, less

likely to overspend on the expectation that tax exporting would allow them to pass some of the burden to residents of other jurisdictions.

The reality of the "correspondence" advantage of the property tax might be challenged. To the extent that the property tax is concentrated on nonresidential property, and improvements (versus land) are a significant component of the tax base, there is a greater potential for exporting the burden to other regions. This occurs, for example, when businesses sell outside the region and are able to pass their taxes on to consumers and when landlords are absentee owners. In countries where only industrial-commercial properties are taxed, the potential for exporting the property tax burden is greater, and the property tax is a less suitable local government levy.

Compliance Costs. The property tax has the advantage of imposing a relatively low compliance cost on taxpayers because taxpayer intervention in the determination of tax liability is minimal, except in the case of appeals. Most taxes are self-assessed (e.g., corporate income taxes or value-added tax), but liability to pay property taxes is determined by the tax authorities; therefore, the compliance costs are largely shifted to the government.[2] Even in cases where there has been a move to self-assessment, the argument is that compliance costs have been reduced because contact with possibly corrupt administrative and certainly bothersome administrative staff was removed. The other potential compliance cost has to do with the method of making payment, but in recent years countries have increasingly shifted to using banks as collection points (Kelly 2004).

Tax Base Competition. A major advantage of the property tax as a local levy is that it usually poses no significant problem of competition with the central government. The value of land and improvements is not a tax base central governments covet; hence, they often seem content to leave it to local governments.[3] As we mentioned previously, the reasons for this common behavior among central authorities are far from clear. Although central authorities may see the wisdom of assigning this tax to local governments, given the advantages discussed in this section, it could also be that their lack of interest in the property tax lies in its complexity and low revenue potential. Or it could reflect the calculus of central officials regarding revenue potential versus political cost.

[2]In most developing and transitional countries, property taxes are assessed by a central authority but billed and collected by local authorities.

[3]This is not always the case. For example, in China, Indonesia, and Jamaica, the property tax is a central government levy, even though local governments receive most of the revenue.

The lack of vertical tax base competition does not exclude, of course, the possibility of horizontal or interjurisdictional tax rate or base competition. Without getting into the positive and negative aspects of that type of competition, the advantage of the property tax over other potential local taxes is that interjurisdictional competition is likely to lead to fewer economic distortions and smaller excess burden losses.

Land-Use Efficiency. Finally, a property tax might be thought of as a charge for land that can lead to significant improvements in the quality of land use. Particularly if land is taxed according to its location value in urban areas, and if assessment is at its highest and best use, a more rational allocation of land use will occur. Here the land-value version of property taxation has a particular advantage. In developing countries, however, the effective rate of taxation is so low that such incentives might not be effective.

Disadvantages

There are major drawbacks to the use of property taxes in developing and transitional countries. Administrative constraints and the perception of the tax by taxpayers go a long way toward explaining the relatively low revenue dependence on this tax.

Administration Cost. The major problem with the property tax is that it is generally difficult and costly to administer. Less efficient and more costly administration, in combination with low revenue yields, can make the property tax a losing proposition in terms of revenue yield per dollar of administrative cost. In most developing and transitional countries, property taxes are badly administered by any standard. As we discuss in a later section of this chapter, both assessment ratios and collection rates often are very low, which leads to unfair treatment of various categories of taxpayers and to significant revenue leakage. Property taxes are not—cannot—be self assessed; hence, a high staff cost is implied, and a great deal of record keeping is required. There also are significant administrative costs associated with collections and appeals. Compounding the problem, there is a shortage of property assessors in virtually all developing countries. Thus, even in the best of circumstances the property tax can seem a poor financing choice for local governments.

Enforcement. The property tax is difficult to enforce. Elected local officials are often not in a position to take actions against delinquent taxpayers, because they are not provided with the means to do so and often those who are

not in compliance are leaders in the community. Potentially effective solutions—penalizing those who are out of compliance by such means as confiscation of property, for example—may be considered too extreme and generally are not feasible because of the political fallout. The special attachment to land in many developing countries raises the possibility that broad-based acceptance of a more intensively used property tax is not likely. This problem has strong similarities to that of collecting user charges for services considered to be essential to life (e.g., housing, water, electricity). Ultimately, it becomes an issue of political will, and few developing and transitional countries have been able to exercise that will. There are some exceptions. For example, South African local authorities have had mixed success with using the threat of cutting off electricity for failure to pay a property tax or utility bill.

Taxpayer Attitudes. A third disadvantage is that the property tax is terribly unpopular with voters, and as a result, politicians are loathe to rely heavily on it. Per dollar of revenue raised, property taxes may generate more negative reaction than any other levy. There are several reasons for this degree of unpopularity. One is that the tax is levied on (unrealized) accretions to the wealth of an individual or a business, and those accretions do not necessarily correspond to income received. Even without increases in value, the property tax is essentially a tax on the potential income from some form of property (real estate) via the opportunity to rent or the value of using one's own home. Other forms of property—for example, stocks or other financial taxes—are taxed only upon realization. That difference creates not only special implementation problems (for example, how to treat those living on fixed incomes), but also a general hostility toward the tax. The unpopularity of the property tax is also a by-product of the judgmental approach to assessment that is taken almost everywhere. A proposed increase in the tax rate on a tax base that is determined in uncertain or even mysterious ways is bound to provoke negative reactions. Finally, the tax is unpopular in part because it is so visible. Most income tax payers are subject to withholding, but even so, may not be able to accurately report their annual payment. Consumption taxes are paid in small increments and are often obscured in the final price of the merchandise. Most people could not even estimate the annual amount of value-added tax they pay. The property tax, on the other hand, is usually billed annually or quarterly, and property owners are much more likely to know exactly what they pay.

Elasticity. Government officials desire a tax that exhibits automatic revenue growth. This protects them from having to return to the voters for permission

to increase the tax rate every time the demand for or cost of public services increases. The property tax is not an income-elastic tax. The basic problem is that reassessments occur only periodically; hence, year-to-year growth in revenues is mostly due to additions to the tax base through construction. When revaluation is too infrequent, say every five or ten years, it leads to large one-time increases in tax liability and to voter uproar from the shock. Countries use various means to cushion the shock, but those means often end up reducing the effective rate of property tax. Some innovations introduced internationally to deal with the low elasticity include indexation—for example, used in Jordan, Colombia, and Brazil—or the phasing-in of the reassessed values, as in the Philippines (Guevara 2004).[4]

AN OVERVIEW OF REVENUE PERFORMANCE

Despite the a priori potential of property taxes, they are far from being a mainstay of the revenue system in developing and transitional countries. Nevertheless, the property tax can be revenue productive in, and often contribute significantly to the financing of, subnational governments in many countries. On average, as shown in table 2.1, property taxes in developing and transitional countries raise less relative to GDP than in OECD countries. In the early 2000s property taxes in OECD countries represented 2.12 percent of GDP, while for developing countries the figure was 0.6 percent and for transitional countries, 0.68 percent. It is interesting that the trend for all three categories of countries has been slightly upward since the 1970s. The data in table 2.1 strongly suggest that reliance on the property tax comes with economic development (e.g., compare OECD countries with developing countries). Some OECD countries make especially heavy use of the property tax. For example, Canada raises a revenue amount equivalent to about 4 percent of GDP, and the United States raises nearly 3 percent of GDP. The variation among countries in the intensity of use of the property tax is explored below in a more systematic way.

The figures presented in table 2.2 for the percent of total subnational expenditures financed by property taxes are particularly interesting. Developing countries may not use the property tax more intensely than OECD countries do, but they appear to rely more heavily on the property tax to finance subnational government expenditures. This gives a different perspective

[4]Indexation of the property tax refers to the practice of mandating an annual increase in taxes equal to some agreed-upon price index, such as the consumer price index.

TABLE 2.2 Property Tax Revenues as a Percent of Total Subnational Government Expenditures

	1970s	1980s	1990s	2000s
OECD countries	9.7	9.88	13.65	12.40
(number of countries)	16	17	16	19
Developing countries	18.65	15.97	13.49	18.37
(number of countries)	21	27	24	20
Transitional countries	3.67	4.92	7.75	9.43
(number of countries)	1	4	18	20
All countries	14.49	12.89	11.63	13.40
(number of countries)	38	48	58	59

Note: The data for 2000s are for the five years from 2000 to 2004.
Source: Columns 2 and 3 are based on International Monetary Fund, *Government Finance Statistics Yearbook* (*GFS*), 2002; columns 4 and 5 have been calculated from *GFS*.

about the importance of strengthening the practice of property taxation in developing countries. Of course, the financing of about 18 percent of subnational government spending from the property tax in developing countries is also a reflection of relatively lower subnational government expenditures and generally fewer options for local taxes. For example, income taxes are much more common at the subnational level in OECD countries.

The average figures in tables 2.1 and 2.2 hide considerable levels of variation in the use of property taxes within each of the three categories of countries represented.[5] What we want to ask next is, besides the level of economic development, what other external institutional factors may help explain variations in the use of property taxes?

FISCAL DECENTRALIZATION AND THE PROPERTY TAX

Although many factors affect the use of property taxes, a useful approach to explaining the relative demand for property taxation in a country is to

[5]See Bird and Slack (2004) and Malme and Youngman (2001) for descriptions of individual country property taxes.

view it as derived from the national electorate's demand for fiscal decentralization. A reasonable working hypothesis is that countries that seek greater fiscal decentralization will rely more heavily on property taxation. To be truly effective, fiscal decentralization requires autonomous subnational government taxes, and property taxes are a logical choice. Consider the following:

- A good local tax features a correspondence between the boundaries within which the expenditure benefits are received, and the boundaries within which the tax burden falls. The property tax comes close to satisfying that condition for both second- and third-tier governments.
- Under a good administration, with a commitment to provide important services, the property tax can be a significant source of revenue for subnational governments. With an efficient administration and with commitment to enforcement, the property tax base can be large and income elastic.
- Subnational governments, particularly third-tier local governments, may have a comparative advantage in assessing the property tax base because of their familiarity with the local economy and its land-use patterns.
- Higher-level governments are not likely to aggressively compete for the right to levy property taxes, because it is a high-cost method of raising revenue, it is politically unpopular, and central governments do not have a comparative advantage in assessing the base.

In this section, with the help of a multicountry panel data set drawn from the Government Finance Statistics (GFS) of the International Monetary Fund (IMF) and from several other sources, we test the hypothesis that fiscal decentralization drives the intensity of property tax use. We measure fiscal decentralization as subnational government expenditures as a percent of total government expenditures. In order to test the role of fiscal decentralization on the relative use of property taxation, we need to control for other variables that are expected to affect the dependent variable. In particular, we expect that reliance on property taxation may be higher across countries and over time the greater the degree of urbanization. Both land values and improvement values tend to increase significantly in urban centers, and with that, property taxation becomes more attractive. Besides degree of urbanization, in the regression analysis we control for GDP per capita, because we have seen that for a variety of institutional reasons richer countries tend to make higher use of property taxation. Transitional countries are identified by a dummy variable; even controlling for differences in income per capita, transitional countries present distinct institutional peculiarities, such as titling and history of land ownership, that may

TABLE 2.3 Determinants of the Relative Use of Property Taxation: OLS Estimation (Dependent variable: property tax revenues to GDP)

Variables	Coefficient estimate	T-stat	Probability > *t*
Constant	–2.012	–3.80	0.000
lgdpcap	0.322	5.11	0.000
lpop	–0.069	–1.85	0.068
decent	1.496	3.25	0.002
urbanpct	0.855	1.77	0.080
pgr	24.43	3.32	0.001
transition	–0.102	–0.48	0.630
dy90	–0.132	–0.70	0.485
dy95	–0.223	–1.27	0.208

Number of observations	107
F (8,98)	13.09
R-squared	0.5166
Adjusted R-squared	0.4772
Root Mean Square Error	0.7005

Notes on variables: lgdpcap = logarithm of GDP per capita; lpop = logarithm of population amount; decent = decentralization, measured as subnational revenue as a percent of national revenue; urbanpct = percent of urban population to total population; pgr = average of population growth rate; transition = dummy of countries in transition; dy90 = dummy of year 1990; dy95 = dummy of year 1995.
Source: Authors' own calculations.

affect the relative use of property taxation. We also control for population size and the rate of population growth.

The estimation is based on a panel of 70 countries for three years, 1990, 1995, and 2000. Although data for many of the variables are available on an annual basis, the restriction to three years is imposed by the data availability for the urban population ratio. Besides the GFS, we use data from the World Resources Institute (www.wri.org) for GDP per capita, population, and population growth rate. The data for urbanization are from the United Nations Secretariat (2004).

Before we discuss the regression results, we need to address several econometric issues. Because of the possible nonlinear effects of population and

TABLE 2.4 Determinants of the Relative Use of Property Taxation: TSLS Estimation (Dependent variable: property tax revenues to GDP)

Variables	Coefficient estimate	T-stat	Probability > *t*
Constant	–6.487	–4.47	0.007
lgdpcap	0.362	5.87	0.000
lpop	–0.042	–1.16	0.864
decent	12.766	3.00	0.013
urbanpct	1.226	2.52	0.014
pgr	78.942	3.78	0.589
transition	0.015	0.07	0.754
dy90	–0.2329	–1.25	0.707
dy95	–0.3109	–1.76	0.157

Number of observations	107
F (8,98)	12.72
R-squared	0.5093
Adjusted R-squared	0.4693
Root Mean Square Error	0.7058

Notes on variables: lgdpcap = logarithm of GDP per capita; lpop = logarithm of population amount; decent = decentralization, measured as subnational revenue as a percent of national revenue; urbanpct = percent of urban population to total population; pgr = average of population growth rate; transition = dummy of countries in transition; dy90 = dummy of year 1990; dy95 = dummy of year 1995.
Source: Authors' own calculations.

GDP per capita, those two variables are entered in the regression in logarithms. Given the cross-country nature of the data set, there were potentially issues specific to each of the countries for which we could not control that might have an impact on the behavior of the dependent variable (property taxes relative to GDP). That might seem to indicate that the appropriate approach was fixed or random effects estimation. However, because we were restricted to three years and because of missing data for some of the variables, we had an unbalanced panel data set with 107 observations, which did not support a fixed effects estimation approach for 70 different countries. Instead, we used ordinary regression and allowed for time effects by using dummy variables for 1990 and 1995.

In table 2.3 we present the ordinary least squares (OLS) results and in table 2.4 two-stage least squares (TSLS) results. The need for TSLS arises from the potential endogeneity of the main control variable of interest, the level of fiscal decentralization. It may be not only that decentralization affects the relative use of property taxation, as hypothesized, but also, in a reverse causation, that the presence or relative ease of property taxation affects the extent of decentralization. In fact, the Hausman test for endogeneity shows that we could not reject the possibility that the decentralization variable was indeed endogenous. For that reason we ran TSLS as an alternative and in the first stage used as instruments for decentralization a dummy variable denoting whether the country is an ex-British colony,[6] and population growth rates.

Results from both the OLS and TSLS estimations show that the coefficient for fiscal decentralization is positive and statistically significant, being much larger in the second case. This fundamentally supports the hypothesis that demand for the use of property taxation derives in part from the level of decentralization. The degree of urbanization, as expected, takes a positive and statistically significant coefficient in the TSLS estimation. The log of per capita income is positive and highly significant in both equations. The dummy year variables and the dummy for transitional countries are not statistically significant, while the log of population is negative and significant and the population growth rate is positive and significant.

We may use these findings to help explain the slow growth of the property tax in developing countries, as reported in table 2.1. As we show in table 2.5, there has been little growth in the fiscal decentralization ratio for three decades. For developing countries, the level of fiscal decentralization, measured by subnational government expenditures as a share of total government expenditure, was about 13 percent, on average, in the 1970s, and was marginally lower in the 1990s and 2000s. Based on the estimated coefficient for decentralization in table 2.4, we can say that, other things being equal, if the decentralization ratio had increased by 5 percent for developing countries in the 1990s, the ratio of property tax revenue to GDP in that decade would, on average, have been close to 0.6, or the average level reached in the 2000s by that group of countries.

[6]This includes Canada and the United States. This variable may not be the ideal instrument because it may be correlated with the errors in the OLS regression, but finding a good alternative instrument for decentralization is a notoriously difficult problem for the entire fiscal decentralization literature.

TABLE 2.5 Fiscal Decentralization Indicators (Percent)

	1970s		1980s		1990s–2000s		
	Developing countries	OECD countries	Developing countries	OECD countries	Developing countries	OECD countries	Transitional countries
Subnational government tax as a share of total government tax	10.68 (43)	17.91 (24)	8.87 (33)	18.18 (23)	10.61 (28)	18.39 (21)	22.41 (23)
Subnational government expenditure as a share of total government expenditure	13.42 (45)	33.68 (23)	12.09 (41)	31.97 (24)	12.97 (54)	32.68 (24)	30.32 (24)

Note: Sample sizes are in parentheses.
Source: International Monetary Fund, *Government Finance Statistics Yearbook,* various years.

TABLE 2.6 Ratio of Third-Tier Government Expenditures to Total Subnational Government Expenditures, Selected Countries (Percent)

	1990s	2000s
OECD countries (number of countries)	53.91 10	46.89 10
Developing countries (number of countries)	40.97 8	40.63 8
All countries (number of countries)	47.44 18	29.17 18

Notes: The table excludes countries with 100 percent of subnational expenditures at the local level (that is, those countries without intermediate regional or provincial governments). The data for 2000s are for the five years from 2000 to 2004.
Source: International Monetary Fund, *Government Finance Statistics Yearbook*, various years.

With an adjusted R-square of 0.47 for the regression in table 2.4, we are far from explaining satisfactorily what goes in to determining the intensity of property tax use. The lack of consistent data is a major difficulty. For example, the arguments for property taxation are that it is the most suitable tax for third-tier local governments—that is, city and municipal governments that are small enough to have the advantage of familiarity in setting tax rates that reflect voter preferences for financing local services and in assessing property. Thus, a reasonable additional hypothesis would be that the greater the importance of local governments in the subnational government sector (local plus regional), the higher the intensity of property tax use.[7] Unfortunately, because the GFS does not consistently show that breakdown, we cannot introduce that type of variable in the regressions in tables 2.3 and 2.4. In table 2.6 we use available data to describe the importance of third-tier governments in fiscal decentralization in recent years. One can intuit from table 2.6 that even if the additional hypothesis were correct, little change in the intensity of use of the property tax should have been expected because, if anything, the relative importance of local governments in the subnational sector has slightly decreased in recent years.

[7]A corollary of this reasoning is that other taxes, such as personal income and consumption taxes, are more easily applicable at the regional level, so that the greater the importance of intermediate-level governments in the subnational government sector, the lower the relative use of property taxation vis-à-vis other taxes.

HOW TO STRENGTHEN REVENUE PERFORMANCE

As shown in table 2.1, the property tax share of GDP has not increased significantly over the past 30 years. In the previous section of this chapter we identified several "external" institutional reasons for that, such as the lack of an increase in fiscal decentralization. There are other, "internal" institutional reasons—having to do with how property taxes are structured and administered—that no doubt contribute to the overall lackluster performance of property taxation. Those factors are especially relevant in the developing world. Data are not available for us to analyze those internal determinants of revenue growth on a country-by-country basis. However, we might use a priori reasoning to speculate on what has gone wrong and then try to illustrate those conjectures with examples and information from selected countries.

The following identity describes the components or steps that go into identifying the ratio of property tax revenues to GDP in any particular country.

$$\frac{T_c}{y} = \left(\frac{T_c}{T_L}\right)\left(\frac{T_L}{AV}\right)\left(\frac{AV}{TMV}\right)\left(\frac{TMV}{MV}\right)\left(\frac{MV}{y}\right)$$

where

T_c	=	Property Tax Revenue Collections
y	=	GDP
T_L	=	Property Tax Liability
AV	=	Taxable Assessed Value
TMV	=	Taxable Market Value
MV	=	Full Market Value

The term on the left of the identity is the ratio of property tax revenue collections to GDP. It is the wide variation in this ratio (reported in table 2.1) that we would like to explain. Why do some countries realize a much higher effective property tax rate than others? Our focus here is on the components of the tax structure and its implementation, particularly assessment and collection.

The first term on the right is the collection ratio—that is, the percent of true liability that is collected. In developing countries, where enforcement is often lax, collection rates as low as 50 percent are not unusual. The examples presented in table 2.7 support this point.[8] Even the low collection rates re-

[8]There are numerous other examples of low collection rates. For example, Iregui, Melo, and Ramos (2004) report effective collection rates of 80 percent for a large sample of Colombian municipalities in the 1999–2002 period; Kim (1993) reports a collection efficiency in Indonesia of 65 percent.

TABLE 2.7 Selected Measures of Property Tax Administration

Country	Collection rate	Assessment ratio	Selected exemptions (partial or total)
Philippines (Rosengard 1998; Guevara 2004)	50–60 percent of current billings in 1990	Legal assessment ratios vary from 15 percent to 80 percent	Assessment ratios vary by value class and by property use
Jamaica (Sjoquist 2004)	40 percent in 2004	The median assessment ratio was 11 percent between the general revaluations	Certain agricultural properties
Chile (Rosengard 1998)	73 percent in 1990	—	Two-thirds of all property is exempt
Indonesia (Rosengard 1998)	80 percent in 1990	Legal assessment rates of 20 percent	—
Kenya (Kelly 2004)	10–60 percent	Actual rates vary between 20 percent and 70 percent	—
Colombia (Iregui et. al. 2004; Bird 2004)	80 percent	70 percent in Bogota, 85 percent in Medillin	—

Source: Various works cited in the table.

ported in the table may be overestimates, because in some cases they include collections of arrears in the numerator and only current-year liabilities in the denominator.

The second term, the ratio of tax liability to assessed value, describes the tax rate. The higher the legal tax rates, the higher the value of this term. Governments in all countries face great pressure to keep the nominal rates low, because of the unpopularity of the property tax. A typical range for tax rates may be between 0.5 percent and 1.0 percent for countries using a capital value system.

The third term is the ratio of assessed value to taxable market value. This describes the efficiency of the valuation process and also discretionary decisions to reduce the base offered by the taxable market value by applying an assessment ratio that is less than 1.0. If no discretionary assessment ratios were applied, and all properties on the roll were valued at 100 percent of full market value, this ratio would be 1.0. In practice, valuation

rates can be as low as 20 percent. As mentioned, assessed values are sometimes low because legally they are set at something less than full market value. The overwhelming evidence from developing countries is that properties are dramatically under assessed. Some evidence on assessment ratios is given in table 2.7.

The ratio of taxable market value to total market value gives an indication of the impact of exemptions and preferential treatments on the property tax base. In many countries, sizable exemptions have been provided, depleting the tax base. The exemptions range from preferential treatment for homeowners to property tax holidays for new businesses. Another important reason the taxable market value may be much lower than full market value is that many properties are not valued at all. Again, some evidence is presented in table 2.7. For example, in the case of Chile, two-thirds of all property is reported to be exempt. Another cause for the divergence between taxable market value and total market value is the failure to incorporate new construction in the tax rolls.

Finally, the ratio of market value of real property to GDP tells us how property values compare to total output in the economy. For example, in an urbanized country, one might expect a higher (and growing) ratio of market value of property to total GDP. Local governments can exert little control over this component of revenue performance. We have no evidence on this last term and treat it simply as a residual to complete the identity.

In sum, what this identity tells us is that administrative and policy reasons for the poor revenue performance of the property tax in developing countries are numerous, but are largely within the control of the local governments.

The importance of this point can easily be illustrated by running a simple simulation to identify the potential revenue impacts of local government administrative reform, as shown in table 2.8. In the columns of the table we show the components of the property tax identity presented above—for example, column 1 shows the ratio of property tax to GDP; column 2 shows the collection rate. The first row of the table shows the baseline simulation, where the values of all the parameters are reasonably chosen so that the resulting property tax effort is 0.6 percent of GDP, the international average for developing countries, as we saw in table 2.1. The parameters of concern are the collection rate, the assessment ratio, and the exemption policy, and for those we have chosen values that seem more or less reflective of the actual practice. A statutory tax rate of about 0.5 percent seems a reasonable assumption, though we will not vary this component of the simulation. The ratio of market value to GDP (which may hold many other factors) is calculated as a residual to satisfy the identity.

TABLE 2.8 Simulated Impacts of Alternative Property Tax Administration Reform

Simulation	$\left(\frac{T_C}{y}\right)$	$\left(\frac{T_C}{T_L}\right)$	$\left(\frac{T_L}{AV}\right)$	$\left(\frac{AV}{TMV}\right)$	$\left(\frac{TMV}{AV}\right)$	$\left(\frac{MV}{y}\right)$
Baseline	0.6	0.5	0.05	0.5	0.8	60
Scenario 1	0.84	**0.7**	0.05	0.5	0.8	60
Scenario 2	0.90	0.5	0.05	**0.75**	0.8	60
Scenario 3	0.75	0.5	0.05	0.5	**1.0**	60
Scenario 4	1.58	**0.7**	0.05	**0.75**	**1.0**	60

Note: **Bold** figures indicate parameter deviations from baseline values.
Source: Authors' own calculations.

The results of the simple simulation show the following:

- In row two we vary only the collection rate, from 50 percent to 70 percent. The result is that the property tax share of GDP increases from 0.6 percent to 0.84 percent, or by about one-third.
- In row three we vary only the assessment ratio, from 50 percent to 75 percent. The result is that the property tax share of GDP rises to 0.9, an increase of nearly 50 percent.
- In row four we eliminate exemptions and do not change anything else. The result is that the property tax share of GDP rises to 0.75, an increase of about one-fourth.
- In row five we vary all three of these factors together and more than double the property tax share of GDP.

In summary, this simple simulation illustrates that quite plausible improvements in government administrative and design practices can move the property tax to a much more significant place in the revenue system of developing countries. Getting property taxes to rise by 1 percent of GDP will generally imply a significant jump in the financing capacity of local governments in many countries around the world. In table 2.9 we perform an additional simple simulation to illustrate that point. If, for the sample of countries in our data set (used to run the regressions in tables 2.3 and 2.4), we first select those countries that collect less than 1 percent of GDP in property taxes and then allow those countries to collect 1 percent of GDP in property taxes, the average increase in subnational government revenues would be around one-third.

TABLE 2.9 Simulations of Revenue Implications of Property Taxes Representing 1 Percent of GDP in the Year 2000 (21 Countries)

Selected countries	Property tax as a percent of GDP	Resulting percent increase of subnational government revenues when property tax is equal to 1 percent of GDP
Austria	0.1	4.7
Bulgaria	0.3	9.2
Chile	0.7	13.1
Croatia	0.5	9.2
Czech Republic	0.5	1.4
Estonia	0.5	7.7
Ethiopia	0.2	7.0
Hungary	0.7	2.2
Indonesia	0.1	66.0
Iran	0.2	45.5
Italy	0.9	0.6
Jamaica	0.2	141.9
Lithuania	0.6	6.0
Romania	0.5	11.5
Slovak Republic	0.6	17.8
Slovenia	0.7	3.9
Sri Lanka	0.7	79.9
Swaziland	0.1	130.0
Thailand	0.3	34.5
Uganda	0.1	20.1
Ukraine	0.0	9.2
Mean values	0.4	29.6

Source: Authors' own calculations.

Of course, we remain aware that even small improvements in some of these parameters can be hard to produce. What is worse, big efforts are often put together to improve one or two critical parameters just to see the deterioration of other parameters, thus with little overall impact on actual revenue collections. For example, Dillinger (1988) reports how the Philippines' Property Tax Administration Project was successful in producing tax maps and updated property assessments, but never yielded a substantial increase in revenue because the problem of poor collection practices was never addressed. Even though valuations increased by 37.5 percent and collectibles by 13.6 percent, actual tax revenues increased by only 1.1 percent. In contrast, as Kelly (1993) reports, the Indonesian reform was more successful. By focusing on improved collection efficiency and improved valuation and assessment, property collection efficiency rose from 65 to 79 percent, and the share of property tax revenue in total own source revenue almost doubled between 1990 and 1991.

THE FUTURE OF THE PROPERTY TAX IN DEVELOPING COUNTRIES

Making property taxes work more effectively in developing and transitional countries is a complex challenge. Although many internal and external factors are involved, we speculate that the future of the property tax in such countries is mainly dependent on four factors: (1) the pace of decentralization; (2) the efficacy of shortcuts to valuation of property; (3) technology catch-up; and (4) the willingness of central governments to give local governments access to other productive tax bases.

Factor 1: The Pace of Decentralization

Despite being one of the most talked about development strategies in the past two decades, decentralization has hardly taken off. Although there are now many decentralized and decentralizing developing countries, the average expenditure share of subnational governments in total government spending is considerably less than in developed countries and has barely budged from its 15 percent level in the 1970s. However, more elected officials are bringing pressure, there is a continuing reaction against central governments that have become too controlling, and there is a political strategy to promote bringing governments closer to people. All of this could lead to increased decentralization. As decentralizing countries turn to the job of identifying revenue sources for local governments, an expanded property tax will be an obvious choice.

Factor 2: The Efficacy of Shortcuts

Administrative cost is arguably the biggest constraint to the growth of the property tax. It is just too expensive and too hard to properly levy and enforce. Countries are turning increasingly to "shortcuts" to address this problem. The introduction of notional valuation based on location and area, self-assessment, indexing between valuation periods, and the exemption of "hard to tax" properties are all examples of such shortcuts. Will these innovations save the property tax or destroy it?

The approach that is gaining currency in developing countries appears to be area-based assessment. This is both inexpensive and simple enough to be acceptable to taxpayers. However, at base it requires a judgmental assessment of value per square meter in each of the valuation zones prescribed by the regional or local government. These notional values will require adjustment each year in order to build elasticity into the property tax. Moreover, the idea that all properties in a zone can be subjected to the same notional valuation per area unit may turn out to be an enemy of fairness in property taxation. Area-based assessments are likely to improve the revenue yield of the tax and give a better ratio of administrative cost to collections, but local governments are not likely to move to a higher intensity of property tax use with this approach to valuation.

Factor 3: Technology Catch-Up

Will technology save property tax administration in developing countries? In general, developing countries appear to be closing the technology gap at a much faster rate than they are closing the income gap. Can new technologies such as computerized mass appraisal, satellite-aided mapping, and cross-referencing circumvent the high costs and time delays associated with the valuation process?[9] Will it soon be possible for local governments to keep up-to-date records of land characteristics and ownership? If new technologies in property tax assessment, collection, and record keeping do catch on, they could minimize much of the current problem with the property tax in developing nations.

Factor 4: The Willingness of Central Governments

Will central governments release other productive revenue sources to local governments? Examples are the right to tax payrolls, piggyback personal in-

[9]Dillinger (1989) describes the successful practice in some Brazilian municipalities of using data provided by other agencies to flag changes in the tax base.

come taxes and excises, business taxes, and taxes on the use and ownership of motor vehicles. To the extent these "easier" tax sources are available to local governments, the property tax might be minimized as a subnational government revenue source.

In sum, property taxation still has great potential but also great uncertainty as an instrument for bringing revenues and accountability to subnational governments in developing and transitional countries around the world.

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