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Roy Bahl
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International Studies Program
Andrew Young School of Policy Studies
Georgia State University
Atlanta, Georgia 30303
United States of America

Phone: (404) 651-1144
Fax: (404) 651-4449
Email: ispaysps@gsu.edu
Internet: http://isp-aysps.gsu.edu

International Studies Program
Andrew Young School of Policy Studies

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Reforming the Property Tax in Developing Countries: A New Approach[1]

Roy Bahl and Sally Wallace
Georgia State University

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I. Introduction

The property tax is almost everyone's choice for the principal local government tax revenue source in developing countries. The focus of public policy on this tax, and the interest it has drawn from public finance scholars and practitioners are evidence of its importance.[2] Moreover, both external donors and national governments have invested significant money in strengthening its administration. Despite all of the good work that has been done in designing more efficient property tax structures and administrations however, property tax revenues account for less than one percent of GDP and less than 4 percent of all tax revenues in developing countries. In terms of revenue mobilization in developing countries, the property tax is an afterthought. But the interest continues.

Why has reform not led to a more revenue productive property tax? Why has the advice on administrative improvements so often been ignored? The answer to these questions may well lie with the flawed approach that has been taken in most reform exercises. Most analyses have ended up recommending reform programs that leave the property tax only marginally stronger in terms of revenue generation, but much more costly to administer. There is surprisingly little variation in this advice on how to "strengthen" the property tax.[3] The obvious question is why should a low income country spend heavily to improve the administration of a tax that will not yield much revenue?

In this paper we propose a different paradigm for property tax reform in developing countries. The unified property tax that we outline here would bring together and restructure the

[2] Three books of essays that review property tax practice in developing and transition countries are Bahl (1979), Bird and Slack (2004), and Bahl, Martinez-Vazquez and Youngman (2008). For a discussion of this view among US scholars, see Cornia and Walters (2006).

[3] For a good example of proposed reforms of the property tax in developing countries, see the Urban Unit (2006) for Pakistan.

traditional urban property tax, property transfer taxes and various forms of land value increment taxes, and could generate enough revenue to justify the significant administrative costs involved.

We begin this paper with an economic model of the demand for property taxation that can explain why this tax is so little used. This is followed by discussions of the revenue performance of the property tax in developing countries, and the high administrative start-up and running costs that constrain attempts to upgrade this performance. We then turn to a description of the practice and the issues surrounding each of the methods by which real property is now taxed in developing countries: the annual property tax, betterment levies, property transfer taxes, agricultural land taxes, and capital gains taxes. The question here is whether these taxes can be clubbed together into an integrated structure and an integrated administration. Lastly, we present a framework for a unified tax on immovable property and draw on a little-used data base to make some estimates of potential revenue outcomes. The question we investigate in this final section of the paper is the extent to which raising property tax revenues to the equivalent of one percent of total land wealth would justify the necessary increase in administrative expenditures.

II. Theoretical Model

To motivate our discussion, we appeal to a relatively simply model of individual choice over private goods, X and public goods G. The individual maximizes utility:

$$U(x,G) \tag{1}$$

Subject to their budget constraint:

$$Y = P_x X + S_1 T_1 + S_2 T_2 \tag{2}$$

T_1 = Property tax collections

T_2 = other tax collections[4]

[4] This could easily be expanded to a more complex function of tax base, tax rates and population.

S_i = representation individual's share of tax collections for tax i, this is the "tax price"

The government's budget constraint is as follows:

$$G = T_1 - a_1(T_1) + T_2 - a_2(T_2)$$

where α_i = administrative cost of tax system collection, enforcement, etc, $i = 1, 2$.

We can define net tax collections as

$$T_1^N = T_1 - a_1(T_1)$$

$$T_2^N = T_2 - a_2(T_2)$$

It is reasonable to assume that:

$$\frac{\partial a_i}{\partial T_i} > 0$$

that is, there is an additional administrative cost incurred for each dollar increase in gross revenue.[5] However, given the relative experience of administrative costs over a variety of countries it appears that there is a declining rate of change in the cost of administration as certain taxes expand. [6] This implies that

$$\frac{\partial^2 a_i}{\partial T_i} < 0$$

and therefore the average collection cost $\frac{\alpha_i}{T_i}$ decreases as T_i increases. For example, consider the

[5] There may also be an increase in evasion or other costs as taxes increase. We assume for simplicity, that those costs are fixed.
[6] The intuition here is straight forward.

following form of a_1 (administrative cost of the property tax):

$a_1 = \beta + \delta T_1^{1/2}$ where β, δ = constants

This general form roughly fits the limited data available on average administrative costs in a few countries including the US and Canada.

Returning to the maximization problem, a representative individual (median voter) maximizes utility subject to their own budget constraint. We may also use the government's budget constraint to derive the demand for T_1 and T_2 :

$$\mathcal{L} = U(x, T_1 - a_1(T_1) + T_2 - a_2(T_2)) + \lambda(Y - P_x X - S_1 T_1 - S_2 T_2)$$

$$\frac{\partial \mathcal{L}}{\partial \mathrm{X}} = U^1(x) - \lambda P_x$$

$$\frac{\partial \mathcal{L}}{\partial \mathrm{T}_1} = \frac{\partial U}{\partial T_1}(1 - a_1) - \lambda S_1$$

$$\frac{\partial \mathcal{L}}{\partial \mathrm{T}_2} = \frac{\partial U}{\partial T_2}(1 - a_2) - \lambda S_2$$

$$\frac{\partial \mathcal{L}}{\partial \lambda} = Y - P_x X - S_1 T_1 - S_2 T_2$$

Setting these first order conditions to zero and solving, we arrive at

$$\frac{\mathrm{MU}_{\mathrm{T1}}}{\mathrm{MU}_{\mathrm{T2}}} = \frac{S_1(1-a_1)}{S_2(1-a_2)}$$

$$\frac{\mathrm{MU}_{\mathrm{T_i}}}{\mathrm{MU}_{\mathrm{x}}} = \frac{S_i}{P_x(1-a_i)}$$

The demand for property tax is thereby a function of the demand for other taxes, the taxpayers tax price (S_1), P_x, and the relative net productivity of property tax versus other taxes (a_1/a_2). A specific functional form for $U(x,G)$ would yield a specific demand function for T_1 and T_2. A typical Cobb-Douglas utility function yields a demand function for T_i that is an inverse function of. a_i That is as a_i increases, less T_i is "chosen". The amount of the government constraint and utility function could easily result in a corner solution of $T_1 = 0$ or $= T_2 = 0$. It is reasonable to assume that $S_i = f(T_i)$ in which case $\frac{\partial S_i}{\partial T_i} > 0$. This condition may preclude a corner solution. Alternatively there may be a constraint that neither tax equals zero (due to alternative tastes, preferences, intergovernmental agreements, etc).

III. Revenue Performance

The revenue yield of the property tax in developing countries is very low. The best comparable data available (IMF, various years) suggest an average yield equivalent to only about 0.6 percent of GDP (Table 1). De Cesare (2004) finds a similar result for Latin American

Countries. This is not enough revenue for the property tax to be classified as a major tax.[7] By comparison, the average ratio of total tax to GDP is about 15 percent for developing countries. Note also from this table that the property tax share in GDP is more than 3 times higher in the OECD countries than in developing countries.

Bahl and Martinez-Vazquez (2008) point out that developing countries may not use the property tax more intensively than OECD countries do, but they rely more heavily on the property tax to finance subnational government expenditures. This gives a different perspective on the issue, i.e., that the property tax in developing countries is an important part of the strategy for fiscal decentralization. However, one must be careful with this interpretation. One reason is that it may be a reflection of relatively lower subnational government expenditures, i.e., the 18 percent of total subnational government expenditures financed by the property tax may itself be a very small number. Another reason is that local governments in less developed countries have been given fewer tax options than is the case in OECD countries.

A number of hypotheses have been offered about why property tax revenues are so low in developing countries. Arguably the most important reason is that the property tax works best as a local government tax, and fiscal decentralization has not been as embraced in developing as in industrialized countries. Bahl and Martinez-Vazquez (2008) use data from a panel of 70 countries for 1990, 1995 and 2000 to show a significant positive effect of both expenditure decentralization and the level of per capita GDP on the level of the effective property tax rate.[8] Higher income countries and countries that are more decentralized use the property tax more

[7] In fact, the IMF does not report the annual property tax separately in *Government Finance Statistics* but includes it with taxes on the use, ownership or transfer of wealth. Their definition includes property taxes that are levied at regular intervals, one time only, or upon a change in ownership.

[8] The effective rate of property tax is measured as the ratio of property tax collections to GDP.

intensively.

Another argument for the low level of revenues raised by the property tax is that efficient administration is very costly, both in terms of the set-up (fixed cost) and the operating costs. In particular, proper valuation and revaluation are thought to be beyond the reach of most subnational government tax administrations, unless very significant expenditures are made to put the capacity in place. The barriers to efficient administration also include the absence of a full and up to date survey of all land (urban and rural) and records of title that would enable determining tax liability. Putting the human resource infrastructure and the information base in place to efficiently administer the property tax would also be an expensive proposition. At current yields of the property tax, it would be difficult to justify such outlays, by either the central or the subnational levels of government. The result is that most developing countries improve their administrations with marginal changes rather than with comprehensive reforms.

There also is the issue of taxpayer resistance to higher taxes. The strength of the sentiment against higher property taxes seems disproportionate to the amount of property taxes paid. Note the very low absolute and relative levels of tax paid in a selected set of countries shown in Table 2.

There is no hard research (that we know of) that addresses the reasons for the unpopularity of the property tax in developing countries, and for the political tensions that surround its increase. One might offer a number of hypotheses to explain this. First is the visibility of the annual property tax, i.e., people know how much property tax they pay, and they usually pay this amount in one lump sum. By contrast, who could even guess at how much VAT they pay? Second, the annual property tax is levied on accrued property wealth, rather than on realized income from that wealth. This suggests the possibility of a break between the

amount of tax liability and the ability to pay the tax. Third, assessment is judgmental rather than objective as in the case of sales or income taxes. Fourth, some would argue that there is something special about the attachment of people to their land, and this is especially true in developing countries and particularly so in rural areas. Fifth, there is the complaint from the local population that present levels of public service provision are not good enough to justify an increase in property tax revenues. Whatever the reason, there is ample evidence of governments refusing to raise property tax rates to authorized levels, postponing the introduction of new valuation rolls, and providing generous relief to what are seen as high tax burdens.

Another contributing factor in this weak revenue performance is the social engineering of the property tax that sometimes leads to a dramatic narrowing of the base. Perhaps the most common of the preferential treatments is that for owner-occupiers. The goal is to encourage home ownership (or to gain political favor with these taxpayers), but the result is to narrow the tax base. A recent study of Punjab province in Pakistan estimates that bringing owner-occupied property fully into the tax base would triple the level of property tax revenues. Other preferential treatments that harm the tax base are the exemption of government properties and the provision of an overgenerous boundary line for low income properties.

Finally, there is the issue of enforcement. Local government officials are close to the political power structure in the local area, both wealthy individuals and businesses. Since wealthy individuals and businesses usually represent a large component of the potential tax base, elected local politicians may find it politically difficult to bring aggressive enforcement measures against delinquents. In addition, they may be subjected to considerable pressure to provide exemptions to the politically powerful.

IV. Property Tax Administration

Poor administration of the property tax has been decried by almost all observers. It is pointed to as the main reason why revenues are so low, and why the tax is seen by many as being unfair. Most reform studies have focused on administration as the top priority for attention, and there has been considerable uniformity in the recommendations made. Most property tax reform studies do not cost out the proposed changes, but most agree that these would be expensive relative to the amount of revenue collected at present rates. It is important to note that there are two kinds of costs to be reckoned with: large one-time outlays to develop the basic systems and the operating costs of normal tax administration duties and maintenance of the system.

A first need is to identify all land and improvements that should be on the tax roll. The completion of a full cadastre is an expensive project in most developing countries, and can involve both aerial photography and tax mapping.[9] In particular, the usual case is that many structures are not on the tax roll. The identification of all taxpayers is also a complicated process, because of unclear or nonexistent titles, and because of absentee ownership. Without these initial surveys of property and ownership, and a method to link them, a more productive property tax is not possible.

Second, it is important to upgrade record keeping methods and systems. An up to date property tax roll is necessary. This involves tracking all new improvements to properties, as well as any sub-division of properties. For the property tax to be effective, there must be a timely and accurate flow of data through the system. This involves new staff, inter-department coordination, and a significant investment by the government. To track this information, it is necessary to implement a proper recordkeeping system.

[9] We use the term "cadastre" in the general sense to refer to all of land records, ownership records, and property tax information (Almy, 2004).

Third, and arguably most important, is the need for a proper valuation system. This system should be staffed with adequate numbers of trained valuers, and must be supported by good data on comparative sales values. The former would be costly but could be done. Comparative sales data simply do not exist in most countries and usually are replaced by "expert judgment" of realtors, government valuers, etc.

Finally all systems for identifying land values and tracking tax payments should be linked. This includes all taxes on real property and all sales of property.

Can the development and maintenance of a cadastre be done better by a central authority or by a local government? In some transition countries in eastern Europe, the organizational responsibility for the records and for valuation lies with a central authority such as the State Land Cadastre in Lithuania (Aleksiene and Bagdonavicius, 2008). A central valuation authority arguably is able to gather more professional expertise in a single place, and develop better analytic systems. Lithuania's fully computerized property registration system links data bases on land and buildings and includes all parcels in the country. Another advantage of the independent authority arrangement is that it can be one step removed from political pressures. Some would be more cautious about central authority. Kelly (2000) argues that when local governments receive the revenues, efficiency demands that they must play the major role in preparation of the tax roll and in assessment. In several Latin American countries, there is a gradual shift of administrative responsibilities to local governments, based on their capacity to absorb these new responsibilities (De Cesare, 2004).

Lastly, there are the issues of collections, enforcement and appeals. Collections are not an expensive proposition in terms of upgrading, and many countries have actually found moving the collection point to banks, and introducing other simplification measures, to be lower cost and

more efficient. Also significant is the question of settling disputes over property tax liability, and dealing with a court system that is clogged with work and is often without sufficient expertise in property taxation. In developing countries, collection rates of 50 percent are not unusual (Bahl and Martinez-Vazquez, 2008).

Ultimately, what we would like (for purposes of this paper) is an estimate of a benchmark cost for property tax administration at an efficient level. We will define this as what it would cost to develop a property tax that could generate revenue yields equivalent to about 1 percent of property wealth, in a fair way and with an operating cost equivalent to about 5 percent of collections. It is no easy matter to estimate either that start-up cost or the running costs from cross-country comparisons, as Almy (2004) has pointed out. Partly this is because countries are very different in terms of their starting point, i.e., the quality of the administration that they have now. They also differ in terms of the structure of their property tax, the effective rate (higher effective rates suggest lower cost per unit of revenue), and even in terms of what overhead they might count in their administrative cost. "However, annual administrative costs in the range of 2 to 5 percent of revenues often are achieved in developed western countries. Ratios in excess of 10 percent are symptomatic of problems" (Almy, p25). A recent questionnaire study carried out by the International Property Tax Institute (2007) finds that agency costs average about 1.35 percent of taxes collected, around a minimum of 0.13 percent and a maximum of 3.69 percent. The respondents were mostly from industrialized countries.

V. The Annual Property Tax

The annual property tax, which draws the most reform attention, is often restricted to urban areas in developing countries. Depending on the country, the tax is levied by local governments (Brazil), state-provincial governments (India) or in many cases under central

government law (China, Indonesia). Depending on the country, the base of the tax can be (a) annual rental value, (b) capital value of land and improvements, (c) capital or rental value of the land, or (d) a combination of location value and area. Each of these four bases holds some attractions, but also some weaknesses. We review these comparative advantages/disadvantages and in particular we ask how each base could fit as part of a unified land-property tax system.

Rental Value Systems.

Many countries, especially former British colonies, hold to the rental value system. This is partly because of historical reasons, but also because of the possibility of using mass valuation for the many rented flats in urban areas. In theory, the tax base is notional, i.e., it is the rent that can be reasonably expected in a fair market transaction. In practice, it bears little relationship to market rent because of how it is assessed and because the rental value law has been confusing about the tax base for vacant lands and about whether the tax base for rent controlled properties should be market rent or controlled rent.[10] Moreover, the concept of "market rent" is especially difficult to determine in the case of owner-occupied and non residential property. Given these assessment practices, few would argue that the discounted value of expected annual rents is equal to market value.

There is no evidence to suggest that a rental value system is more or less costly to administer than a capital value system.[11] However, it does not lend itself to the comparative sales approach (which is usually based on capital values of property transactions). Nor is it a good fit in a system that depends on a property transfer tax, a capital value tax, or value increment capture, since all of these are based on the concept of changes in the total value of the

[10] For example, Pakistan's courts have ruled that vacant land has no rental value.
[11] To make such a cost comparison, one would need to hold constant the level of assessment efficiency, i.e., the percent of market value actually assessed, and the amount of dispersion in this assessment ratio.

property.

Capital Value Systems

Capital value systems get around some of these issues. Since the legal base in most countries is the true market value at sale, conceptual problems with defining the base in cases of vacant land, rent controlled properties, and land used for non-residential purposes are mostly eliminated. It is also true that the capital value base for the annual property tax is consistent with that for transfer taxes and capital gains taxes.

Capital value systems, however, bring new and in many ways even more difficult problems. The valuation process requires accurate data on sales values of properties, which are not available in developing countries. Resort must be made to expert judgment, i.e., ad hoc work by realtors and other knowledgeable people who work on such matters. And, even if imperfectly done, the separate valuation of land and improvements imposes a significant administrative cost. The valuation process requires information about structures (e.g., size, quality of construction), and this is another cost-increasing factor for the administration.

Land Value Systems

Site value systems tax the market value of land. There are two advantages to this approach. One is that it is lower cost because structures are not included in the tax base. Another is the well known advantage of a site value tax of encouraging the most efficient use of land. Site value systems are used in such diverse places as Australia and South Africa, New Zealand, Denmark, Estonia, Jamaica and Kenya.

Some see serious problems with site value systems. The number of sales of vacant properties that can be used for calculation of a “comparable sales value” is limited in many urban areas, so it is not possible to empirically divide property value between land value and building

value (Mills, 1998). This criticism is less relevant in developing countries because land and improvements tend to be valued separately in any case. Reschovsky (1998) argues that the techniques that assessors have developed allows for assessing land even in the absence of a large number of vacant land sales. Another problem with the site value base is that the value of the tax base is smaller because improvements are not included, so the statutory rate must be higher to yield any given amount of revenue. This causes taxpayer resistance, as does the failure to tax visible, high valued structures.

Site value systems do not match up well with property transfer taxes because transfer taxes are usually levied against the total selling price of the property (both land and improvements). There might be a better match with capital gains taxes because some levy against total property value and some against the land only. The value capture taxes such as betterment levies can be imposed on increases in land values or increases in total property values. One might argue the superiority of the land base since public improvements or rezoning primarily effect the location value of the land. Also, rural taxes are probably better based on land alone.

Area Systems

The area-based systems of property taxation give the appearance of being very simple and very objective. Each parcel is taxed at a specified rate per area unit of land and per area unit of structures. Chinese cities, Polish municipalities, Tunisian communes, Bangalore city in India and Peshawar city in Pakistan use the area-based system, suggesting its broad appeal. Many would argue that the great advantage of the area based system is that it does not require valuation of individual parcels.

The fact is that the area based systems are not so simple as they seem, at least that would

be the case if they were administered as designed. First, the location value (the tax rate) must be established, suggesting an assessment method not unlike that required for a site value base. Typically, several tax rates will be set for a local area, depending of the desirability of the location. Second, these tax rates must be changed as the amenities provided in various areas changes, and as the "land value gradient" changes. This suggests a need for periodic revaluation, just as in the case of value-based systems. Third, the physical measurement of structures must be kept up to date, and the valuation table (tax rate table) for structures also must be changed regularly.

An area based system could fit a unified property tax, if a system was put in place to regularly update the notionally determined values. In fact rural property taxes, including agriculture, probably will be assessed in a notional way irrespective of the property tax base that is chosen. In some countries, capital gains are determined in a notional way. Still, at some point in the development of the property tax, there must be a move toward an objectively determined value base, and the area-based systems do not appear to promise this.

Which is best?

Various studies have examined these bases, and offered reform ideas as to how the problems with each might be overcome. These ideas are summarized in Appendix Table 1. If there is a theme in these ideas, it is the tradeoff between simplification and low administrative cost (the area based system) and valuation cost (any of the other three). To the extent there is a current trend in developing countries, it would seem to be in the direction of the simplification choice. The conclusion one might draw from this is that countries are resigned to low levels of property tax revenues, so are hesitant to invest heavily in tax administration.

The question might be changed from "which is best" to which of these systems might fit

best into a unified property tax that combined the annual property tax, value capture and transactions-based taxes. The capital value approach could be argued to be most consistent in that it taxes a capital value base, and it could best use the comparative sales data generated from transactions. The rental value and site value systems would seem less able to use this information, though a good case might be made for taxing only the capital value of the land. An area based system could support a unified property tax in the short run, but only as a bridge to a capital value tax on land and/or improvements.

VI. Taxes on Property Transfers

The other widely used tax on immovable property is the transfer tax, i.e., a tax on the sales value of properties. In developing countries this is usually levied as part of the stamp duty on documents and/or as a separate property transfer tax. Depending on the country, these may be levied as central, provincial or local government taxes.

Stamp duties are a part of the tax system in most developing countries, but they are widely criticized. A fundamental question raised by critics is "why have a stamp duty on property transfers?" In fact, there are good answers to this question. Clearly there is need to legalize documents and assure that they are properly filed, and a government stamp is part of the procedure for doing this. To levy a service charge that would cover the stamping and verification cost would seem a reasonable justification for this duty. There even might be some justification for differentiating the rate of charge by type of document, given the different degree of examination required for various types of documents. Problems with this levy arise with respect to property transfers (and transfers of shares).

The role of property transfer taxes in developing countries has now gone well beyond documentation of a change in ownership. In fact, there are several reasons why real estate

transfer taxes have found their way into tax systems in developing countries, and why their staying power is so great. First, it is an easy tax handle because most buyers/sellers desire to legally record the transfer and therefore will voluntarily comply. Second is the revenue motivation and what might appear to be a very low cost of collection. When property values escalate, as happens periodically in most countries, the revenue take can be quite significant. In some cases, higher property transfer tax rates are used to cool down overheated property markets. Property transfer taxes are never a major source of revenue in developing countries, but they raise enough to protect their place in the tax system. For example, property transfer taxes and stamp duties account for 4 percent of central government taxes in Jamaica, and 38 percent of own source revenues in Punjab province, Pakistan.

Third, if property ownership is concentrated in the higher income classes, the distribution of tax burdens may be progressive.[12] Fourth, the number of people in the taxpaying population in any given year is much smaller than in the case of more general taxes, hence the opposition to the tax may not be as great as would be the case if, say, an increase in the annual property tax or the value added tax were proposed. Finally, a property transfer tax might reach that part of the population that ordinarily avoids payment of most income tax and value added taxes.

There are major disadvantages to the property transfer tax. First, it raises the cost of property transactions thereby reducing the volume of formal transactions and slowing the development of the real estate market. Properties may be held in sub optional uses because the tax is large enough to discourage a transfer, and this imposes an efficiency cost. Second, if the tax is properly assessed, administrative costs could be very high, because of the need to verify

[12] Because data are limited, it is not possible to determine if the tax is borne by buyers or sellers. However, to the extent the tax on land is capitalized into land values, it likely is borne by all owners of land. Since land ownership is concentrated in the higher income brackets, the distribution of the tax burden will be progressive (Alm, Annez and Modi, 2004).

the declared sales prices and revalue when necessary. In many countries, declared values are not checked for accuracy. Bahl's study of over 26,000 property transactions between 2001-2003 in Jamaica (where the transfer tax rate is 13 percent) shows that only about 7 percent of the declared values were audited (Bahl, 2004). The World Bank (2004) reports that 70 percent of property transfers in Maharastra State (India) are undervalued by about 20 percent. There is a long list of countries with the same experience. Third, a property transfer tax gives property owners an incentive to understate taxable value, and so it weakens the database that is necessary for objective assessment of the urban property tax. This problem is not so often discussed but it is a very great shortcoming of the property transfer tax.

A moment's reflection will lead one to the conclusion that the problems with the property transfer tax are dependent on the level of the nominal tax rate chosen. At very low rates, these problems may be of little consequence. But when the tax rate is high, the implications of these problems are magnified. For example, Alm, Annez and Modi (2004) studied Indian states with different stamp duty rates and found that underdeclaration of sales prices tends to rise with the stamp duty rate.

In fact, countries choose very different statutory rates of taxation on the value of property transfers. An illustrative list of rates for various countries is shown in Table 3. These data suggest a great deal of variation in the practice. South Africa, for example, taxes property transfers with a sliding rate that rises to 8 percent and subjects these sales to a 14 percent VAT when the sale is made by a VAT vendor (e.g., a property developer).[13] But in many countries, the rates are much lower. The reform options most often seen for property transfer taxes in recent years are reductions in the rate to mitigate the problems described above. Examples include the Czech Republic in 2003, Portugal in 2003, Taiwan in 2003, and Dominican Republic

[13] In the case of a VAT vendor, the transfer tax can be taken as a credit against the output tax.

in 2003.

VII. Betterment Levies

Properties may also be taxed according to the benefits received from public investment or development decisions, e.g., the construction of an access road to their neighborhood, an improved sewer system, or a change in zoning from rural to urban. Such actions will lead to an "unearned" increment in land values. The theory behind recapture of part of this increment with a betterment levy is that certain property owners will benefit from these actions more than property owners in general, therefore a special levy is justified. Such levies take many forms, and go by several names, depending on the country, e.g., special assessments in the US, *plusvaliás* in Columbia and betterment levies in South Africa.

The administrative conditions for implementing a betterment levy seem manageable enough, even in developing countries:[14]

- A quantifiable impact on land values,
- Identifiable beneficiaries,
- A public mechanism to implement the levy, and
- The political will to implement the levy

Normally, betterment levies are charged on a one-time basis, with a rate set to capture a percentage of the initial impact on land values. So, even if the estimated increment is overstated, it will not amount to full confiscation of the increase. Or, public agencies may be content with capturing only a portion of the full cost of a public investment, as in the case of Korea.

There are a number of problems with the implementation of betterment levies, and perhaps this explains why they are not used more frequently in developing countries. The

[14] The conditions are elaborated in Day (2005).

measurement of the impact on land value is a problem. It is not possible to estimate, on a one-off basis, the value to a property of an infrastructure investment or a change in the zoned use of land. This is because the impact of a public investment on land values may take years to play out.

Another problem is the difficulty of separating the overlapping roles of betterment levies, annual property taxes, property transfer taxes and capital gains taxes on real property. A policy question to be answered in rationalizing property tax policy is how to avoid taxing the same base with two different instruments. Betterment levies supposedly charge, on a one time basis, for land value increments due to public investments, while annual property taxes also should reflect these value increases in the base that they tax. A capital gains tax or a property transfer tax would subsume all value enhancing factors (including betterment) in its base.

VIII. Rural Land taxes: Agriculture

Many would argue that the agricultural sector is undertaxed. The case might be put forward with an example: while agriculture's share of national income is about 25 percent in India and Pakistan, the sector "pays" a very small percentage of tax revenue. Moreover, the World Bank (2007) argues that the net taxation of agriculture has fallen dramatically in most countries during the last twenty years. Anderson (forthcoming, reported in World Bank 2007) finds that in Pakistan, the effective level of taxation of agriculture declined from approximately 18 percent to less than 5 percent.

Certainly there is justification for taxing the agricultural sector more heavily. First, agricultural income is usually exempt from income tax, so non-farm households at any given income level face a higher tax burden on their labor income than do agricultural households. While there are certainly inequities in other parts of the tax system, this one can be particularly

egregious when the federal income tax generates a substantial portion of revenue for the central government and when there are large numbers of individuals employed in the agricultural sector.

Secondly, because agriculture is such a large part of the economy in many developing countries, not taxing agricultural income means that effective tax rates on other sectors of the economy must be higher (or public service levels must be lower). This is bound to decrease the economic efficiency of the tax system as taxpayers in these other sectors seek ways to avoid or evade those higher taxes. Third, increased taxation of agriculture may be justified, on the principle that government infrastructure and various subsidies provide benefits to the agricultural sector.

This said, the problems to be faced are how to get past the political obstacles to taxing agriculture, and how to administer a tax on what Rajaraman (2004) has termed the "hardest to tax" sector. One reasonable reform option is to adopt a land-based agricultural income tax. In fact, this is provided for in the law in some countries, with revenues usually assigned to subnational governments. Administration of an income tax using the normal methods of assessment is quite possible for large farms that operate in the modern sector. For most farms, however, an accounts-based administration would be impossible. An alternative approach, discussed in Rajaraman (2004) and Bahl, Wallace and Cyan (2008) is a presumptive tax based on land area and crop. The latter reflects the significant differential net returns from different crops (and arguably the differential productivity of the land). All farms above a certain acreage size would be subject to this tax. Assessment would seem manageable, if a full survey of agricultural land was in place and kept up to date.

Rajaraman's caution about the hard-to-tax agricultural sector can be taken beyond administrative concerns, to the political power of the sector that often leads to favored tax

treatment. Bird and Slack (2008) provide an interesting summary of the many different kinds of preferential treatments of farmland that are provided around the world. The results of such exemptions, lower rates and preferential assessments, has been to further widen the tax burden gap between agriculture and the rest of the economy.

IX. Rural Land Taxes: Non-Agriculture[15]

Rural local governments in many countries levy a local property tax on non-agricultural land. For example, this is the main source of revenue for India's village (gram panchayat) governments. These taxes tend to be very primitive and usually are levied on an area basis or even a house basis rather than on a value basis. The yield tends to be very low, because the tax roll usually does not cover all properties and because collection rates are low. Enforcement is so lax in many places that the property tax is all but a voluntary levy.

The case of India is illustrative of the practice in poor countries. Rao, Nath and Vani (2004) estimate that collections by rural local governments in Karnataka State average well less than $US 1, and that collection costs are more than half the amount collected. Bahl, Sethi and Wallace (2007) found tax levels to be almost as low in West Bengal State, but noted a significant variation. Some local governments had been able to move their collections to a level well above the statewide average. In a regression analysis of over 3000 gram panchayats, they found that the level of per capita own source revenues (mostly property tax) was significantly and positively related to the literacy rate, suggesting a positive marginal effect of economic development and voter awareness about the need for local revenues. This underlines communications is an essential ingredient of success with rural local property taxation.[16]

Despite their low level of revenues, there is a strong case to be made for rural local

[15] For a good review of this subject, see Bird and Slack (2008).
[16] See Zhan (2006) for a discussion of the role of communications in the decentralization efforts in Sierra Leone.

government property taxes. This is virtually the only significant source of revenues open to these local governments and hence the only way to develop some accountability to taxpayers for the quality of services provided. In recent years, India, Colombia and South Africa among others have rethought the structure of their system of rural local government revenue mobilization.

X. Capital Gains and Sales Taxes

The sale of property is a taxable event not to be missed in developing countries where tax administration is weak. While this has pushed most countries toward the adoption of property transfer taxes, a capital gains tax on real property, or the inclusion of the sale of real property in the VAT base, have always been alternatives.

A capital gains tax on property (real estate) would serve the purposes of generating revenues and closing off an avenue of avoidance of income taxes. The base of the tax would be the difference between the sales price of the land and the (adjusted) purchase price. In theory, this is superior to the property transfer tax because it taxes the profit on the original investment and not the investment itself. In fact, there is some use of capital gains taxes on immovable property in low and middle income countries, and some examples of inclusion of sales of real property in the VAT.

One might conclude that the tax administration in most developing countries is not yet ready to support an effective capital gains tax on real property. Certainly this is an issue, and it does seem clear that notional rather than actual capital gains would need to be used as the basis for assessment. On the other hand, the present system of taxing property transfers would seem no more manageable, and there also, notional values are used. Given the very great problems with underdeclaration of property transfer values and the harm this causes, the alternative of a capital gains tax is not so far-fetched.

Wallace (2008) surveys various capital gains taxes on real property and find that most are hybrids that do not tax real gains. Very few of these hybrids are found in developing countries. Two that might be mentioned are Korea and Taiwan where capital gains taxes were levied when both were considered developing countries. Taiwan has long imposed a kind of capital gains tax on land (the land value increment tax, LVIT). The government declares an official selling price for all properties once each year. The basis is the "original decreed value" adjusted for inflation and land improvement costs. Transfers between farmers and exempt. The statutory tax rates are progressive, with the top marginal rate equal to or above that of the individual income tax (Tsui, 2008).

A capital gains tax on real property was levied in Korea through the 1990s, primarily to discourage land speculation. Unlike the Taiwan version, the Korean tax was levied every third year on unrealized gains. The base included idle land, non-business land owned by firms, and excess residential lands. The tax rate by 1995 was 50 percent of "excess profits" defined as land value increases above the national average during a three year period. Land value increases were estimated by government (Lee, 2000).

Even though there are these examples, the fact is that developing countries have not adopted capital gains taxes, and seem to feel comfortable with property transactions taxes. The reasons for this might be speculated on. One is the fear that a capital gains tax could not be administered in most developing countries. The second is that it might introduce a discrimination in the tax treatment of immovable property and other assets.

Another choice is to eliminate the stamp duty and property transfer tax, and bring real estate transfers by businesses under the value added tax. Buyers and sellers would have an incentive to report correctly, and a more accurate flow of information about land values would

result. The tax would be levied at the VAT rate on the selling price of land, less the (real or notional) tax paid on the purchase price.

This would violate the notion of a VAT as a consumption tax since housing is consumed over many years. The practice varies widely among the industrialized countries. Some countries cover certain types of property sales under the VAT (e.g., new vs. used buildings as in Germany and Belgium), some zero rate new buildings (UK), and there are numerous types of special treatments and exemptions. A good discussion of the treatment of real property under the VAT is in Bird and Gendron (2007, p81-86).

XI. Proposal: A Global Property Tax

Property tax reform in developing countries has failed, in part because the cost of making the necessary administrative improvements is too high relative to the potential yield from this investment. Many countries have addressed this problem by reducing administrative expenditures with shortcut methods of valuation, which further limits the growth potential of the tax, and the vicious circle continues. The proposal here is to rationalize the system of taxing land and structures, to increase the revenue yield from property taxes, and to justify the significant increase in administrative expenditures that is required.

We propose a unified property and land tax, as summarized in Table 5 below. The idea is to create a property tax that is administered by a single department and that would cover all forms of tax on real property. There would be four levy components imbedded in this unified property tax: An annual property tax on urban and rural property, a land-based tax on agricultural property, a betterment levy and a capital gains tax.

First, all non-agricultural property in the jurisdiction of the taxing authority (e.g., the province) would be subject to an annual property tax. The base would include both urban and

rural property. For all urban land and all rural land not used in farming, it would be a tax on the capital value of land and structures in current use. The tax rates would be set by the province, or by the local governments under a decentralized system. Either way, the expectation is that tax rates in urban areas would be higher than those levied in the rural areas. The choice of a capital value base on land improvements is to gain some parity with sales values reported at the time of property transfers. The latter would become an important basis for valuation of the annual property tax base.

Second, agricultural land would be subject to an annual tax, imposed as a presumptive income tax. The tax would be levied on the land area of each farm, and the (specific) tax rate would vary by crop. Data on crops planted would be kept current. There would be a threshold level, below which no tax would be levied.

Concurrent with the adoption of an annual tax on all property, the property transfer tax would be abolished. The rationale for this proposal is straightforward. If transfer taxes are a general revenue, i.e., a payment for public services received, this payment should be extracted yearly rather than at the time of a transfer. Moreover, eliminating the transfer tax would remove the disincentive for underdeclaration of sales values and would make it easier to develop a data base on comparative sales that could be used for valuation under the annual property tax. Eliminating the tax on transactions would have the added value of hastening the development of a real estate market and improving the efficiency of land use allocation.

Not all will agree with the proposal to eliminate the tax on property transfers. One reason is that a property transfer is an event that is easily identified by the taxman. Undervaluation may be common, but completely escaping the tax probably is not. Why give up a sure thing? Abandoning the property transfer tax could lead to a revenue loss, at least in the short run.

Another reason why some would argue that the present regime cannot be abandoned is that property transfer taxes are a proxy for capital gains taxes on property investments. This is not a good justification for the traditional transfer tax because the sales price of a property probably bears little relationship to the size of a capital gain. The capital gain depends on the real appreciation in value since purchase, whereas the property transfer tax depends solely on the gross selling price irrespective of any other factors, including whether or not any gain had been made.

Accordingly, a capital gains tax on immovable property sales would be established as the third component of this reform program. This would be in addition to the annual land tax proposed above. In theory, the concept of a capital gains tax on immovable property is straightforward. The tax liability would be the difference between the buying and selling price of the property, indexed for inflation. The buying price (base) would be set according to historical records of purchase price or could be determined on a notional basis. Owners could petition, and bring evidence, to have this basis increased. The original purchase price would be verified by the valuation staff in the capital gains tax office. At least in the early years the selling price would be a notional determination. Note, however, that there would be a self-enforcing feature. Buyers would not have a disincentive to underdeclare the purchase price because their basis for a future tax on capital gains would be too low. The nominal gain would be adjusted for inflation and for the cost of allowable improvements to the property (e.g., irrigation).

The implementation of a capital gains tax on real property raises some serious administrative issues.

- How would records of the original selling price be documented and verified?
- How would records of the increase in basis be kept and verified? For example, records would be required to show the cost of improving properties to enhance the

selling price.

- Would there be an inflation adjustment?
- How would inter-family transactions be handled?

Under this proposal for a unified property tax, firms in the VAT (developers) would be subject to tax on sales of real property. They would receive a credit for capital gains taxes paid. This suggests that the capital gains tax rate not exceed the value added tax rate, so that a level playing field be kept between sales by VAT vendors and sales by all others. This raises a tricky problem, since the capital gains rate should not be lower than the top marginal rate of the individual income tax (which would apply to most other capital gains).

Fourth, a betterment levy or special assessment would be imposed to recapture land value increments resulting from public improvements or from zoning changes. In theory, these increments also would be captured in the annual tax on property and in the capital gains tax. We would argue that the annual property tax is more like a charge for public services, so there is no issue of double taxation. A credit could be allowed against capital gains tax liability. This means that the betterment levy would act as a withholding amount against future capital gains taxes.

A key element of this proposal is for a unified administration of property and land taxes. This would have many advantages:

- A full property tax roll could be developed, and all records could be brought together. A unique parcel number would be identified, and a physical and legal cadastre could be maintained.
- The valuation of all properties would be brought under one system. A capital value system would be implemented for both rural and rural properties, and valuation techniques would be uniform. The larger agencies would enable development of manuals to guide assessment, sales ratio studies to check on dispersion and regular training for officers. This uniformity in valuation would apply to the annual property tax, the betterment levy and the capital gains tax. This coordination should bring

significant economies of scale.

- Significant information sharing would be an important component of this unified administration. Information on valuation, changes in ownership or physical characteristics, and tax payment history for each of the four levies would be integrated.

None of this precludes heavy involvement in tax rate setting or tax administration by local governments. It does suggest, however, a centralization of the procedures and the information base at the provincial or central level.

XII. Revenue Potential

Estimation of the potential base of a unified property is no easy task. First, this requires a judgment about the effective rate of property tax that would be tolerated by taxpayers and economic planners in developing countries, even if the administrative system were in place to produce this result. We will assume that a rate equivalent to one percent of taxable land wealth (about three percent of GDP) is feasible. The question we raise here is whether this level of property taxation would justify the cost of putting in place and maintaining the necessary administrative system.

Second, this exercise requires an estimate of the value of land and structures. To do this even for a single country would be difficult, because few countries regularly make estimates of their property wealth. However the World Bank has taken what it calls a "comprehensive snapshot of wealth" for 120 countries (World Bank, 2006, p xiv) in 2000. They follow economic theory in estimating total wealth as the present value of future consumption, and estimate the value of produced capital from historical investment data. From the data in the World Bank study, we are able to generate a measure of wealth that matches up (conceptually) with the potential property tax base. This measure, which includes the values for cropland, pastureland and urban land and structures, is reported for selected countries in Table 5. Note, for example

that the sum of these components for the US is $80,622 per capita (an amount equivalent to about 230 percent of net domestic product). In the case of a more or less representative low income country (Thailand), property wealth is estimated at $9767 per capita (about 490 percent of NDP). The higher ratios of land wealth to total output square with intuition and suggest again why there is so much resistance to taxing land in developing countries.

The estimates of total wealth from this study are reported by country income groups in Table 6 (column 2). Note that the per capita stock of wealth in low income countries is less than 2 percent of that in high income countries. Note also that the land and structures component of total wealth falls in percent terms with income level. About one third of all wealth in low income countries is in the form of land and structures, but the share is almost half that level in the case of high income countries.

From these data we might develop a rough estimate of the revenue potential of a unified tax on immovable property. To illustrate, let us take the case of Turkey, which in the year 2000 raised about $24 per capita in property tax revenues (about 0.55 percent of NDP). This is equivalent to about 0.2 percent of total land wealth. The levels are roughly comparable for the other developing countries in this sample.

To estimate revenue potential from a unified property tax, let us assume that one-half of cropland and pastureland is subsistence and is not subject to property taxation. Let us further assume that the unified property tax is levied so that the effective property tax rate on land wealth is one percent. Under this scenario, the property tax in Turkey would rise from $24 to $113 per capita and would increase to 3.8 percent of NDP. This computation is repeated for 10 selected countries with the results shown in Table 7. For most low income countries in the sample, a 1 percent tax on land wealth would increase the effective property tax rate to a level

equivalent to more than 3 percent of NDP. In all of these cases, the tax on property would become a significant component of total tax revenues. This is about the same share of GDP that is captured in many industrialized countries (or somewhat higher).

Implications for Administration Costs

As noted above, we cannot directly estimate the administrative costs that must be incurred to raise the property tax to this level of revenue yield. What we can do, however, is use these revenue estimates to investigate the possible return to such an investment.

Let us consider a more or less generic case of a developing country with a weak property tax administration. In order to ratchet up the unified property tax to the revenue level envisioned here, the following administrative steps would need to be taken:

- Complete a cadestre for all urban and rural properties in the province (country).
- Determine appropriate billing/ownership information by compiling land registration property ownership records.
- Do a survey of all agricultural properties, determining both land area and crop planted, and put in place a system to update this information.
- Prepare all necessary valuation and collection manuals, and update them regularly.
- Hire and train a cadre of professional valuers and undertake valuation of all properties.
- Set up an infrastructure for administering a capital gains tax on land.

The decision question is how much should a developing country government be willing to pay for this set of improvements? To answer this question, we perform the following calculation:

The net present value of the stream of property taxes is computed assuming an effective tax rate of 1 percent of land wealth with and without an upgrading of administration. In the case of upgraded administration, it is assumed that nominal property tax revenues will grow by an

additional 10 percent in the first full year to reflect the benefits of upgraded technology and administration. In all cases, the inflation rate is 4 percent, and the growth in property tax revenue is assumed to equal the inflation rate. The annual cost of revenue collection is assumed to equal 3 percent in all cases. The discount rate is 7 percent—a rate for public programs suggested by the U.S. Congressional Budget Office (CBO).[17]

As seen in Table 8, each country witnesses a substantial increase in tax revenue per capita in the case of an upgrading of administration. The second column shows the difference in the per capita net present value of collections with administration upgrading, and without, in per capita US dollars. The additional value added ranges from $206 per capita in Chile to over $47,000 per capita in Korea. The last column shows the per capita cost of a $100 million investment in administration. The cost-benefit is clear—the administrative upgrading of the new 1 percent land wealth system, pays for itself many times over. The results of this calculation demonstrate the value of investing in the new system. If the policy decision of a land value tax of 1 percent is taken, then we can compare, on a per capita basis, the net present value of the investment relative to the per capita upfront fixed cost of investment. This could help to determine the usefulness of such an upgrade.

Would this net return (our operating cost) justify the upfront expenditure to put a modern property tax system in place? It is not possible to cost out such a project in general terms because every country is so different. To gain a rough idea, however, we might consider the description of two World Bank Projects.[18]

- A $15 million loan to Slovenia will go toward improving the country's land registration, housing finance, mortgage, and property ownership systems;

[17] This computation could be adjusted to phase in the new law or adjust for economies of scale in the development of the administration. For simplicity, we assume the increase in revenue associated with the new law and the investment in administrative capacity occur in year 1.

[18] World Bank.org/external/projects/main.

developing first-time registration of apartments; establishing a market-based property tax; and monitoring agricultural land-use monitoring.

- The Cadastre Development Project for the Russian Federation aims to improve the information flow and rationalize normative and operational procedures for the Unified State Cadastre of Immovable Property so as to facilitate development of real property markets, improve that quality of services provided by the offices of the Cadestre Agency, and strengthen linkages with other organizations.

These two projects suggest a per capita cost between US $____ in Slovenia to $_____ in Russia. This compares quite favorably to the present value of the revenue flow from a tax of one percent of property wealth.

Administration Efficiencies

Are there reasons, other than the enhancements described above, that might make the unified property tax more administrable? The answer is that the system proposed here has three important features, each of which can make a noticeable difference in the efficiency of property tax administration:

- The elimination of the property transfer tax on immovable property would remove a disincentive to reporting actual sales values. The result should be that valuers would have a reliable data base from which to work in estimating market values.

- The introduction of a capital gains tax would put a self-enforcing mechanism in place, i.e., buyers would not be willing to allow sellers to understate the transaction value because it would lower their basis and thereby increase their eventual capital gains liability.

- The unification of the property tax would enable administration by a single agency. This would produce economies of scale in valuation, record keeping, surveys, training, etc. It would also allow quality improvements by allowing more specialization in administrative assignments.

XIII. Revenue Increases: Administration or Rate Increases?

How would a developing country government move its property tax yield to a level as high as 3 percent of GDP? In the model we develop here, the increase comes about because

of improved administration (valuation and collection) and an increased tax rate.[19]

The basic thesis in this paper is that the revenue take from the property tax must be large enough to justify the heavy administrative cost involved. The NPV calculations above suggest that the revenue return from a one percent tax on land wealth can pass this test.

Now the question becomes how a country could reach this new revenue plateau, i.e., how much would be through improved administration and how much would be though structural changes. We might use a simple model to organize this discussion, based on the theoretical construct developed earlier. As shown earlier the administrative costs of collection rise as tax revenues increases, but at a decreasing rate. This hypothesized result is because of improvements in both the collection rate and the assessment ratio that come with increased administrative expenditures. After a certain threshold is reached, administrative improvements become increasingly difficult.

An anecdotal version of the situation is described in Figure 1, with T_1/T_1^i on the y-axis and $a_1\ (T_1/T_1^i)$ on the x-axis. Let us assume that the collections per unit of revenue $a_1\ (T_1/T_1^i)$ is 5 percent for industrial countries (Almy, 2004). Let us also assume a developing country at point A, with lower administrative costs per unit of tax collected (1 percent) and a lower rate of collections against liability. In the example we describe, the country spends only about one percent of collections on administration and realizes a collection rate of 50 percent. The path described in Figure 1 shows that an increase in the running cost of administration to 5 percent of collections would increase collection efficiency $T_1^{'}/T_1$ to 80 percent, which we assume would be equivalent to industrial country standards. This revenue responsiveness assumes that the same basic systems (e.g., cadastre) are in place in developing and industrialized countries.

[19] An increased tax rate in this model can result from an increase in the nominal rate or a removal of exemptions and preferential treatments. ,

The revenue gains from administrative improvement would not be enough to justify the increase in the operating cost of property tax administration and payment for the heavy fixed costs involved (e.g., surveys, cadastre, computerization, etc.). Let us assume that this would require raising the property tax to a level of about 3 percent of GDP (the industrial country average rate).

In Figure 2, we show that the movement from A to B would raise the ratio of property tax revenue to GDP from X % to X_1%. But to move to an industrialized country level would require reaching X_2% percent of GDP (point F). The question we now raise is how much of an effective rate increase is necessary to move from B to F. To do this, we estimate the increase due to administrative improvements as CB, and the increase due to structural change as BF.

To estimate these components, we make use of the following identity, which is a straightforward decomposition of the ratio of property tax revenues to GDP.

$$\frac{T_1'}{Y} = \left(\frac{T_1'}{T_1}\right)\left(\frac{T_1}{AV}\right)\left(\frac{AV}{MV}\right)\left(\frac{MV}{YV}\right)$$

where,

T_1'	=	Property Tax Revenue Collections
y	=	GDP
T_1	=	Property Tax Liability
AV	=	Taxable Assessed Value
MV	=	Market Value
MV	=	Market Value

The term on the left is the ratio of property tax revenue collections to GDP. It is the level of this ratio that we would like to explain. Our focus here is on the components of the tax

structure and its implementation, particularly on assessment and collection.

To carry out this estimation, let us make some assumptions, based on previous work and anecdotal evidence for developing countries.

T_1'/T_1 = collection rate (0.5) (Bahl and Martinez-Vazquez, 2008)

T_1/AV = nominal tax rate

Av/Mv = assessment ratio (0.5) (Bahl and Martinez-Vazquez, 2008)

Mv/Y = 3.8 (World Bank, 2000)

T_1'/Y = 0.6 (Bahl and Martinez-Vazquez. 2008)

In row (1) of Table 9, we use these assumed values to calculate the implied statutory rate $\left(T_1/AV\right)$ at 0.6. This would be the starting point represented by point A in Figure 2. If this nominal rate were held constant, but the product of the assessment ratio and the collection rate were increased to 0.81, the ratio of T_1'/Y would rise to 1.85, point B in Figure 2 (and row 2 in Table 9). What this shows, however, is that the administrative contribution to revenues would be equivalent to 1.25 percent of GDP. This would still fall short of the target of 3 percent of GDP (the industrial country average). To accomplish this (a move from B to F in Figure 2) will require a nominal rate increase from 0.6 to 1.0 percent of assessed value as shown in row (3) of Table X.

These results, albeit based on some very general assumptions suggest that a significant upgrading of the take from the property tax might not be as difficult as most observers would

expect. These results suggest that more than one-half the required increase can be had from administrative improvements (i.e., the collection rate and more accurate valuation). While increasing valuations are contentious, they are less so than statutory rate increases and the elimination of existing preferential treatments. And, the structural changes require legislative actions, while the administrative improvements do not.

XIV. Conclusions

Property tax revenues in developing countries are stuck at a level below one percent of GDP. Reformers and governments grieve about this, and numerous reform efforts have been undertaken. The proposed changes are pretty uniform: deal with the administrative problems of building a cadastre, undertaking regular and proper valuation, and ratchet up collection and enforcement. When seen through the eyes of developing country governments, such reforms call for spending a great deal to improve administration, without much promise for increased revenue.

In this paper, we argue that the reform might instead concentrate on redefining the property tax so that its revenue yield might be considerably greater, and therefore might justify the kinds of administrative expenditures required to establish a functioning property tax. We propose a unified property tax – in structure and administration – that includes four elements: an annual tax on all rural and urban property, a land based presumptive agricultural income tax, a capital gains tax, and a betterment levy. We show that at an effective rate equivalent to one percent of total land wealth, this unified property tax could raise revenues of 3 percent of GDP – a level that would justify the administrative expenditures required.

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Table 1. Property Tax as Share of GDP (Percent)

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

Note: The average for the 2000s is for the years 2000 and 2001.
Source: Calculations in Bahl and Martenez-Vasquez (2008) based on data taken from International Monetary Fund (various issues).

TABLE 2

Per Capita Collection of Selected Taxes (in $US)

Country	Property Tax	Income Taxes	General Sales Taxes
Chile (2002)	30	197	476
Russia (2001)	26	186	241
Indonesia (2004)	8	61	70
Egypt (1997)	3	67	54
Latvia (2004)	45	451	592
Kazakhstan (2004)	19	235	216
Canada (2004)	1100	4921	2649

Table 3. Property Transfer Taxes on Real Estate: Selected Countries

Country	Tax Rate
Pakistan	
Punjab	6 percent
NWFP	7.5 percent
Jamaica	13 percent
Portugal	Graduated rate ranging from 2 percent to 6.5 percent. Rate varies by value and land use.
Germany	3.5 percent
Slovakia	1 percent to 6 percent, depending on value
Czech Republic	3 percent
Netherlands	6 percent
Pakistan	5 percent
Bhutan	5 percent
Taiwan	7.5 percent
Mauritius	Between 5 percent and 10 percent
Swaziland	Between 3 percent and 4 percent, depending on value
Costa Rica	1.5 percent
El Salvador	Up to 3 percent depending on value
Kenya	4 percent
Malta	12 percent
South Africa	Graduated rate ranging up to 8 percent
Dominican Republic	3 percent

Sources:

Portugal, *Tax Notes International*, April 21, 2003, p. 227; Germany, *Tax Notes International*, January 14, 2002, p. 102; Slovakia, *Tax Notes International*, March 8, 2004, p. 915; Czech Republic, *Tax Notes International*, January 5, 2004, p. 26; Netherlands, *Tax Notes International*, June 16, 2003, p. 1093; Bhutan, *Taxes and Investment in Asia and the Pacific,* Supplement No. 104, 1993, International Bureau of Fiscal Documentation; Taiwan, *Taxes and Investment in Asia and the Pacific,* Supplement No. 165, 1998, International Bureau of Fiscal Documentation; Mauritius, *African Tax Systems,* Supplement No. 117, 2000, International Bureau of Fiscal Documentation; Swaziland, *African Tax Systems,* Supplement No. 105, 1997, International Bureau of Fiscal Documentation; Costa Rica, *Latin American Taxation Database*, Supplement No. 122, 2000, International Bureau of Fiscal Documentation; El Salvador, *Latin American Taxation Database*, Supplement No. 113, 1998, International Bureau of Fiscal Documentation; Kenya, *"Land Value Taxation: A Case Study Approach,"* McCluskey and Franzsen, 2001; Pakistan, data supplied by Provincial Government Officials; Malta, *Tax Notes International*, March 27, 2006; South Africa, Transfer Duty Act of 1949 (as amended); Dominican Republic, Tax Notes International, February 4, 2008.

Table 4.
A Global Property Tax

PRESENT SYSTEM	PROPOSED SYSTEM	COMMENTS
Annual Urban property tax	Annual urban Property Tax with a higher effective tax rate and an improved administration.	
Annual Rural Property tax	Introduce an Annual Rural Property tax with a tax administration that can identify and assess liable properties.	Only rural properties not used in farming would be covered by this tax.
Property transfer tax levied at the time of transfer	Merge into the annual urban and rural property tax	There would no longer be a stamp duty on property transfers.
Various Agricultural Income Taxes, Land Taxes and Cesses	Presumptive tax on income based on land and crop.	This would be applied only to land used in farming. The tax rate would be specific but would vary by crop. There would be a threshold based on acreage below which there would be no tax.
	Capital gains tax	The selling price would be determined notionally in the first years after implementation. The base price would be determined by sales records or by a notional determination. Sales by VAT would be taxable under VAT with a credit for capital gains taxes paid.
Betterment Levies, Special Assessments, etc.	Betterment levies	

Table 5
Estimated Tax Base for a unified Tax on Immovable Property
(Wealth Estimates, 2000, $ per capita)

Country	Population (in millions)	Cropland	Pastureland	Urban Land and Structures	Total Land Wealth	Total Land Wealth as a percent of NDP
US	282.2	2752	1662	76205.01	80,622	2.29
Canada	30.8	2829	1631	51925.86	56,385	
Spain	40.5	2806	971	37865.1	41,642	3.03
Indonesia	206.3	1245	50	2282.28	3,577	5.30
India	1015.9	1340	192	4604.46	6,136	13.76
Argentina	35.8	3632	2754	18298.14	24,684	3.20
Chile	15.2	2443	1001	10234.35	13,678	2.86
Hungary	10.0	2721	1131	14822.85	18,674	4.27
Latvia	2.4	1506	1877	12428.85	15,811	4.83
Korea	47.0	1241	275	30064.65	31,580	2.91
Mexico	98.0	1195	721	18154.5	20,070	3.47
Turkey	67.4	2270	861	8215.41	11,346	3.81
Malaysia	23.3	1369	24	12512.64	13,905	39.13
Thailand	60.7	2370	96	7301.7	9,767	4.91
Pakistan	138.1	549	448	933.66	1,930	

Source: Completed from data in World Bank (2006).

TABLE 6 **The Distribution of Total Wealth: 2000** **(Per Capita amounts in $US)**			
Income Group	Farmland , Urban Land and Structures	Total Wealth	Percent Share of Land
Low Income Countries	2,456	7,532	32.6
Middle Income Countries	7,110	27,616	25.7
High Income Countries	76,522	439,063	17.4
World	18,167	95,860	19.0
Relative Levels of Country income groups to World Average (in percent)			
Low Income Countries	13.5	7.8	
Middle Income Countries	39.1	28.8	
High Income Countries	421.2	458.0	

Source: World Bank (2006)

Table 7
Revenue Potential of Unified
Tax on Immovable Property

Country	Actual level of Property Tax		Potential Level of Property Tax	
	Per Capita	Percent of NDP	Per Capita	Percent of NDP
United States	1343.7	3.82	806.2	2.29%
Spain	317.0	2.48	416.4	3.03%
Argentina	120.7	1.56	246.8	3.20%
Chile	34.3	0.41	136.8	2.86%
Hungary	37.3	0.24	186.7	4.27
Latvia	29.9	0.56	158.1	4.83
Korea	71.4	0.84	315.8	2.91
Turkey	24.4	0.55	113.4	3.81
Malaysia	14.0	1.50	139.0	3.91
Uganda				
Thailand	6.5	0.01	97.7	4.91

Table 8
Present value of a Revenue Flow from a 1 percent Tax on Land Wealth

US dollars	Additional Per capita revenue US Dollars	$100 million investment per capita
United States	1211.724	0.354358611
Spain	625.2669	2.469135802
Argentina	371.3885	2.793296089
Chile	205.5307	6.578947368
Hungry	28059.7	10
Latvia	23757.54	41.66666667
Korea	47447.81	2.127659574
Turkey	17073.2	1.483679525
Malaysia	20896.23	4.291845494
Uganda		
Thailand	14685.54	1.647446458

Table 9

Simulated Impacts of Alternative Property Tax Administration Reform

Variables	$\frac{T_C}{Y}$	$\frac{T_C}{T_L}$	$\frac{T_L}{AV}$	$\frac{AV}{MV}$	$\frac{MV}{Y}$	
Baseline	0.6	0.5	0.6	0.5	3.8	
Scenario 1	1.85	0.9	0.6	0.9	3.8	
Scenario 2	3.0	0.9	1.0	0.9	3.8	
Scenario 3						
Scenario 4						

APPENDIX TABLE 1
ALTERNATIVE BASES FOR PROPERTY TAXATION

TAX BASE	MAJOR PROBLEMS	RECOMMENDATIONS	COMMENTS
Annual Rental Value	No data on comparable rents; courts disallow taxation of vacant property and make rent controls a basis for taxing some residential properties; conceptual problems with taxing commercial and industrial property ; Property ownership is uncertain and a full cadastre does not exist.	(a) Switch to a capital value or an area based system (b) Survey all properties, determine ownership, and build a tax roll. Keep it up to date. (c) Do an annual rent survey, impute a value for owner occupied properties, Use CV valuation methods and a capitalization rate to assess non residential properties.	(a) Would inherit a new set of problems, and perhaps not have a revenue effect. (b) The survey and its update would be very expensive. (c) The survey would be expensive. The courts might not accept the imputation.
Capital Value of Land and Improvements	No data on comparable sales: Would require assessment of each parcel and would require that difference among structures be taken into account;	(a) Switch to an area based or a site value system. (b) Survey all properties, determine ownership, and build a tax roll. Keep it up to date. (c) Force an accurate reporting of transactions values for sales of properties	(a) A site value system would require a higher nominal rate, and would have valuation problems. An area based approach is simpler, but is more notional and less horizontally fair. (b) The survey and its update would be very expensive. (c) This would require a major reform of the property transfer tax.
Site value	How to gather comparable sales values when there are so few sales in urban areas, or how to justify an imputation of land value from sales of properties; Gives an impression of showing favor to owners of high value structures; Requires a higher nominal rate.	(a) Tax the value of land and structures (b) Survey all properties, determine ownership, and build a tax roll. Keep it up to date. (c) Valuing land by the residual method requires comparable sales data.	a) Much more expensive than taxing only the land. b) The survey and its update would be very expensive. c) This would require a major reform of the property transfer tax.

Area System	Requires a notional estimate of location values, and a method of updating this on a periodic basis; Requires a notional assessment manual for building values per square unit; Property ownership is uncertain and a full cadastre does not exist; There is no distinction drawn among individual properties in the same value zone.	(a) Adopt one of the three approaches that are based on property values. (b) Survey all properties, determine ownership, and build a tax roll. Keep it up to date. (c) Valuing land to determine location values requires comparable sales data.	(a) All are costly to do (b) The survey and its update would be very expensive. (c) This would require a major reform of the property transfer tax.