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The Relevance of the New View of the Incidence of the Property Tax in Developing Countries

by

Charles E. McLure, Jr.

Winter, 1976

The author is the Cline Professor of Economics and Finance at Rice University. The paper was originally presented at the annual conference of the Committee on Taxation, Resources, and Economic Development in Cambridge, Massachusetts, October 22-24, 1976.

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Abstract

The Relevance of the New View of the Incidence of the Property Tax in Developing Countries

by

Charles E. McLure, Jr.

While tax incidence studies have traditionally allocated property taxes on improvements to consumers, the so-called "new view" asserts that, on the average, such taxes should be allocated to capitalists. This paper presents a third view that: a) distinction must be drawn between portions of the economy effectively isolated from national capital markets (such as subsistence agriculture, small-scale industry and commerce, and owner-occupied housing of the poor) and other sectors in which capital is intranationally mobile; and b) that the burden of taxes on intranationally mobile capital depend upon the extent on international capital mobility. If capital is internationally mobile, the "old view" does not do badly, though it must be modified to allow for burdens on land and labor. Other determinants of incidence, such as the geographic scope of the tax, sectoral differentials, consumption patterns, imperfect competition, and rent controls, are discussed. No "cookbook" formula can substitute for careful analysis of particular cases.

The Relevance of the New View of the Incidence of the Property Tax in Developing Countries

1. Introduction

Anyone reviewing my previous work on the incidence of taxation in developing countries would easily understand why Professor Bahl would ask me to write a paper on the relevance of the new view of the incidence of the property tax in developing countries, though he might be skeptical about the prospects of getting a straight answer.[1] In my 1968 study of tax incidence in Colombia I allocated two-thirds of the incidence of the property tax on the basis of non-food expenditures and one-third to upper income recipients of capital income.[2] The justification for this procedure was that "The allocation of two-thirds of the property tax on the basis of expenditures excluding food is intended to reflect the incidence of the tax on business and commerce and on rental housing. The remaining one-third is assumed to fall on relatively well-to-do homeowners and farmers."[3] This is a fairly straight forward application of what has come

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[1]The guided tour through the literature on "McLure on Incidence" is not intended to swell the list of references to my own work. Rather, in a paper such as this it is useful to have examples of positions on both sides of the issue under discussion. Since there is a good chance that at least some of the authors providing examples will be embarrassed when their mistakes are highlighted, I have decided to take upon myself the dubious distinction of providing the examples--and enduring the embarrassment. Besides, these examples are unequivocal and convenient statements of the two views of the incidence of the property tax by a practitioner of the (black?) art of estimating incidence of taxation in developing countries.

[2]Charles E. McLure, Jr., "The Incidence of Taxation in Colombia," in Malcolm Gillis, editor, Fiscal Reform for Colombia: The Final Report and Staff Papers of the Colombian Commission on Tax Reform (Cambridge: Harvard Law School International Tax Program, 1971), pp. 239-66, especially p. 254.

[3]Ibid., pp. 263.

to be characterized as the "old view" of the incidence of the property tax, though one might reasonably ask why I thought the part of the tax on farmers would not be shifted to consumers.[1] In my 1971 study in Panama, I used the same assumptions (but slightly different numbers) to allocate the property tax among owners of agricultural land (5 percent), owner-occupants of housing (19 percent), and consumers of non-food items (76 percent).[2] In both these studies the application of the old view gave patterns of incidence that were generally progressive, even though the old view is not supposed to do this.[3]

Then I returned to Colombia in 1972 and, as a recent convert to the so-called "new view," wrote, "In line with recent developments in incidence theory, these taxes are treated as being borne by the owners of taxed property."[4] Needless to say, the property tax added to the estimated progressivity of the Colombian tax system. So far, our reviewer would have no clear reason for concern; he might merely view this conversion as the triumph of new theory (reason?) over old. But the glow would soon fade. For in 1975, even before publication of the last quotation had heralded my conversion to the new view, I argued, "...it seems unlikely that the new view is generally correct, <u>except to the extent that countries</u>

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[1]There is, of course, an easy, if after the fact, explanation. If farmers sell in competition with imports, the prices they receive for their outputs are determined in world markets. Thus they can only absorb the tax--or, to anticipate the story to be told below, pass it on to land and labor. But taxes on agricultural property are relatively unimportant.

[2]Charles E. McLure, Jr., "The Distribution of Income and Tax Incidence in Panama, 1969," <u>Public Finance Quarterly</u> (April, 1974), 155-201, especially 191.

[3]The Incidence of Taxation in Colombia," <u>op. cit.</u>, 254; "The Distribution of Income and Tax Incidence in Panama, 1969, <u>op. cit.</u>, 167-68.

[4]The Incidence of Colombian Taxes, 1970," <u>Economic Development and Cultural Change</u> (October, 1975), 155-83. The quotation is from pp. 170-71.

are effectively isolated from international capital markets."[1] Given what might appear to be a remarkably quick theoretical flip-flop, one might reasonably ask whether I had "back-slid," as so many overly enthusiastic converts do, whether I had made an error in one or the other of the last two studies, or whether the conditions were special in Colombia. In other words, it may be that in asking me to write this paper, Professor Bahl was saying, "Will the real Charles McLure please stand up?" Let me say at this time, without yet standing fully, that the answer to the previous question is not so simple; I probably made a mistake in my second incidence study for Colombia, since there seem to be no mitigating circumstances in Colombia. But, and this may seem contradictory, I was probably also wrong in the first study in Colombia and in the Panama study to adhere so strongly to the old view. What I should have done was use the theoretical reasoning of the new view to produce a third "mutant" view. Unfortunately, even my 1975 paper on taxation and the urban poor stops short of doing so, even though my earlier work had contained such a view.[2]

In the rest of this paper I examine the relevance of the new view of the incidence of the property tax in developing countries. We see that incidence depends upon exactly what question is being asked and the conditions in the country under examination, especially the international mobility of capital. (Thus we see that the economist not only has two hands; when asked to stand and identify himself the best he is likely to be able to achieve is a low crouch.)

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[1] Charles E. McLure, Jr., "Taxation and the Urban Poor in Developing Countries," Staff Working Paper No. 222 (Washington, D.C.: World Bank, 1975), 7. (Emphasis added to highlight the role of international capital mobility discussed further in section 3c below.)

[2] This is discussed more fully in section 3c below.

2. The Old View and the New

Recent years have seen the evolution of an amazingly uniform format for the discussion of the incidence of the property tax.[1] Descriptions of the old (or traditional) view and its implications are followed (like the night, the day, in the minds of some advocates of the new view) by criticisms of the old view. These criticisms come in two waves. The first questions the distributional implications of the old view, even if the theory is correct. But the primary criticism questions the validity of the theory underlying the old view and substitutes a theory which is now commonly called the new view. Given the abundance of places where one can read this standard discussion, I will limit my own description of the two views to the bare bones of the theoretical arguments necessary to understand what follows.

The fundamental difference between the two views lies in their assumptions about the elasticity of supply of capital.[2] Because the old

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[1]See, for example, Henry J. Aaron, Who Pays the Property Tax: A New View (Washington: Brookings Institution, 1975), Chapter III.

[2]Dick Netzer, in Economics of the Property Tax (Washington: Brookings Institution, 1966), Chapter III, suggests that the locus classicus (or at least a good summary) of the old view is Jens P. Jensen, Property Taxation in the United States (Chicago: University of Chicago Press, 1931), pp. 53-75. But in reading Jensen I find a discussion that sounds more like the new view than "the accepted body of doctrine" that Netzer says had become "the conventional wisdom" on the incidence of the property tax some 40 years before. Moreover, it is interesting that Aaron, op. cit., pp. 20-25, presents the theory of the old view without providing references to explicit statements of that view. Similarly, George F. Break in "The Incidence and Economic Effects of Taxation," in Blinder et al., The Economics of the Public Sector (Washington: Brookings Institution, 1974), pp. 154-54, summarizes the old view without saying who held it. Note finally that Mieszkowski, op. cit., pp. 73-74, was quite explicit in saying that his goal was not to discredit one old view, but to reconcile two old views, each of which was generally correct for the question being asked. Since this paper is not concerned with the history of thought on incidence theory, I take the old view to be what Netzer says

view assumes capital to be in infinitely elastic supply, it concludes that the part of the property tax levied on improvements cannot be borne by owners of capital.[1] Instead, this tax is thought to be shifted forward to consumers, including renters, in the case of rental housing, and to be regressive.[2]

The new view, on the other hand, takes the supply of capital to be totally inelastic. As a result, the property tax on improvements is, on the average, borne by owners of capital, rather than being shifted forward.[3] Given the distribution of ownership of capital by income classes, the property tax is progressive, rather than regressive.

But this is only part of the story, albeit the part that usually receives most of the attention and is most commonly associated with the new view.[4] There will generally be deviations of property tax rates

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it was, rather than questioning further whether there ever was a monolithic old view.

[1]The traditional view of the incidence of the part of the property tax levied on land is one of capitalization, that is, burden on those who owned land at the time the tax was imposed or raised. The two views on the land at the time the tax was imposed or raised. The two views on the land portion of the tax are contrasted primarily in footnotes.

[2]But one criticism of the old view asserts that tax burdens are related to permanent income, rather than to current income; the tax on improvements need not be regressive, even if it is borne by consumers. For this and other criticisms of the old view that take as given the assumption of forward shifting, see Aaron, ibid., pp. 27-38.

[3]This extreme assumption is, however, softened by the recognition that saving may be responsive to the return to capital, so that in the long-run view the supply of capital is not completely inelastic. Similarly, the old view's assumption of totally fixed supply of land is relaxed by assuming an agricultural hinterland from which land can be annexed to urban areas. It seems accurate to state, however, that the new essentially accepts the old view on the elasticity of supply of land but rejects the old view on the elasticity of the supply of capital.

[4]I have no proof for this assertion, and there seems to be no clear advantage in citing examples in order to demonstrate that a straw man is not under attack. But I have seen examples in which the excise effects that figure so prominently in the new view are largely overlooked, especially by noneconomists.

around the average rates. These deviations can occur because property taxes are often local levies, rather than national ones. And even for nominally uniform national taxes, deviations can occur because investments in some regions and some industries are taxed more heavily than others, either as a matter of conscious policy or because of differences in administering the tax on various kinds of property and in various regions or localities.[1]

Because owners of capital can be expected to allocate their wealth among competing uses of locales in such a way as to earn the same net rate of return at the margin, the supply of capital to any one industry or jurisdiction is perfectly elastic. Thus deviations of property tax rates from the average are passed on to consumers and owners of factors which are specific to regions or activities that are taxed expecially heavily or lightly, rather than burdening or benefitting owners of capital.[2] The latter effects on product prices and factor returns are now usually called excise effects.

There can be little doubt that the new view is the correct view, if only because, properly understood, it encompasses the old view, and corrects it. This startling conclusion is easily understood once one sees that one cannot determine "the" incidence of the property tax unless the question at issue is specified in greater detail.[3] If the incidence question relates

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[1]Though elements of the new view can be found elsewhere, the standard reference and source of the analysis summarized here is Peter Mieszkowski, "The Property Tax: An Excise Tax or a Profits Tax," Journal of Public Economics, Vol. I (April, 1972), pp. 73-96.

[2]Note that the differentials involved here are in the ratio of tax to value of (or return to) capital, rather than in the ratio of tax to value of sectoral output. It is the former that induce excise effects. The latter, if the result of a uniform rate of tax on capital and sectorally different capital output ratios, do not create distortions and excise effects. This is a standard--but commonly overlooked--result of the general equilibrium incidence analysis.

[3]This conclusion would not, of course, startle Mieszkowski, who stated (ibid, p. 74):

to a tax levied on capital by a jurisdiction to which capital is in inelastic supply, the new view is appropriate and the old view is clearly wrong. If, however, we are concerned with the incidence of a tax levied in only some part of a group of jurisdictions among which capital is highly mobile, the old view does fairly well.[1] Note, however, that in this case the old view is satisfactory not so much by design as by an accident in the history of thought. Furthermore, it is inferior to the new view even here. Let me explain.

Both the old view and the new view would lead us in this latter case (tax of geographically limited applicability) to conclude that the tax on improvements would not be borne by capital. In the new view the high elasticity of supply necessary to produce this result is the logical implication of the limited scope of the tax and mobility of capital. But in the old view it appears that the high elasticity results from the misapplication of partial equilibrium analysis. Since this misapplication explains the inability of the old view to indicate the likely incidence of a uniform tax on all uses (geographic or sectoral) of capital, it deserves our brief attention.

Recall that formulation of the old view predated general equilibrium incidence analysis. But partial equilibrium analysis, unless carefully

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> ...there is relatively little conflict between the view that property taxes are excises and the proposition that the basic effect on property tax is to decrease the yield from real capital <u>if it is properly recognized that the global (nation-wide) effects of the tax are quite different than the partial effects</u> for a single city, or groups of cities. (Emphasis in original)

Aaron, <u>op. cit.</u>, pp. 18-20, also notes that the answer depends upon the question being asked: "Who pays the property tax...depends upon the scale of the envisaged change."

[1]Although this aspect usually figures less prominently in discussions of the new view, the same reasoning applies to differential taxation of types of property.

done--and in this case care may be synonymous with knowing in advance the general equilibrium result--cannot generally handle problems of a) partial factor taxes (i.e., taxes on some uses of one factor) or b) general taxes (taxes on all products or uses of one factor).[1] Faced with the problem of analyzing a tax on all uses of capital, partial equilibrium analysts seem to have considered the uses one at a time, as though the "pieces" of the tax did not add up to a uniform tax on all capital, rather than simply treating the tax as being levied on a factor in relatively inelastic supply.[2] Moreover, though there are exceptions to this rule, even the analysis treating components of the general tax separately tends to be flawed. That is, in the conventional wisdom, the property tax is treated as a cost which, much like an excise, must be added to price, rather than as a partial factor tax which will induce substitution of other factors for capital and result in the tax being shifted at least in part to those other factors. In its treatment of excise effects the new view does, of course, capture these effects on factor returns as well as effects on product prices. It is in this sense that the new view incorporates a corrected statement of the old view.

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[1]For a further discussion of the problems involved in employing partial equilibrium analysis where general equilibrium analysis is required, see Charles E. McLure, Jr., "General Equilibrium Incidence Analysis: The Harberger Model after Ten Years," Journal of Public Economics, Vol. IV (February, 1975), pp. 125-61.

[2]One could hardly ask for a clearer statement of the fundamental error involved in using partial equilibrium analysis than this sentence from Jensen, op. cit., p. 53, "With a general property tax, as with any other compound tax, no analysis of incidence can be made until the tax has been broken up into its component parts." Even so, Jensen proceeds, following the lead of H. G. Brown, who was so often on target in incidence analysis, to provide insights quite similar to those in Mieszkowski's later analysis.

3. Application of the New View

The conclusion of the previous section, that the new view encompasses and corrects the old view, and the title of this section might suggest that the remainder of my paper would be short. Together they seem to imply that we need only attribute national taxes, on the average, to owners of capital and then follow Mieszkowski in sorting out the excise effects of local differentials, including locally levied property taxes. This would, however, be inaccurate. Mieszkowski's conclusion that a uniform tax on capital (or the average rate of property taxation) would be borne by owners of capital depends upon the international immobility of capital, as well as the insensitivity of saving to the return on capital. A straightforward application of Mieszkowski's analysis would suggest that if capital is in elastic supply to the taxing nation, even a uniform national property tax has excise effects analogous to those Mieszkowski described for local taxes (or differentials). This section therefore presents the application of the reasoning of the new view to the incidence problem in developing countries. It does not simply apply the results of the Mieszkowski analysis, since doing so would almost certainly be inappropriate in many instances.

Part a) describes the basic assumptions (to be relaxed subsequently) under which the analysis proceeds, especially perfect competition and neglect of benefits. Part b) notes the need to specify exactly the incidence question at issue: whether a national or a local tax change is under examination. Part c) examines the crucial role played by assumptions of mobility and considers results for three different mobility assumptions: (I) intra-national and international immobility, (II) intra-national mobility, but international immobility, and (III) intranational

and international mobility. The "excise effects" of Mieszkowski's analysis became pervasive in case III, so that burdens on land, labor, and goods produced domestically but not exported or sold in competition with imports became crucial.

Section d) applies the theoretical lessons of the previous discussion, along with broad characteristics of taxation and other economic patterns found in developing countries, to suggest general tendencies in the incidence of taxation among income classes and implications for the conduct of incidence studies. The implications of relaxing assumptions made earlier are considered in part e). The analysis described thus far raises as many questions as it answers. These concern geographic and industrial patterns of taxation, the extent of capital mobility, etc. These questions are brought together in section f) in the interest of emphasizing that no cook-book approach to the analysis of incidence can substitute for careful thought.

a) Basic assumptions

In our application of the theoretical reasoning of the new view to the property taxes in developing countries we make several simplifying assumptions. Some of these will be relaxed subsequently, especially in part e) below.

First, we ignore dominance of world markets by taxing countries, and assume that developing countries face fixed world prices for exports, as well as imports. This qualification restricts the applicability of our analysis only slightly since few countries dominate world markets to anywhere near the degree required to exercise monopoly power by

themselves (e.g., tin in Malaysia), and it seems unlikely that property taxes would be the vehicle for cartelization in any efforts to emulate OPEC.[1]

Similarly, we ignore for now the possibility that some regions or localities dominate markets within nations and therefore do not face completely elastic demands for all goods other than what we refer to below as "local goods." Where the assumption of nondominance is inappropriate, allowance should be made for it in the way described in part E. In the same vein, in part D we examine the incidence of property taxes under the assumptions of perfect competition. But violations of this assumption are commonplace in developing countries and must be discussed in section E and faced squarely in any application of this analysis. Finally, we ignore for now many of the characteristics of developing countries that are so distinctive: progressive property tax rates, the exemption of much owner-occupied low income housing, important public enterprises, and squatter settlements, for example. Several are discussed below, after we have set the stage with a generally applicable theoretical analysis.

Third, we abstract from the benefits financed by property tax revenues. Thus we cannot deal effectively with the incidence of revenues from such fiscal devices as valorization in Columbia or better-

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[1]For a discussion of the determinants of the ability of countries to export taxes on natural resources, see Malcolm Gillis and Charles E. McLure, Jr., "Incidence of World Taxes on Natural Resources with Special Reference to Bauxite," American Economic Review, LXV (May, 1975), 389-96, and "The Distributional Implications of the Taxation of Natural Resources," Rice University Studies, 61 (Fall, 1975), 143-62. Though property taxes are not considered explicitly there, the discussion of the income tax on the normal return to capital is generally applicable to the property tax.

ment levies in Korea, for example. The inability to handle such benefit-related charges is probably not a major loss, given the purpose of this paper. First, despite there appeal to economists, betterment levies seem not to have achieved widespread popularity outside a few countries.[1] Second, and more important, it may not even be very meaningful to ask the incidence of taxes that go to finance particular projects of special benefit to those upon whom the taxes are levied, especially if the projects and financing are approved overwhelmingly by target groups, as seems often the case.[2] If one were to ask the incidence of such taxes he would almost certainly want to incorporate the analysis of benefits, which would take us far beyond the scope of this paper.[3]

Somewhat more troublesome is the possiblity that programs financed from general revenues benefit those who pay the property tax.[4] A full

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[1]For a review of experience in this area, see Orville Grimes, Jr., "Urban Land and Public Policy: Social Appropriation of Betterment," World Bank Staff Working Paper, No. 179, Washington: International Bank for Reconstruction and Development (May, 1974).

[2]It is hardly ever suggested, for example, that analysis be undertaken of the incidence of postal charges, the assumption being that users receive at least what they pay for. Of course, there remains the possibility that not all of the target group gain as much from public projects as they pay in betterment levies. But even knowing that can involve a very complicated analysis of benefits, including the valuation of infra-marginal benefits; and it may not suffice to use differential analysis in such cases since there may be no politically realistic alternative means of finance. That is, if the very existence of project benefits depends upon financing via betterment levies, the difference in incidence of betterment levies and other means of finance is totally moot.

[3]For tentative conclusions on related issues, see Charles E. McLure, Jr., "On the Theory and Methodology Of Estimating Benefit and Expenditure Incidence," presented to a conference of the Rice Program of Development Studies, Houston, (April, 1974).

[4]Strictly speaking we cannot even say with much confidence who receives the benefits or pays the taxes without detailed analysis. But given the differential incidence analysis to be employed, this is of no practical importance in the case at hand.

treatment of this issue would again take me beyond the scope of my assignment,[1] but it seems that we can easily sidestep the question. If the programs are financed from general revenues, alternative sources of finance are presumably available.[2] Thus, rather than attempting to determine the budget incidence of tax-expenditure programs, we can "simply" compare the incidence of the property tax with the incidence of an alternative source of revenue.

The reason for placing "simply" in quotation marks in the previous sentence is that in the attempt to avoid examining the incidence of both the property tax and benefits we have set for ourselves the problem of determining the incidence of <u>two</u> taxes, the property tax and some alternative tax to be used as the benchmark in our differential analysis. If we are not careful in our choice of the alternative tax, we will not have greatly simplified matters. In particular, a national income tax would tend to cause some of the same international capital flows discussed below (in Case III), and a subnational income tax would be virtually unworkable in almost all developing countries. Thus, I assume as an alternative tax levied on land in the taxing jurisdiction.[3]

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[1]The basic issue seems to be whether or not those who invest in rental housing, commerce and industry benefit from public spending. Though direct benefits (from crime prevention, transportation, etc.) may be modest, indirect benefits may be substantial. Thus, education and public health may be reflected in lower wage costs. The complex analysis needed to track down both direct and indirect benefits goes well beyond the incidence of the property tax.

[2]Alternative revenue sources would be available at the national level in almost all countries. Even (of especially) in localities that rely heavily upon the property tax, on the average, there should be alternative sources of revenue at the margin; and there is always the possibility of national grants to subnational governments.

[3]For an analogous assumption in the state-local sphere, see McLure, "The Interstate Exporting of State and Local Taxes: Estimates for 1962," <u>National Tax Journal</u>, XX (March, 1967), 52.

This alternative is choosen primarily for its analytical convenience. It can be levied at either the national or subnational level and can be expected to reduce land rents by the amount of the tax and induce none of the geographic migration of capital associated with the tax on improvements. Yet it does have other advantages that hardly need to be emphasized to this group. So my analysis can usefully be viewed as one of the gains and losses of taxing property, rather than land in developing countries.

Before concluding this section I must address myself briefly to the old question of capitalization. It is customary to note that a tax on land, if it has been capitalized, need have no burden on anyone presently alive. According to economic theory, the tax would have reduced the wealth of landowners at the moment of its imposition, and those landowners may or may not be the present owners of the taxed land. We can apply the same reasoning to the analysis of that part of taxes on improvements that is shifted to land. Strictly speaking, present landowners may have bought at a price depressed by the shifted tax and not bear the burden of the tax.

The theory of capitalization is, of course, theoretically compelling, and it seems to have been borne out by empirical investigation.[1] Yet it is not necessarily relevant for most policy discussions.

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[1]See, for example, Larry L. Orr, "The Incidence of Differential Property Taxes on Urban Housing," National Tax Journal, Vol. 21 (September, 1968), pp. 253-65, Wallace E. Oates, "The Effects of Property Taxes and Local Public Spending on Property Values: an Empirical Study of Tax Capitalization and the Tiebout Hypothesis," Journal of Political Economy, Vol. 77 (November/December, 1969), pp. 957-71, J. D. Heinberg and W. E. Oates, "The Incidence of Differential Property Taxes on Urban Housing: A Comment and Some Further Evidence," National Tax Journal, Vol. 23 (March, 1970), pp. 92-98, R. Stafford Smith, "Property Tax Capitalization in San Francisco," National Tax Journal, Vol. 23 (June, 1970), pp. 177-93, Henry O. Pollakowski, "The Effects of Property Taxes and Local Public

After all, the important question for the analysis of tax policy is how people would be affected by changes in taxation--in this case the elimination of the property tax.[1] Thus, continued reliance upon land taxes--even if long-since capitalized--burdens present landowners who can, in Bird's words, "be said to bear the tax in the important sense that they would be gainers if it were removed."[2] Similar statements can be made about capitalized portions of other property taxes which are shifted to land. In what follows reference to burdens on land will mean that landowners bear the tax in the sense just described; they need not have been burdened by the initial imposition of the tax.

b) The question at issue

Perhaps the most important lesson of the recent debate over the relative merits of the old view and the new view of the incidence of the property tax is the importance of stating the question at issue precisely. As Aaron has written, "...the pattern of gains and losses generated when a single state or locality changes property taxes will

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Spending in Property Values: A Comment and Further Results," Journal of Political Economy, Vol. 81 (July/August, 1973), pp. 994-1003, and Wallace E. Oates, "The Effects of Property Taxes and Public Spending on Property Values: A Reply and Yet Further Results," Journal of Political Economy, Vol. 81 (July/August, 1973), pp. 1004-1008.

[2]For a more detailed statement of this position, see Charles E. McLure, Jr., "Taxation and the Urban Poor in Developing Countries," op. cit.

[3]See Richard M. Bird, "The Incidence of the Property Tax: Old Wine in New Bottles," Canadian Public Policy, supplement, 1976. The usual view of capitalization results from examining dY_i/dT for the original imposition of taxes, where Y_i is the real income of individual i and T is the amount of tax revenue collected in a given period. The view expressed here is that it would be much more relevant for most policy purposes to examine the above derivative for prospective changes in taxation.

differ markedly from that appearing after a change in the nationwide use of property taxes..."[1] That such a simple lesson needed to be learned is lamentable, to put it mildly. But it did need to be learned.

Translating this lesson into application in the third world, we see that we must ask, in Aaron's words "the scale of the envisioned change." If, for example, we are asking about the effect of changing the property tax in Cali on Bogota, that result may--but need not--be quite different from that derived from the investigation of the incidence of the property tax in Colombia.[2] Similarly, we may get a different answer if we ask the incidence of changing the property tax on housing or certain industries in Columbia, rather than asking the incidence of a uniform change in Colombian property taxes. Finally, there may be a further difference if we ask the incidence of changing property taxes on housing in Cali, rather than that of changing Colombian property tax. This is clear from the Mieszkowski analysis.

But even if a national property tax is being changed, we must not assume that the changes are uniform across the country. Due to differences in administrative skills, efforts, and resources (including adequate budget and a current cadastral survey) apparently uniform tax changes may be translated into tax assessments that are far from uniform; and, of course, they need not strike industries uniformly.

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[1] Aaron, op. cit., 19.

[2] The qualification to this sentence and the next one will be explained further in the next part of this section.

Equally important, one should not be misled by the false impression that a tax change is local, when indeed it is not. Suppose, for example, that city A raises its property tax. The immediate reaction might be to treat this as an isolated event and analyze the excise effects generated. But more careful analysis might suggest that a broader pattern of tax increases was involved.[1] Most obviously, the national government might have mandated uniform increases in local property taxes. More subtly, national grants might have been so structured as to stimulate increased local reliance on property taxation. In either case the economic effort would be similar to that of a national tax increase. A similar result could occur if several localities agreed to raise taxes simultaneously, rather than being caught in the prisoner's dilemma situation in which each fears the loss of industry that might result if it acted alone to raise taxes.[2]

These differences are elaborated further in the following part of this section, where we discuss the importance of assumptions about factor mobility. But we can note here that a crucial determinant of the incidence of property taxes is whether or not capital's range of mobility exceeds the scope (industrial or geographic) of the change in the property tax under examination.

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[1]The discussion of this paragraph is relevant primarily if the supply of capital is inelastic as seen by the nation. This point is developed further in the next footnote.

[2]An analogous problem has been discussed in McLure, "Interstate Exporting...," op. cit., 51-52. Similarly, if all nations decided multilaterally to raise their property taxes together, the assumption that each faced an elastic supply of capital would be irrelevant to the assessment of the incidence of the multilateral tax change. This possibility is so remote as to be ignored in most of what follows.

c) The role of mobility assumptions

In Mieszkowski's analysis, a national property tax on improvements is, on the average, borne by the owners of capital, but differentials above and below the average rate of tax give rise to "excise effects." A local tax or local changes in a national tax, of course, barely affect the average national tax rate and therefore generate only excise effects. These excise effects involve reductions (increases) in land rents and perhaps wage rates and increases (decreases) in prices of "home goods" (locally produced goods and services not sold in national markets) in localities with higher (lower) than average property taxes. Prices of nationally produced goods or locally produced goods sold in national markets are unaffected by the property tax, because they are determined in the national market.[1]

This summary of the new view indicates clearly the overwhelming importance of mobility assumptions, broadly defined. Mieszkowski's analysis occurs in a context in which capital is mobile within a nation, but is in fixed supply to the nation. On the other hand, land is geographically immobile and labor is imperfectly mobile between localities with high or low rates of taxation. Finally, it is assumed that some goods, such as housing services, are inherently "home goods," while others are traded in national markets.

Once we turn to the analysis of property taxes in developing countries--and many developed countries, for that matter--we must modify Mieszkowski's mobility assumptions. Perhaps the most important

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[1]Prices are affected to the extent that such goods require distribution to local markets. But wholesaling, retailing, and servicing in local markets can be categorized as "home goods."

modification is in the assumption that capital is in fixed supply. Though the mobility of capital is often restricted by exchange controls, and capital would be less than perfectly mobile between countries, in any event, we must be ready to relax the assumption of a fixed national supply of capital. Moreover, "home goods" can take on a new connotation: that of nontraded goods in the theory of international trade. In what follows we will sometimes use the term "national goods" to refer to goods and services that are not traded internationally and "local goods" in place of "home goods." Finally, we must recognize explicitly the likelihood that capital markets are less efficient in developing countries than in developed countries, and substantially less perfect than in the theory of incidence of the property tax. In particular, the only viable outlet for saving of many poor people in developing countries may be in tangible investments in owner-occupied housing, small-scale commerce and industry, and subsistence agriculture. Similarly, low and middle income families may be largely shut off from access to capital markets. Thus, we may want to treat the capital stock of low-income households as essentially given, geographically immobile, and specific to the industries listed above, while assuming that the remainder of capital is mobile between uses and localities.[1] This latter mobility of capital may be only within the nation, or it may be relative to world capital markets.[2]

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[1]Some forms of property of low-income families are, of course, movable between jurisdictions. But these are not ordinarily subject to property tax.

[2]In order to assume that capital is mobile between nations it is not necessary to believe that middle income households are active in world capital markets. All that is required is that interest rates

The alternative mobility assumptions and the incidence results they suggest are indicated in Table 1. Thus, column II indicates the results of the Mieszkowski analysis in which capital is mobile within the nation but (implicitly) immobile internationally. Column III presents an alternative in which capital is mobile between, as well as within, nations. Column I contains not so much an alternative mobility assumption, though that interpretation might sometimes be appropriate (e.g., for short-run analysis), as a description of the mobility of taxable property of low-income persons. Row 1a deals with changes in local taxes that are uniform across industries or with the average changes in local taxes that are not uniform across industries. Row 1b considers sectorally differentiated changes in local taxes. In rows 2a to 2d changes in national taxes are considered. In row 2a, a uniform change in national taxes (or the average of differential changes) is considered. Rows 2b and 2c allow for local and for industrial differentials, respectively, and row 2d considers both types of differentials altogether. Rows 1a and 1b are, of course, similar in spirit to rows 2b and 2d.

Perhaps the main lesson of Table 1 is the limited relevance of that part of the new view of the incidence of the property tax which focuses upon the burdens on capital. If the supply of capital is inelastic to the taxing nation, the tax probably has the general effect posited by the new view. But if capital is mobile internationally, the heralded

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are competitive and determined at the margin by those who are active in world markets.

TABLE 1: Incidence Implications of Alternative Mobility Assumptions, for Various Types of Tax Changes

Type of tax change	Intranational and Interindustry Mobility: No	Yes: International Mobility: Yes	Yes: International Mobility: No
	I	II	III
1. Local tax			
a. Average	Sources: local capital Uses: none	Sources: locally immobile labor and land Uses: local goods	Sources: as in IIa Uses: as in IIa
b. Industrial differentials	Sources: differentially taxed local capital* Uses: none	Sources: industrially specific and locally immobile labor and land Uses: heavily and lightly taxed local goods	Sources: as in IIb Uses: as in IIb
2. National tax			
a. Average	Sources: capital Uses: none	Sources: capital Uses: none	Sources: land and nationally immobile labor Uses: national goods
b. Local differentials	Sources: differentially taxed local capital Uses: none	Sources: land and locally immobile labor Uses: local goods	Sources: as in IIb Uses: as in IIb
c. Industrial differentials	Sources: differentially taxed capital* Uses: none	Sources: industrially-specific land and nationally immobile labor Uses: heavily and lightly taxed national goods	Sources: as in IIc Uses: as in IIc
d. Local and industrial differentials	Sources: differentially taxed local capital Uses: none	Sources: industrially specific and locally immobile labor and land Uses: heavily and lightly taxed local goods	Sources: as in IId Uses: as in IId

*May be diffused to all locally owned capital.

burden on capital cannot be expected to materialize. Rather, even a nationally uniform tax has only excise effects. That is, it reduces the return to land and labor that is immobile internationally, and it may raise the price of national goods. Of course, the other "new view" results shown in column II are not affected by the assumption of international mobility, since international capital mobility provides nothing not already provided by intranational mobility.

On the other hand, the "new view" results for local and industrial differentials are changed markedly to the extent that capital is specific to both certain localities and certain industries (Case I).[1] Incidence on the sources side, rather than falling on those who sell services of land and labor, falls on owners of capital.[2]

d) Patterns of incidence

Since we are ordinarily interested more in distributional effects across income classes than across factor groups, the analysis of the previous part of this section can be no more than the starting point for the estimation of incidence in developing countries. In this part we employ the results summarized in Table 1 and some common characteristics of property taxation in developing countries to suggest likely

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[1] The property tax could, of course, induce low-income groups to substitute untaxed personal property for taxable real property. If so, the burden of the tax would be diffused to owners of all locally immobile capital (including personal property), and there would be some adjustments in relative prices. Even if such substitutions occurred, they probably would not substantially alter the analysis presented here.

[2] In this instance it is difficult to determine whether owner occupants bear the tax on the sources side (as owners) or on the uses side (as occupants). Since low-income rental housing is likely to be owned by those whose capital is mobile, both industrially and geographically, renters, as consumers of local goods, presumably bear a substantial part of the tax (except for case IIa) on the uses side.

patterns of incidence among income classes, first for a uniform national levy and then for local and industrial differentials. Since these patterns are based upon the assumptions described in part a) of this section, they may be altered by the relaxation of those assumptions. (See part e) below.) Moreover, the description of property taxation used in deriving these patterns of incidence follows a Latin American (and particularly Colombian) mold, and therefore may need to be modified for application in other countries.

A uniform national tax

Dealing with nationally uniform taxes, the old view found incidence to be on consumers and the new view found it to be on owners of capital. Our analysis confirms the findings of the new view if capital is not internationally mobile. But to the extent that capital is in elastic supply to the taxing country, the story is quite different. In that case, the property tax burdens nationally immobile labor and consumers of national goods.

Converting these patterns into distributional consequences, we can argue that in Case II (with Case I) a national property tax would burden capitalists, with the probable exclusion of low-income owner-occupants, subsistence farmers, and those in small-scale commerce and industry. These last groups would be excluded, in all probability, because the property tax generally does not apply to such groups, because of explicit or de facto exemptions, and they are (as noted above) effectively isolated from national capital markets.[1] Thus, it would appear that

[1] If the tax does apply to any of these groups, they should bear its burden. Or if it does not, but capital mobility to and from

under the assumptions of Case II the property tax would, on the average, be quite progressive--perhaps more so than in developed countries.

The story is, of course, quite different if we examine Case III (with Case I). The burden on land would presumably be progressive in most countries, but that on labor would probably tend to be regressive. And to the extent that the tax fell on "national goods" it would probably be regressive, though generalization on this question is difficult. Regressivity on the uses side would seem likely, because of the tendencies for agricultural products to be national goods and for luxury goods to be imported.[1] But basic foodstuffs are also imported in many countries. Evaluating the relative strengths of these (and other) tendencies is difficult without a complicated model, but it certainly would not be surprising to find regressivity, on balance.

Local differentials

For both Cases II and III, the results just discussed are only part of the story, even if national taxes are under examination, since differentials in tax rates produce excise effects that cannot be ignored. To the extent that local differentials merely reflect differences in industrial mix, they are discussed momentarily. Let us

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the rest of the economy is high, families in these groups should share in the burden of the tax on other sectors.

[1]Domestic services are national luxury goods. While there may be a tendency to think of these as being highly labor-intensive, and thus largely unaffected by property taxes, provision of quarters for servants may make this service quite capital-intensive.

focus here upon local differentials in the taxation of particular industries. Though such differentials are doubtlessly widespread, perhaps the most important are those between capital cities (or special districts) and other cities.[1] It is not uncommon for capital cities to be allowed to levy higher tax rates than those permitted other cities. The theory underlying both Cases II and III suggests that these differentials would be reflected in land rents, wages of locally immobile labor, and prices of local goods.

The attraction of capital cities, relative to smaller cities, if the conventional wisdom on the subject is correct, might make high-income recipients of labor income geographically less mobile than their low-income counterparts.[2] Thus, they would be harmed relatively more than the poor by the differentials under discussion. But whether this is true or not, to the extent that wages are higher in capital cities than in other cities and urban areas, the effects on wages would tend to increase progressivity or reduce regressivity. The same tendency may be at work in the effect on land rents, since the richest landowners might be expected to own land in capital cities. Conversely,

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[1]For an indication of differences on the expenditure side, see Roger S. Smith, "Financing Cities in Developing Countries," IMF Staff Papers, XXI (July, 1974), 334. As Smith notes (pp. 344-46), some capital cities are constituted as special districts which have both local and state functions in three-tier systems of government or special status in two-tier systems.

[2]That is, the attractions of the capital produce locational rents for these groups that could be captured by taxation. Locational rents may be substantially less important for the less affluent.

land in smaller cities may be owned primarily by those further down--but not near the bottom of--the income scale. But this is less certain to be true or to be important.[1] Finally, the differential effects on prices of local goods probably also tend to increase progressivity. This occurs because prices of local goods rise where incomes are highest (the capital) and fall where they are lowest (other cities). On balance, then, it seems likely that the local differentials that actually exist are likely to increase the progressivity of national property taxation.

This does not, of course, mean that a local increase in the property tax will increase the progressivity of taxation on residents. First, a substantial amount of any burdens on land may be exported to non-resident landowners; presumably these exported taxes would be neglected in calculating local progressivity. The remaining taxes falling on land can probably be expected to be progressive, but not so progressive as this differential would be if seen from the national point of view (i.e., including the exported burdens). Burdens on labor can generally be expected to be regressive. Finally, the tax-induced increases in prices may be either regressive or progressive, though the latter may well be the most probable pattern. This is true because local goods, surprisingly enough, are unlikely on the average to be items of mass consumption. First, most foodstuffs will be grown or sold outside the taxing region, and therefore not be local goods, quite aside from the

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[1] This phenomenon may be relatively unimportant because even landowners in small cities may be among the nation's richest families. If they are, the redistribution induced by differentials would just be among the rich, not between them and the poor.

fact that the distribution channels through which they pass may have little contact with the property tax collector. Second, domestic services are important local goods not consumed by the poor. And casual observation suggests that even the demand for housing, an important local good, may be rather income elastic in developing countries, as it is in developed countries.[1] Whether these effects on the uses side and the sources side effect on landowners can offset the regressive burden on labor is, of course, unclear.

Before turning to the discussion of industrial differentials, we should note briefly an important difference in the two sets of results just presented. In dealing with the effects of local differentials on the national distribution of income, we were concerned with the distribution of burdens and benefits among income classes throughout the nation. In the discussion of local tax changes we were interested primarily in the local distribution of income. Thus, tax exporting to nonresidents played a crucial role and there were no (or few) benefits to attribute to local residents.[2]

Industrial differentials

Perhaps more important than the local differentials just discussed are industrial differentials in property taxation. First, it seems

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[1] The income elasticity would, of course, be calculated relative to permanent income. That luxury housing may be undertaxed is considered directly below.

[2] To the extent that benefits occur they accrue primarily to nonresidents. Note that any local tax change changes both the national average tax and other local deviations from the average. Thus from a national point of view a local tax change is merely a change in local differentials, but from a local point of view it is quite important.

likely, as noted above, that little property taxation is applied to low-income housing of owner occupants, to subsistence farming, or to small-scale industry and commerce. If this undertaxation is not diffused to other sectors, as seems likely, these exemptions tend to add to the progressivity of the property tax. Second, property used in commercial agriculture seems to be generally undertaxed.[1] To the extent that prices of basic national foodstuffs were lower as a result, the distributional effect would be favorable. But to the extent that agricultural prices were determined in world markets, the primary beneficiaries would be landowners and workers specific to agriculture. The further split between these two groups might well depend upon the existence of an elastic supply of labor to commercial agriculture, and the success of unionization among agricultural workers. Ordinarily, we might expect that landowners would benefit most--at substantial cost in progressivity.

Either high income residential property or industrial and commercial property in the modern sector (or both) is likely to be overtaxed. In either event progressivity is likely to be increased. This occurs either because income elastic national goods are involved or because workers (and landowners) in the top part of the income distribution are burdened.[2] Of course, the exact pattern of differentials

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[1] See Richard M. Bird, Taxing Agricultural Land in Developing Countries (Cambridge: Harvard University Press, 1974), especially chapters 4 and 5.

[2] To the extent that unionization creates monopoly rents, labor is likely to be relatively immobile out of the modern industrial sector. Labor in such employment generally fall in the upper income classes. The existence of a largely untaxed informal sector may prevent taxes from being shifted forward in the form of higher prices. Note, finally, that luxury housing is often undertaxed.

is an empirical question, but it seems unlikely that any distributional gains generally offset losses resulting from undertaxation of agriculture.

Implications for incidence studies

Until now the primary candidates to bear the incidence of property taxes in developing countries have been consumers (old view) and capitalists (new view). But the analysis just reported suggests that we should partition the economy between locally and industrially immobile capital (owner-occupied low-income housing, small scale commerce and industry, and subsistence agriculture, each taken individually, rather than as an aggregate) and other capital. For the first group the burden of a national property tax is largely on owners of the taxed property.[1] But the national property tax on other capital burdens capital only if capital is internationally immobile. In the more likely event that capital is mobile between nations, we should allocate the national tax to landowners, labor, and consumers of national goods, though I am unaware of any study of incidence in developing countries that follows this procedure.[2] This, of course, means that we must distinguish between "consumption" and consumption of national goods.

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[1] If investment in these sectors is essentially isolated from national capital markets, little is lost by treating the capital as two distinct factors and the general property tax as a tax on two types of property.

[2] The only study of which I am aware that takes the theory presented above seriously enough to utilize it in incidence estimates is McLure, "Interstate Exporting of State and Local Taxes: Estimates for 1962," National Tax Journal, XX (March, 1967).

The analyst's task is further complicated by geographic and regional differentials around the average rate of the property tax. Those differentials must be identifed and attributed to owners of factors specific to the differentially taxed use or area and to consumers of local goods (in the case of regional differentials) or particular national goods (for sectoral differentials).

The task is similar when we turn to the examination of the incidence of local taxes among local residents. But in this case we must take account of tax exporting, especially to nonresident landowners.

In short, then, the proper approach is likely to be far different from anything done in the past, and it is theoretically more difficult and empirically more demanding. And, as we note in the next part of this section, the analyst's life becomes even more difficult once we start relaxing the simplifying assumptions necessary to get a handle on the analysis.

e) Relaxing the assumptions

In part b) of this section we made several assumptions in order to keep the analysis within manageable limits. While some of these assumptions may be generally reasonable for developing countries considered as a group, for particular countries they are not valid and the implications of relaxing them must be considered.

First, we have assumed that no taxing jurisdiction dominates the national market for particular goods. Where this assumption violates reality, we would want to allow for the exporting of part of local

property taxes (or differentials in national taxes) to nonresident consumers in the rest of the country.[1]

Beyond that, we must allow for the possibility of imperfect competition in both product and factor markets. Consider first the case in which a monopolist operates in the market for "national goods" (if a nationally uniform tax is under examination) or "local goods" (if we are concerned with a local tax or with local differentials). Economic theory tells us that under identical circumstances the monopolist would shift about half as much of an excise tax to consumers as a competitive industry would shift; the remainder of the tax reduces economic profits. Though the possibility of tax-induced factor substitution clouds the issue, we would expect similar results for the property tax.[2] This, of course, suggests that monopoly causes the burden of the national property tax to be more progressive than in the competitive case. But pure monopoly may be fairly rare--though less rare than in developed countries. If oligopoly exists, the results may be nearly those of the competitive model, unless joint profits have been

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[1] For an example of how this might be done, see Charles E. McLure, Jr., "The Interstate Exporting," 49-77. It was assumed there that 40 percent of production taxes (including property taxes on manufacturing for national markets) were shifted to consumers if the state dominated the national market, but not if there was no dominance. It might be noted that competition from imports received little attention in that study. In developing countries neglect of imports would, of course, generally be a serious mistake. Note, finally, that this exporting to consumers is distinct from (and, in fact, an alternative to) the exporting to nonresident landowners discussed earlier.

[2] In the extreme case the monopoly exists because of tariff protection, and the world price plus import duty places a ceiling on domestic prices. In this case the tax would not raise prices and might come entirely out of monopoly profits, rather than being shifted backward.

maximized. Finally, where monopsony exists in factor markets, we expect only half the backwards shifting found in the competitive case. But monopoly in labor markets, exemplified by unionization, creates economic rents and, as noted above, labor immobility. Thus, sectoral (and perhaps geographic) differentials are more likely to be borne by unionized labor than by labor in competitive markets.

Public enterprises play an important role in the economics of many developing countries. How their presence influences the incidence of the property tax depends upon the sectors in which such enterprises are active and whether or not the tax applies to the property of the enterprises or only to private property.[1] If such enterprises were active only in markets for traded goods (if a national tax is examined) or nonlocal goods (for the case of a local tax) and were not liable for tax, their presence would not affect the conclusions reached earlier. If, however, tax exempt public enterprises compete with taxed private firms in markets for "home goods," they may tend to reduce the ability of the private firms to shift the tax forward. If backward shifting is not possible, the private firms may, of course, give way to tax-exempt public enterprises.

If public enterprises are liable for the property tax, we must ask the incidence of the tax on enterprises. The analysis differs from that for private firms in that more mangerial slack may exist in such enterprises than in the private sector. If public firms compete with producers not subject to the tax, there will be tendencies for the tax

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[1] Bahl notes, op. cit., p. 13, that government property is generally exempt from property tax.

to reduce returns to land and labor specific to the sector in which the enterprise operates.[1] But in addition capital investments may be less responsive to rates of return than in the description of the private sector presented above. In such a case property taxes paid by a public enterprise would simply reduce the surplus or increase the deficit of the firm. Thus, the tax would be paid, in effect, by the taxing government or involve merely an intergovernmental transfer of fiscal resources.[2]

Suppose now that taxed public enterprises were active in markets isolated from (international or national as the case may be) competition. Examples would be public utilities. Though the results depend upon whether those responsible for regulating charges allow pass-through of property taxes, we would normally expect incidence on consumers.[3]

Rents and other prices are often subject to government control in developing countries. To the extent that controlled prices of either type of "home goods" are not allowed to reflect higher taxes, or national taxes (in the international capital mobility case) will be

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[1]Such tendencies would be especially strong in the mining sector, where rents are often earned both by owners of natural resources and by unionized labor. Note, however, that in most countries underground natural resources are owned by the state itself.

[2]Note that a locally-owned enterprise could be active in the world market and a nationally-owned enterprise could be active in the local market for goods with nation-wide markets.

[3]In the absence of pass-through, the results would be similar to those just described in which competitive forces prevent reflecting tax changes in prices.

similar to those for traded goods or nonlocal goods. But if prices have been controlled at artificially low levels and are allowed to reflect higher taxes, they will almost certainly do so.[1] In such a case, burdens are unlikely to fall on land and labor.

f) What we need to know

Anyone reading this far will certainly have noted two fundamental points (besides the general lack of applicability of either the old or the new view as usually understood). First, the implicit theoretical model lying behind the conclusions, if it were to be written explicitly, would be extremely complex.[2] Second, the empirical requirements for the implementation of the analysis outlined are enormous.

Explicit theorizing would need to allow for the three cases mentioned in part c) of this section, or at least for Case I and either Case II or Case III. Choosing which case was relevant would require a clear understanding of the question at issue, that is, whether a national or local perspective is appropriate and knowledge of the freedom of international capital flows. Other aspects of the nation's tax system, as well as the actual or expected application of exchange controls and the fear of devaluation and nationalization, inter alia, would be crucial. Moreover, capital may be quite mobile into and out

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[1] It might be argued that the relaxing of controls, and not the tax, results in higher prices. But if the tax change is a necessary condition for the relaxation of controls, it seems reasonable to attribute the price increase to the tax change. This reasoning is applicable to both "home goods" and goods sold in competition with producers not subject to the tax.

[2] The analysis would resemble that in Mieszkowski, op. cit., but would be even more complicated.

of a given country, but relatively unresponsive to tax changes. Not only are taxes small, relative to expected returns to capital, but it may be that extraordinary investment opportunities generate economic rents, and that investment is, therefore, relatively insensitive to small taxes that merely reduce rents. Alternatively, firms may be sufficiently anxious to establish themselves in given markets that they will absorb the tax, rather than leave the markets to competitors. It seems likely that we would ordinarily find ourselves in some middle ground between Cases II and III in which capital has a positive, but finite, elasticity of supply.

While we have argued that capital may be more or less specific to the industries constituting our Case I, we have not said much about the possibility that land and labor are mobile from these industries to other sectors. That is, labor may be mobile from either small-scale industry and commerce or subsistence farming to the remainder of the economy, though the bulk of mobility may be between these sectors. Similarly, land may be equally suitable for subsistence and commercial agriculture. Not only do we have an empirical question to establish patterns of mobility; we have a quite complex exercise in general equilibrium analysis to model these interactions.

Moreover, we would need to allow for interdependence on the consumption side. That is, low-income rental housing is a substitute for housing of low-income owner-occupants. Similarly, subsistence farmers may or may not produce the same crops as are imported or produced on commercial farms. Finally, small-scale industry and commerce may provide the same goods and services as are produced in the modern sector.

Aside from tracing these interdependencies (and others) in a general equilibrium model, we would need to allow for the various non-competitive elements, including price controls, listed in the previous part of this section. And the problem is further compounded if we have taxes levied on public enterprises--or private firms, for that matter--that do not even follow the profit maximizing or cost minimizing paradigms of standard economic theory.

Turning from the need to fill in gaping holes in economic theory to the data required by even the tentative analysis of this paper, and remembering how little data are available in most developing countries, one may be glad that in most countries of the Third World the property tax is a relatively unimportant revenue source.[1] Beside the issues already mentioned above (international capital mobility, interdependence via land and labor markets and consumption, geographic market dominance, industrial organization, price controls, industrial relations, the role of public enterprises, etc.), we must ask about the extent and nature of geographical and sectoral differentials, including those due to poor or obsolete cadastral surveys and other inadequacies in assessment practices, the partitioning of products among traded, national, and local goods, the composition of the tax base, and patterns of ownership of various factors between nations and localities as well as across income classes for residents of the taxing jurisdiction.

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[1]See Bahl, op. cit., 4-8 and Raja Chelliah, "Trends in Taxation in Developing Countries," IMF Staff Papers, XVIII (July, 1971), 254-331. Bahl notes, however, that property taxes finance a sizeable portion of urban public services provided by local governments.

Given that neither the old nor the new view of the property tax can be applied in developing countries without careful thought and the amount of theory and attention to facts being "careful" involves in this case, it should be understandable why, when asked by Roy Bahl to stand and identify myself, I have only been able to achieve a low crouch and mutter "it all depends."

58. "The Choice of Technology: Multinational Firms in Brazil" (1974), 42 pp..... Samuel A. Morley & Gordon W. Smith

59. "The Developmental Significance of the Rise of Populism in Colombia" (1975), 21 pp.....Robert H. Dix

60. "Inflationary Financing, Industrial Expansion and the Gains from Development in Brazil" (1975), 43 pp..... Donald L. Huddle

61. "Noneconomic Factors in the Study of Economic Development" (1975), 33 pp..... Robert Cartier

62. "Social Groups and Religious Values as Factors in Economic Development: A South Asian Example" (1975), 25 pp...Robert Cartier

63. "The Bodpagaun Project: A Case of Economic Development" (1975), 29 pp.....Robert Cartier

64. "Some Economic and Political Characteristics of the Low-Income Housing Market in Bogotá, Colombia and Their Implications for Public Policy Alternatives" (1975), 36 pp..... Timothy O. Gauhan

65. "Public Expenditures and Services as Policy Outcome Predictors: A Two-Nation Analysis for Health and Education" (1975).. Kim Q. Hill

66. "Low Income Housing Development in Bogotá (1975), 32 pp..... .....Stephen O. Bender

67. "Consumption and Earnings Patterns and Income Redistribution (1975), 26 pp..... J. Gregory Ballentine and Ronald Soligo

68. "Income Redistribution and Its Effects on Factor and Import Demand in Taiwan: A Simulation Approach" (1975), 33 pp..... Yhi-Min Ho

69. "The International Tin Agreement: A Reassessment" (1975), 19 pp... .....Gordon W. Smith and George R. Schink

70. "Ethnography of Migration: Breaking Out of the Bipolar Myth" (1976), 15 pp..... Douglas Uzzell

71. "Education, Communalism and Income Distribution" (1976), 33 pp..... ..... Fred R. von der Mehden

72. "From Play Lexicons to Disengagement Spheres in Peru's Urbanization" (1976), 21 pp..... Douglas Uzzell

73. "Savings Behavior of Poor and Rich in Taiwan: 1964, 1966, 1968, and 1970" (1976), 30 pp..... Marian Krzyzaniak

74. "Communalism and the Gains from Development: The Case of Nigeria" (1976), 55 pp..... Gaston V. Rimlinger

75. "The Relevance of the New View of the Incidence of the Property Tax in Developing Countries" (1976), 38 pp..... C. E. McLure, Jr.

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