Urban Land Policy

Issues and Opportunities

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Intervention through Property Taxation and Public Ownership

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THIS CHAPTER EXAMINES TWO FORMS of intervention in the urban land market: property taxation and public ownership. The assessment of any given policy depends on what objectives are to be met, and unobtainable objectives can create their own problems. Three familiar objectives for land policy are adopted here: distributional equity, efficiency of resource allocation, and government revenue. The relationship of betterment to these objectives is discussed first, and then property taxation and government ownership are evaluated with respect to the same objectives.

Betterment

When governments make site-specific public investment, rent increases may shift the public benefits from tenants to landowners. For example, if households value the benefits of new water services at more than their water bills, competition for the serviced land will drive up rents and thus shift some of the benefits of the water services from residents to landowners.

The Bustee Improvement Organisation in Calcutta shows how the benefits of public services can shift from occupant to owner when the site is not owner-occupied. About one-third of Calcutta's population live in bustees (slum housing) with a complicated tenure arrangement: landowners rent sites to housing entrepreneurs called thika tenants, who build huts and in turn rent them to occupants. The government has attempted

to upgrade sites by installing public services such as water, electricity, drainage, and sanitary facilities (see Grimes, 1976). Initially the bustee dwellers benefit, but if the improvements lead to increased rents some of the benefits shift first to the thika tenants who own the huts, and in turn to the landowners. The extent of the shift depends on how quickly housing and land rents adjust. The elasticity of supply of huts on the serviced land will limit the size of rent increases, but the supply is inelastic in dense upgrading projects. Rent control would limit the shifting of benefits away from bustee dwellers, but brings problems of its own.

This is not to say that upgrading bustees is unwise, but rather that landownership and tenure determine the final incidence of local public service benefits where the value of these services to the consumer is greater than the direct price charged. The final distributional impact of low service charges is probably very different from the initial impact unless residents own their homes.

Changes in property value are sometimes used to measure net benefits of specific services, and this logically implies that property owners receive all these benefits. If, for example, piped water is supplied to all houses without charge, the residents' consumer surplus from water will be larger than when users pay for water. Therefore user charges tend to reduce the capitalization of project benefits into land values. Without user charges, residents pay for water indirectly through land rents. With user charges, residents pay for water directly, and land rent rises by a lesser amount, imposing a smaller burden on those who use little water. By this reasoning, the incidence of user charges may be very similar to the incidence of betterment levies when the capitalization of consumer surplus in land values is considered.

The ways in which betterment arises and the factors determining who receives the benefit must be taken into account when evaluating property taxation and public ownership as urban land use policies. It is to these topics we now turn.

Property Taxation

> "After all the proper subjects of taxation have been exhausted, if the exigencies of the state still continue to require new taxes, they must be imposed on improper ones." —ADAM SMITH

Taxes are not usually seen as significant tools to influence land use because revenue is the objective, but there are exceptions. For example, Taiwan and Chile tax vacant land to stimulate development in certain zones, Jakarta has higher tax rates on land not used in accordance with its zoning, and the Republic of Korea taxes speculative gains in land value.

Even when revenue is the only objective, however, property taxation affects land use, and these effects are often directly contrary to other objectives, such as improving housing.

Most conceivable land tax systems seem to have been tried somewhere. For purposes of comparison, different tax systems can be classified according to their definition of the tax base—the subject of most disagreement over tax policy. The three major contenders for the property tax base are total property value, site value, and betterment.

The two most persistently proposed land tax reforms refer to changes in the tax base. Both stem from the work of Henry George, who, in contrast to Adam Smith, believed that the exigencies of the state had almost exhausted the improper subjects of taxation and that no tax had been imposed on the proper one.

The recommended reforms are, first, that the property tax base should be changed from improved value to land value and, second, that betterment should be taxed. These two proposals raise many of the most important issues of land tax policy, and the following discussion evaluates them according to the three major tax objectives outlined earlier: distributional equity, efficiency of resource allocation, and revenue. The section concludes with a proposal for a new way to pay betterment taxes.

To evaluate any tax one must first estimate (or assume) its incidence. Two approaches are possible. The first is differential incidence, in which government revenue and expenditures are assumed to be fixed; an increase in one tax is matched by a decrease in some other tax, so the problem is really to estimate the incidence of two taxes at once. This approach is most appropriate when evaluating major structural changes in the tax system, and it is used here in discussing the merits of land taxes as opposed to property value taxes. The second approach, which is more appropriate for estimating the effects of a betterment tax, is to assume that the tax revenue will finance a specific expenditure and to examine the results of the tax and expenditure together. The incidence of any tax is rarely unambiguous, however, and even with the long-studied general property tax there are wide differences of opinion.[1] The incidence of the same tax can also be different in different countries because of differences in administration (Roy W. Bahl, "The Practice of Urban Property Taxation in Less Developed Countries," in Bahl, 1979).

1. Charles E. McLure, "The Relevance of the New View of the Incidence of the Property Tax in Developing Countries," in Bahl (1979), surveyed his own views on the incidence of the property tax. In a 1968 study he assumed that in Colombia two-thirds of the property tax was borne in proportion to nonfood expenditures, and one-third was borne by upper-income owners of capital; in another study done in 1972 he assumed that the tax was borne entirely by owners of the taxed property.

Land Value or Total Property Value as the Tax Base?

Land value (also called site value) has long been advocated as an alternative to total property value for the real estate tax base. Theoretical arguments strongly favor taxation of site value, but evidence only weakly confirms the predicted benefits of exempting improvement value from the tax base. The relevant policy choice is whether to shift the tax base from improved value to site value rather than to choose initially between them, and the replacement of one tax base by another raises questions not encountered in the simple comparison of their long-run effects. Therefore, both short-run and long-run effects of shifting toward heavier land taxation are explored below according to the criterion of how well the objectives of equity, efficiency, and revenue are met.

EQUITY. A shift in the property tax base from total property value to land value would reduce some distributional inequities and introduce others. If the land value tax is a levy on pure land rent and therefore unshiftable, the incidence of the tax change is on the owners of land at the time the tax change is announced. In practice, no such change of tax base can ever be announced suddenly; in Jamaica, for example, it was eighteen years between the enactment of legislation introducing site value taxation in 1956 and the completion of assessments in 1974.

Because landowners bear the burden of pure site value taxes, the most important element in evaluating the equity consequences of shifting the tax base toward land value is an ethical judgment about the existing distribution of land. If landownership is highly concentrated in higher-income groups, the redistribution accompanying the tax base change would at least be popular with a large number of taxpayers. Indeed, one of the reasons for introducing site value taxation in Jamaica was the unequal distribution of land (see O. St. Clair Risden, "A History of Jamaica's Experience with Site Value Taxation," in Bahl, 1979). In 1965, 3 percent of all farms were larger than twenty-five acres, yet they accounted for 63 percent of total farm acreage; 80 percent of all farms were smaller than five acres and accounted for only 15 percent of total farm acreage.[2]

2. This view corresponds to the findings of Archibald M. Woodruff and L. L. Ecker-Racz, "Property Taxes and Land Use Patterns in Australia and New Zealand" (in Becker, 1979, pp. 185–86): "The fact that a number of Australian and New Zealand communities have been voting to change to unimproved capital value basis for property taxation has less implication for the inherent superiority of that system over others, as it generally reflects taxpayers' desire to minimise tax bills. Communities vote to shift to unimproved capital

(Note continues on following page.)

Landownership is also highly concentrated in Hawaii, which adopted a higher property tax rate on land than on buildings in 1964. In 1960, approximately 84 percent of all privately owned land in Hawaii and 70 percent of all privately owned land in Honolulu was in holdings of 5,000 or more acres (Baker, 1961). By 1962, more than two-thirds of new residential development land in Honolulu was available only with leasehold tenure, and seventeen landowners accounted for 99.9 percent of all residential leaseholds (Vargha, 1964).

Despite this high concentration of landownership, the property tax change was unpopular with many voters, and in 1980 Hawaii abandoned its higher tax rate on land. Because lessees were typically required to pay the property taxes on their leased land, the graded tax bore heavily on homeowners whose leased homesites were underimproved in comparison with the market. And because the land leases run for up to ninety-nine years, increases in land taxes could not be passed back to the landowners except in the very long run.

The Hawaiian experience from 1964 to 1980 shows the short-run problems caused by shifting to a tax system that promises long-run advantages. It also emphasizes the importance of tenure arrangements as they influence the distributional consequences of taxes.

If land value taxes reduce land values, those who own the land (or lessees who hold an interest in the land) at the time the tax is imposed bear the burden of the tax. Bird (1976) points out, however, that current landowners continue to bear the burden of a capitalized tax in the politically relevant sense that they would gain if the tax were reduced.

A site value tax captures betterment, although the low effective rates in most countries indicate that this is not yet an important source of revenue. When taxation is based on the market value of land, any increase in land value automatically increases the annual tax liability, regardless of the cause and when or whether the land changes hands. Therefore, a pure site value tax has a broader base than either betterment levies (which generally recoup the cost of public investments) or capital gains taxes (which are generally triggered only at the time land changes hands). Further, if the assessed land value is independent of any activity on the owner's part, a land value tax should not affect the allocation of land. Since the equal-yield tax rate on land value is higher than that on total property value, the land value tax captures a greater proportion of increases in land value than does the general property tax.

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value when they are on the outskirts of a developing metropolis and a majority of homeowners stand to benefit at the expense of a few. The reverse is true in older, prosperous sections of metropolitan areas where the shift would be in the opposite direction and store and factory owners would benefit at the expense of the more numerous homeowners."

The distributional consequences of raising the tax rate on land must be considered along with the consequences of lowering the tax rate on improvements. Unfortunately, the theory is unsettled, and most developing countries lack the factual basis on which incidence estimates depend (see Bird, 1976, and McLure in Bahl, 1979). For example, there are very few facts about the distribution of urban landownership among income groups.

In this uncertain context, Linn ("Incidence of Urban Property Taxation in Colombia," in Bahl, 1979) examined the differential incidence of a change from general property taxation to site value taxation in Colombia, and found that it would have either an approximately neutral or a somewhat progressive long-run effect. Linn points out that the switch to site value taxation would be more progressive if low-valued properties were exempted from taxation, which happens in many countries.

Progressive rate structures can align land tax burdens crudely with ability to pay. The land value tax rate in Taiwan is graduated from 1.5 to 7.0 percent of assessed value, and in 1974 about 43 percent of all land tax revenue was derived from land assessed at more than the 1.5 percent basic rate (see Lent, 1976). Owner-occupied land is taxed at a preferential rate of 0.7 percent and factory sites at 1.5 percent to promote homeownership and industry. The land tax rate in Jamaica is also graduated, from 1 percent to 4.5 percent of assessed value over J$50,000. Although fewer than 1 percent of all parcels were valued at more than J$50,000, they yielded more than half the total revenue from the land tax (see Risden in Bahl, 1979).

If a site value tax rate is to have exemptions or to be progressive, it seems logical to tax the total value of the landholdings, rather than that of individual parcels.[3] Otherwise, the rate structure encourages subdivision without a change in ownership. In Taiwan the progressive tax rate is levied on the cumulated value of all land held by an owner within each prefect or municipality. This seems reasonable if the objective is to avoid monopoly power in the land market.

A progressive rate structure is not well suited to a general property tax because, at the upper end of the scale, a high tax rate would be a strong disincentive to capital-intensive land uses. By contrast, a high tax rate on land encourages rather than discourages investment in improvements and should deconcentrate landholdings.

Because the imposition of site value taxation amounts to the appropriation of a share of the land's value, some proposals for a movement toward

3. This, however, presents problems of avoidance in many countries, since each parcel can be owned by a separate corporation and many people may be owners of each corporation.

site value taxation call for both a phased reduction in building taxes and a phased increase in land taxes. Since the increase in tax liability is deferred, the impact on current landowners is reduced—but whatever benefits may accrue as a result of the reform are also delayed. An increase in taxes is a risk accepted by all landowners, and maintenance of the status quo rewards those who gamble that the tax system will not be changed.

EFFICIENCY. There are two basic efficiency arguments for shifting the property tax base from improvement value to land value. One is that taxation of buildings, or of any capital improvements to land, deters both new construction and maintenance and thus increases the price of housing and other real estate. A property tax on land value alone does not vary with individual decisions to build, and thus people are free to build what they think best.

A second argument for changing the tax base is that there are direct benefits that derive from high taxes on land. Since few taxes are thought to have any advantages other than the revenue they produce, the claim that site value taxation can actually increase the efficiency of the urban land market sets it apart. The argument is that if land is taxed according to its revenue potential there is a stimulus to develop the land to its full capacity. Although a wealth-maximizing landowner in a perfect market already has this incentive, in imperfect markets the cash-flow requirements of a land value tax spurs owners to allocate land to its highest use. Moreover, since the value of land depends on its public services and development capacity, site value taxation pressures owners to develop already serviced land and relieves demands to extend new services to raw land. Since development capacity depends on zoning, taxation according to land value also promotes the use of land for its zoned purposes rather than for some less intensive activity.

Despite these generally accepted theoretical arguments, few empirical studies have shown that land use patterns differ markedly between areas where general property taxation is used and those where site value taxation is used. Richman (1965) found no effect in Pittsburgh where land is taxed more heavily than buildings, and Woodruff and Ecker-Racz (in Becker, 1979) found no differences among suburbs in Australia with different property tax systems. Clark (1974) examined the land use patterns in Auckland, New Zealand, where within one metropolitan area jurisdictions have the local option of using any of three property tax bases: total value of land and buildings, unimproved land value, or annual rental value of the property. Although the three systems were operating side by side, no significant differences were found in either land use or changes in land use. This was so despite the fact that the property tax revenues from each system were comparable to that in most U.S. cities.

Even the theoretical argument that a general property tax reduces investment in improvements has been challenged by the "new view" of property tax incidence in which capital is assumed to be in fixed supply to the nation, so that the effect of the tax is to reduce the rate of return to suppliers of capital, but not to reduce capital formation. If so, and if the property tax rate is uniform on all property in the country, there would be no inefficiency introduced by the tax.[4]

It seems clear on theoretical grounds that higher land taxes will reduce the market value of land (see Walters' discussion of appropriation ratios in chapter 2), and there is some empirical verification for this effect. The effect of a site value tax on the rate of appreciation of land values must, however, be analyzed somewhat differently. As developed in chapter 2, the rate of return to landowners is the sum of the rate of return of the land in current use plus the rate of price appreciation of land. For vacant fringe land awaiting development, the return in current use may be zero or negative; if so, the rate of appreciation must cover both the supply price of capital (the interest rate) and the land tax. Therefore, to provide the same after-tax rate of return as that on other assets, land prices must increase faster in the presence of an annual land value tax. Although a site value tax would be expected to lower the general level of land prices, it should not be expected to reduce the rate of appreciation of these prices. For example, Grimes (1974) found that land taxes did not reduce the rate of increase of land prices in the countries he studied.

To discourage speculation and encourage development of land that is already provided with infrastructure, vacant or underutilized land can be taxed at a uniform rate or a rate that escalates with the length of the period in which the land is held idle. An important argument for a tax on vacant land is that it can stimulate the economies of agglomeration that compact, contiguous development can bring. This will be beneficial if government is better informed than private decisionmakers. In general, however, it is not desirable to encourage the immediate development of all urban land. Many sites need to be held for later expansion of facilities or for denser development not yet justified. The definition of what is or is not "development" of a vacant site may also be a difficult issue. If the definition is too loose, premature buildings will be constructed merely to

4. Johannes F. Linn ("Incidence of Urban Property Taxation in Colombia," in Bahl, 1979) has further challenged the old view of the property tax. He points out that the assumption that the supply of urban land is perfectly inelastic can be questioned on the grounds that the quantity of urbanized land in most cities does expand over time. If the supply of urban land is price elastic, then a local tax on land value may be shifted. Whether this is true depends on how the tax is imposed, and in particular on whether fringe landowners have some say in whether their land will be included in the urban tax district.

satisfy the tax requirement. If defined at a rigidly high standard, undue hardship for many low-income families will result.

In Taiwan a surtax of between 200 and 500 percent of the regular land tax is levied on private land that has been designated as a building site but that remains vacant. All sites on which the value of improvements is less than 10 percent of the land value are considered vacant (Lent, 1976). The tax is levied only in selected areas, which in 1974 included less than 1 percent of all land subject to the conventional land value tax. It has been estimated, however, that between 1968 and 1973 the vacant land tax led about half the owners subject to the tax to construct improvements on their land.

Finally, the macroeconomic effects of property taxes on resource allocation can be important. Feldstein (1977) has argued that if a land tax reduces land value, one result is that a larger amount of desired wealth must be accumulated in the form of produced capital. Because land and capital are substitutes in investors' portfolios, a tax that reduces land value would increase the equilibrium capital stock. This could be an important stimulus in countries where land value is a large part of total wealth.

REVENUE. The revenue effects of a change toward site value taxation depend in part on the ratio of land value to total property value. There are few estimates of this, and there is general agreement that existing assessed values for tax purposes are poor indicators of true values.

The revenue performance of land value taxes in developing countries that employ them has not been impressive. For instance, Jamaica in 1974 completed an eighteen-year process of changing from a general property tax to a site value tax system, yet collected only 5 percent of its total tax revenue from land taxes in 1975–76 (Risden in Bahl, 1979). In Taiwan, where there is a long-standing commitment to the principles of land value taxation, the revenue from urban land value taxes was 1.5 percent of total tax revenue, and rural land taxes contributed another 2.2 percent, compared with 3 percent contributed by the "house tax" assessed on the value of improvements (Lent, 1976).

At the subnational level, land taxes are a more important source of revenue; for instance, they contributed between 10 and 20 percent of provincial tax collections in Taiwan between 1967 and 1974 (Grimes, 1974). Nevertheless, the general experience is that real estate taxes produce less revenue when land alone is taxed than when total property value is taxed.

With regard to the relative costs of assessing taxes, Brown (1965) found that in New Zealand the cost was $NZ0.60 per assessment for unimproved land values, and $NZ4.00 per assessment for land and improve-

ment value. This suggests that a pure site value tax will be cheaper to administer than a general property tax.[5] In developed areas a general property tax gives a greater opportunity to check the accuracy of assessment by reference to sale values recorded in transactions, but this is less important at the urban fringe where there are more transactions of vacant land to give evidence of current values.

Betterment as a Tax Base?

Annual property taxes on capital value capture only a small share of betterment because most tax rates are low and assessed values lag far behind market prices. However, betterment can be taxed separately, and two types of betterment taxes are discussed below.

First, when the goal is to finance site-specific public investment, special assessments can be imposed on the betterment caused by investment. If the property is assessed before the project is undertaken, the tax base is the increase in land or total property value expected to occur as a result of the expenditure. Because betterment is difficult to measure, project costs are usually apportioned according to a simpler tax base, such as frontage or land area, that can serve as the measure of special benefit received. Special assessments are an alternative to financing services by user fees, especially when it is technically or politically difficult to charge for services directly.

Doebele, Grimes, and Linn (1979) have analyzed betterment levies that recover public investment costs in Bogotá, while Macon and Merino Mañon (1975) surveyed betterment levies throughout Latin America. Both studies provide excellent discussions of the important problems of determining the area benefited by the public expenditure, determining the total betterment to be recovered, and dividing the levy among benefited properties.

Second, land value increases can be taxed at the time property ownership is transferred, either as a special capital gains tax on land or simply as part of the general system of capital gains taxation. The tax is based on what has already happened to land values, and the revenue is generally not earmarked for any specific property-related use. This sort of tax is more commonly administered by a national rather than a local government.

A third type of betterment tax is on the gain in value associated with a land use change. Because of its intimate relationship to the land use

5. Technical problems in assessing site value for tax purposes are described in William S. Vickery, "Defining Land Value for Taxation Purposes," and Ursula K. Hicks, "Can Land be Assessed for Purposes of Site Value Taxation," both in Holland (1971).

planning process, this type of gains tax is feasible only where there are very strong land use regulations. Even Britain, which has such regulations, has had considerable difficulty in administering development value taxes, and they are not discussed here.

EQUITY. The incidence of betterment levies is not necessarily on those legally obliged to pay them. Neutze (1970, p. 328) takes the position that it is "virtually impossible to devise a tax that will directly reduce in substantial degree, or directly capture a significant part of, the increment in the value of land resulting from its conversion to urban use. Almost any kind of tax will mostly be passed on to the final consumer of the developed land." Archer (1976) cites evidence that the Sydney betterment levy of 30 percent of gains from rezoning was passed on to land users. Many land sale contracts even included an explicit provision that the buyer pay the Sydney levy, and this quickly generated a popular belief that the levy was shifted.

If betterment taxes are not shifted, they would, like the site value tax, fall on those who own the land at the time the tax is introduced. Land prices would be lower, but the subsequent rate of return would be unaffected (Shoup, 1970; Roger S. Smith, "The Effects of Land Taxes on Development Timing and Rates of Change in Land Prices," in Bahl 1979). The exact amount of future betterment is never known with certainty, however, and is especially uncertain when there are many possible locations for future public infrastructure investment. Therefore, even if the average rate of return on landholdings is no greater than on other assets, some owners receive large increases in land value from the public investments while others receive little. A betterment levy would tend to capture these imperfectly anticipated gains from public investment and would thus reduce the variation in owners' after-tax incomes.

Although benefited owners may not oppose a betterment tax if the revenue is used to provide services that cause the betterment, an important equity question should not be neglected. Some lower-income occupants may be unwilling to pay for the benefit of a particular public investment, such as paved road. If the investment makes the neighborhood more attractive, higher-income groups may then bid up rents and land values. Therefore public investment can cause property values to rise by more than the betterment levies, but original owners may wish to move rather than pay the tax out of their current income. This is an "efficient" outcome, because land will be allocated to those who value it most, given that the public investment is going to be made. Some owners might suffer a welfare loss, however, and might prefer no public investment and no betterment tax.

Financing public works by betterment levies is equivalent to requiring owner-occupants to receive a public service and pay for it (through the levy) or else move out, realizing whatever net capital gain remains after payment of the levy. If the government tries to capture all the betterment provided by public facilities, owners must either stay and pay the charge or else move out with no capital gain. Therefore all owners who value the new services at less than the tax would suffer a net loss whether they move or not. Insofar as the poor are less willing to pay for new public services, attempts to capture 100 percent of betterment will reduce the welfare of low-income owner-occupants.

Renters may also move if a new public service causes rents to be bid up in the benefited area. They suffer a welfare loss equal to their full costs of relocation. Even those who stay may value the new service less than the accompanying rent increase and thus would be made worse off. But if the tax is incident on the landowner, it can be, by definition, imposed without harming the renter. It is betterment that dislocates renters, not the betterment levy.

EFFICIENCY. Betterment levies introduce discipline into the demand for public expenditures. When expenditures that benefit specific sites are financed from general revenues, there is political competition for the valuable public decisions that confer land value gains without compensating payment. A tax on the land value gains conferred by public expenditures reduces the incentive to spend resources merely to influence the distribution of public investment.

Another point (discussed in chapter 2) is that in some countries betterment levies may be the only effective way to finance public investment. If the "shortage" of serviced land in developing countries is due in part to an unwillingness or inability to charge a cost-recovery price for public services, an alternative is to finance the service provision by taxation of the land value gain that arises when the services are extended. The tax effectively takes the place of a price for services.

The rate structure of a general land value increment tax can also affect resource allocation. For instance, Taiwan has a progressive tax rate on increases in land value which varies from 20 percent of the gain on increments less than 100 percent up to 80 percent of those over 300 percent. Since the gain is generally larger on land held for longer periods, this rate structure presumably hurts short-term speculators and encourages "straw" transactions to make one large gain appear to be several small gains. Despite this incentive, in 1975 more than 60 percent of the revenue from the land value increment tax came from transactions subject to the 80 percent tax rate (Lent, 1976).

A capital gains tax payable at the time of sale can produce a lock-in effect. There is, however, almost no evidence as to how important this is in the land market. In Taiwan the tax on realized gains is supplemented by a tax on unrealized increases for properties that are not transferred in any ten-year period. This reduces the incentive to delay sale in order to avoid taxes.

REVENUE. Few countries collect much revenue from taxes on increases in land values. For example, in Taiwan the land value increment tax yielded only 2.7 percent of total tax revenue in 1976 (Lent, 1976). Grimes (1974, p. 147) concluded in his survey of social appropriation of betterment:

> In all countries examined . . . receipts from betterment levies and land value increment taxes were low compared with receipts from property taxes and other revenue sources. In some cases, particularly Great Britain and South Korea, this disappointing performance was compounded by expectations when the taxes were introduced that the revenue obtained could not fail to be impressive.

Although national land value increment taxes designed to produce general revenue have been disappointing, the performance of local betterment levies designed to recover the cost of specific projects has been more impressive. In Bogotá, "valorization" charges are used to finance public improvements that benefit specific areas, and the charges are based on the increases in land value caused by the public improvement. In some years the revenue from these valorization charges has exceeded 50 percent of the total revenue collected by the general property tax (Linn, 1976). The revenue potential of land value increment taxes appears to be greatest when the tax is clearly linked to a specific expenditure that will not occur unless the increment tax finances it.

A Suggested Improvement—Deferred Special Assessment

Although betterment taxes score highly on the criteria of both equity and efficiency, a major difficulty in practice is the cash-flow problem for benefited owners, who pay taxes in cash but realize no compensating cash benefits unless they sell their property. Even if the government allows owners to stretch payment of their assessments through installments, the principal and interest payments still present a cash-flow problem for many owners. Because it is costly to use equity in an owner-occupied home to pay taxes, the cash-flow problem alone can make it impractical to use special assessments to finance even public investments, such as for water supply, that increase land values by more than their cost.

One possible way to deal with this cash-flow problem would be to allow owners of benefited property to defer payment of special assessments, with accumulated interest, as long as they own their properties (Shoup, 1980, presents this proposal more fully). The timing of payments entirely at the owner's option thus distinguishes a deferred special assessment from conventional special assessments or betterment levies. The local government would, in effect, offer loans to owners to pay the betterment tax. If owners were charged the market rate of interest on the deferred assessment, the present discounted value of future payments would equal the initial special assessment, so the government would lose nothing by the delay.

Local governments would run little risk of default if the country's land registration and property tax systems were sufficiently integrated to prevent legal transfer of ownership without payment. Even in cities where it is difficult to collect annual property taxes, it may be easy to collect deferred assessments because the seller has the cash from the sale when the assessment is due, and both the seller and the buyer need the government's cooperation to transfer legal title to the property. For instance, land in Colombia cannot be transferred without a certification that all valorization charges have been paid.

Despite its great security of repayment, a deferred assessment could never result in foreclosure for nonpayment because, by definition, it would not be due until a property is sold. This would be an especially important advantage in developing countries where many property owners participate only marginally in the market economy and have no reliable cash income with which to pay taxes. Even though taxation is the only way to finance a greatly desired public investment, many owners would understandably resist any new tax that threatens the loss of a home by foreclosure. The terms of a deferred assessment specifically exclude the possibility that an owner will ever be evicted for nonpayment, and for this reason deferred assessment should be less unpopular than other property taxes.

The benefits of such an approach from the owner's point of view are clear. Desired services are obtained without any cash-flow problem or fear of foreclosure; and since expected public service benefits are capitalized into property values, the owners take the value of these benefits away with them when they sell and leave the neighborhood. The burden of paying the deferred assessments is, however, borne by the original owner because the tax cannot be passed on to anyone else any more than a mortgage can be. Property with deferred assessment debt would sell for no more than similar property without debt, so the tax would be paid only by the seller no matter how large it had grown over time. Further, if a market rate of interest is charged on assessment debt, the sale date does

not affect the present discounted value of the deferred assessment payment. Thus, a deferred assessment accumulating at the market rate of interest should have no effect on an owner's decision when to sell or redevelop a property.

Conventional approaches to easing the burden of paying special assessments often misidentify the cash-flow problem as one of low income. In Bogotá, for instance, valorization taxes are normally due within six months, but low-income owners are granted periods of up to five years to pay in yearly installments with no interest charges (Doebele, Grimes, and Linn, 1979). This offer requires a substantial subsidy (one quarter of the capital cost if the cost of capital is 10 percent a year) but does not wholly solve the cash-flow problem. Deferred assessments could solve every owner's cash-flow problem, and yet require no subsidy if the government charges a market interest rate on assessment debt.

Finally, the opportunity to use deferred assessments for neighborhood public investment would be a strong incentive for owners to register their land titles, because deferred assessments depend on an unambiguous system to record land ownership and transfer. Such registration would not only make the urban land market more efficient, but also make annual property taxes more collectible, especially if they too could be deferred at a market interest rate. Postponement of property taxes could also solve the politically difficult cash-flow problem that site value taxation can cause for low-income owners of highly valued land. Therefore, shifting toward site value taxation and simultaneously offering tax deferment might overcome some of the practical objections to exempting improvements from the tax base.

Public Ownership

Public ownership of land is best examined in practical contexts, and two very different forms, land banking and land readjustment, are discussed below. The focus is on intervention in, rather than replacement of, land markets, and most land is assumed to be privately owned.

Land Banking

Land banking usually refers either to advance acquisition of sites for government use or to larger-scale public ownership of undeveloped land planned for future urban use. The first subsection considers banking sites for the government's own use, and the second, public dealings in the land market to influence land uses and prices.

FOR FUTURE GOVERNMENT USE. Increasing population and rising land prices give a strong incentive to buy land before need. The objectives of advance acquisition are mainly to locate future public facilities efficiently and to pay less for the sites. Shoup and Mack (1968) found that the chief benefit of advance acquisition was to preserve the sites best suited for future public purposes from premature commitment to private use. Land value appreciation alone justified the advance acquisition, but the greater benefit was to keep the land available. For example, one government bought sites for school expansion before they were needed, so as to prevent private construction on them.

Although the "captured" appreciation is a transfer from the previous owners to the government, it is a net gain in efficiency to prevent premature private construction which must then be demolished to make way for future public use. For some future facilities that need large or specific sites, advance acquisition is almost essential, because earlier private development can easily make later public use too expensive.

Insofar as the government possesses information concerning its own future actions, advance acquisition for future facilities has potential for capturing the betterment they create. But to be successful, the government has to act before the information becomes public knowledge, and land acquisition is often a slow process. If the government's land-buying intentions are kept "secret," there is great opportunity for private trading with inside knowledge. Government purchases would signal its intentions in any case, and land values would tend to rise in response, even without any public announcement. Further, any comprehensive land use plan indicates roughly where services will be provided, and expectations will affect land values long in advance.

Land banked for future public use can be put to an interim use that yields revenue or some other public benefits, but governments can have a hard time evicting interim users (perhaps squatters) when the time comes to build. Temporary tenants sometimes construct permanent improvements to solidify their claim to land, and this magnifies the apparent injustice of reclaiming it from them. This difficulty often requires that banked land be kept idle or that interim users be "incorporated" into the later public use.

Banking sites for future use has costs that are not always easy to measure. The government has to finance the bank, and interest costs can exceed the appreciation captured. A low government borrowing cost can make advance acquisition appear profitable, but in practice the shadow interest rate on public investment funds is usually much higher.

There is also the chance of buying land that later turns out to be

inappropriate for an intended public use. If a site acquired in advance is used instead of one that is more suitable at the time of need, the full value of the appreciation is not a true net gain to the government. But in some cases only the inventory of publicly owned sites is considered, and the benefit of having captured appreciation may be far outweighed by the poor location of the completed facility. Shoup and Mack (1968) found that only one-fourth of U.S. cities that acquired land in advance made any attempt to calculate the subsequent market value or carrying costs of the sites they bought.

A land bank of future public sites requires management, and this cost may be considerable if complicated safeguards are necessary to ensure disinterested behavior by the managers. The scarcity of expert land managers, willing to work only on the public behalf, may in many circumstances be the greatest impediment to a successful program of advance acquisition.

TO INFLUENCE LAND USES AND PRICES. Quite aside from advance acquisition for future public use, large-scale land banking has been recommended as a way of providing public infrastructure and capturing the betterment it creates. The argument runs that if the government could purchase all land to be converted from rural to urban use and pay compensation at agricultural value, planners would be better able to direct urban growth and the government could collect the betterment created. If the government were the only buyer of raw land for conversion, its offer price, backed by the power of compulsory purchase at agricultural value, would set a ceiling price for private transactions. The bank could service the raw land, then sell the building sites, or lease them if the serviced land is to stay in permanent public ownership.

Government monopoly of the land-conversion process is most closely approached in Sweden and the Netherlands (Neutze, 1973). However, the institutional framework and administrative resources in these countries are completely different from those in most rapidly urbanizing nations, and it is doubtful if the process could succeed without them. Doebele's (1974) analysis showed that the favorable results in Sweden resulted not only from the use of large-scale public ownership, but also from an "intricate complex of interlocking and mutually self-supporting institutions all focussed on common objectives." In particular, the important role of secrecy in the operations of the public land acquisition agency places a premium on the incorruptibility of the civil servants involved.

The introduction of a land bank operation to buy raw land at its opportunity cost in nonurban uses would involve reducing the value of all raw land to its current use value. It would also greatly increase the rewards to illegal subdivision of unserviced land, already a severe

problem in many countries. Thus, success of the land bank in capturing betterment would require strict enforcement against illegal subdivision. But, in practice, the price of illegally subdivided land can approach that of legally subdivided land, especially if the government pursues a policy of subsequently upgrading the illegal settlements by providing clear titles and public services. One example of the incentives provided by legalizing squatter settlements is a 1967 program in Seoul, Korea, to give subsidies and legal permits to owners of squatter houses to which specified improvements had been made. In one area 1,000 new houses were noted within one month of the announcement of the program.[6]

Although local government purchase of land before the provision of urban public services has the potential to capture the rural-to-urban betterment and to provide a controlled supply of building sites, the potential is very unlikely to be realized in most cities with a rapidly growing low-income population. Government control over both squatting and illegal subdivision is likely to be weak or, if effective, must involve harsh controls. If the land bank is not a monopsonist and instead buys land at market prices, its potential for capturing betterment or influencing land prices is greatly reduced. If the holdings of private land speculators are not simultaneously reduced, the government's entry into the market as a buyer of undeveloped land would presumably raise the demand for land and thus raise rather than lower its price. Carr and Smith (1975) argue that a land bank will reduce land prices only if speculators reduce their holdings by more than the size of the land bank itself. The government cannot sell land to reduce prices without first having bought it, and if a secular rise in land prices is the problem, countercyclical buying and selling would have little impact.

Land banking operations in the raw land market can affect the supply of building sites by assembling land and reselling it with restrictions on the type and timing of the uses to which the land may be put. If, for instance, land is sold with the requirement that construction of specified improvements be completed within a given period, the government has greater control over the market, but the reluctance to use strong control measures short of government purchase may imply a lack of political will or consensus necessary for extensive land banking to work. Further, many observers feel that existing land use controls hinder more than help the low-income population. By setting inappropriately high standards for permitted construction, density, and services, governments in developing nations have, it is argued, reduced the alternatives open to those who cannot afford housing of such high standard (Turner, 1976). Any

6. William A. Doebele, "Land Readjustment as an Alternative to Taxation for the Recovery of Betterment: The Case of South Korea," in Bahl (1979).

policy that strengthens the government's control over land development may actually work a greater hardship on those who now obtain their housing outside formal channels. Thus, a land bank must be realistically considered in the light of the uses which government officials will make of it. One obvious temptation is to use banked land for public use when another location would actually be better, and this has allegedly been a problem with some site-and-service projects.

Managers of a land bank intended to influence the pattern of urban development obviously have to make economic and political decisions about the desirability of future development. Dishonest practices in both the acquisition and disposition of land are difficult to control, especially if social objectives justify deviating from market prices in purchase or sale, or if there is secrecy. This is an inevitable problem of land bankers, but an alternative form of public ownership, discussed next, reduces this problem to a minimum.

Land Readjustment

Land readjustment is a temporary form of public ownership that is simple in principle and sophisticated in practice. It appears particularly promising because of its demonstrated success in the Republic of Korea, Japan, Taiwan, and elsewhere. Doebele (in Bahl, 1979) describes the process in Korea, where it has been used to convert small and irregular agricultural parcels into replotted building sites with full public services for over one quarter of Seoul (see also the discussion in chapter 3).

Either the government or a petition from 80 percent of the landowners can start the readjustment process to convert fringe land from rural to urban use. The readjustment authority then prepares a site plan for the entire area, replots the land for private building sites and public uses, and installs all the expensive urban infrastructure, such as paved roads, sewers, and electricity. The market value of the new building sites is estimated, and just enough sites are retained by the government for auction to repay the cost of public planning and infrastructure. The original owners then get back the remaining sites in proportion to their initial contributions—usually from their original holding. Owners farm their land right up to the time infrastructure is installed, so that fringe land is not idle during the conversion to urban use.

The number of sites that must be auctioned to finance the project cost depends on the prices they bring. Korean public authorities keep project land prices high by making sure that the supply of lots they make available does not exceed demand at any time (Doebele in Bahl, 1979). An alternative policy would be to readjust more land every year to push down the price of serviced land. The government would have to auction

more of the now less valuable sites to recoup its cost, so the readjusted landowners would receive less betterment. But more rural landowners could participate, and urban land prices would be lower.

Land readjustment is the process of bartering raw land for serviced land, and is therefore suited to countries where governments find it difficult to finance public infrastructure investment. Landowners cannot escape paying project costs even if taxes are hard to collect, because their contributions are decided in kind before the project begins. Landowners also pay all the holding costs while the project is under way, so the readjustment authority has only to finance the infrastructure investment, and that only until sites are auctioned. In effect, those who buy the auctioned "cost recovery" land pay for the infrastructure.

One problem, however, is that many owners receive several building sites in exchange for their raw land contributions, and this delays use of serviced land. Because the lack of mortgage money compounds the mismatch between owners and would-be buyers, strengthening the mortgage market could improve the effectiveness of the readjustment process. If development does not occur promptly, the large infrastructure investment yields little or no return.

Another way to accelerate building on serviced sites would be to return fewer building sites to large landowners, auction the rest, and divide the proceeds, net of government planning and infrastructure costs, among participating landowners in proportion to their initial land contributions. Although this is a departure from the basic barter principles of readjustment, it would assure that initial landowners have sufficient cash to begin construction on their own sites, and that no owners have more land than they could themselves use. The auction process could be further modified by antispeculation requirements in the sale agreement, or by a tax on vacant land.

Although most readjusted sites are bartered, the auctioned sites demonstrate market values. If sites bring high prices and go only to high-income families, they are clearly too large or too well serviced for low-income families to afford, and more but smaller sites might bring a higher total value. The auction therefore not only recovers the government's cost of planning and infrastructure but also gives a market survey of the results.

Conclusions

Rather than recapitulate, it is perhaps more useful to end with some specific recommendations that emerge from this chapter.

Where there are shortages of serviced land, higher rents and capital

values shift some of the benefits of public services to landowners. At the same time, governments often cannot extend basic services to raw land because they cannot finance the public expenditures. Given these factors, a lack of serviced land may be partly attributed to the failure to tax the betterment caused by public services. Although betterment levies have often proved disappointing, there is evidence of success when they are perceived as a price that owners must pay to receive public services. This introduces some discipline into the political process of allocating public expenditures and permits a more extensive program of servicing raw land for urban uses.

User charges are an alternative to betterment levies for some public services. Because service benefits net of user charges raise rents and land values, the burden of user charges should shift from users to landowners. Thus, the ultimate distributional consequences of user charges and betterment levies may be quite similar. Since rate structures for user charges can be made progressive, their well-known efficiency as rationing devices would suggest greater reliance on them to cover at least marginal cost. To the extent that user charges affect land values, they should also not be neglected as a device to recapture betterment.

There are compelling grounds for not attempting to tax 100 percent of betterment. In particular, the normal assessment errors in estimating land values may be greatly magnified when assessing the difference between land values before and after betterment. Given the well-known problems of administering tax systems that are conceptually much simpler, it seems prudent to begin modestly.

Finally, two promising ways to increase urban public investment are deferred assessment and land readjustment. Because realized increases in land value are the ultimate source of repayment for public investments financed by deferred assessment and land readjustment, both methods offer great security to lenders without unduly burdening the current income of borrowers. Therefore, both deferred assessment and land readjustment offer excellent opportunities for increased domestic and international lending to finance local public investment.