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A Critical View of Land Value Taxation as a Progressive Strategy for Urban Revitalization, Rational Land Use, and Tax Relief

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ABSTRACT: This paper reviews arguments for land value taxation (LVT) as a tool to stop urban sprawl, eliminate land speculation, reduce housing costs, and provide tax relief. It is found that LVT would increase, not lower land prices and would provide only a small incentive to building construction. LVT would not favorably affect the distribution of wealth, nor reduce housing costs. It could provide some residential tax relief, but less effectively than other methods such as a progressive property tax.

GENERAL ISSUES RAISED BY THE DEBATE ABOUT LAND VALUE TAXATION

What is land value taxation (LVT)? Basically, it is a system where land is taxed at a higher rate than improvements (a graded tax). In its pure form, the improvements to real property would not be taxed at all. In theory this would be an incentive to promote more intensive use of land. Proponents seek to substitute LVT for the current property tax system used by most local governments in the U.S. which tax both land and improvements to land at exactly the same rate.

The idea of land value taxation goes back to a notion first advanced in 1879 by Henry George. His "single tax" movement was based on a belief that LVT could completely substitute for all other forms of government taxation, and that this would remove the unearned surplus accruing to landowners and redistribute unearned private wealth to the society at large. The notion had populist anti-monopoly adherents over the years. More recently, some within the emerging Green movement have advanced similar proposals for LVT. Confronted by ever-increasing disinvestment in our central cities, homelessness, urban sprawl, and concentration of wealth, some progressives have recommended adoption

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of LVT as a way to promote infill development and halt real estate speculation.

Historically, many populist advocates of LVT have argued for a fundamental change in our relationship to the land. They have buttressed their arguments for LVT with the assertion that all people should have equal access to nature and should receive the full fruits of their labor (Carter 1982: 30). Both these goals are suggestive of Marxian socialist values. George was a critic of accumulation of wealth in land, as was Marx, but saw the private ownership of the unearned, socially generated value of land as the main source of this accumulated surplus value. Marx, by contrast, recognized the source of surplus value in the exploitation of labor, and saw surplus value reflected in private accumulation of socially generated values in all forms of capital, not merely land.[1] George avoids attributing surplus value to non-landed capital by defining capital in a very narrow way; most of what is generally thought of today as capital assets by non-Marxist and Marxist economists is not considered capital in George's definition. Oriented to the goal of a decentralized economy based on self-employment, George ignored the normal results of the evolution of capitalist competition toward concentration of private ownership of improvements with small business generally losing out in the absence of regulation of markets, capital access, and scale (Edel 1982).

The height of the U.S. land tax movement from 1910-1920 resulted in the introduction of a graded tax in Pittsburgh and Scranton, Pennsylvania and Houston, Texas. The Houston experiment ended when it was found to violate the tax uniformity clause in the state constitution. Similar clauses in most other state constitutions have presented a bar to LVT's introduction except in Hawaii in the 1960s where it was one part of a comprehensive land-use control program, and in 10 additional Pennsylvania cities.[2] (Pennsylvania has one of the most liberal uniformity clauses, while Hawaii has no such clause.) It is questionable whether Hawaii's use of LVT is as envisioned by Georgists since land is not assessed at highest and best use, but is tightly controlled by state zoning (Hagman 1965: 788). LVT experiments were more successful in other countries.

In Australia and New Zealand LVT was introduced at the federal level near the turn of the century as a result of anti-monopoly movements, similar to those in the U.S., that sought to break up large concentrations of landownership. In those two cases, LVT was introduced with steeply progressive tax rates (based on the value of the landowner's total landholdings in Australia) in order to break up large landholdings and redistribute wealth, rather than with the intent of controlling urban sprawl, stimulating construction or controlling land speculation. The

Valuer General of New Zealand said, "There was no evidence that the tax would (1) control urban sprawl and speculation in land; (2) encourage the construction of 'better' buildings; (3) encourage growth; or (4) cause slums to disappear" (Hagman 1965: 776). Because of the progressive tax rate feature, LVT did in fact break up large landholdings in Australia and New Zealand, so that by the end of World War II, "the movement had progressed far enough so that the maximum rate applied only to a relatively small number of taxpayers," while exemptions were introduced for small resident landowners (Woodruff and Ecker-Racz 1969: 156). But in most underdeveloped countries, LVT has not been effective as a major source of revenue or wealth redistribution, often being imposed on the basis of acreage rather than value (Pillai 1987: 46). For example, Tanzania and Zambia phased out their LVT, and a number of countries which started out using LVT eventually found a need to supplement it with a tax on improvements (Lent 1978).

Rationale for LVT

LVT raises several important issues for progressives to consider that go beyond the validity of the claims made for it by proponents. One is the larger issue of how to practically go about implementing a more equitable redistribution of wealth in the U.S. A second issue is whether progressives can help offer solutions to distorted land use patterns which encourage urban sprawl, and whether tax incentives have any place as a realistic part of such a solution. A third issue is how progressives can meaningfully contribute to the debate about how to provide property tax relief to millions of homeowners, farmers and small businesses — in the absence of major reallocations of federal revenues.

Whatever the merits of LVT as a policy instrument, it is instructive to trace the concerns which underlie the motivation of many of its adherents. One key concern is the widespread inequity of property tax assessment and incidence among property owners. In addition to the nominal tax rate, relative property tax burden is equally determined by the *assessment ratio*, which represents the percentage of actual market value to which the nominal tax rate is applied for a given property. Except in the 25 states which explicitly allow some differential treatment between classes of property — for example, residential, commercial, industrial, and agricultural classes — the assessment ratio is theoretically uniform. But in practice, assessment ratios vary widely with certain systematic biases being common. One of these is the systematic undervaluation of vacant land compared to buildings and structures (improvements). There are numerous reasons for this bias,[3] which results in a greater relative tax burden on homeowners compared to land-intensive industrial and commercial property owners (Kuttner 1979:

31).[4] It is noteworthy that Pennsylvania, the only state in which many cities have adopted LVT, ranks 49th out of 50 in assessment accuracy. This low accuracy may have magnified the political pressure for innovation (Breckenfeld 1983).

A second equity concern is the fact that appreciation in the value of tangible property in general is not subject to income taxation unless it is sold, even though it can be argued that this increase in value is just an alternative form of income. Some LVT adherents see the value of land as publicly generated, and therefore view this unearned increment in value as rightfully belonging to the public (Gaffney 1970: 207). But currently, the only tax which captures any of the unrealized income from land appreciation is the annual property tax. Typical, annual, total local property tax rates may be from 2 to 4% of property value. Yet the annual income tax on all capital has been estimated as being about 9% of value (Steuerle 1982: 284-289). It turns out that the magnitude of unrealized, tangible real property value which escapes full taxation is several hundred billion dollars a year, not including corporate-owned property.

A third rationale for LVT derives from the waste represented by having large amounts of vacant land within cities at the same time that urban sprawl accelerates at the urban periphery. For example, a Congressional report found that in 1971 the average city had 25% of its land vacant (Coyne 1983: 34). Here the Georgist argument is twofold: 1) a higher tax on land will force the landowner to develop the land by increasing the holding cost, and so deter land speculation; and 2) a lower tax on improvements will increase the economic incentive to develop new housing and businesses. The expectation is that the market for cheap land at the urban periphery will shift to vacant land in central cities, thereby discouraging urban sprawl and encouraging rejuvenation of deteriorating central city areas.

It is also argued by some that LVT will result in upgrading or improving the quality of buildings, and that it will increase the quantity and affordability of housing. In this scenario, a decrease in housing costs is expected to occur through two mechanisms: a *tax capitalization effect* and an *incentive effect*. The assumption of *tax capitalization* means that the present value of all future payments of a *higher tax rate on a piece of land* translates into *lower land prices* because, as sales of land are negotiated, new buyers will figure in this tax increase as a liability affecting the market price they are willing to pay for the land. Lower land prices in turn are expected to result in lower housing prices. The assumption of an *incentive effect* derives from the presumed impetus to greater investment expected to result from the *lower tax rate on improvements*. The lower tax rate becomes incorporated into a lower

estimated operating cost for a home or business over the life of those improvements. This is assumed to increase the supply of new housing. In a later section, I will examine the validity of these assumptions in detail.

Further rationales for LVT assert that it will: (1) provide greater economic efficiency by reducing the tax on capital improvements; (2) generate additional revenue to fund public services or provide property tax relief (in the extreme view, enough could be generated to fund all public service needs — thereby replacing all other tax revenues — with a residual available for distribution among the population); and (3) offer more local autonomy by giving local governments a tool that they could use for tax relief and revenue generation in a time of federal and state fiscal cutbacks. In what follows, I will argue that most of these alleged outcomes are unrealistic, and flow from a misunderstanding of the dynamics of real estate markets and of the economic impacts involved.

Much of the confusion in claims about LVT rest on failure to consider implicit assumptions, many of which are never tested. For example, the actual impact of an LVT proposal depends on whether the proposal is revenue-neutral (raising the tax on land would then imply lowering the tax on improvements), revenue-increasing or revenue-decreasing (for example, lowering the rate on improvements, while keeping the current rate on land). The impact depends crucially on whether the tax is applied over the entire metropolitan area or just in one city of that area.[5] It depends on whether one assumes that public expenditures and city services rise or fall with the tax revenue in an LVT proposal or remain constant. The effects are different in cases in which land is rented by the owners of improvements, from the cases where the owner of improvements also owns the land beneath it. The capitalization effects claimed depend on the degree of competitiveness of the market for land, rental housing, and industrial and commercial products; the degree of mobility of the various renters and users of land; and the relative difference in existing property tax rates between municipalities. Similarly, there is often an implicit assumption that the "highest and best use" of land will be beneficial to society as a whole. But "highest and best use" is a narrow appraisal term keyed only to the market value of land. The profit-maximizing land use indicated as the "highest and best use" is not based on considerations of social efficiency or equity. Free market ideologues confuse efficient market *allocation* of a good or service with its efficient *distribution* in terms of social goals of community stability, equity, environmental integrity or public investment (Harriss 1986: 267-268). But some LVT supporters admit the limited usefulness of LVT in the absence of stringent land use controls, such as

those modeled in Hawaii's application of LVT. (Harriss 1971: 154) In the analysis that follows, I shall try to uncover these assumptions.

The Capitalization Effect

Most adherents of LVT never question the basic assumption that LVT leads to lower prices on land as a result of the capitalization of the tax mentioned earlier. This assumption is key to many of the theoretical benefits alleged to accrue from the tax. For instance, the lower land prices expected from the *capitalization effect* of a land tax is relied upon — along with a general increase in the supply of housing induced by the separate *incentive effect* of removing the tax on improvements — to reduce the price of housing. Similarly, lower land prices are relied on to make land available to a wider range of people, hence encouraging the redistribution of wealth. Finally, this lowering of land prices in central-city areas is expected to result in a shift in the competitiveness of these sites compared to urban fringe land, which will work in favor of infill development and against urban sprawl.

Given the centrality of the assumption of capitalization of a land tax into lower land prices, it is interesting that a number of proponents of LVT point out that this effect may be illusory, and that a land tax may, under realistic assumptions, lead to *higher* rather than lower land prices. A supporter of LVT pointed out in 1970 that land prices had been high and rising in Sydney, Australia, a land tax city (Harriss 1970: 235). And three years after Harrisburg, Pennsylvania adopted a graded tax, the mayor there noted: "Ten years ago people with properties worth $100,000 watched them go down to $90,000 and $80,000 and even $60,000 but, in the last few years, we've turned that around with a 50% increase in land values" (Rybeck 1977: 455).

To begin with, the conventional wisdom of LVT adherents relies heavily on a seldom-questioned assumption from traditional economics, namely, that the supply of land is fixed (it cannot be increased), and therefore a land tax cannot be shifted to renters. A common inference from this is that the unshifted tax increment must be borne by landowners as a class. Once incorporated into the expectations of prospective landowners, LVT adherents reason that this would result in a bargaining down of the price of land in subsequent transactions. Yet Roger Smith, a supporter of LVT, points out that "the supply of land which will be made available for development at any point in time is not fixed" (Smith 1978: 60).

The idea that the supply of land is fixed is untrue for all practical purposes, and true only in an aggregate sense. In terms of any specific land market, or any specific land use, or any given geographic area, the supply of land is always changing (Goldberg and Chinloy 1984: 123;

Skouras 1978: 115). Rezoning of land, annexation, demolition, closure and relocation of businesses, changes of ownership, conflicting nearby uses, environmental hazards and nuisances, transportation and other public improvements, and a variety of other linkage factors can all change the effective supply of land in an area for any given use or market type. Moreover, if landowners could not themselves alter the supply of land for any given use, then there would never be any phenomenon of speculative withholding of land for development, which changes the price of the land. Clearly, speculative withholding of land does occur; LVT proponents themselves attest to this, by invoking a shift to LVT as a way of correcting land speculation. So the assumption of a fixed land supply is inaccurate.

If the assumption of a fixed land supply is abandoned, then it can no longer be assumed that any tax capitalization effect would occur. In the first place, we need to distinguish the case where a change to LVT would be revenue-neutral with respect to the existing property tax on land and improvements from other cases. In that case, the rise in the tax rate on land would be matched by a corresponding decrease in the tax rate on improvements. Gaffney, a strong defender of LVT, points out that in this case land prices would not fall because a reduced tax on improvements would raise land rents as much as the tax increase on land is expected to lower them, by the same capitalization argument (Gaffney 1970: 189-190). Using a simplified general equilibrium model in which land supply is fixed but capital is mobile, Grosskopf and Johnson also show that a revenue-neutral shift from the current property tax to a tax only on land value results in higher land prices rather than lower ones (This follows from their derivation that a uniform land and building tax decreases land prices in the long run more than a uniform land tax of equal yield.) (Grosskopf & Johnson 1982: 53-55). If the total tax revenue collected from a shift to LVT were to increase, on the other hand, proponents like Gaffney expect land prices to fall.

But if a shift to LVT resulted in a higher yield compared to the present property tax, this would be reflected in higher expenditures, and possibly higher service levels. Therefore if one allows for capitalization of higher service levels as well as higher land taxes, one may find that higher-tax areas actually attract firms and households, resulting in greater demand for land, hence higher land prices (Netzer 1966: 34; Warner 1987: 389). Studies indicate that people are willing to accept lower wages, higher housing prices and higher tax rates in order to obtain a superior quality of life, which in turn is closely tied to a higher rather than a lower level of public spending (Blomquist, Berger and Hoehn 1988; Power 1988). A number of capitalization studies have not controlled for service expenditures even though government expenditures have the potential to

more than offset the negative impact of taxes (Warner 1987: 389). It is likely a higher tax on land would be accompanied by greater spending on services which would add to the value of land. As is well documented, the major source of land value derives from public improvements (Czamanski 1966). For example, a study by Hutchinson purporting to strongly support LVT's effect in Australia failed to control for any variables other than the form of tax (LVT versus traditional property tax), including expenditures or service levels (Hutchinson 1963). Edwards' study of LVT in Australia fails to find any significant effect of tax rate on housing prices, when public expenditure level is controlled for in the model (Edwards 1984: 495).

Another factor to be considered is the geographic scope to which a land tax would apply. The ability of landowners to shift the tax forward depends on (1) the extent to which the market for homes and income properties of various kinds corresponds to the area over which the tax applies; and (2) the degree of monopoly or competitiveness in the markets for each income property's products. Often, these factors are not controlled for in empirical studies. For example, housing and labor markets tend to be metropolitan in scope. If a shift to LVT involved a significant increase in total tax revenue, and was applied to only a portion of the metropolitan area such as a single city, it is possible that capital would migrate away from that area. On the other hand, if it also involved a partial or total exemption of tax on improvements, capital might migrate in. Even if LVT was applied in a revenue-neutral way over the whole metropolitan area, this would not necessarily stop capital mobility since preexisting property tax differentials would still be present, reflecting in part different levels of services provided, and there would be windfalls and wipeouts in any switchover to LVT. It is possible that in the metropolitan-wide case, forward-shifting of a tax to renters would occur since most tenants cannot easily escape the tax by relocating. To the extent this was true, land prices would not fall.

Finally, the greater the degree of monopoly control of markets for a product, the more likely that businesses in that sector — whether owners or renters of land — could shift the tax forward to consumers.[6] Also, the ability to shift the tax onto workers in terms of lower wages would be tied to the competitiveness and segmentation of the national and local labor market in each business sector. In either case, all or part of a land tax could be shifted rather than borne by landowners. To the extent that such forward-shifting occurs, there would be no capitalization of LVT into lower land prices.

In general, I conclude there is no consistent evidence for the reality of land value tax capitalization effects upon which the argument for a land price decline depends. The few studies of Pennsylvania cities which

actually have a graded tax have been inconclusive (Bourassa 1987; Mathis and Zech 1982; Pollakowski 1982). Nevertheless, even if there were some degree of tax capitalization, it is likely that such an effect would be strongly overridden by other effects of greater magnitude that would work to raise land prices. The presumed capitalization effect hinges on the assumption of an increase in the supply of vacant sites that will become available for development, forcing down the price of land. However, exogenous forces such as population in-migration and smaller household size create demand for land of a large order of magnitude that would neutralize any capitalization effect in areas of the country recognized as "growth magnets" and to a lesser extent in other areas (Evans 1983: 125; Smith 1978: 62).

More generally, any lowering of the tax on improvements that accompanied an increase in the tax on land would increase the marginal productivity of the land — the intensity of improvements to the land — other things being equal, and hence its land rent (Douglas 1978: 219). Appraised property values are based on the potential income to the land under its highest and best use as if it were vacant (AIREA 1987: 271). By inducing more intensive development on vacant land, the market value and price of the land will increase, reflecting the weight of the added improvements just as rezoning land for more intense use raises its value. The incentive effect of removing the tax on improvements would outweigh the higher tax on the land and attract buyers (Grosskopf and Johnson 1982). Empirical evidence shows that, contrary to popular belief, land is a relatively low-risk asset (Witte and Bachman 1978: 556; Wurtzebach and Miles 1987: 544) It is also favored as a hedge against inflation and a diversification from stocks and bonds. This shifts investment portfolios away from other outlets and toward land. The continuing demand for land as a low-risk investment would still operate to raise land prices (Feldstein 1977: 355). If there were a short-term capitalization effect that lowered land prices under LVT sufficiently, investments would shift to produced capital. As long as private saving increased, this partial substitution of capital for land would eventually raise the intensity of land use, and the income from land, thus raising its price (Break 1982: 133; Feldstein 1977: 354).

Even in the case of a metropolitan-wide shift to LVT, the effect on land markets would not be locally uniform. Those municipalities having higher current property tax rates and service demands — often the central cities — would experience larger increases in land prices from the shift (Grosskopf and Johnson 1982: 56). Yet it was precisely to correct the higher land values in central cities that proponents have defended the need for LVT.

To an extent a revenue-increasing form of LVT gives the public a greater claim on land equity, but it does not remove speculation in land. Unless LVT were confiscatory, the remaining land rent component would still be available for private speculation. In this case LVT may simply increase the land area needed by speculators to obtain the same rate of profit (Vickrey 1982: 31). This may increase the concentration of landownership and the extent of urban sprawl. Public purchase of development rights, land banking, community land trusts, a graduated series of property tax rate brackets based on total value of holdings by owner, and consistency mandates requiring enforceability of zoning with master plans would all be more effective approaches to ending land speculation. The continued speculation in land would also serve to keep land prices up. This would be a function of the degree of concentration of ownership in land markets.[7]

Finally, the shift away from improvements taxation could begin to attract national or international capital investments, which would also cause land prices to rise (Grosskopf and Johnson 1982: 56).

Although the empirical data is inadequate to resolve the issue, empirical and theoretical evidence described here suggests it is likely that land prices would rise as a result of a shift to LVT, and very unlikely they would fall, especially in central cities. This issue is tied up with the extent of the incentive effect from reducing the tax on improvements which I now examine.

The Incentive Effect

Advocates of LVT claim that it will provide a major incentive to more intensive development of land, particularly in deteriorating cities. Will LVT provide an incentive to development? The immediate effects of removing or reducing the property tax rate on improvements will be minimal to the extent land is already being used as intensively as possible under existing zoning and building regulations (Netzer 1966: 205). It is possible that there would be an incentive to rehabilitate properties. However, the main barrier to adequate property maintenance may be the direct expense involved, rather than the fear that improvements would trigger reassessment of the property, resulting in higher taxes. A study found that renovators reported that they were negligibly motivated by preferential tax policies such as property tax abatements or tax increment financing (Dunne 1976: 24).

We would expect the major incentive effect to show up in development of vacant land. But, writing in 1965, Richman found no evidence of accelerated development in Pittsburgh as a result of use of the graded tax (Richman 1965). Woodruff and Ecker-Racz reported no observable evidence for speeding up of development in LVT versus non-LVT cities

(Edwards 1984: 486). Another researcher similarly found no difference in development impacts of LVT and a tax on land and improvements in New Zealand (Clark 1975). Other studies of LVT cities fail to control for macroeconomic variables affecting housing markets.

Bourassa's study of residential building permits in Pittsburgh between 1978-1984, which controlled for a number of other variables affecting housing markets, found that the higher land tax rate and its theorized effect of lowering prices through tax capitalization was insignificant in increasing construction. But the lower tax on improvements did have a substantial effect (Bourassa 1987: 53). However, this time-series analysis fails to provide a comparison of the building permit effects in Pittsburgh against possibly similar effects in other non-LVT cities and is inconclusive.

Generally, it is unclear that any incentive effect deriving from reducing the tax on improvements would be significant enough to attract capital for redevelopment of deteriorating central cities in areas where market forces do not support central city reinvestment anyway. Numerous studies of the effectiveness of property tax abatements and tax increment financing around the country show that these incentives are generally ineffective because they tend to be used in areas that would have developed anyhow without any tax subsidy (Eisinger 1985: 13; Wolkoff 1983: 78; Mattson et al. 1988: vi).

They are also ineffective because they are just too small in magnitude to have a significant impact on relocation and investment decisions. In terms of the commercial and industrial sectors, repeated studies have shown that intermunicipal property tax differentials are an insignificant factor in business costs, and hence in relocation decisions (Hovey 1986: 114; Eisinger 1985B: 10; Dunne 1976: 38). Residential property taxes represent a more significant share, about 15 to 20%, of monthly operating costs for a home or apartment building (Berger 1983: 257; Peterson and Solomon 1973: 24). But again, intermunicipal *differentials* in property tax rates between cities within a metropolitan area, which is the relevant measure, are generally an order of magnitude lower than this — only 1 to 2% of gross income. Any potential tax incentive effect would be minimal unless LVT were accompanied by an increase in the level of taxation that would probably be perceived as onerous by homeowners and renters, rendering it politically infeasible. Generally, the traditional view that taxes on improvements and capital are largely shifted forward to consumers is still the most likely to be accurate (Netzer 1966; Dahlby 1982; McLure 1977: 69).

Although it is true that the removal of the tax on improvements is not neutral and might have some incentive effect in encouraging development, one can also argue that the current property tax does not

penalize new development, as claimed by LVT proponents. Alternatively, it could be seen as neutral because it taxes both land and improvements at the same rate. Speculators who withhold land from development still pay the same tax rate on the land value under the current property tax, so it is to their advantage to develop it for some income-producing use. Precisely because it does tax existing improvements, the current property tax could be seen as a holding cost on improvements that provides a financial incentive to redevelop obsolescent buildings to increase the rate of return, just as LVT proponents claim that LVT, by increasing the holding cost on land, acts to force them to develop the land. (To truly penalize development, a property tax would have to be imposed only on improvements, and not at all on land, in my view.) And if the incentive effect claimed for LVT were really significant, it might speed up the life cycle of buildings too far and result in premature destruction of still viable, physically sound buildings simply because they had reached the end of their depreciable life for income tax purposes (Hagman 1965: 777). At least one LVT advocate says that, to be workable and equitable, the shift to LVT would need to be accompanied by income tax reform with regard to capital gains and depreciation (Grey 1969: 96). The real underlying issue here may be to correct the systematic underassessment of the value of land rather than to introduce a higher nominal tax rate on land.

LVT and Urban Sprawl

At the city level, LVT would not halt urban sprawl, which is driven by many other factors such as: higher prices of land and assessments on improvements at the center than at the periphery; higher insurance costs; economic redlining; changes in manufacturing space requirements; traffic congestion and inadequate parking; agglomeration effects and difficulty in assembling land at the center; and an automobile-based culture. If LVT increases land prices over time, this could exacerbate capital flight from the cities, and lead to further abandonment of rundown properties.

In states with permissive annexation laws, large cities are often instigators of sprawling peripheral development. A tax on land value would do nothing to aid the older, inner-city areas in such cases because it would be applied equally everywhere within the corporate boundaries of the city. Therefore, any incentive to development would carry over to peripheral sites and central sites within the city equally. Given the existing market-driven factors favoring peripheral sites, LVT would have no corrective effect.

Because it is not sensitive to varying land uses, LVT could also encourage overdevelopment of vacant land resulting in overcrowded conditions, undersupply of park and open space, and excessive strain on

public services, unless strong zoning controls prevented this (Harriss 1970). If the shift to LVT involved an overall increase in tax rate relative to the existing ad valorem tax on land and improvements, this would make low-income housing development even less desirable (Eisinger 1985: 16).

LVT at a county or regional level is likely to increase urban sprawl given that most vacant land is concentrated outside central cities and that various market factors still favor building at the urban fringe, in the absence of strong county regulatory growth controls on the supply of developable fringe land. At the county level, LVT would accelerate the conversion of prime agricultural land to urban use.

LVT and the Cost of Housing

Proponents of LVT argue that by inducing more intensive development, a greater supply of housing will result. They reason that a greater housing supply will lower the price of housing and that this will help make housing more affordable (American Institute for Economic Research 1984; Incentive Taxation 1990). Secondly, they argue that the capitalization effect will reduce the price of land. Since the cost of land is a big factor in housing costs, they reason that this will reduce the price of housing (Lehman 1989: E1; Incentive Taxation 1990). Thirdly, they assume that if rents rise under LVT, tenants will relocate to other communities or economize on living space, which will force rents down. All these assumptions are flawed. The second argument has been dealt with earlier in our discussion of the tax capitalization effect. The third argument ignores the lack of mobility of most tenants, and their lack of options in terms of affordable rental housing choices.

In general LVT would not correct existing market trends. LVT does nothing to address the widespread problem of exclusionary zoning ordinances which act to limit the creation of low-income housing in many communities. Such ordinances have both a fiscal and a cultural basis (Hamilton 1979: 170-171). Ventures which appear unprofitable currently would remain so under LVT, and private-sector affordable housing is currently not profitable to develop (Rosen 1984: 93; Sternlieb and Hughes 1980: 247). If LVT did induce an overall increase in housing supply, such an increase would not necessarily translate into lower housing prices because of (1) the extent to which high housing costs are fixed by exogenous market variables such as costs of interest and construction materials and non-tax operating expenses; and (2) the strong segmentation of housing markets — contrary to traditional filtering theories which assume that increased housing supply at the upper end of the income range will trickle down to those most in need. Empirical evidence of the 1980s clearly shows that any increased supply

of rental housing would not benefit those unable to afford it (Lowry: 1983). Since 1981, real rents have risen steadily and in 1988 stood at their highest level in two decades despite a sharp rise in rental vacancies (Joint Center for Housing Studies 1988: 17). The Urban Land Institute claims there is an excess of one million rental housing units with an additional increase of 500,000 a year (Land Use Digest 1988). Yet rates of homelessness are skyrocketing (Rogers 1985). Although the incentive effect of introducing LVT would likely be minimal, even what conversion or rehabilitation occurred under the free market conditions favored by advocates of LVT is likely to result in gentrification which would force up rents or force relocation of the poor. A study of LVT in Australia found that the effect of it there has been to raise the average price of housing significantly, even though there was also an increase in housing supply (Edwards 1984).

LVT and the Concentration of Landownership

Although LVT is often linked to redistributional rhetoric, this is done usually "without any supporting statistical evidence on the probable effects on the distribution of income or wealth" (Prest 1982: 147). The argument by adherents that LVT would disperse ownership of land is based on the assumption that land values will go down under LVT thereby widening access to ownership.

Ownership of land is presently quite concentrated. In Gene Wunderlich's estimate, 3% of the population own 95% of the privately held land in the U.S. (Meyer 1979: 49). In another estimate, the top 5% of landowners own 75% of the private land in the U.S. (Lewis 1978). The largest landowners have sufficient wealth that they would not be deterred from continued speculation unless a land tax was nearly confiscatory (Smith 1978: 68). Long before this effect occurred, the land tax would be annulled on political grounds because of its similar impact on the majority of smaller landowners (Hagman 1965: 778). The ineffectiveness of LVT in addressing land speculation is a result of it not addressing the basic fact of the current concentrated ownership of landholdings, which would be unaffected by a shift to LVT.

Where land taxes have been used without a progressive rate structure, no redistribution of landownership has resulted. And there is no reason why a progressive rate structure should not be applied to improvements as well as land.

LVT, Property Tax Relief, and Revenue Generation

If LVT was introduced in a revenue-neutral form relative to the old property tax, there would be some tax savings that homeowners could use to reduce rents. One model of LVT for Eugene-Springfield, Oregon;

found a 24% decline in taxes on the average homeowner, as a result of LVT (Lindholm and Sturtevant 1982). Several studies of potential impacts of LVT on tax burdens found that both multi-family and single-family residential taxpayers would experience reduced property taxes (Smith 1970; Rawson 1961: 23; Clark 1985). But another modeling of LVT effects for San Diego found that it would redistribute tax burden from hotels, motels, commercial, industrial and public uses to residential, general business, agricultural and undeveloped land (Neuner, Popp and Sebold 1974). Thus, in general, LVT may not provide tax relief to homeowners in every case.

Homeowner property tax relief could be accomplished more directly through removing the exemption for manufacturing machinery and equipment, commercial inventories and livestock, or by requiring a higher assessment ratio on commercial and industrial property classes than on residential property. These options already exist in many states. A progressive property tax by owner, graduated by total value of each owner's real estate holdings, would be a more effective and equitable source of property tax relief.

While it is likely that a tax on land would be adequate to replace the property tax revenues of local government which have been declining for decades (Grosskopf and Johnson 1982: 59-65), it is widely believed that LVT would not be an adequate revenue generator to replace all sources of public income as envisioned by Georgists (Roakes and Jacobs 1988; Follain and Miyake 1986: 464; Douglas 1978: 220; Dimasi 1987: 589). Estimates of the role of income from land rent compared to total national income vary greatly. Based on the national income accounts, the role of rent in national income is quite small and has been declining over time. In 1985, rental income was 1 to 2% of GNP and decreasing, while interest income was 8 to 11% of GNP and increasing. Twenty years ago, by contrast, aggregate rental income was three times as large as interest. This shift reflects the fact that real interest rates have risen faster than rents, and that debt has increased as a percentage of real estate and corporate financing (Wurtzebach and Miles 1987: 14-15). Reliance on the national income accounts has been criticized as a basis for estimating the revenue potential of land rent. Cord has estimated that the actual land rent tax base is potentially as high as 28% of U.S. national income. His conclusions are based on a series of adjustments to land rent, some of which are questionable. Even if I do not subtract for capital consumption adjustments, and assume that as much as half of profits and interest income are really disguised income from rent in the form of mortgages and real estate equity, land rent would still be no more than 10% of national income in 1989, so the revenue from a tax on land would not be

adequate to replace all other government revenue sources (*Survey of Current Business*, November 1990: 10).

Alternative to LVT: A Progressive Property Tax

The goal of recovering the unearned social increment of land value is a legitimate one for those concerned with the redistribution of wealth. But the concept of land value taxation is not the best way to accomplish this. In general, a progressive tax on wealth or income is the main legal avenue allowed for redistribution of wealth under the U.S. Constitution.[8] As wealth is even more highly concentrated within the population, there is even more reason to tax wealth.

It is generally accepted that a redistributive tax at the federal level is more effective than at the state or local level for two reasons: 1) the base to which the tax applies is broader, so a greater degree of redistribution is possible; 2) tax avoidance through geographical movement of assets is avoided for households, though this is less true for corporations. Yet the task of reclaiming political control over federal revenues for social and ecological needs is daunting. This has led some social change activists to search for alternative state and local sources of progressive taxation.

It is possible to conceive of a progressive state tax on wealth, as of income. Great Britain and Sweden for instance have annual taxes on wealth (Jaffee 1978: 485). Eighteen U.S. states currently levy a net worth tax on corporations, usually at low rates. Mainstream politicians argue against progressive taxation at the state and local level by claims that corporations and the wealthy will move to another state or locality. Although evasion of a state tax on intangible property such as stocks and bonds could be minimized through enforcement and use of IRS data, a large amount of tax evasion occurs under existing state intangible taxes (Jaffee 1978).

This mentality of accommodation of the wealthy can be challenged by use of a tax which cannot be avoided by relocation. Such a tax is the tax on tangible, real property (not just land). Tax payments must be made even if the owner relocates. If tax payments are not made, the public has first claim on the property which can then be land banked or used in socially beneficial ways. Also, as I have seen, property taxes are an insignificant factor in business location decisions, and so would not affect future in-migration of firms. Therefore, the local property tax — and perhaps a state property tax — would be a logical candidate to use for redistribution of wealth. And there is no reason why a progressive property tax should not apply to improvements as well as land. Furthermore, such an alternative revenue source is doubly desirable

because it increases the self-reliance of state and local governments in a time of federal retrenchment.

The notion is not as radical as it first appears. The origin of the property tax historically was not as a benefit tax on property owners to pay for services to their property, but as an ability-to-pay tax used for general revenue (Lynn 1967: 45; Mishkin 1965). In early colonial times in the U.S., a number of states had progressive property tax rate structures at the parcel level, based on the value of the parcel. But the redistributive impact of even a local property tax would be greatly enhanced by applying the differential rates based on the total value of each property owner's real estate within the taxing jurisdiction, rather than on the value of each individual parcel. (This was the system used effectively at the state and federal level in Australia to break up large landholdings.)

Since property is but an alternative, slightly illiquid form of income (Heller 1974: 756; Wisconsin Dept. of Revenue 1977: 67), it is easy to legally justify a progressive property tax based on the 16th Amendment of the Constitution which authorizes progressive taxes on income. (Nevertheless, the uniformity clauses in some state constitutions would need to be changed to allow such a tax.) A progressive local property tax also has advantages over a progressive local income tax in terms of greater fiscal stability over the course of the business cycle, in addition to the fact that it cannot be avoided by relocation.

Based on dollars and time spent, property tax relief is the single biggest issue in state political discourse, and has been for some time. In Wisconsin, for example, over 50% of general purpose state revenues are spent in one form or another in attempts to provide "property tax relief" to homeowners, farmers and small businesses. But existing forms of tax reform put forth no alternative form of funding to pay for this tax relief. Therefore, such reform proposals end up using the income and sales tax taken disproportionately from working people to pay for tax relief to these same people. By contrast, the progressive property tax envisioned here could provide tax relief by capturing a heretofore untapped segment of the property tax base — namely, a fairer share of the disproportionate wealth held by upper-income people and corporations, whereas the present property tax, regardless of tax credits that are applied after the fact, taps only a fraction of this base with its flat, single-rate structure. For example, the top 100 owners of property in Madison, Wisconsin in terms of value own 33% of the property tax base. Therefore, merely tripling the tax rate on them could provide enough revenue to eliminate all property tax on all other property owners, at the same level of spending. Yet a 200% increase in tax rate on these owners would still only represent a shift from 1% of business costs to 3% (Due 1961: 166;

Eisinger 1985B: 10-11). This is not large enough to override the really significant factors in business decisions such as an area's quality of life, proximity to markets, a skilled work force, labor costs, proximity to raw materials, etc.

Such a tax is a better targeted solution to property tax distress than existing classifications which apply a blanket higher assessment on all commercial property relative to all residential property, thereby penalizing small businesses and granting a windfall to upper-income homeowners. The actual rate structure of a progressive property tax could be set in flexible ways to assure that small, low-income but capital-intensive businesses and low-income homeowners on fixed incomes were not penalized. A special fractional assessment ratio could be applied to all farmland to compensate for its land-intensive character; with this proviso, it would help break up large factory farm holdings. Because its effects would not fall uniformly on owners of rental income properties, owners of smaller units could be expected to benefit, and the breakup of large holdings would make the housing market more competitive and lower housing costs.

Finally, a progressive property tax structure could help slow urban sprawl. Since ownership of urban fringe land under development pressure is highly concentrated, a progressive property tax on a county or regional level, within the context of a strongly enforced land use plan to preserve farmland, would help break up these holdings, thereby slowing the conversion to urban use. In addition, the great shift upward in value resulting from assessment of land at urban rather than rural use could push many owners into a higher tax bracket. The anticipation of this could slow the process of sprawl.

CONCLUSION

Progressives, populists and Greens have recently shown renewed interest in use of land value taxation as a solution to problems of urban sprawl, lack of affordable housing, inadequate public revenues, concentration of wealth, inefficient investment patterns, and real estate speculation. Most of the empirical evidence cited here suggests that it would not be effective in solving many of these structural problems of our political economy.

Much of the hope placed on LVT as a solution to such problems is misplaced. In terms of the issues reviewed here, including three basic ones — redressing existing land use patterns, redistributing wealth and providing property tax relief — LVT would not deliver the results often claimed for it. The effects of tax policies like LVT, as with tax abatement and tax increment financing, are too small and too untargeted

to have the desired land use and economic development impacts. There is no reliable evidence for the *capitalization effect* which proponents believe would reduce land prices. While there is some evidence for a small *incentive effect* to development from removing the tax on buildings, it is likely that this development would only occur in areas already able to attract capital investment. It would not alleviate existing disinvestment patterns, and could actually reduce the investment in inner-city areas compared to peripheral locations by raising land prices, especially in the downtown core.

In terms of the distribution of wealth, LVT would not only fail to correct existing inequities, but it is likely also to exacerbate the concentration of wealth. The larger the size of the LVT rate is made in efforts to have some land use impact, the more onerous the results would be in terms of social equity.

Although empirical evidence does suggest that LVT could offer property tax relief to homeowners in some cases, there are other more direct methods to achieve this same end. The most radical and potentially effective of these would be a progressive, graduated tax on property or wealth which would change the shape of the basic curve of tax burden by wealth class; by comparison most other approaches merely shift the form of the tax on working people by taking more from them in income or sales tax burdens in order to fund property tax relief. A progressive property tax could not only provide significant tax relief and permanently shift the distribution of wealth, but it also offers the opportunity to tap a major new source of funds desperately needed for implementing radical solutions to economic, social and ecological problems.

NOTES

1. Marx's notions of exploitation and surplus value can be extended to the natural world by recognizing that capitalist — or other noncapitalist accumulation processes as in centralized, state-controlled economies — can undervalue natural resources just as they can undervalue human labor. In this sense, any ignored *resource deficit*, however measured, that accrues by depletion of resources and the destruction of ecological systems would operate to decrease the *social surplus* within which the distributional conflicts between workers and capitalists, between workers and other workers (as in racism and sexism within the working class), and between finance capital and industrial capital play themselves out.

2. Most state constitutions contain uniformity clauses requiring property tax to be applied based on a uniform assessment and tax rate which treats all similarly situated properties equally. There are precedents for legal classifications which treat different types of property differently. Twenty-five states have adopted tax classification systems which allow different types of real property to be assessed at different percentages of equalized market value; residential and farm property are assessed at

a lower rate than commercial and industrial property in many of these states (ACIR 1991: Table 43, P.M-176).

3. Some of the reasons given for a bias in favor of higher assessments on vacant land include the fact that land is frequently assessed based on existing use rather than highest and best use (Engelbert 1969: 114); it is hard and time-consuming for the typical local assessors to accurately estimate a highest and best use of land, whether vacant or not, especially given their level of expertise (Back 1982: 120); local assessors are often subject to political pressure to undervalue the land portion of a property compared to the improvements because improvements qualify for a depreciation deduction on federal income tax returns, whereas land is not depreciable; because improvements depreciate, while land appreciates, administrative lags between periodic reassessment of properties favor the undervaluation of land; the interdependence of land values on proximate sites makes raising the assessment on any given parcel more likely to affect many other parcels, and therefore engender wider taxpayer resistance (Gaffney 1970: 174).

4. The exemption of manufacturing machinery and equipment, livestock and business inventories has also contributed greatly to the shifting of the property tax burden from commercial and industrial uses to residential uses over the last 10 to 20 years. A majority of states now allow this exemption. As a result of the introduction of these exemptions in Wisconsin in 1973, the share of the total property tax burden borne by residential property in the state rose from 47.9% in 1972 to 57.7% in 1985 (See Wisconsin Taxpayer, March 1974 and May 1986 issues).

5. According to Brueckner, "[l]ong-run effects were shown to depend crucially on the relative sizes of the tax zone and the housing market" (Brueckner 1986: 56).

6. One author notes that "it may be safe to assume that most of the tax on the owners of commercial improvements will be shifted forward to the consumers thus transforming that part of the burden to a commodity tax" (Pillai 1987: 46).

7. A study of vacant land at the urban fringe of four large U.S. cities found that 16% or less of the landowners owned 71% of the land (Brown et al. 1981: 132). In 1977, 17 property owners owned 90% of the vacant residential acreage in the City of Madison, Wisconsin (City of Madison Planning Department 1977: 4).

8. However the U.S. Supreme Court in Hawaii Housing Authority vs. Midkiff, 467 U.S. 229 (1984), upheld the constitutionality of the 1967 Land Reform Act in Hawaii which redistributed title to property from the concentrated ownership of a few to a broader share of state citizens. The Court established that use of eminent domain for redistributional purposes such as this was coterminous with the scope of the state's regulatory powers, and hence very broad. (Dushoff 1988: 14-2 to 14-3; Moss 1989).

REFERENCES

Advisory Commission on Intergovernmental Relations. 1991. *Significant Features of Fiscal Federalism*. Volume 1. February.

American Institute for Economic Research. 1984. *Pro-Growth Property Taxes*. Research Reports 51(1) June 4.

American Institute of Real Estate Appraisers. 1987. *The Appraisal of Real Estate*. Chicago: AIREA.

Arnott, Richard J. and James G. Mackinnon. 1977. The Effects of the Property Tax: A General Equilibrium Simulation. *Journal of Urban Economics* 4: 389-407.

Bentick, Brian L. and Thomas F. Pogue. 1988. The Impact on Development Timing of Property and Profit Taxation. *Land Economics* 64(4) November.

Berger, Curtis J. 1983. Controlling Urban Growth Via Tax Policy. In, *Land Use Issues of the 1980's*, James Carr and Ed Duensing (eds.).

Black, David E. 1977. Property Tax Incidence: The Excise-Tax Effect and Assessment Practices. *National Tax Journal* Vol.30.

Blomquist, Glenn C. , Mark C. Berger and John P. Hoehn. 1988. New Estimates of Quality of Life in Urban Areas. *American Economic Review*. March.

Bourassa, Steven. 1987. Land Value Taxation and New Housing Development in Pittsburgh. *Growth and Change* 18(4).

Break, George. 1982. Henry George and Tax Reform - 100 Years Later. In, *Land Value Taxation: The "Progress and Poverty" Centenary*. Richard W. Lindholm and Arthur D.Lynn, Jr. (eds.). University of Wisconsin Press.

Breckenfeld, Gurney. 1983. Higher Taxes That Promote Development. *Fortune*. Vol. 108. August 6. pp. 68-71

Brown, H. James, Robyn S.Phillips and Neal A. Roberts. 1981. Land Markets at the Urban Fringe: New Insights for Policy Makers. *Journal of the American Planning Association* 47(2).

Brueckner, Jan. 1986. A Modern Analysis of the Effects of Site Value Taxation. *National Tax Journal* 39(1).

Carter, Weld S. 1982. An Introduction to Henry George. In, *Land Value Taxation: The Progress and Poverty Centenary*. Richard W. Lindholm and Arthur D. Lynn, Jr. (eds.). University of Wisconsin Press.

City of Madison Planning Department. 1977. *Costs of Residential Development: Madison Vs. Adjacent Jurisdictions*. September.

Clark, W.A.V. 1975. *Impact of Property Taxation on Urban Development*. Report #187, Institute of Government and Public Affairs, Univ. of California L.A.

Cord, Steven. 1985. How Much Revenue Would A Full Land Value Tax Yield? *American Journal of Economics and Sociology* 44(3).

Coyne, William. 1983. An Idea We Must Nurture. *Land and Liberty* (London, England) March/April.

Czamanski, Stanislaw. 1966. Effects of Public Investments on Urban Land Values. *Journal of the American Institute of Planners*. Vol. 32. July.

Dahlby, B.G. 1982. Traditional View of the Incidence of the Property Tax: An Examination. *Public Finance Quarterly* 10(3).

Dimasi, Joseph A. 1987. The Effects of Site Value Taxation in an Urban Area: A General Equilibrium Computational Approach. *National Tax Journal* 40(4).

Douglas, Richard. 1978. Site Value Taxation and Manvel's Land Value Estimates. *American Journal of Economics and Sociology* 37(2) April.

_____. 1979. Land Taxation, Neutrality and Risk Aversion. *Public Finance Quarterly* 7(2) April.

Due, John F. 1961. Studies of State-Local Tax Influences on Location of Industry. *National Tax Journal* 14(2) June.

Dunne, Robert C. 1976. Explicit Property Tax Policies and the Promotion of Specific Land-Use and Economic Development Objectives: A Review. *Assessors Journal* 11(1) March.

Dushoff, Jay and Denise J. Henslee. 1988. Public Use and Necessity - The Right to Take Revisited. *Proceedings of the Institute on Planning, Zoning and Eminent Domain.*

Eckart, Wolfgang. 1983. The Neutrality of Land Taxation in an Uncertain World. *National Tax Journal* 36(2).

Edel, Matthew. 1982. Capital, Profit and Accumulation: The Perspectives of Karl Marx and Henry George Revisited. In, *Land Value Taxation*. Richard Lindholm and Arthur D. Lynn, Jr. (eds.).

Edwards, Mary 1984. Site Value Taxation in Australia. *American Journal of Economics and Sociology* 43(4).

Eisinger, Peter. 1985. *Tax Abatements and Economic Development*. Report to Wisconsin Strategic Development Commission. January.

_____. 1985B. *Business Location Decisions*. Report to Wisconsin Strategic Development Commission. February.

Ellis, Larry V. and J. Paul Combs and William Weber. 1983. Administrative Inequity in the Property Tax: Further Evidence. *Public Finance Quarterly* 11(4) October.

Engelbert, Ernest. 1969. The Political Aspects of Real Estate Taxation in Relation to Metropolitan Growth and Planning. In, *Land and Building Taxes: Their Effect on Economic Development*, Arthur Becker (ed.).

Evans, Alan W. 1983. The Determination of the Price of Land. *Urban Studies*. Vol. 20: 119-129.

Feldstein, Martin. 1977. The Surprising Incidence of a Tax on Pure Rent: A New Answer to an Old Question. *Journal of Political Economy* 85(2).

Follain, James R. and Tamar Emi Miyake. 1986. Land Versus Capital Value Taxation: A General Equilibrium Analysis. *National Tax Journal* 39(4).

Gaffney, Mason. 1970. Adequacy of Land as a Tax Base. In, *Assessment of Land Value*, David Holland (ed.). University of Wisconsin, Madison.

Goldberg, Michael and Peter Chinloy. 1984. *Urban Land Economics*. John Wiley. New York.

Grey, Arthur L. 1969. Urban Renewal and Land Value Taxation. In, *Land and Building Taxes: Their Effect on Economic Development*, Arthur Becker (ed.). University of Wisconsin. Madison.

Grosskopf, Shawna amd Marvin Johnson. 1982. Land Value Tax Revenue Potentials: Methodology and Measurements. In, *Land Value Taxation*. Richard Lindholm and Arthur D. Lynn, Jr. (eds.).

Hagman, Donald G. 1965. The Single Tax and Land-Use Planning: Henry George Updated. *UCLA Law Review* 12: 776.

Hamilton, Bruce W. 1979. Capitalization and the Regressivity of the Property Tax: Empirical Evidence. *National Tax Journal Supplement*. Vol. 32.

Harris, Charles E. 1971. Site Value Taxation. *Harvard Journal on Legislation*. Vol. 9.

Harriss, C. Lowell. 1970. Transition to Land Value Taxation: Some Major Problems. In, *Assessment of Land Value*, Daniel Holland, (ed.). University of Wisconsin, Madison.

_____. 1986. Tax Policy For Economic Progress. *American Journal of*

Economics and Sociology 45(3) July.

Heller, Thomas C. 1974. Theory of Property Taxation and Land Use Restrictions. *Wisconsin Law Review*. Vol. 3.

Hovey, Harold A. 1986. Interstate Tax Competition and Economic Development. In, *Reforming State Tax Systems*, Steve Gold (ed.). National Conference of State Legislatures. December.

Hutchinson, A.R. 1963. *Public Charges Upon Land Values*. Land Values Research Group, Melbourne.

Incentive Taxation. 1990. How Will Tenants Fare With a Land Value Tax? September.

Jaffee, Bruce L. 1978. State Taxation of Intangibles: The Problem of Evasion. *Public Finance Quarterly* 6(4) October.

Joint Center For Housing Studies. 1988. *State of the Nation's Housing: 1988*. Harvard University.

Kohlkepp, Daniel and Charles A. Ingene. 1979. The Effect of Municipal Services and Local Taxes on Housing Values. *American Real Estate and Urban Economics Association Journal* Vol. 7.

Kuttner, Bob. 1979. Behind the Tax Revolt: A Shift of the Burden From Business to Homeowners. *Washington Post*. September 9.

Land Use Digest. 1988. Rental Housing Market Stagnates. 21(4) April 4.

Lehman, H. Jane 1989. Two-Tier Property Tax Finds Area Supporters: Proponents Say it Would Cut Housing Costs. *Washington Post*. April 8.

Lent, George E. 1978. Experience with Urban Land Value Tax in Developing Countries. *International Bureau of Fiscal Documentation*. Number 1.

Lewis, James A. 1978. *Landownership in the United States, 1978*. U.S. Department of Agriculture. Ag. Info. Bulletin No. 435. April. Washington, D.C.

Lindholm, Richard and Roger Sturtevant. 1982. American Land Tax Roots: Plus Experimentation in Oregon. In, *Land Value Taxation*, Richard Lindholm and Arthur D. Lynn, Jr. (eds.).

Lowry, Ira S. 1983. Rental Housing: Shortage or Surplus? In, *Urban Land Policy for the 1980's*. George Lefcoe, (ed.). Lexington.

Lynn, Arthur D. 1967. Property Tax Development: Selected Historical Perspectives. In, *Property Taxation USA*, Richard D. Lindholm, (ed.).

Martin, Susan W. 1989. *Research Report: Accounting and Reporting for Property Tax Abatements*. For Government Finance Officers Association. Washington D.C. December.

Mathis, Edward J. and Charles E. Zech. 1982. An Empirical Test: The Economic Effects of Land Value Taxation. *Growth and Change* 13(4): 2-5.

Mattson, Gary A., et al. 1988. *Tax Increment Financing: A Program Evaluation of Florida Cities*. Florida Institute of Government and Florida League of Cities.

McLure, Charles. 1977. The 'New View' of the Property Tax: A Caveat. *National Tax Journal* 30(1).

McMillan, M. and R. Carlson. 1977. The Effect of Property Taxes and Local Public Services Upon Residential Property Values in Small Wisconsin Cities. *Journal of Agricultural Economics*. February: 81-87

Meyer, Peter. 1979. Land Rush: A Survey of America's Land. *Harper's Magazine*. Vol. 258. January.

Mills, David. 1981. The Non-Neutrality of Land Value Taxation. *National Tax Journal* 34(1).

Minnesota Office of Legislative Auditor. 1986. *Tax Increment Financing*. May.

Mishkin, Selma J. 1965. *Property Taxes: The 1970 Outlook*. Council of State Governments. October.

Moss, Janice R. 1988. Public Use and Necessity. *Proceedings of the Institute on Planning, Zoning and Eminent Domain.*

Netzer, Dick. 1966. *Economics of the Property Tax*. Brookings Institution. Washington, D.C.

Neuner, Edward, et al. 1974. Impact of a Transition to Site Value Taxation on Various Classes of Property in San Diego. *Land Economics* 50(2).

Oates, Wallace E. 1969. 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*. November: 957-971.

Owen, Michael and Wayne Thirsk. 1974. Land Taxes and Idle Land: A Case Study of Houston. *Land Economics*. August.

Peterson, George E. and Arthur Solomon, et al. 1973. *Property Taxes, Housing and the Cities*. D.C. Heath. Lexington, MA.

Pillai, Vel. 1987. Property Taxation in Thailand: An Uncommon Combination of a Land Tax and A Rental Tax. *Singapore Economic Review* 32(2) October.

Pollakowski, Henry O. 1982. *Adjustment Effects of a Tax on Land: The Pittsburgh Case*. Lincoln Institute of Land Policy. Cambridge, MA.

Power, Thomas M. 1988. *The Economic Pursuit of Quality*. New York: M.E. Sharpe, Inc.

Prest, Alan R. 1982. United Kingdom Land Taxation in Perspective. In, *Land Value Taxation*, Richard Lindholm and Arthur D. Lynn, Jr. (eds.).

Rawson, M. 1961. *Property Taxation and Urban Development*. Research Monograph 4. Urban Land Institute. Washington, D.C.

Richman, Raymond L. 1965. The Theory and Practice of Site-Value Taxation in Pittsburgh. *1964 Proceedings of the Fifty-Seventh Annual Conference on Taxation. National Tax Association*. Harrisburg, PA.

Roakes, Susan and Harvey Jacobs. 1988. *Land Value Taxation and Urban Land Use Planning: An Annotated Bibliography*. Council of Planning Librarians. No. 216. May.

Rogers, Richard H. 1985. The Rise of the New Urban Homeless. *Public Affairs Report* 26(5) October/December.

Rosen, Kenneth T. 1984. *Affordable Housing: New Policies for the Housing and Mortgage Markets*. Ballantine. Cambridge, MA.

Rybeck, Walter. 1977. Site Value Taxation. *Journal of Housing*. September: 454-457

Skouras, A. 1978. The Non-Neutrality of Land Taxation. *Public Finance* 33(1-2).

Smith, Roger S. 1978. Land Prices and Tax Policy: A Study of Fiscal Impacts. *American Journal of Economics and Sociology* 37(1) January.

Sternlieb, George and James Hughes. 1980. Multifamily Housing Demand: 1975-2000. In, *America's Housing Prospects and Problems*, George Sternlieb and James Hughes (eds.). Rutgers University. New Brunswick, N.J.

Steuerle, Eugene, U.S. Department of the Treasury. 1982. Is Income From Capital Subject to Individual Income Taxation? *Public Finance Quarterly* 10(3) July.

Teachout, Mary. 1982. Defining and Measuring Land Value - A Progress Report. In, *Land Value Taxation*, Richard Lindholm and Arthur D. Lynn, Jr (eds.).

Tideman, T. Nicholas. 1982. A Tax on Land Value is Neutral. *National Tax Journal* 35(1).

Vickrey, William. 1982. Comment. In, *Land Value Taxation*, Richard Lindholm and Arthur D, Lynn, Jr. (eds.).

Warner, Paul D. 1987. Business Climate, Taxes and Economic Development. Economic Development Quarterly 1(4): 383-390.

Wisconsin Department of Revenue. 1977. *An Examination of the Desirability of a Local Income Tax for Wisconsin*. May.

Wisconsin Legislative Audit Bureau. 1981. *The Tax Increment Financing Law: An Evaluation*. Report 81-1.

Witte, Ann D. and James E. Bachman. Vacant Urban Land Holdings: Portfolio Considerations and Owner Characteristics. *Southern Economic Journal*. Vol. 45. October.

Wolkoff, Michael J. 1983. The Nature of Property Tax Abatement Awards. *Journal of the American Planning Association*. Winter.

Woodruff, A.H. and L.L. Ecker-Racz. 1969. Property Taxes and Land-Use Patterns in Australia and New Zealand. In, *Land and Building Taxes* Arthur P Becker (ed.).

Wurtzebach, Charles H. and Mike E.Miles. 1987. *Modern Real Estate*. New York.: John Wiley and Sons.