5 *Richard W. Lindholm and Roger G. Sturtevant*

American Land Tax Roots: Plus Experimentation in Oregon

The year 1979 is the one hundredth birthday of Henry George's *Progress and Poverty.* The economic positions of this book, written by a Californian newspaperman, are based largely on the economics of David Ricardo and Adam Smith – the eighteenth-century founding fathers of modern capitalism. The basic premise of Ricardo and Smith is that since the supply of land cannot be increased, high land prices do not encourage production expansion. Land absorbs funds without increasing production efficiency. George, however, went beyond this purely economic position. He envisaged the land tax as the way to eliminate poverty. He was sharply challenged in this position by the leading British economist of the period, Alfred Marshall. Marshall asked George to prove that poverty would disappear if a major land tax were introduced. George, of course, could not. Nevertheless, Marshall became a supporter of the land tax as a desirable approach to municipal finance, even if it would not eliminate poverty (Marshall 1920, rpt. 1936, pp. 794–804).

Land value taxation (LVT) has roots extending into the social philosophies of all civilizations. The early church fathers, imbued with ancient Hebrew traditions, took the position that land was given to the rich and poor in common (Neilson 1933, p. 90).

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Use of LVT in the U.S.

The move of the thirteen colonies toward independence from Great Britain brought the abolition of the law and custom of entail and right of primogeniture. The democratizing of land ownership was an important portion of the American Revolution. Another democratizing impact made its appearance in the sources of revenues of the states. The economic conservatism of the U.S. Constitution shows itself in the limitations placed on the tax role of land. In the states themselves, the poll tax was replaced with a land tax, and Ely, in his 1888 book, reported that by 1796, all of the fifteen states except Delaware had a land tax. Four of the fifteen also had a general property tax (Ely 1888).

It is of interest to note that the first federal direct tax, i. e., other than excise, provided for a progressive tax rate on land and improvements. The tax, enacted by Congress on July 14, 1798, was limited to real estate used for residential purposes. Congress was reluctant to tax productive activity; in the area of taxation, they wished to remain on the consumer side of the economic coin. The U.S. Constitution (Sec. 9, Par. 4) limits the federal government to a property tax that is an equal per capita levy.

U.S. Land Policy and Progress and Poverty

The passage of the Homestead Act in 1862 finally settled "land policy" for the major United States political groups. The "solution" did not last long. The great depression of 1873 to 1877 revived agitation centered on land control. Prior to the 1870s, not many American economists had accepted David Ricardo's law of economic rent that was included in his *Political Economy* (1817). This situation was changed by the observed economic pressures of the 1870s. Into this dynamic political and social environment, Henry George published his book *Progress and Poverty* (1879, rpt. 1929). American economists were pushed into consideration of land problems by the immense influence of the "book." Tariff and currency problems no longer occupied the center of the American economic stage. Land use and ownership problems came to dominate economic policy considerations.

Progress and Poverty was read widely throughout the English-reading world and was later translated into many languages, including Chinese. Cheap paper editions outsold the most popular novels of the day. Some two million copies of this 568-page book were published, and Henry George moved from California to New York, where he was nearly elected mayor.

The concept of land taxation, differing from the taxation of other

wealth, had found favor immediately following the American Revolution. In 1879, one hundred years after the Revolution, the idea enjoyed a substantial revival in the United States. Social reform, through collecting in taxes a substantial portion of the economic rent of land, was advocated as a way of taxing without raising prices and reducing the monopoly power of landowners.[1] Today, after another hundred years, the problem of monopoly power through the control of land has re-entered the arena of political economy. Again, economist tariff and currency discussions are being replaced by fundamental analyses, such as resource availability, monopoly, and economic rent (surplus).

Democracy and LVT in Oregon

Concern in Oregon over economic rent from control of land and the use of LVT to finance government services, while stimulating greater efficiency in land development, is entwined with the promotion and adoption of what is often called the "Oregon political system." This "political power to the people" program was to be carried out through the initiative, the referral, and the recall (Thompson 1929). Once the people acquired political power, they would vote in LVT. Economic power to the people was to be from political power to the use of LVT. The backers of the program were frequently called the "single taxers," deliberately by the concept's enemies and through ignorance by many others (Gilbert 1916, pp. 25–52). Actually, Henry George never envisioned LVT as constituting the sole source of government revenues; neither had he endorsed it to be collected at a rate so high that land would lose its value.

The leader of the LVT advocates in Oregon was William Somon U'Ren (1859–1949)(Woodward 1915, pp. 112, 119). He was also the leader in bringing about the initiative, the referral, and the recall. In his *Report of the Single Tax Conference* (1910, pp. 21–22), U'Ren pointed out that he saw the initiative and referral procedure included in a complete concept of LVT.

A politically influenced tax package developed by Governor McCall in 1973 provided lower property taxes for households, somewhat higher real estate taxes for businesses, and substantially higher property taxes in certain areas on forest, range, and farm lands, and, in addition, on vacant urban areas. This impact was to be brought about by including all income-producing real estate into a statewide base that was to bear a

1. Owners of land had to explain why returns from land ownership varied even though the quantity of investment on the land was the same. Monopoly turned out to be the source of economic rent. David Ricardo, *Essay on the Influences of the Low Price of Corn on the Profits of Stock* (1815), *passim*.

uniform tax rate. These funds, plus additional state funds, would support 10 percent of the costs of providing an average level of schooling. The approach, which had been approved by the Oregon legislature, under House Bill 2004, Regular Session, in March 1973 was rejected by the voters. It attracted only two out of five votes. The sharp rejection was attributed to the breadth and complications of the legislation. There was something bad, as well as good, for everybody. The concept of a simple and single rate LVT had become buried in political complexities.

The farmer in 1973, as in the days of U'Ren, turned out to be an active opponent of LVT. It was generally agreed the lower land prices expected from LVT would make it easier for a young farmer to gain control of enough land for an efficient farm unit. However, the stabler land prices also reduced the capital gains expectations of the older farmers; the older farmers, in Oregon as elsewhere, provide most of the farmer leadership.

Several bills have been introduced in the Oregon legislature providing for city and county choice and a statewide modified LVT.[2] The statewide tax would be applicable to all taxable land at a uniform rate. All the funds collected were to be dedicated to the finance of education. None of these bills were reported out of committee.

Current LVT Developments

The current LVT expansion and discussion is a portion of urban land planning, energy conservation, and a reduction of the taxes based on the capital values of the necessity shelter. In Pennsylvania, recent legislation has permitted local governments to increase the portion of the property tax rate resting on land (the graded property tax). The resultant growth of LVT in Pittsburgh and a statewide increase in total property taxes are being pointed to as a reversal of the California "Proposition 13" trend. Property taxes as a land tax are apparently more attractive than property taxes that also include personal property and structures in the tax base.

The information available to political leaders and voters on, for example, the distribution of land ownership, the effect of land tax rates on land use decisions, the attractiveness of LVT to new industries, and the expansion of old industries, remains scarce. However, a number of studies similar to the Eugene, Oregon, study summarized below have been completed (Schroeder and Sjoquist 1975, p. 8). They are only partial analyses and can answer only a few of the basic questions being asked as LVT becomes a viable policy alternative in the area of municipal finance.

2. House Bill 1769 Regular Session 1969, House Bill 1726 Regular Session 1971, and Senate Joint Resolution 48, Regular Session 1977.

A Hypothetical Application of Land Value Taxation to Eugene, Oregon, and Its Effects on Urban Growth

The general property tax is no longer identified as the most unpopular tax in the United States (Sturtevant 1979, p. 7), but it continues to provide more revenues to local governments than any other source. A compilation of U.S. Bureau of the Census material indicates 84.5 percent of all tax collected at the local level is attributable to the property tax (Netzer 1966). The use of the property tax is widespread as a fiscal tool. The concern herein, however, is with the property tax and its relationship to developer decision-making and resultant urban development patterns. It has become apparent that numerous unintended consequences have emerged. Among these consequences is the rather recent concern with the allocative effects prompted by the property tax levied on both the value of land and the improvements. Evidence has been accumulating which suggests that the property tax in its present form encourages certain forms of urban sprawl (Gaffney 1973b, pp. 115–51).

The conventional property tax is a dissuasion to both the quality and quantity of new construction and to the proper maintenance of existing structures (Grieson 1974b, pp. 139–40). The intensity of development within urban land markets and the highest and best use of parcels is restricted by the property tax as an allocative side effect (Shoup 1978, pp. 105–32). The withholding of vacant land from urban markets in expectation of future windfall profits caused largely by the provision of public improvements has prompted sprawling "leapfrog" development patterns to persist. A United Nations publication has noted that vacant land has been increasing faster in market value than any other type of land (Manuel 1973, p. 35). Speculators are quickly attracted to this potential for "unearned" profit. A further inducement to exploit socially created land values is due to a preferential property tax treatment of land over improvements. Preferential tax treatment of capital gains provides an additional vehicle to avoid taxes on any increment of land value. The pursuit of "unearned increments" as a hedge against inflation promotes speculation in vacant land. The resultant high prices force development to locate in areas beyond the urban area periphery (Gaffney 1973a, pp. 17–34).

Oregon's growth management program, designed to reduce sprawling urban development, adopted Senate Bill 100, more commonly designated the 1973 Land Use Act. Under the act's goals, guidelines have been developed for orderly and rational growth, preservation of agricultural lands, low cost housing, efficient transportation, urban infilling, increased densities, and designated urban service boundaries.

The city of Eugene, Oregon, has received national recognition through the work of the Lane Council of Governments and the local application of this legislation (Oregon Land Conservation and Development Commission 1974). The city continues to use the conventional property tax on land and building value, but in addition it has pushed up assessments on vacant land more rapidly than on improvements. Growth controls also have been introduced, which attempt to contain development and increase urban capital-to-land ratios. A recent study of this dichotomous relationship between the property tax and urban growth in Eugene is summarized below; this study lends empirical support to the use of land value taxation as an effective land use planning instrument, as well as a fiscal tool providing tax relief to homeowners.

Grieson Model Applied to Eugene

The model used is an adoption of an economic analysis developed some years ago by Ronald Grieson (1974a). In applying the model to Eugene, it is important to keep the limitations of the model, as well as its usefulness, firmly in mind. In an actual application for policy purposes, a detailed land use investigation is needed, as well as community input. In addition, alternative taxation approaches need to be evaluated. It is, of course, quite possible that the efficiencies in land use may be politically unworkable. However, general voter support may be forthcoming. Lindholm, for example, found that "the property taxes collected on single family residences for the entire Eugene–Springfield metropolitan area would decline by 24 percent from current levels if existing property taxes were replaced with LVT raising the same quantity of revenues (1978, p. 23).

The city of Eugene includes 19,498 single family residences, with a total single family residential land value of $118,494,000. Improvement value for the same group totals $427,986,000. Assessments are at 100 percent of market value (Lane Council of Governments 1976). From these figures the average value of single family residential land, building, and property value can be determined: average single family residential land value = $6,077; average single family residential building value = $21,950; and average single family residential property value = $28,027. Employing a 10 percent discount rate and a 3 percent average property tax (Lindholm 1978, pp. 23–24), an application of the Grieson model can be made to derive the "price effects" of the alternative tax.

Given an average effective tax factor of .33 percent, i.e., 3 percent tax rate at 100 percent of assessed market value divided by the 10 percent discount rate, and the elasticity of supply of structures for single family Eugene residences,

$$n_s = \tfrac{1}{2} \frac{\text{value of improvements}}{\text{value of land}} = .5 \frac{\$21{,}950}{6{,}077} = 1.8,$$

the following elasticities are derived:
(a) elasticity of quantity of structures supplied:

$$n_{Qt} = \frac{-1}{1/n_s + 1} = \frac{-1}{1/1.8 + 1} = .64;$$

(b) elasticity of land value:

$$n_{Vt} = 2n_{Qt} = 2(-.64) = 1.28;$$

(c) elasticity of property values:

$$n_{Pt} = \frac{n_{Qt}}{n_s} = \frac{-.64}{1.8} = .36;$$

and (d) elasticity of price of structures:

$$n_{Bt} = n_D(n_{Qt}) = -1\,(-.64) = .64.$$

Applying the removal of the effective tax factor, i.e., 1.33 − 0.33 = 1.0 or 25 percent reduction, to the elasticities above yields representative allocative values for the city of Eugene without the conventional property tax's burden on investment:
(1) Quantity of structures per given land area:

$$n_{Qt} \text{ (tax factor)} = .64\ (.25) = .16;$$

(2) Land values per given land area:

$$n_{Vt} \text{ (tax factor)} = 1.28\ (.25) = .32;$$

(3) Property values per given land area:

$$n_{Pt} \text{ (tax factor)} = .36\ (.25) = .09;$$

and (4) Price of structures per given land area:

$$n_{Bt} \text{ (tax factor)} = .64\ (.25) = .16.$$

Table 5.1 summarizes the allocative effects of a land value tax replacing a conventional 3 percent property tax for Eugene. The two top horizontal lines show the present property tax and a switch to land value taxation *from* that basis as it exists today. Note the higher rate of land tax necessary to cover revenues. The 10.9 percent rate has been estimated by Lindholm as the uniform rate on land value necessary throughout the city

Table 5.1. A comparison of the effects of a 3 percent conventional property tax with a land value tax applied at equal revenues for the city of Eugene, Oregon

Type Tax	Rate (Percent)	Land Use	Average Lot Size	Number of Lots	Number of Structures	Average Lot Value	Average Property Value	Average Structure Price	Total Land Consumed	Total Land Conserved	Number of Added Structures	Average Consumer Tax Burden	Average Homeowner Tax Burden	Average Total Tax per Dwelling Unit
Conventional (Land and Buildings)	3.0	Single Family Homes	10,000[a]	19,498	19,498	6077	28,027	21,950	4,476 acres	0	0	538	302	840
Land Value Tax-Recent Changeover	10.9[b]	Single Family Homes	10,000	19,498	19,498	6077	28,027	21,950	4,476 acres	0	0	0	662	662
Land Value Tax-Structures Constant (equilibrium)	8.25	Single Family Homes	8,620[c]	19,498	19,498	6915	29,442	18,438	3,858 acres	618 acres	0	0	571	571[d]
Land Value Tax-Land Area Constant (equilibrium)	8.25	Single Family Homes	8,620	22,618	22,618[e]	6915[f]	29,442	18,438	4,476 acres	0	3,120	0	571	571
Land Value Tax-Lot Size Constant (equilibrium)	6.9	Single & Multi-Family Homes	10,000	19,498	22,618	8022	30,549	18,438	4,476 acres	0	3,120	0	571	571

Note: Totals may not necessarily sum due to derivation procedure

[a]Actual average single family lot in Eugene is 10,370 sq. ft. Lane Council of Governments, *Inventory of Existing Land Use, Housing Characteristics and Historic Resources,* Feb. 8, 1978.

[b]A 10.9 percent land value tax has been estimated by Lindholm (1978) to replace current nonequilibrium revenues.

[c]If single family housing is demanded without substitutes, e.g., duplexes, then increased capital intensity will be found in smaller lot sizes.

[d]Increased capital intensity diminishes infrastructure costs in equilibrium which reduces amount of tax necessary to finance urban area (estimate only).

[e]If quantity of structures demanded is not held constant, then the 618 acres of conserved land (13.8 percent) can be used for compact expansion of 3,120 additional single family homes.

[f]Equilibrium land values are derived from the Grieson model which does not include the capitalization of taxes.

of Eugene to cover the revenue lost by "untaxing" improvement values (Lindholm 1978, pp. 23–24). As growth occurs, however, developers will decrease the amount of land input for single family residences or supply higher density substitutes if market demand allows it. The assumption has been made that duplexes and townhouses will not act as substitutes for single family home consumers. This assumption is not critical and can be relaxed. Capital intensity in this case would grow through higher density multiple family dwellings providing similar land conservation and price effects.

Lines three and four of table 5.1 display the capital intensity effects through a 13.8 percent decrease in land consumed for single family residences.[3] The total savings in land would amount to 618 acres that is being used currently for residential purposes under the influence of the conventional property tax. The data on these two lines is compiled for comparison as if Eugene had historically developed having a land-only tax for local government revenue finance. Note that the total tax per dwelling unit is only $571 in line three. This results from the calculation that the total land consumed by single family residential use is decreased by about 13.8 percent compared to the area pre-empted by the same number of single family stuctures under the current property tax.

Infrastructure costs will be lowered by the decrease in r^2 as distance varies with land area used while the tax costs of education will remain constant. Note also that in line four, the total quantity of structures has been allowed to increase to the point at which land consumed just meets the equivalent number of acreage consumed by current residential use. A total of 3,120 single family homes has been added to housing stock without any increase over present consumption of land. Total tax burden per lot remains constant, given the added population and the use of smaller lot sizes. Costs may rise somewhat because newcomers will be somewhat further away from service mains. The savings with a compact growth form is substantial (Real Estate Research Corporation 1974).

Land Use Shifts

The value increases for land, property, and capital intensity, and the decrease in price of structures are derived through the model in aggregate form for a given area of land. In this case the total value for the given 4476 acres of single family residential land (see table 5.1) increases by 32 percent. When structures are held constant, total land area must be reduced by the amount of land conserved (13.8 percent or 618 acres) and the value of land on a per lot basis must be calculated excluding this

3. A 13.8 percent decrease in the consumption of land is equal to a 16 percent increase in capital intensity for a given number of structures.

amount, i.e.: total land value + 32 percent land value increase − 13.8 percent total land value (area) decrease ÷ 19,498 structures = $6,915 per lot at 8,620 sq. ft. The price of structures is found to decrease with increased capital intensity. This decrease compensates for increasing land values.

Whether increased capital intensity is a function of smaller lot sizes or higher density construction, i.e., duplexes and townhouses, the price will decrease per unit of land by 16 percent. Property values increase uniformly for the 4,476 acres of land currently in single family use by 9 percent in equilibrium.[4] If structures are held constant, then only 3,858 acres of land will be consumed, given equilibrium conditions and an original imposition of land value taxation. Equilibrium property values in this case must equal present total property value + a uniform 9 percent increase per care for 4,476 acres − value of conserved land ÷ 19,498 structures = $29,442 in property value per 8,620 sq. ft. lot. Given total land (4,476 acres) as a constant, 3,120 additional structures or a 16 percent increase will be available for new urban growth. If new growth is included, the divisor above will be 22,618 and the value of land conserved 0. At 3.4 persons per structure, the urban area presently occupied by single family residences would be capable of housing 10,608 additional residents if land value taxation had been the original property tax.

Conclusion

It can be seen that the model developed provides data that can be useful to planners and administrators as they attempt to implement goals development. It is apparent that within the constraints of the model, a land value tax would be an efficient growth control mechanism to assist planners in attaining a compact residential environment within the urban service boundary. For the city of Eugene, Oregon, it appears that the magnitude of the compact growth effects would constitute a 16 percent increase in the capital intensity of single family housing for a given land area. Whether this would be achieved by the market through smaller lot sizes or a substitution of demand with greater building densities requires further study of local market conditions. Summarily, it appears that land value taxation has an effective relationship of a great enough magnitude to warrant its use. Care must be taken in manipulating the tax rates so that growth control variables are affected sufficiently while needed revenue capacities are being met.

4. This is a per-acre calculation and must be modified for given changes in lot sizes. The capitalization of tax burdens is not quantified in Grieson's method and may offset the increased land and property values substantially.

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