

An aerial, grayscale photograph of a dense urban environment. The buildings are represented as various sized rectangular blocks. A red dashed rectangle is drawn on the ground, highlighting a specific block in the center of the image. The perspective is from a high angle, looking down on the city.

# LAND VALUE TAXATION

**THEORY, EVIDENCE, AND PRACTICE**

**Edited by Richard F. Dye and Richard W. England**



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THEORY, EVIDENCE, AND PRACTICE



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Richard F. Dye and Richard W. England

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OF LAND POLICY  
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## FOREWORD

Among economists, a tax on land value is renowned for being an especially efficient tax because it produces few unintended costs while raising revenue. What does this mean? Taxes are normally levied on economic activity or assets to raise financial resources for the government. However, in addition to producing tax revenues, taxes typically raise the market price of the good that is taxed, which makes consumers buy less of it. The resulting reduction in production and consumption of the good is a distortion caused by the tax, and this reduction imposes an additional cost on the local economy. When a tax does not affect the amount of the commodity produced or consumed, there is no additional cost, and such a tax is more efficient (less costly to the local economy) than other taxes that reduce production. Land is one of the special commodities whose amount is fixed and unaffected by a tax on its value, so economists agree that a tax on land value is efficient.

Of course, it is often said that economists agree on a great many things, but tend only to discuss the things about which they disagree. This observation helps inform the contents of this volume. While it spends several pages laying out the aspects of land value taxation on which there is much agreement—such as its efficiency—most of the volume addresses the existing theoretical and empirical evidence in support of other claims made for a tax on land value. For example, some of the additional benefits claimed for a land value tax are that it reduces speculation in land, increases the density of urban development when it replaces a typical property tax, promotes economic development generally, encourages investment in real property, and fosters compact development by stimulating infill development and reducing leap-

frog development. In addition, views range widely about how practical it is to implement a land value tax and what legal frameworks are required to support it.

The challenge for the contributors to this volume has been to survey the literature on land value taxation and to synthesize their surveys in a single volume covering global experience that serves as a point of reference for researchers, specialists, and practitioners. This is a special challenge because there is a wide-ranging and sometimes fugitive literature on land value taxation theory and measurement. Moreover, a great deal of implementation experience and empirical work relevant to land value taxation has taken place in countries other than the United States.

The contributors to this volume have done an admirable job of reviewing and assessing the ongoing debates about the theory of land value taxation. They have taken pains to document where theory is well or poorly supported by empirical work, to note the lessons derived from experience with implementation, and to relate current views about the necessary supporting legal framework to relevant legal contexts. This volume provides guidance for additional empirical work by identifying areas where existing studies are weak or contradictory, and informs new attempts to implement land value taxation. It also settles some debates about land value taxation and initiates new ones.

Gregory K. Ingram  
President and CEO  
Lincoln Institute of Land Policy



# INTRODUCTION AND PRACTICE





# The Principles and Promises of Land Value Taxation

RICHARD F. DYE AND RICHARD W. ENGLAND

The property tax is, economically speaking, a combination of one of the worst taxes—the part that is assessed on real estate improvements . . . and one of the best taxes—the tax on land or site value.

—William Vickrey (1999)

**T**HE LAND VALUE TAX is a variant of the property tax. Taxation of real property is almost as old as civilization itself. Property taxes were levied in Egypt, Babylonia, China, and other parts of the ancient world to build palaces and temples and to maintain imperial armies. For nearly five centuries, Romans paid taxes on the assessed value of land, buildings, livestock, trees, and vines (Carlson 2005). In contemporary times, the property tax is widely used around the world. It accounts for nearly half of local government tax revenue in the United States and generates all local tax receipts in Australia (England 2007; see also chapter 3 of this volume).

Although it is a venerable and important source of government revenue in various nations, the property tax is controversial because it is widely perceived to be unfair and inequitable (Youngman 2002). Forty-three states in the United States have enacted some form of legal limitation on property taxation to mitigate its impact (N. Anderson 2006). In 1994, for example, Michigan amended its constitution to cap increases in real property assessments and raised its retail sales tax to help pay for public schools.

A strong case can be made for reforming the property tax instead of eliminating it. The loss in revenue following repeal of the property tax would have to be made up with other taxes, each with its own problems, or with massive cuts in local government services. Moreover, the loss of this key local revenue source might mean the loss of local control over politically sensitive government services like public schools and public safety. There are many different ways that the property tax could be reformed. This book looks in particular at the reform suggested by the quotation at the opening of this chapter from the Nobel laureate William Vickrey—keep what is best about the property tax, *land value taxation*, and eliminate or move away from what is worst, the tax on the value of buildings and other improvements.<sup>1</sup>

Great claims have been made for the promise of land value taxation, dating back to the nineteenth-century political economist Henry George ([1879] 1962) and even earlier to the classical economists. George argued that taxes on land promote fairness because the value of land is determined by community rather than individual efforts. A tax on land is efficient in that it does not distort investment choices, whereas a tax on the value of improvements discourages economic development. Given the current heightened interest in property tax reform, we believe that now is a good time to assess the state of knowledge regarding land value taxation. The authors in this volume address the following questions:

- What has been the actual experience with land value taxation in various nations?
- What predictions about the effects of land value taxation flow from modern economic theory?
- Does statistical evidence support these theory-based predictions?
- What can we say about the fairness or equity of land value taxation?
- Supposing that land value taxation is a fair and efficient form of taxation, are there constitutional or other legal obstacles to its adoption?
- Do assessors and appraisers of property values have the tools needed to measure land values for tax purposes?
- Who are the gainers and losers when a land value tax is implemented,

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1. The traditional property tax applies the same rate to both improvement values and land values. A pure land value tax exempts improvement values from taxation altogether and taxes only land values. A graded, dual-rate, or split-rate property tax applies a lower rate to improvement values. The term *land value taxation* is used to represent both its pure and partial forms.

and what political coalitions are likely to form in support of and in opposition to this kind of tax?

The historical experience with land value taxation has been quite substantial, dating back to the late nineteenth century in Australia and the early twentieth century in Pennsylvania and South Africa. Modern economic theory suggests that land value taxation might offer various advantages over traditional property taxation by encouraging more efficient resource use, more rapid economic development, and more compact urban development. Unfortunately, research-based evidence in support of these theoretical predictions is a bit scanty, and additional statistical research is needed to buttress the case for land value taxation. As with any change in taxation, adopting a land value tax would pose issues of fairness that are of central importance from ethical and political perspectives. Enacting a land value tax also requires careful attention to both its legal viability and practical issues of assessing land values separately from improvement values.

## EXPERIENCE WITH LAND VALUE TAXATION

Steven Bourassa, in chapter 2, reviews the experience with split-rate taxation in U.S. jurisdictions. Except for brief experiments in several other states, the U.S. experience with land value taxation has been in Pennsylvania and Hawaii. Sixteen jurisdictions in Pennsylvania currently have split-rate systems. Land value taxation was adopted but later rescinded in seven other Pennsylvania jurisdictions, most notably in Pittsburgh, which had a split-rate system from 1913 until it was repealed in 2001. The rejection of land value taxation in Pittsburgh was not based on the merits, or demerits, of the tax; rather, an increase in the tax rate on land happened to occur at the same time as a long overdue reassessment of property values, which resulted in major shifts in the tax burden and a political backlash. Other Pennsylvania cities have repealed split-rate taxation because it apparently failed to reverse the local economic decline caused by powerful forces acting on the broader region. In Hawaii, the split-rate tax was the scapegoat for bad land use planning that had permitted too much development in Waikiki and other areas of the state.

Riël Franzsen, in chapter 3, reviews the experience with land value taxation in jurisdictions outside the United States. The fact that at least 25 countries currently use some form of land value taxation makes the concept seem

practicable and much less utopian. Case studies of five nations at various levels of economic development highlight the importance of statutory and administrative choices regarding the definition of the tax base and the measurement of land values for tax purposes. Land value taxation has to be examined in the context of national legal institutions and practical issues of implementation. There has been a movement away from land value taxation in favor of a more conventional property tax in several countries. In New Zealand over the last 20 years, various local jurisdictions have elected to replace a land-only tax with a land-and-improvement property tax. In South Africa, a recent law will eliminate the local option of a split-rate tax in favor of a single-rate property tax by the middle of 2009.

### THEORY AND EVIDENCE

Wallace Oates and Robert Schwab explore the theory of land value taxation in chapter 4. Using basic economic theory and numerical examples, they first consider the impact of increasing the tax on land while keeping the tax on improvements constant. They establish three key results in this case: (1) the burden of a land tax falls entirely on landowners; (2) a land tax does not distort economic decisions, because the supply of land is fixed; and (3) a tax on land has no impact on the timing of development.<sup>2</sup>

Oates and Schwab next look at the impact of simultaneously raising the tax on land and changing the tax on improvements so as to leave total revenue unchanged. This is the more policy-relevant case, but the theory is more complicated because a tax on improvements distorts economic decisions. The results can go either way, and they turn on how responsive the supply of improvements is to the change in the tax on those improvements. Following Brueckner (1986), the authors conclude that for plausible values of this elasticity, the revenue-neutral tax rate on improvements is lower, the intensity of improvements per unit of land will rise, and—surprisingly—the value of land may rise, too (because, even though increasing the tax on land will make land less valuable, decreasing the tax on improvements will make land more valuable). Oates and Schwab then consider how a shift to a land tax will affect urban sprawl. The theory is complicated, with forces pulling in both directions, but the most likely result is that increasing the land tax will

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2. Results (2) and (3) hold only if the land appraisal is based on “highest and best use” or is otherwise independent of current use.

decrease sprawl. Finally, they look at the revenue potential of a land tax and conclude that it is much greater than is often supposed.

In chapter 5 Elizabeth Plummer takes a careful look at the fairness and distributional issues surrounding land value taxation. The attractiveness of a land tax depends on its efficiency and neutrality advantages, as well as on how it conforms to the principles of ability-to-pay, horizontal equity, and vertical equity compared with alternative revenue sources. A switch from a traditional property tax to a land value tax could result in substantial shifts in the tax burden, which would affect the political acceptability of such a change. The burden of a shift to land taxation will fall most heavily on owners of properties with a high value of land relative to the improvements that are on it—what is called a *high land intensity*. With awareness of such changes in tax burdens, it might be possible to include transitional rules or targeted tax relief to soften the negative impacts. A major problem is that the data needed for thorough distributional analysis are hard to come by. So, unfortunately, the few studies that explicitly try to compare the pre- and postreform burdens provide mixed results as to whether the land value tax would be more or less progressive than the traditional property tax. Plummer then tries to get at the question implicitly by examining how land ownership varies across the income distribution. In the United States and the United Kingdom, land ownership is concentrated among the wealthiest, but land value as a percentage of net wealth decreases as wealth increases. Regrettably, it is almost impossible to obtain data that measure land value, improvement value, or other wealth value in a comparable way. The nature of the country or jurisdiction considering a land value tax can also affect the distribution of its burden among taxpayers. Plummer compares two studies of U.S. municipalities. One is in a built-up and in-demand area where the value of land relative to improvements is high and a land tax would be more progressive than a property tax. The other is less developed with relatively lower land values, and a land tax would be less progressive.

The evidence on the effects of implementing land value taxation is reviewed by John Anderson in chapter 6. He begins, importantly, with a careful explication of just what constitutes evidence. We never observe the effects of land value taxation per se, only the differential effects of a change in tax regimes in the context of initial conditions and local institutions and along with the effects of any other changes that may have occurred at the same time. The effects of land value taxation must be seen in some measurable variable, such as an increase in the value of building permits, and should

be estimated with sufficient controls for the other factors or local conditions that might also cause the outcome variable to change. Anderson carefully reviews a large number of studies using several different approaches—including theoretical models, simulation models, regression models, and comparison studies. The overwhelming majority of studies can be rejected as inconclusive because of some methodological flaw or data limitation. What remains are some credible studies that show no effects and other credible studies that show measurable effects. Anderson considers the two best studies to be Oates and Schwab (1997), which indicates that a move to land value taxation does not hurt building activity, and Plassmann and Tideman (2000), which indicates that land value taxation may actually help building activity. A number of the studies, including Oates and Schwab (1997), do show a positive association between adoption of land value taxation and building activity, but have to be characterized as inconclusive regarding causation because of an inability to rule out the confounding effects of other factors.

## IMPLEMENTATION

In chapter 7 Richard Coe addresses the legal framework for land value taxation in the United States. The implementation of a land tax might seem a simple proposition administratively, since virtually all taxing jurisdictions already value land and improvements separately. But differential taxation of the land and improvement components of the same parcel of property could encounter legal obstacles and be challenged as a violation of the uniformity, equality, and proportionality provisions commonly found in state constitutions. In some cases it may be allowable to designate improvements as a separate class of property. Or, it might be possible to designate improvements as exempt from property taxation. Coe carefully analyzes these legal issues and provides a detailed listing of the relevant provisions of all 50 state constitutions. In many cases it might take a constitutional amendment to permit land value or split-rate taxation.

The enactment and implementation of a land value tax require an accurate assessment of the value of land separate from the value of the improvements on that land. Even though most jurisdictions do report separate values for land and improvements, several eminent economists have expressed doubt that existing land assessments satisfy the accuracy requirement (E. Mills 1998; Netzer 1998c). Michael Bell, John Bowman, and Jerome German address the feasibility of accurate land assessment in chapter 8. As



the authors point out, assessing the value of undeveloped parcels is relatively straightforward in rural areas because recent sales transactions can be mined for data. However, in urban areas, sales of vacant lots are rare, and alternative assessment techniques must be employed to measure land values. A comparison of the abstraction, allocation, and contribution value methods using data from Virginia, Maryland, and Ohio reveals that assessed land values vary with the choice of assessment technique. This result is somewhat worrisome from the perspective of tax administration, but the authors argue that recent developments in assessment practices have improved our capacity to quantify land values for tax purposes. These developments include the use of sophisticated econometric techniques to decompose parcel values and geographic information systems to analyze the spatial dimensions of land values.

The political acceptability of land value taxation is crucial to its implementation, and this is the topic of chapter 9. Steven Bourassa asks the question, If land value taxation is such a good idea, why haven't more jurisdictions adopted it, and why have some who have tried it later rejected it? He organizes his answers around five issues. First, the property tax is unpopular, in large part because it taxes wealth—which includes unrealized capital gains—rather than current cash flow. Land value taxation can aggravate this concern. Second, land value taxation requires separate assessment of land and improvements, which is harder to do accurately than determine the total value of a parcel. Land values are also more volatile than total values, so, if rates are not sufficiently flexible, absolute and relative shifts in the tax burden will be larger. It was the confounding effect of downwardly inflexible tax rates and the resulting large increase in average tax burdens that led to the rejection of land value taxation in Pittsburgh. Third, changing the incentives for economic development can interfere with economic planning. In Hawaii, land value taxation was rejected because it was seen as contributing to overdevelopment of parts of the islands. Fourth, as with any major tax regime shift, there will be both winners and losers. This affects the fairness and political acceptability of land value taxation, regardless of its other virtues. Finally, and perhaps most importantly, the land value tax and its benefits are not well understood by elected officials and the public.<sup>3</sup>

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3. Bourassa notes earlier in chapter 2 that after the rejection of land value taxation in Pittsburgh, the city made much greater use of programs to abate a portion of property taxes on improvements. Abatements are an indirect form of land value taxation, but a form that is perhaps more understandable and acceptable politically.

### WHAT HAVE WE LEARNED?

Several conclusions follow from this volume's survey of what we know about land value taxation. First, proposing a land value tax is not an unobtainable utopian ideal, since actual experience demonstrates the feasibility of enacting and collecting land value taxes. Second, proposals to enact a land value tax are likely to provoke heated opposition because the distributional effects of tax reform matter a lot politically and a regime switch from a traditional property tax to a land value tax would undoubtedly create losers as well as winners. Third, there may be constitutional, statutory, or administrative problems that would have to be addressed before a land value tax could be successfully implemented. Despite these challenges, we believe that land value taxation deserves serious consideration by state and local officials, especially now, when other reforms to the property tax are being debated. Economic theory and, to a lesser degree, empirical evidence support the claim that taxing land values instead of wages, profits, or capital values would improve economic performance and could improve people's lives.