Land Value Taxation:
An Annotated Bibliography

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Lincoln Institute of Land Policy
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Land Value Taxation: An Annotated Bibliography

Agapos, A. M. and P. Dunlap, R. (1973). "Elimination of Urban Blight Through Inverse Proportional Ad Valorem Property Taxation." American Journal of Economics and Sociology 32(2): 143-152.

conceptual, peer reviewed

Development of a property tax system that relies on ad valorem property taxes that change over time to discourage property value depreciation. The model proposes a two-rate system on land and buildings for all property owners other than owner-occupied homes. Such a system would involve a declining tax on buildings when the value of buildings are improved or maintained and an increasing tax on buildings that decline in value. Land would be assessed at a fixed rate. It is argued that such a system, coupled with reassessment of property and land values at least every five years, will both encourage property-value enhancement/development as well as provide for a more equitable tax system for property owners.

Ahene, R. A. (2000). "Land-Value Taxation Around the World: Nations of Eastern Africa." American Journal of Economics & Sociology 59(5): 273-298.

institutional, international

Examples of land-value tax systems in East African countries. A particularly successful example is Kenya, where land-value taxes provide for a significant proportion of local tax revenues (42% in 1985). Land value taxes have been credited for contributing to "the rapid development and modern appearance of Nairobi and other major cities in Kenya."

Almy, R. and V. Abrahamian (2001). Property Taxation in Armenia. The Development of Property Taxation in Economies in Transition: Case Studies from Central and Eastern Europe. J. H. Malme and J. M. Youngman. Washington, D.C., World Bank: 85-95.

institutional, international, not peer reviewed

Provides historical context and current statistics on land-value and property taxation in Armenia. Property taxation began in 1995, with separate taxation on land and buildings. The land-value tax is primarily applied in agricultural areas. While property taxes accounted for almost 26 percent of local government revenues in 1996, significant problems related to the administration of property taxes and the lack of efficient property markets have limited the revenue potential of property and land taxes.

America, R. E. I. o. (1988). Property Taxes and Charges in Australia: A Discussion Paper. REIA Professional Series No. 1. Canberra, Australia, Real Estate Institute of Australia

Anas, A. (2003). Taxes on Buildings and Land in a Dynamic Model of Real Estate Markets. The Property Tax, Land Use and Land Use Regulation. D. Netzer. Northampton, MA, Edward Elgar: 6-36.

theoretical, not peer reviewed

Theoretical analysis of the real estate market effects of a uniform property tax versus a land value tax. The model demonstrates that the two types of tax systems will have opposite effects on the real estate market. A land value tax will decrease vacant land because of higher holding costs. The rate of construction and number of buildings will increase under adoption of a land value tax, while rent and the prices of buildings and land will decrease. The value of buildings relative to land, however, will rise. An optimal tax is one that would place a higher tax rate on land relative to buildings. Such a tax can improve general welfare because it encourages faster construction of buildings, which increases welfare in the long-run through increased consumer surplus (because of lower rents) even though there are short-run welfare losses caused by the distortionary tax.

Andelson, R. V. (2000). "On Separating the Landowner's Earned and Unearned Increment: A Georgist Rejoinder to F. A. Hayek." American Journal of Economics and Sociology 59(1): 109-117.

conceptual, peer reviewed

A response to Hayek's criticism of the Georgist theory of land and taxation of land value. Hayek's criticism centers on the inability to distinguish between increases in the value of land due to nature and public expenditures and those increases in value due to efforts by the owner. The primary response to this critique is that even if some portion of land-value is due to owner improvements and is taxed (incorrectly according to Georgist theory) under a land-value tax, the improvements themselves will not be directly taxed and the owner would be better off under this form of tax system than any other.

Andelson, R. V. (2001). "The Earth is the Lord's." American Journal of Economics & Sociology 60(5): 195-201.

Support of George's theories on the land and property taxation from a religious perspective.

Anderson, J. E. (1986). "Property Taxes and the Timing of Urban Land Development." Regional Science and Urban Economics 16(4): 483-492.

theoretical, peer reviewed

An extension of earlier contributions to the concept of property taxation and timing of development. The general model assumes a single-rate property tax and finds it to be "non-neutral with respect to the timing of development in most cases." When the base for the tax is changed to current land rental income, however, the model supports the neutral effects on timing of development found in Bentick (1979). The model adds to the literature by demonstrating that the neutrality effect of taxes only holds when the pre-development and post-development tax rates on rental income are uniform. If tax rates prior to development are lower than tax rates after development than development will be delayed.

Anderson, J. E. (1993). "Two-Rate Property Taxes and Urban Development." Intergovernmental Perspective 19(Summer): 19-20, 28.

Anderson, J. E. (1993). "Use-Value Property Tax Assessment: Effects on Land Development." Land Economics 69(3): 263-269.

theoretical, peer reviewed

Assesses the impact on the timing of land development when the use-value method of assessing

property for tax purposes is utilized. Since the use-value approach does not take into consideration "the highest and best use" of property, it may consistently under-assess its true value and, thus, impact the decision to develop land.   The model assumes the current use of land is in agriculture, which may not be its best use. The primary results indicate that agricultural land will be developed more slowly under use-value assessment, and that the pace of development will be slower given either a wider "divergence between use-value and developed value" or a higher property tax rate. The two results together indicate that use-value taxes are more likely to slow development for agricultural land on the "urban fringe" as opposed to land in rural areas.

Anderson, J. E. (1999). "Two-Rate Property Tax Effects on Land Development." Journal of Real Estate Finance and Economics 18(2): 181-190.

theoretical, peer reviewed

A theoretical examination of how the movement to a two-rate tax on land and improvements will affect both the speed and the capital intensity of development. The predicted effects depend on the relationship between capital and development time in the profit function of the developer. When capital and development time are either independent or substitutes for one another, and the elasticity of substitution between land and capital is also small, the model predicts that a move toward a graded or two-rate tax system will speed the timing of development and increase capital intensity. These assumptions and predictions illustrate the case of a stable or declining (decentralizing) urban area. When capital and development time are strong complements, however, as they are in a growing or centralizing urban area, the model predicts that timing development may slow and capital intensity may diminish after the movement to a two-rate system.

Anderson, J. E. (2005). "Taxes and Fees as Forms of Land Use Regulation." The Journal of Real Estate Finance and Economics 31(4): 413-427.

theoretical, peer reviewed

A review of the literature on "the effects of taxation on both development timing and structural density." Considers the examples of single-rate property taxes, two-rate property taxes and land-value taxes.

Archer, R. W. (1972). Site Value Taxation in Central Business District Redevelopment (Sydney, Australia). Washington, D.C., Urban Land Institute.

case study, international

An empirical study of the effects of site value taxes on redevelopment in Sydney. The study compares the experience of Sidney from 1956 to the present to that of Melbourne over the same time period. Melbourne relied on "an improved value" form of property taxation as opposed to a tax on site values.

Arnott, R. (2005). "Neutral Property Taxation." Journal of Public Economic Theory 7(1): 27-50.

theoretical, peer reviewed

Theoretical consideration for the design of a property tax system that is both neutral in its effects on development timing and density as well as administratively simple to apply. To achieve these

results, the model determines that three conditions on tax rates must hold: the tax rate on pre-developed land value is zero, the tax rate on post-developed residual site value is positive, and the tax rate on capital (structures) is negative.

Arnott, R. (2006). Effects of Property Taxation on Development Timing and Density: Policy Perspective <u>Brookings-Wharton Papers on Urban Affairs: 2006</u>. G. Burtless and J. R. Pack. Washington, D.C., Brookings Institution Press: 189-230.

Arnott, R. and P. Petrova (2006). "The Property Tax as a Tax on Value: Deadweight Loss." <u>International Tax and Public Finance</u> 13(2-3): 241-266.

    theoretical, peer reviewed

    Theoretical examination of relative efficiency losses under four property tax systems, including a land-value and two-rate property tax system, when there are three tax rates: "one on pre-development land value, a second on post-development structure value, and a third on post-development residual site value." The model proposes that for constant growth in rental rates, the density of development is inversely related to the first tax rate and independent of the second two. The timing of development, however, is directly related to the second two tax rates and inversely related to the first. From this primary proposition, the model derives conclusions about the effects on efficiency and development of four tax systems: the Canadian property tax system, a uniform property tax system, a site value tax system and a two-rate property tax system. They conclude that all four systems are distortionary in some way. Regarding development, the Canadian system encourages later development, the simple and two-rate systems "discourage density," and the site-value system "results in earlier development at lower density." Regarding deadweight loss, it was found to be directly related to the elasticity of substitution in structure production for all but the Canadian tax system.

Association, N. T. (2006). <u>National Tax Association's 99th Annual Conference on Taxation</u>, Boston, MA.

    Citations to specific chapters are shown separately in this bibliography.

Aura, S. P. and T. Davidoff (2005). Optimal Commodity Taxation When Land and Structures Must be Taxed the Same Rate. <u>Fisher Center Working Paper</u>, Fisher Center for Real Estate and Urban Economics, University of California, Berkeley.

    case study, not peer reviewed

    Provides a simulation study on the appropriate choice of tax regime. The simulation indicates that the ideal tax system is one that only taxes land and labor. However, when land value taxation is not possible, relatively more revenues should come from property taxation as local governments require higher and higher revenues. Failing to tax property at all under these conditions can have a worse impact on overall welfare than the costs of implementing property taxes that distort economic development. The study also finds that "property taxes should increase with the land share in real estate markets," but this is obviously not the case in California or Massachusetts, states with high land values, but low property taxation.

Back, K. (1970). Land Value Taxation in Light of Current Assessment Theory and Practice. <u>The Assessment of Land Value</u>. D. M. Holland. Madison, WI, University of Wisconsin Press: 37-54.

    institutional, not peer reviewed

Considers the practicality of a site value tax system from an assessment point of view. When bare sites are not available to determine site values, assessors have to rely on indirect methods of calculating site values for property. A "land residual method" can be applied which assumes land will be used at its highest and best use. To determine an assessed value, however, appraisers would have to accurately estimate economic rent, economic costs and investor expectations. Alternatively, an "anticipated use or development method" could be applied which calculates site value based on the presence of a "hypothetical building" on that site. The theoretically preferred method is to use the ratio of land value to property value for every parcel of property. This is extremely difficult to achieve, however, and is not commonly used. While assessing land based on market value is likely to be feasible using any of the preceding methods, site value taxation remains difficult to achieve politically.

Backhaus, J. G. (2000). "Land-Value Taxation Around the World: Germany." <u>American Journal of Economics & Sociology</u> 59(5): 221-237.

Bahl, R., Ed. (1979). <u>The Taxation of Urban Property in Less Developed Countries</u>. Madison, WI, The University of Wisconsin Press.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Bahl, R., Ed. (1991). <u>The Jamaican Tax Reform</u>. Cambridge, MA, Lincoln Institute of Land Policy.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Bahl, R. (1998). Land Taxes versus Property Taxes in Developing and Transition Countries. <u>Land Value Taxation: Can It and Will It Work Today?</u> D. Netzer. Cambridge, MA, Lincoln Institute of Land Policy: 141-171.

institutional, international, not peer reviewed

Considers current use of and difficulties in developing land tax systems in transitional and developing countries. Current tax systems in developing countries rely on different types of taxation, including both site-value and two-rate systems. While the potential for such systems exists in both developing and transitional economies, there are serious problems with underassessment in developing countries and difficulties of calculating market values in transitional economies. Further benefits and costs of moving to such a system conclude the analysis.

Bahl, R., J. Martinez-Vazquez, et al. (1996). <u>The Guatemalan Tax Reform</u>. Boulder, CO, Westview Press.

case study, international, not peer reviewed

Consideration of a 1992 proposal by the Guatemalan government to replace the current property tax system with a tax on land as one of a number of considerations in a larger tax reform policy. The primary benefits of the land tax proposal are assumed to be increased incentives to invest in property and improvements, as well as more vertical equity in the overall tax structure. In spite of the potential benefits, however, the proposed tax rates on land are considered to be too low: they would not produce enough revenue to justify the administrative costs of changing the tax structure.

Bahl, R. and J. Zhang (1989). Taxing Urban Land in China. <u>World Bank Discussion Paper</u>. Washington, D.C., World Bank.

    case study, international, not peer reviewed

    Analysis related to the issue of imposing a land-use tax on urban land in China. Urban land in China is owned by the state; however, structures and buildings can be privately owned. There is currently not a land-use tax at the national level, but it is under consideration because of the revenue potential of such a tax and its effects on the efficiency of land use. Despite the lack of markets for and price data on urban land, over 100 Chinese cities are experimenting with a tax or charge on land use of some type. To approximate an assessment value for the price of land, many cities look at the "variations of profit per square meter of land in different locations of a city," and it is assumed that a national land-use tax would be primarily based on land area with different rates for different urban locations. A model to estimate land values based on profits is constructed and tested econometrically using data provided by firms in two Chinese cities. Shadow prices of land in the two cities are calculated based on the econometric results. These shadow prices could potentially be used as approximations of land value for assessment purposes.

Bahl, R. W. (1979). The Practice of Urban Property Taxation in Less Developed Countries. <u>The Taxation of Urban Property in Less Developed Countries</u>. R. W. Bahl. Madison, WI, The University of Wisconsin Press: 9-47.

    institutional, international, not peer reviewed

    Provides comparative analysis of urban tax systems in less developed countries. Four of the urban areas under consideration have either land-value taxes or two-rate property taxes as part of the local tax system. In three of these cases (Nairobi, Jakarta and Lusaka), land is taxed more than improvements; however, in Seoul, the tax rate on improvements was double the rate on land in 1976.

Bahl, R. W. and J. F. Linn (1992). <u>Urban Public Finance in Developing Countries</u>. New York, NY, Oxford University Press.

Bails, D. (1974). "Two Municipal Revenue Sources Contrasted: The Land Value Tax and the Property Tax." <u>American Journal of Economics and Sociology</u> 33(2): 187-199.

    conceptual, peer reviewed

    Comparison of a uniform property tax to a land value tax on the bases of neutrality, equity and administration. On the basis of neutrality, land value taxes are preferable since uniform property taxes provide disincentives to improving property. Land value taxes remove this disincentive and encourage use of land that would otherwise be held idle.   In terms of administration, it can be difficult to separate land value from improvement value of property. However, Australia has been assessing land values in this way for 80 years and there are several methods whereby this can be accomplished. Land value taxation in Pennsylvania, in Fairhope, Alabama, in California irrigation districts and in Southfield, Michigan are cited as successful applications of the tax in the United States.

Balazs, K. (2000). "Land-Value Taxation Around the World: Hungary." <u>American Journal of Economics & Sociology</u> 59(5): 259-270.

Batt, W. H. (1995). The Pittsburgh Two-Rate Tax and Capital Investment. manuscript. Albany, NY.

Beaumont, M. S. (1992). "Optimal Property Taxation in California: Is Greater Reliance on Land Values Feasible and Desirable?" Review of Urban and Regional Development Studies 4(2): 162-178.

    literature review, U.S., peer reviewed

    Analyzes the potential for adopting a site value tax system in California. An optimal tax is defined as one that allows for minimal deadweight loss, can be collected with relatively low administrative costs, and is equitable in its effects. The means by which site value taxation in particular fits these criteria is considered via a literature review of the theoretical benefits of site value taxation as well as a summary of the "modern analysis" of site value taxation in Brueckner (1986) and DeMasi (1987). If California is required by the courts to revamp the property tax system established after Proposition 13 in 1978, a site value tax system would be a possibility. While there is no available data to "rank alternative tax structures" in California, the efficiency aspects of site value taxation make it an attractive possibility. However, the equity effects of such a tax are less clear. It is especially difficult to determine if a site value tax would be more equitable than the current non-market property valuation system since the equity effects can not be readily measured with the data on property taxation collected after Proposition 13.

Beck, H. T. (1999). Land-Value Taxation and Ecological-Tax Reform. Land-Value Taxation: The Equitable and Efficient Source of Public Finance. K. C. Wenzer. Armonk, NY, M. E. Sharpe: 205-223.

    conceptual, not peer reviewed

    Comparative analysis of eco-taxes and land-value taxes, including two-rate property taxes. Two-rate property taxation demonstrates the "two important aspects of ecological tax reform...the intrinsic effects (long-term environmental benefits) and the revenue assignment (a tax cut or relief)." The two-rate tax accomplishes the first by providing incentives for more housing and jobs in urban areas, as well as incentives for less urban sprawl and lower costs of infrastructure. The second is accomplished through lower tax rates on structures as well as by encouraging efficient use and development of land. Eco-taxation and two-rate property taxation also share the common characteristic of having "a small number of large losers and many small winners," which brings into question their political feasibility. The benefits of both types of taxes are typically long-term efficiency gains as opposed to short-term revenue/distributional gains. Because of the similarities in the two types of tax systems and the difficulties faced in the political feasibility of passing such tax reforms, a more unified effort among advocacy groups of the two types of taxes is recommended.

Becker, A. P., Ed. (1969). Land and Building Taxes: Their Effect on Economic Development. Madison, WI, University of Wisconsin Press.

    An edited volume. Citations to specific chapters are shown separately in this bibliography.

Becker, A. P. (1969). Principles of Taxing Land and Buildings for Economic Development. Land and Building Taxes: Their Effect on Economic Development. A. P. Becker. Madison, WI, University of Wisconsin Press: 11-47.

    theoretical, not peer reviewed

    Analyzes the micro- and macroeconomic development effects of land value taxation. Although

the total amount of land has a perfectly inelastic supply, urban land can be created by conversion from agricultural land, and therefore its supply is not perfectly inelastic. Based on this assumption, the economic development effects of switching from a uniform property tax to a land value tax are assessed at the micro- and macroeconomic levels. The microeconomic effects on development from a higher land value tax are the capitalization and holding cost effects, which will decrease the price of land, and the fixed cost effect, which will increase the price of land. The microeconomic effect of greater investment in buildings from lowering/eliminating the tax on buildings is referred to as the unburdening effect, which will cause the price of land to increase. The overall impact on the price of land is assumed to be positive, but this depends on the magnitude of the unburdening effect. Macroeconomic effects of adopting a land value tax include higher interest rates, and an increase in real output and real income due to increased real investment. Overall price levels are assumed to remain constant due to increases in both aggregate demand and aggregate supply.

Becker, A. P. (1970). "Arguments for Changing the Real Estate Tax to a Land Value Tax." Tax Policy 37(7-9): 15-31.

theoretical, peer reviewed

Analyzes the effects of adopting a site value tax system as opposed to a uniform property tax based on the criteria of economic, equity, public finance and environmental benefits. The economic benefits include increasing the supply and quality of buildings, speeding the timing of development, providing for greater allocative efficiency, increasing wages and economic opportunities and diminishing land speculation. Equity benefits include placing relatively higher taxes on resources that are not the result of human efforts and providing for more equal distribution of wealth and income. The benefits according to public finance include an increase in the "aggregate land value base" that is both immediate and long term as development occurs, more "financial independence" for local governments and higher capital gains and income tax revenues. Environment benefits include "more orderly development of" and better planning for urban land, less holding of idle land and provision of a "population density that is a precondition for reviving mass transit."

Bell, M. E. (2002). Property Tax Structure and Practice. Property Taxes in South Africa: Challenges in the Post-Apartheid Era. M. E. Bell and J. H. Bowman. Cambridge, MA, Lincoln Institute of Land Policy: 59-75.

institutional, international, not peer reviewed

Presentation and analysis of data provided by three surveys of South African local governments on the issue of property taxation. The local governments can choose among a site-value tax, a uniform property tax or a two-rate property tax on land and improvements as possible approaches to property taxation. Across all of the surveys, the three options appear to be split fairly evenly among the localities, with some localities even choosing to tax improvements at a higher rate than land.

Bell, M. E. and J. H. Bowman (2002). Factors Influencing the Choice of Site Value Taxation Among Local Governments. Property Taxes in South Africa: Challenges in the Post-Apartheid Era. M. E. Bell and J. H. Bowman. Cambridge, MA, Lincoln Institute of Land Policy: 97-111.

empirical, international, not peer reviewed

Considers the question of why localities in South Africa choose site-value taxation as opposed to the two other forms of property taxes (flat rate, or two-rate). Results of regression analysis on data from 596 South African localities indicate that none of the four variables considered ("size of local authority," "size of public sector," "composition of property tax base" or "prevalence of informal housing") are consistently significant and of the correct sign in the various models developed, even though the models overall appear to have statistical significance. One interesting result that requires further research is the unexpected positive relationship between public sector size and choice of a site-value tax system. A negative relationship was hypothesized under the assumption that larger public sectors would choose to levy a tax on a larger tax base in order to receive more government revenues. One explanation offered for the statistically significant positive relationship is that if a site-value tax is, in fact, more efficient than the other two systems, it may lead to more overall economic growth, a larger tax base and a larger public sector.

Bentick, B. L. (1979). "The Impact of Taxation and Valuation Practices on the Timing and Efficiency of Land Use." Journal of Political Economy 87(4): 859-868.

theoretical, peer reviewed

Demonstrates that a land tax is not neutral when it is based on the current market value rather than the current income of land. This result is contrary to prior contributions which assume that since property and land taxes are capitalized and borne by property owners and land owners, and thus neutral at any given point in time, that this will also be true over time as well. The model indicates that such neutrality does not exist under the current-market-value approach to valuing land as there is a shift in land and savings away from longer-term and toward shorter-term investments, thus affecting the allocation of land and savings especially for those industries that are land-intensive.

Bentick, B. L. (1980). "Capitalized Property Taxes and the Viability of Rural Enterprise Subject to Urban Pressure." Land Economics 56(4): 451-456.

Bentick, B. L. (1982). "A Tax on Land Value may not be Neutral." National Tax Journal 35(1): 113.

theoretical, peer reviewed

A response to Tideman's (1982) comment on defining the value of land according to its "present use." It is agreed that land should be valued and assessed according to its "prospective" current use and not its "actual" current use. However, the results of the original model that "a tax on the market value of land is not neutral" still holds when the landowner cannot receive the returns from two potential uses at the same time and, thus, there is "a tax on waiting, just like the rate of interest, with similar effects on the time pattern of alternative income streams which are chosen."

Bentick, B. L. (1996). "The Differential Incidence of an Urban Land Tax Depends on the Travel Intensities of Substitutes for Land." Urban Studies 33(9): 1729-1732.

theoretical, peer reviewed

A response to Pasha (1990), which concludes that a portion of a land tax will be borne by urban consumers in addition to landowners. In the Pasha model the tax burden depends on the consumer's elasticity of substitution between "land services" and other goods. This is argued to be incorrect unless there are restrictions on the movement of urban residents to non-urban (and non-taxed) areas. Pasha's results will hold under such restrictions on movement, but the relative

burden of the tax cannot be predicted "because it depends on the travel intensity of the commodities which are substitutes for urban land, one of which is physical capital."

Bentick, B. L. (1997). "The Economic Effects (Neutrality) of Taxes on Land: They Depend Neither on Non-Pecuniary Returns Nor on Capital Market Imperfections." American Journal of Economics and Sociology 56(2): 369-371.

theoretical, peer reviewed

A response to Bourassa (1992) and the conclusion that a tax on land is not neutral under either conditions of non-pecuniary value or imperfections in the capital market. Non-pecuniary values, it is argued, are irrelevant to the neutrality argument (just as pecuniary values are) as long as the tax on land does not vary for different uses of land. Imperfections in capital markets are likewise argued to be irrelevant to the neutrality of a tax on land. Non-neutrality only holds under a "special case where the uses of land are mutually exclusive rather than sequential," and this condition exists independently of either of the two factors considered by Bourassa.

Bentick, B. L. and T. F. Pogue (1988). "The Impact on Development Timing of Property and Profit Taxation." Land Economics 64(4): 317-324.

theoretical, peer reviewed

Considers the effect of taxes on the timing of development under three different conditions: one in which there is a single urban use for land ex ante and ex post, a second in which there are many uses for land ex ante but only one ex post, and a third in which there are multiple uses for land ex ante and ex post. When there is a tax on land value the effect on the timing of development depends which of the three conditions exist. A land tax is neutral if the first condition holds, it leads to earlier development under the second condition, and it encourages later development under the third condition. However, "model 3 is the most realistic of the three models, and it predicts that a land tax reduces the profitability of redeveloping land from one use to another and thus imparts rigidity to existing land uses."

Bentley, D., D. J. Collin, et al. (1974). "Incidence of Australian Taxation." Economic Record 50(December): 489-510.

Berglas, E. (1982). "User Charges, Local Public Services, and Taxation of Land Rents." Public Finance 37(2): 178-188.

theoretical, peer reviewed

Argues that "sole reliance on either user charges or taxation of land rents is not optimal" in providing financial support for local services. If a community has an "optimal size" then "the cost of services is exactly equal to land rent" and a tax on land is the only tax required to finance a "pure public good." When local services are marketable as opposed to public, then "the sum of user charges and land rents should exactly cover the cost of local services." When communities are not of optimal size, however, then costs will exceed (be lower than) revenues when communities are too small (large). The relationship between "the optimal provision of local services and the simultaneously derived tax structure depend[s] heavily on cost structures, population size, the area, and transaction cost."

Bird, R. M. (2004). Land and Property Taxes in Poland. International Handbook of Land and Property

Taxation. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 253-258.

    institutional, international, not peer reviewed

    Description of the property tax system in Poland. Agricultural and forest land is subject to a land tax in Poland. The tax is not assessed on the basis of land value, but rather on the bases of the fertility and location of the land as well as the type of crop (or tree species) in production.

Bird, R. M. (2004). Property Tax in Ukraine. International Handbook of Land and Property Taxation. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 246-252.

    institutional, international, not peer reviewed

    Description of the property tax system in Ukraine. The central government imposes land taxes in the Ukraine, with the tax rate varying based on land use (for agricultural land) and on population and location (for non-agricultural land). Land taxes accounted for approximately three percent of total tax revenues in the Ukraine in 2002.

Bird, R. M. (2005). "Getting it Right: Financing Urban Development in China." Asia Pacific Tax Bulletin March/April: 107-117.

    institutional, international

    Compares the appropriateness of a variety of fiscal instruments in financing local government expenditures in China. The two main criteria proposed for any local taxes are that "(1) local governments should be able to set tax rates; but (2) the tax bases on which those rates are imposed should not lend themselves to 'tax exporting'." A tax on land meets the first criterion, but not the second. In addition a tax on land-value as opposed to a uniform property tax would encourage land-use density rather than discourage it. As a general recommendation, the author considers "simple, uniform local property taxes" to be the best choice although if there are differential tax rates, they should be in the form of land being taxed at a higher rate than improvements.

Bird, R. M. and E. Slack (2006). Taxing Land and Property in Emerging Economies: Raising Revenue…and More? Working Paper. Toronto, University of Toronto.

    institutional, international, not peer reviewed

    Considers the appropriate use of land and property taxes in developing economies. The two primary roles for land and property taxes for such countries are to provide revenue and to "affect land use." While land and property tax revenues do not tend to be large relative to GDP for any country, they "are often important sources of local revenue in many countries, especially in developing countries," accounting for "40 percent of all sub-national taxes" in the 1990s. The contribution discusses much of the past literature on property and land taxes as they relate to land use effects and administrative concerns, and applies that discussion to developing countries. The final section considers the special case of China, with a recommendation for a "classified area-based rural tax and a market-value-based urban tax" on land for localities in China. However, this can only be feasible when such a tax system becomes politically acceptable and when well developed property markets are established.

Bostic, R. W., S. D. Longhofer, et al. (2006). Assessing Land Taxation Regimes: Revenue Volatility and

Land Leverage. <u>Working Paper</u>.

    empirical, U.S., not peer reviewed

    Analysis of the volatility of land values relative to the volatility of overall property values in the United States. The issue of volatility in property values is an important consideration for local governments as it affects their ability to plan for future tax revenues and public spending. Using quarterly pricing and a "land-to-total value ratio, or land leverage" data from 46 large U.S. metropolitan areas, the study indicates that "land value growth is more volatile than overall property value growth." Land values tend to be especially volatile in low "land leverage" jurisdictions. Therefore, switching from a uniform property tax system to one based relatively more on land values may result in more revenue volatility for local governments, especially those with relatively low "land leverage" property values.

Bourassa, S. C. (1987). "Land Value Taxation and New Housing Development in Pittsburgh." <u>Growth and Change</u> Fall: 44-56.

    empirical, U.S., peer reviewed

    An empirical analysis of the effect on the Pittsburgh housing market as a result of increasing the land-value tax rate relative to the tax rate on structures. Two effects on the incentives of landowners to develop property as a result of such a change are identified: "[t]he liquidity effect results from increasing the land tax rate, while the incentive effect results from decreasing the improvement tax rate." For an empirical test of the model, the real dollar value of monthly building permits from 1978 to 1984 for the city of Pittsburgh are used as the dependent variable. The results indicate that while relative increases in the land-value tax did not have a significant impact on new construction in Pittsburgh (the liquidity effect was zero), relative declines in the tax rate on structures did provide an incentive effect to encourage new construction. More specifically, the model indicates that "a 1 percent decrease in the improvement tax rate...should result in a 2.36 percent increase in the dollar value of new housing."

Bourassa, S. C. (1990). "Land Value Taxation and Housing Development: Effects of the Property Tax Reform in Three Types of Cities." <u>American Journal of Economics and Sociology</u> 49(1): 101-111.

    empirical, U.S., peer reviewed

    An empirical test of the impact on development from higher tax rates on land relative to improvements in three different cities in Pennsylvania. The hypotheses are that relatively higher land-value taxes should encourage development through the "liquidity effect" in all three types of cities, while the relatively lower tax on improvements should encourage development through the "incentive effect" only in Pittsburgh (a "central city") and New Castle (a "relatively isolated city"), but not in McKeesport (a "suburban city"). As in Bourassa (1987), there is no statistical support for a liquidity effect from the relatively higher land-value tax rates in any of the three cities. The incentive effect from a relatively lower tax rate on structures is statistically significant only for Pittsburgh, and not for New Castle as hypothesized. It is noted, however, that the expected incentive effect should be lower for New Castle than for a "central city" like Pittsburgh.

Bourassa, S. C. (1992). "Economic Effects of Taxes on Land: A Review." <u>American Journal of Economics and Sociology</u> 51(1): 109-113.

    theoretical, peer reviewed

An argument against Bentick's 1979 contribution that a land tax is not neutral in its effects on land allocation and the timing of development. The author demonstrates that Bentick's result is based on a market valuation of land that changes according to its uses, but if land is valued according to its "highest and best use," then land value will remain constant regardless of the actual or planned use for the site. Under this form of valuation, Bentick's non-neutrality effects on savings and land allocation disappear.

Bowman, J. H. and M. E. Bell (2004). Implications of a Split-Rate Real Property Tax: An Initial Look at Three Virginia Local Government Areas. <u>Working Paper</u>, Lincoln Institute of Land Policy.

case study, U.S., not peer reviewed

Consideration of the distributional aspects of moving from a uniform property tax to a pure land tax, using three localities in Virginia as bases for the study. Two general findings are common across all three localities. First, properties with relatively high land-to-improvements ratios would have a higher tax liability if such a shift occurs, while properties with relatively low land-to improvements ratios would have a lower tax liability. Second, the residential share of property taxes would tend to fall, especially for multi-family residences. The results for commercial/industrial property and the distributional effects based on income level are mixed.

Bowman, M. E. B. a. J. H., Ed. (2002). <u>Property Taxes in South Africa: Challenges in the Post-Apartheid Era</u>. Cambridge, MA, Lincoln Institute of Land Policy.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Brown, H. G. (1917). "The Ethics of Land Value Taxation." <u>Journal of Political Economy</u> 25: 464-492.

theoretical, peer reviewed

Theoretical consideration of the argument that land rent is unearned by any individual and, therefore, should be subject to taxation. Land is essentially different from capital in that it does not provide a service to others and it is not a resource that is the result of any individual's efforts or activities, but rather the result of "natural conditions" or "social growth." In addition, it is argued that a tax on the market value of land "would probably in no wise affect the owner's choice of uses for the land or his intensity of use of it or the efficiency of his use of it," causing less distortions than other taxes. If taxes must be levied in order to finance public revenues, a tax on land-value is preferable to other taxes.

Brown, H. G. (1927). "Land Speculation and Land-Value Taxation." <u>Journal of Political Economy</u> 35: 390-402.

theoretical, peer reviewed

Supportive theoretical argument for land-value taxation to stem the effects of land speculation. Two detrimental social effects of speculation are offered. First, it is wasteful because it requires more resources to go through and around such land in urban areas. And second, "[i]t decreases productive efficiency...by forcing the use of inferior land...and...by compelling a more intensive utilization of land than would otherwise be economical." It is proposed that increasing land-value taxes on both utilized and idle land "would discourage speculative holding of land and would do so in rough proportion to the increase in the tax rate."

Brown, H. G. (1928). "Should Bare-Land Values Be Taxed More Heavily?" The Journal of Land and Public Utility Economics 4(4): 375-392.

> theoretical, peer reviewed
>
> Theoretical effects of shifting from the current tax system to a tax system based on the site value of land. Land value is different from the value of capital since it "depends solely on its expected future income and the current interest rate," and not on its costs of production. Therefore, a tax on land value will necessarily lower the price of land while a tax on capital can not lower the price of capital below what it costs to construct the capital. Increasing taxes on the site value or rental value of land is appropriate since it is a "community-produced value." If taxes on improvements were decreased at the same time that site-value taxes were levied, the overall tax incidence on property owners could be reduced. Lower local taxes on capital and improvements would then result in greater flows of capital into local areas, resulting in higher labor productivity and wages. Higher taxes on land rents would also lead to the desirable result of less land speculation and potentially with the result of a lower tax burden on agricultural land.

Brown, H. G. (1943). "Anticipation of an Increment and the 'Unearned Decrement' in Land Values." American Journal of Economics & Sociology 2: 343-357.

Brown, H. G. (1949). "The Challenge of Australian Tax Policy." American Journal of Economics & Sociology 8: 377-400.

> literature review, international, peer reviewed
>
> A summary of the results of empirical studies conducted by Hutchinson in the 1940s on the development effects of land-value taxation in Australia. Results from the comparisons of Australian states indicate that there are more increases in land area and new construction in states that apply land-value taxes as opposed to uniform property taxes. For localities, Henderson compares similar cities in terms of location and "type" (residential vs. industrial). He finds that for all locations considered, both new buildings constructed and building values are higher in jurisdictions using land-value taxation. There is also a noticeable difference in vacant land holdings: "The decline in vacant holdings in the land value tax group was 57 per cent as against 30 per cent for the other group."

Brown, H. G. and E. R. Brown (1967). "Incentive Taxation in Australia." American Journal of Economics & Sociology 26: 416.

> empirical, international, peer reviewed
>
> A note regarding the impact of a change in tax structure in South Melbourne, Australia in the 1960s. Due to the adoption of a new land-value tax, there are short-term benefits in the economy in the form of increases in building permits (both residential and commercial) as well as more spending on both housing and commercial-space improvements. This, in combination with the results of other empirical studies in Australia, leads to the question of why such a tax system is not adopted in other countries.

Brown, J. B. (1968). "The Incidence of Property Taxes Under Three Alternative Systems in Urban Areas in New Zealand." National Tax Journal 21(3): 237-252.

Browning, C. E. (1963). "Land Value Taxation: Promises and Problems." Journal of the American Institute of Planners 29(4): 301-309.

Brueckner, J. K. (1986). "A Modern Analysis of the Effects of Site Value Taxation." National Tax Journal 39(1): 49-58.

> theoretical, peer reviewed
>
> The seminal theoretical work on the issue of a revenue-neutral switch from a uniform property tax to a two-rate tax system. The model demonstrates the long-held view that adopting a two-rate system will increase the level of improvements to land, while also deriving the theoretical impact on land values and housing prices. The impact on land values is particularly significant as past contributions consider this result to be ambiguous. The theoretical model indicates that while the value of land may indeed either rise or fall upon adoption of a two-rate system, the direction of the change is predictable and dependent on the endogeneity of housing prices.

Brueckner, J. K. and H.-A. Kim (2003). "Urban Sprawl and the Property Tax." International Tax and Public Finance 10(1): 5-23.

> theoretical, peer reviewed
>
> Considers the impact of property taxes on urban sprawl. A model is developed to show that a uniform property tax can have two opposing effects on urban sprawl. Higher property taxes can encourage urban sprawl through an "improvement effect" which provides a disincentive to constructing larger buildings. However, higher property taxes can also discourage urban sprawl through a "dwelling-size effect" which provides an incentive for smaller dwelling spaces. The improvement effect is shown to dominate under the assumptions of the numerical analysis. The replacement of a uniform property tax with a land-value tax eliminates the tax on structures and improvements and would, therefore, have a net effect of discouraging urban sprawl, causing the size of cities to decline.

Brunori, D. (2004). "What Politicians Know About Land Taxation." Land Lines 16(4).

> empirical, U.S., not peer reviewed
>
> The results of a survey of state legislators and locally elected officials to determine the "level of knowledge" about land-value and split-rate taxation. Results indicate that the concept and potential development benefits of land-value and split-rate taxation are widely known among legislators and local officials while the effects of such taxation on urban sprawl are less well known (more than 40% of both groups believed that land value taxation would lead to more sprawl rather than deter it). The primary reason for lack of legislation promoting land-value and split-rate taxation in localities in the U.S. does not appear to be lack of knowledge on the topic among legislators and officials, but must lie in other explanations such as political feasibility or administration of the tax.

Brunori, D. and J. Carr (2002). Valuing Land and Improvements: State Laws and Local Government Practices. Working Paper. Cambridge, MA, Lincoln Institute of Land Policy.

> empirical, U.S., not peer reviewed
>
> A survey of tax districts to determine which local districts consider land and improvements

separately for the purposes of taxation. While only 29 states require land to be valued separately from improvements for tax purposes, a survey of 246 local governments indicates that 99% of them "actually values land and improvements separately." Of the offices surveyed, 88% are "highly confident" in their estimates of the portion of property assigned to each. The results of these surveys indicate relatively strong support for the ability of local governments to switch to a land-value or split-rate tax system since most of them already have the appropriate assessment information available.

Bryant, R. W. G. (1972). Land: Private Property, Public Control. Montreal, Canada, Harvest House Ltd.

literature review, international

Summary of empirical studies and theoretical arguments in support of site-value taxation. While emphasis is on the Canadian experience, there is much comparison to experience with such taxation in the United States and proposals for such taxes in Great Britain, as well as supportive evidence drawn from empirical studies in Australia and New Zealand.

Bryson, P. J., G. C. Cornia, et al. (2001). Land and Building Taxes in the Republic of Slovakia. The Development of Property Taxation in Economies in Transition: Case Studies from Central and Eastern Europe. J. H. Malme and J. M. Youngman. Washington, D.C., World Bank: 51-66.

institutional, international, not peer reviewed

History of the property tax system in Slovakia. Localities in Slovakia tax land and buildings at different rates. Two conditions contribute to the "underutilization" of land value taxes in Slovakia. First, land taxes are based on the size of parcel rather than the market value of land since there is no market data on land prices. And second, per capita tax revenues on land fall "[a]s the size of the municipality increases."   The opposite is true for per capita revenues from the tax on buildings, indicating that larger cities, in particular, are losing out on revenues from a potential tax source.

Bryson, P. J., G. C. Cornia, et al. (2001). Taxes on Real Property in the Czech Republic. The Development of Property Taxation in Economies in Transition: Case Studies from Central and Eastern Europe. J. H. Malme and J. M. Youngman. Washington, D.C., World Bank: 39-50.

institutional, international, not peer reviewed

Historical development and current analysis of property taxation in the Czech Republic. Land and buildings are taxed at separate rates in the Czech Republic, with the valuation of land and buildings being determined by physical area as opposed to market values. While the tax is applied at the national level, the valuations of property vary among municipalities by virtue of a "coefficient related to the size of the city." Real estate taxes generated approximately 5% of overall tax revenues for the Czech Republic in 1998, and it is suggested that they can be utilized much more, particularly as a revenue source for local governments.

Buttenheim, H. S. (1935). "If Henry George Were Writing Today." The Journal of Land and Public Utility Economics 11(1): 1-11.

Calvo, G. A., L. J. Kotlikoff, et al. (1979). "The Incidence of a Tax on Pure Rent: A New (?) Reason for an Old Answer." Journal of Political Economy 87(4): 869-874.

theoretical, peer reviewed

Builds on the Feldstein (1977) theoretical analysis of a tax on land rent by introducing a bequest effect. Feldstein demonstrates that the Ricardian "proposition that a tax on pure rent is not shifted" will not hold when the supply of capital is allowed to change in an overlapping-generations model. In that model, the younger generation chooses to put more savings in the form of capital as opposed to land as land prices drop with the introduction of a tax on land rent. This will impact the marginal product and price of capital. According to the current model a land tax is a "forced government transfer" between generations which can be "completely offset by private transfers" between generations. A tax on land rent will still cause the price of land to fall, but since the level of bequests falls by the same rate, the reduction in price of land will not encourage more savings in the form of capital and the "tax is fully capitalized in the price of the land" as indicated by the Ricardian proposition.

Case, K. E. (1986). Economics and Tax Policy. Boston, Oelgeschlager, Gunn & Hain.

Case, K. E. and J. H. Grant (1991). "Property Tax Incidence in a Multijurisdictional Neoclassical Model." Public Finance Quarterly 19(4): 379-392.

theoretical, peer reviewed

Simulation study of the effects of differing rates of property taxation across local jurisdictions. Assuming mobility of households and capital across jurisdictions, a model is developed to compare the effects of a property tax system that is uniform across jurisdictions versus one that is applied at different rates across jurisdictions. Simulation studies are conducted for 25 jurisdictions of 500 households each. When a uniform property tax is applied, the prices of land and housing are shown to decline due to declining demand for property in general. While the households pay the property tax, some of the burden is shifted to landowners in the form of lower rents. When property taxes are allowed to vary across jurisdictions, households move to jurisdictions with relatively lower tax rates. Households are shown to "bear an equal share of the burden" across jurisdictions, while landowners in the relatively lower taxed localities gain substantially due to higher rental incomes and landowners in higher taxed jurisdictions lose substantially (approximately 15% of their total land value) due to lower rental income.

Chamley, C. and B. D. Wright (1987). "Fiscal Incidence in an Overlapping Generations Model with a Fixed Asset." Journal of Public Economics 32(1): 3-24.

theoretical, peer reviewed

Analyzes the long-run impacts on capital formation, land prices and intergenerational welfare as the result of a variety of tax policies and transfers, including a land tax. The model indicates that land prices may either rise, similar to Feldstein (1977), or fall when a tax on land rent is imposed. If land prices do increase, the price increase is limited to one-half of the value of the tax, which implies that the older generation must bear at least half of the tax burden. This result is at odds with the Feldstein result that "the older generation can gain from the introduction of the land tax."

Chapman, J. I. and T. Tyrrell (2006). An Extension of a Land Tax Model to Include Uncertainty in the Value of Land--A General Equilibrium Model Simulation. National Tax Association's 99th Annual Conference on Taxation. Boston, MA.

theoretical, not peer reviewed

Applies a theoretical model to determine the effects of different forms of taxation on urban production. The model is similar to Mills (1998), but the model in the current application is used to show the effects on economic variables under different taxation systems when land values are both correctly and incorrectly estimated. If land values are estimated correctly, then a land value tax is shown to be neutral in its impact on both output and use of other resources (capital and labor). However, if land values are over-estimated as a proportion of overall property values, then there is essentially an "unintended tax on capital." When land values are under-estimated, there is "no effective tax on capital..., but the size of the city will have to be larger to generate the needed total tax." When land values are over-estimated, it is also demonstrated that the capital/labor ratio will fall more in a uniform tax system than in a land value tax system if capital is more productive than land. If land is the relatively more productive resource, however, the capital/labor ratio falls slightly more in a land value tax system when land is over-estimated, but this only occurs when the error in estimation is very large. Overall, a land value tax is shown to be preferred to the uniform tax system in avoiding "misallocation of resources" in the instance of incorrect land value estimates.

Cheshire, P. and S. Sheppard (2003). Taxes versus Regulation: The Welfare Impacts of Policies for Containing Urban Sprawl. The Property Tax, Land Use and Land Use Regulation. D. Netzer. Northampton, MA, Edward Elgar: 147-172.

empirical, international, not peer reviewed

Compares the impact on urban sprawl and welfare from adoption of a transportation tax versus a land value tax. Open space in urban areas is considered a public good, which will be underprovided in private markets. In order to create more open space, localities can either choose to regulate urban sprawl through direct regulation and zoning or through indirect regulation and taxation. The effects of direct regulation can be observed through real estate zoning laws and regulations that exist in the United States and England so taxation methods are evaluated in the current analysis. Two methods of taxation, a transportation tax and a land value tax, are considered in a simulation study of Reading, England. In order to achieve the same level of "urban land use," a transportation tax would have to be relatively higher than a land value tax. A land value tax is shown to improve social welfare in the community while a transportation tax would lower it. Overall social welfare improves under the land value tax because the gains from the redistributed tax revenues offset the losses due to the "higher effective cost of land (land value plus tax)." There are also positive redistributional elements to the land value tax since the benefits of the tax are primarily received by the "poorest quintile" of residents.

Chester, E. (1976). "The Site-Value Tax: Its Potential Effect on Urban and County Land Use in North Carolina." Carolina Planning 2(2): 43-49.

Clark, G. and E. Jamelske (2005). "The Efficiency Gains from Site Value Taxes: the Tithe Commutation Act of 1836." Explorations in Economic History 42(2): 282-309.

empirical, international, peer reviewed

Analysis of the efficiency effects of switching to a site value tax system. In 1836, the English Tithe Commutation Act "switched taxation of large areas of farmland from a percentage of gross output to an equivalent lump sum tax on site values." The study analyzes the effects of this tax reform by estimating the gains on land rent in 5,108 rural parishes in England from 1842 to 1855. The prediction is that rents ("including taxes and tithe payments") should be higher after the tax

reform since the previous tithe on land distorted economic decision-making whereas a lump sum tax on site values does not. The empirical results indicate that due to the reform, "an estimated £0.43 was gained by landlords in England for every £1 previously collected in tithe, even though the total tithe paid did not change." The results varied both by region and by the date at which the tax reform was completed in a region.

Clark, W. A. V. (1974). <u>The Impact of Property Taxation on Urban Spatial Development</u>. Los Angeles, CA, Institute of Government and Public Affairs, University of California.

case study, international

Statistical and descriptive presentation of the impact of property taxation in New Zealand. Provides a review of the theoretical and empirical literature on the economic effects of property taxes. Localities in New Zealand can choose the form of property taxation from among the options of annual valuation, capital valuation and unimproved valuation. Residents of Dunedin chose to change from annual valuation to unimproved valuation in 1953. The political forces behind this change and the economic impacts are detailed in the volume.   The example of Auckland, which "has three different taxing systems operating within it metropolitan boundaries" is then considered to determine the comparative impact on land development. It is concluded that "the role of the rating...system is negligible in its impact on the spatial structure of the city" and the study does not find support for "the argument that the unimproved-taxing system is more equitable, and more socially more desirable, than other taxing systems."

Clawson, M. C., Ed. (1973). <u>Modernizing Urban Land Policy</u>. Baltimore, MD, Johns Hopkins University Press.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Coffin, D. A. and M. A. Nelson (1983). "The Economic Effects of Land Value Taxation--Comment." <u>Growth and Change</u> 14(3): 44-46.

theoretical, peer reviewed

A critique of the empirical results offered in Mathis and Zech (1982). Mathis and Zech found no statistical support for the contention that land value taxation encourages economic development by examining the use of split-rate versus uniform property taxation in 27 Pennsylvania cities. Only three of the cities in the study made use of split rate taxation and one of those cities had only been using split rate property taxation for a year. Therefore, the two independent variables which measured the relative differences in tax rates on land relative to buildings (at both the city and county levels) would equal one for 24 of the 27 cities, and be greater than one for only 3 cities. Additionally, some of the data used in the model is lagged seven years prior to the year that the effects on housing development are being measured. Combined with further criticism on the appropriate use of ordinary least squares and the lack of any time series data in the analysis, the critique questions the overall validity of the stated results in Mathis and Zech.

Cohen, J. P. and C. C. Coughlin (2005). "An Introduction to Two-Rate Taxation of Land and Buildings." <u>Federal Reserve Bank of St. Louis Review</u> 87(3): 359-374.

literature review, U.S., not peer reviewed

A theoretical supply-and-demand analysis of the impact of taxes, and particularly a land tax, on

economic markets. The economic effects of a land tax are demonstrated to be different from other excise taxes primarily because the supply of land is perfectly inelastic with respect to prices, allowing for a tax that would not produce a deadweight loss in the market. The article provides a review of significant empirical contributions to the literature and discusses the political economy ramifications of a two-rate system.

Cohen, M. P. (2000). "Land-Value Taxation Around the World: Mexico." <u>American Journal of Economics & Sociology</u> 59(5): 129-136.

institutional, international

Focuses on the effects of a tax reform in the late 1980s in Mexicali, "the first municipality in the country to apply a land-value tax." While developmental effects of the tax reform are not discussed, "property tax revenues account for more than 50 percent of local municipal revenues [which] puts Mexicali way above the nation-wide averages at the local, state and federal levels (in 1995: local, 15.3 percent; state, 8.4 percent; federal, 10.3 percent) for the relative share of property tax revenues to total revenues."

Connellan, O. (2004). <u>Land Value Taxation in Britain: Experience and Opportunities</u>. Cambridge, MA, Lincoln Institute of Land Policy.

Connellan, O. and N. Lichfield (2000). "Land-Value Taxation Around the World: Great Britain." <u>American Journal of Economics & Sociology</u> 59(5): 239-257.

Controller, C. o. P. O. o. t. C. (2001). Tax Structure Analysis Report, City of Philadelphia: Office of the City Controller.

Copes, J. M. and W. Rybeck (2000). "Land-Value Taxation Around the World: Jamaica and Other Caribbean States." <u>American Journal of Economics & Sociology</u> 59(5): 111-127.

institutional, international

Consideration of the land tax and its effects in Caribbean countries. While land taxes are used in countries such as Jamaica and Belize, the tax rates are not substantial enough in those countries to provide positive economic development effects. On the other hand, Montserrat has had a two-rate property tax since the 1960s and, as a result, previously underutilized tracts of land "have been forced into economic production."

Cord, S. (1967). "The Graded Tax League of Pennsylvania: A History." <u>American Journal of Economics and Sociology</u> 26(3): 263-264.

Cord, S. (1970). "The Role of the Graded Tax in Urban Redevelopment: A Case Study of Lancaster, Pa." <u>American Journal of Economics and Sociology</u> 29(3): 321-328.

case study, U.S., peer reviewed

Considers the potential impact of a split-rate taxation proposal for the city of Lancaster, Pennsylvania. Under the assumption that the city would reduce the tax rate on buildings by approximately 75% and increase the rate on land to maintain constant tax revenues, several development and distributional effects are discussed. In particular, the adoption of such a tax would potentially encourage development and improvement of properties, both commercial and

residential, and provide for lower taxation on single-family homes and apartment houses. Store properties within the central business district would likely pay higher taxes under the plan, but since their location in the central city "presents tremendous opportunities for retail businesses, ...it could be expected that the city which created such values should tax such values." Such retail businesses should also expect more benefits to accrue as a result of the tax if it encourages more construction of apartment housing in the city, resulting in a larger population of city residents, particularly middle- and high-income families.

Cord, S. (1976). "The Impact of a Graded Tax on a Rural Area: A Case Study in Indiana County, Pa." American Journal of Economics & Sociology 35(1): 71-75.

> case study, U.S., peer reviewed

Cord, S. (1985). "How Much Revenue Would a Full Land Value Tax Yield?" American Journal of Economics & Sociology 44(3): 279-293.

> conceptual, U.S., peer reviewed

> Consideration of whether a tax on land value could replace the current (1981) U.S. tax revenues resulting from taxes on labor and capital. An estimated $1.029 billion is collected by governments at all levels in revenues from taxes on capital and labor, while it is "conservatively estimated" that a tax on land values would result in revenues of $566 billion. A more liberal estimate of revenues from a tax on land values, changing such assumptions as the percentage of property value apportioned to land, would be $764 billion. While this is less than the current revenue supplied by taxes on labor and capital, there are a few other considerations. First, some of the tax revenues currently collected are actually "user charges" which could continue to be appropriately applied under a land-value tax system. Second, as the taxes on labor and capital are replaced by a tax on land value, production and employment will increase, causing land rent to rise and spending on welfare programs to decline. Overall this results in the possibility of replacing the current taxes on labor and capital with a single tax on land, even if one considers an "average" estimate of revenues from land value taxation of $664 billion.

Cord, S. B. (1965). Henry George: Dreamer or Realist? . Philadelphia, PA, University of Pennsylvania Press.

Cord, S. B. (1983). "Taxing Land More Than Buildings: The Record in Pennsylvania." Proceedings of the Academy of Political Science 35(1): 172-179.

> case study, U.S., not peer reviewed

> Considers the impact on urban development as a result of an increase in land value taxation relative to the tax on improvements for cities in Pennsylvania. Pittsburgh gradually increased its land tax rate from 1978 to 1982 from 4.95% to 13.3% while the tax on improvements increased from 2.475% to 3.2%. Building permits rose over that same time period although it is unclear if the change in relative tax rates was responsible for that increase. Scranton changed its relative tax rates on land value and improvements from 5.1% and 2.55% in 1979 to 9.6% and 2.55% in 1980-82. It experienced an increase in building permits over that same time period while Wilkes-Barre, a city of similar size and location, experienced a decline. New Castle and McKeesport have similar results relative to cities of their own size after adopting two-rate taxation structures, while the results for Harrisburg are less clear.

Cord, S. B. (2005). <u>The Golden Key to Continuous Prosperity: How to Vote Yourself a Tax Break (Without Any Reduction in Government Revenue)</u>. Bloomington, IN, AuthorHouse.

conceptual, not peer reviewed

Advocating a tax on land rent (LRT) from a conceptual approach with support from case studies. The study recommends a gradual adoption of a tax on land rent to replace other distortionary taxes while maintaining the same level of government tax revenues. Wage earners in particular, would benefit from such a change since "they have little land rent income, ...but are hit hard by taxes on what they produce." The efficiency and equity arguments in support of land value taxation from the literature are further considered and discussed. Offers evidence from 18 empirical studies indicating that localities that switched from a uniform property tax to a two rate system (with a higher rate on land than buildings), experienced an increase in new building permits in the three years following the switch relative to the three years prior to the switch. Asserts similar evidence from 237 other statistical studies as well. It is argued that such taxation can be specifically advantageous to the cause of farmers, the promotion of environmental issues and the fight against terrorism (in part, by reducing poverty).

Cowan, H. B. (1958). <u>Municipal Improvement and Finance as Affected by the Untaxing of Improvements and the Taxation of Land Values</u>. New York, Harper and Brothers.

case study, international

Considers the impact of adopting a land value tax on localities in Australia, New Zealand, South Africa and Western Canada. Provides taxation and economic data from localities in the four regions as evidence of the theoretical benefits of lowering the tax on improvements and levying a tax on land value. The study primarily focuses on the impacts on land values, tax revenues and local development as well as on changes in tax incidence.

Craig, E. D. (2003). "Land Value Taxes and Wilmington, Delaware: A Case Study." <u>State Tax Notes</u> 31(5): 371-373.

literature review, case study, not peer reviewed

Review of the literature on land value taxes with emphasis on the need for such taxation in Wilmington. A proposal for adoption of a land value tax system in Wilmington advocated increasing the tax rate on land from .0008 percent to .04 percent over a five year period. "This would have increased the property tax revenue collected on land values sixfold" and allowed for lower taxes on buildings and wages. It was estimated that the tax on buildings could be phased out entirely by increasing the tax on land to .09 percent. While a tax on land values was not enacted, there is a tax on vacant dwellings that creates similar efficiency effects to a land value tax by "punishing speculators and encouraging owners to generate income from their properties or sell their structures."

Cuddington, J. T. (1978). "Estimating Impacts of a Property Tax Reform." <u>Land Economics</u> 54: 362-372.

simulation, international, peer reviewed

A simulation study on New Westminster, Canada to determine the effects of site value taxation on tax incidence and changes in property values. The decline in land values under a site value tax system are shown to depend on the degree to which taxes on improvements are shifted to

landowners under the current property tax system. Assuming that landowners bear approximately 50% of the current burden from the tax on improvements, it is predicted that land values will decline by approximately $4,044 per property under a site-value tax, but that estimate decline is doubled if landowners are assumed to bear none of the current tax on improvements. Likewise, it is also shown that land value changes based on improvement/land ratios and changes in tax incidence when switching to a site value tax also depend on the incidence of taxes in the current property tax system.

Daume, E. F. (1930). "A Critical Analysis of the Operation of the Pittsburgh Graded Tax Law." <u>Annals of the American Academy of Political and Social Science</u> 148(1): 145-156.

case study, U.S., not peer reviewed

Statistical study of the impact of the 1913 "Graded Tax Law" in Pittsburgh. The law, which provided for a tax on buildings at one half of the rate on land value, was adopted gradually until it became "fully effective in 1925." By 1930, the tax rate on land values was set at 2.6% while the tax rate on buildings was set at 1.3%. This tax change in combination with an act passed in 1911 which made certain classes of real estate subject to more taxation, were passed with the intent of promoting use of vacant land. The study finds that higher building construction in Pittsburgh likely was not due to a change tax law, but should be attributed to greater economic prosperity throughout the country. Additionally the new tax laws may eventually contribute to congestion problems as more development occurs and will ultimately reduce tax burdens on those most able to pay while increasing tax burdens on those who are least able to pay.

Dillinger, W. (1988). Urban Property Taxation in Developing Countries. <u>Policy Research Working Paper Series 41</u>. Washington, D.C., World Bank.

Dillinger, W. (1988). Urban Property Taxation: Lessons From Brazil. <u>Policy Research Working Paper Series 37</u>. Washington, D.C., World Bank.

Dillinger, W. (1991). Property Tax Reform: Guidelines and Recommendations. <u>Working Paper</u>. Washington, D.C., World Bank.

DiMasi, J. A. (1987). "The Effects of Site Value Taxation in an Urban Area: A General Equilibrium Computational Approach." <u>National Tax Journal</u> 40(4): 577-590.

simulation, U.S., peer reviewed

Builds on the Brueckner (1986) theoretical model of moving from a uniform property tax to a two-rate tax on land and buildings. The model is a simulation study of the Boston metropolitan area in 1980. The optimal relative tax rates are determined to be when "land values are taxed at 3 times the rate for capital values." The welfare gains are found to be "6.6 percent of the tax revenues raised." Even more efficiency gains are possible if residential property is allowed to be taxed at a higher rate than commercial. The model also demonstrates that "[l]and rents and housing prices fall while improvements per unit of land in housing and population densities rise." Some land that was previously used for urban purposes is converted to agricultural purposes, resulting in a smaller urban area.

Division), P. E. L. W. (1985). <u>Development, Equity and the Graded Tax in the City of Pittsburgh</u>. Pittsburgh, PA, Pennsylvania Economy League (Western Division).

Douglas, R. W., Jr. (1978). "Site Value Taxation and Manvel's Land Value Estimates." <u>American Journal of Economics and Sociology</u> 37(2): 217-223.

    theoretical, peer reviewed

    A critique of studies that indicate a site value tax cannot generate enough revenue to replace a uniform property tax. Particular arguments are made against Heilbrun (1966), which concludes that most urban areas could not raise enough revenues from a site value tax based on national estimates provided by Goldsmith. Since the Heilbrun study, other contributions have used dynamic, as opposed to static, analysis of a site value tax to show that such a tax can become revenue adequate when capital is growing or land rents are increasing as a result of a switch to a tax on site values. Most importantly, the Goldsmith estimates "significantly underestimate the true value" of land and this has been corrected by estimates provided by Manvel (1968). It is argued that Manvel "has, if anything, probably overstated the case for adequacy," however, and while a site value tax is still recommended based on its efficiency effects, a tax on site values alone is likely not capable of replacing the revenues of a uniform property tax system.

Douglas, R. W., Jr. (1979). "Land Taxation, Neutrality, and Risk Aversion." <u>Public Finance Quarterly</u> 7(2): 231-237.

    theoretical, peer reviewed

    Considers the effect of a land value tax on the timing of development when individuals are risk averse. Risk is modeled in the form of uncertainty about the future returns on developed relative to undeveloped land. An increase in the land value tax will decrease expected values and variances for the returns on both developed and undeveloped land. If the landowner has constant or increasing levels of risk aversion at higher income levels, the landowner will prefer to keep land idle once a land value tax is imposed since the land value tax reduces the variability of returns to idle land more than the variability of returns to developed land. If the landowner has risk aversion that declines as income rises (which is more likely to be the case), then the owner may choose either to develop the land or keep it idle in the face of a higher land value tax, depending on whether the reduced risk from holding idle land "outweighs his increased reluctance to take risk at the lower income."

Douglas, R. W., Jr. (1980). "Capital Migration, Land Rent Changes, and Site Value Tax Adequacy." <u>Regional Science Perspectives</u> 10(1): 35-43.

    conceptual, peer reviewed

    Theoretical analysis of the local effects of a site value tax on capital movement and revenue adequacy. The issue of revenue adequacy depends on the value of land rents after a site value tax is adopted. The model indicates that land rents will increase if there is a high price elasticity of demand for consumer goods relative to the elasticity of substitution for factor inputs (including land). The rationale for this is that "output can be increased without a significant reduction in price, increasing the demand for land and raising rents." If the opposite is true, however, capital will be substituted for land, reducing both the demand for and rent earned on land. Additionally, "[r]ent increases are larger...when labor is mobile." By providing estimated values for parameters in the model, it is concluded that rent would not change by more than 10 to 20 percent for most localities. Even though "large rent changes are unnecessary if the present land base is large enough," most localities would not be able to replace the revenues generated by a uniform property tax by utilizing a site value tax system. A split-rate tax system is feasible, however.

Douglas, R. W., Jr. (1980). "Site Value Taxation and the Timing of Land Development." The American Journal of Economics and Sociology 39(3): 289-294.

    theoretical, peer reviewed

    Demonstrates that a site value tax is not neutral with respect to the timing of development. Imposing or increasing a site value tax will result in faster development. The intuitive argument in support of this result is that a higher tax on land increases the required rate of return on land (and lowers its market price) relative to other assets. This encourages faster development of land as the owner now has a preference for current, as opposed to future, income on that asset. Similarly, since higher taxes have to be paid on land, landowners prefer higher current income on land from which to pay those taxes. This outcome relies on the consideration of the value of land according to its current market value rather than according to its development value.

Dunkley, G. R. A. (2000). "Land-Value Taxation Around the World: Republic of South Africa." American Journal of Economics & Sociology 59(5): 299-311.

    institutional, international

    History of land-value taxation in South Africa. Local governments in South Africa have historically relied on site value taxes as a major source of revenue. The contribution traces the legislation relevant to site-value taxation and its impact on local governments and development.

Dwyer, T., Ed. (1999). Resource Tax Policy in Countries of the Asia Pacific Region. Canberra, Australia, Asia Pacific Press.

    An edited volume. Citations to specific chapters are shown separately in this bibliography.

Eaton, J. (1988). "Foreign-Owned Land." American Economic Review 78(1): 76-88.

    theoretical, peer reviewed

    Extends the work of Feldstein (1977) to an open-market economy with perfect capital mobility. Allowing for these two assumptions, the result in Feldstein that the stock of capital will rise and capital prices will fall as a result of a newly adopted land-value tax is no longer applicable. This is because the price of capital and domestic capital stock are determined by the world interest rate. A land-value tax will, therefore, only impact the price of land and not the price of other resources. There are still real effects as a result of adopting a land-value tax, however, because it discourages foreign investment. Welfare is shown to increase as a result of the land tax, which is similar to the closed economy results found in both Feldstein (1977) and Chamley and Wright (1987).

Eckart, W. (1983). "The Neutrality of Land Taxation in an Uncertain World." National Tax Journal 36(2): 237-241.

    theoretical, peer reviewed

    Theoretical analysis of whether land value taxation is neutral under conditions of uncertainty. Assuming that individuals are risk averse and that the future is uncertain the model shows that a land value tax is not neutral regarding its effects on housing supply and housing rents.

Individuals are assumed to hold three assets in their portfolio: land, buildings (housing units), and bonds. The impact of land value taxation on housing supply depends on "the correlation between expected future land prices and construction costs." A negative correlation between the two implies a relatively lower risk to investing in buildings since as the value of buildings decreases, the value of land will increase. If land values are taxed, returns on land will be less variable, and there is less of a need to invest in buildings to lower the overall risk of the portfolio. Thus, investment in buildings decline and housing rents, as a result, increase. The opposite effects are true if future land prices and construction costs are positively correlated, but in either case a land value tax will have real effects on housing supply and housing rent.

Edwards, M. E. (1984). "Site Value Taxation in Australia: Where Land is Taxed More and Improvements Less, Average Housing Values and Stocks Are Higher." <u>American Journal of Economics & Sociology</u> 43(4): 481-495.

> empirical, international, peer reviewed

> Analyzes the impact of site value taxation on the value of new houses and the stock of houses in Australia. Using regression analysis, two different models are constructed with two different dependent variables: "average value of houses constructed" and "stock of dwellings" for each of the states in Australia. Over the time period 1951 to 1964, each model indicates a positive and significant relationship between "the proportion of local governments in each state which use unimproved capital values as the tax base" and the respective dependent variable.

Edwards, M. E. (1988). The Economic Effects of Taxing Land Rents, Texas A&M University. PhD Dissertation.

England, R. W. (2002). "Land Value Taxation and Local Economic Development: Results of a Simulation Study." <u>State Tax Notes</u> 24(4): 323-327.

> simulation, U.S., not peer reviewed

> Simulation studies of the development effects resulting from a switch to a split-rate property tax system in two New Hampshire cities. The studies assume a revenue-neutral change in land and capital tax rates in 1999 in each community, with the land tax rate quadrupling in Berlin and doubling in Manchester. In both cases, residential property owners would bear a relatively greater burden of the property tax incidence after the change since their properties are less capital-intensive than industrial and commercial properties. In the short-term, it is predicted that in both cities the cost of living would decline, investment spending would increase slightly, and per capita real disposable income would remain about the same. In the long-term, both cities are predicted to experience higher job growth, more growth in local production, more residential construction and a lower cost of living.

England, R. W. (2003). "State and Local Impacts of a Revenue-Neutral Shift from a Uniform Property to a Land Value Tax: Results of a Simulation Study." <u>Land Economics</u> 79(1): 38-43.

> simulation, U.S., peer reviewed

> A simulation study on a hypothetical shift from a uniform property tax to a land value tax for the state of New Hampshire in 1999. Findings related to tax incidence are that a revenue-neutral shift in tax systems would result in a reallocation of tax burdens from capital values to land values, a lower tax burden for commercial and industrial properties, and a higher tax burden for residential

land owners. Further findings related to broader economic variables indicate that the state of New Hampshire would experience both short- and long-term growth in total employment and gross state product, as well as an increase in real wages relative to other states. The economic impacts on localities within the state would vary.

England, R. W. (2004). "Designing a Two-Rate Property Tax Plan to Reduce Regressive Effects and Increase Voter Support." State Tax Notes 32(1): 39-44.

simulation, U.S., not peer reviewed

A simulation study of Dover, New Hampshire to examine "the distributional effects of property tax reform." The study indicates that two-rate taxation would tend to benefit the relatively wealthier households at the expense of the middle and lower classes. In order for two-rate taxation to be politically feasible, the middle and lower class households must be offered a progressive tax credit. Commercial and industrial property owners would face differing effects of tax burdens in the presence of two-rate taxation, depending on the level of structure value to land value among others. Two-rate taxation accompanied by tax credits could reduce opposition from owners of undeveloped land.

England, R. W. (2006). "Using Land Value Taxation to Finance Municipal Expenditure in U.S. Cities." State Tax Notes 41(11): 739-746.

literature review, case studies, U.S., not peer reviewed

Considers the efficiency effects and revenue adequacy of site value taxation as a source of local government revenues. A review of empirical studies in the literature point to the economic efficiency potential from switching from a uniform property tax to a split-rate tax system. Preliminary evidence on the revenue adequacy of switching to a pure land value tax system indicate that in two of the five cities studied (Chicago and Milwaukee), such a switch is not feasible since the tax rate on land value would have to be set higher than the rate which would confiscate all land rents. In two other cities (Philadelphia and Washington), the switch is theoretically feasible, but would result in tax rates so high as to cause a considerable decline in land prices in the short run. Only in Phoenix would such a tax reform be truly feasible without a dramatic effect on land values. Overall, it is concluded that a split-rate tax system is the more "politically feasible" alternative for most municipalities. It is noted that the study is static and not dynamic in its analysis, and that a dynamic analysis would likely make revenue adequacy more achievable as cities switch away from more distortionary taxes.

England, R. W. and R. D. Mohr (2003). "Land Development and Current Use Assessment: A Theoretical Note." Agricultural and Resource Economics Review 32(1): 46-52.

theoretical, U.S., peer reviewed

A theoretical examination of "factors that influence the effectiveness of a current use program in delaying development." A model is developed to show the magnitude of the effect on development when undeveloped land receives preferential treatment with regard to property taxes. Two penalties can be imposed on land-owners who choose to postpone development: 15 states impose no penalty and encourage "universal enrollment" in current use programs, while 27 states impose a penalty that is approximately "equal to the property tax savings plus interest charges" which at the margin discourages any participation in the program.

England, R. W. and M. Q. Zhao (2005). "Assessing the Distributive Impact of a Revenue-Neutral Shift from a Uniform Property Tax to a Two-Rate Property Tax with a Uniform Credit." <u>National Tax Journal</u> 58(2): 247-60.

      simulation, U.S., peer reviewed

      Provides the argument that the redistributional concerns resulting from a switch to a two-rate property tax system make such a change politically unfeasible. A simulation study for Dover, New Hampshire is conducted to demonstrate that there are "substantial redistributive effects" from increasing the tax on land values. In particular, owners of property with lower-valued or no improvements would be taxed more heavily as would owners of parcels of land that are relatively more valuable. In addition, wealthier homeowners would tend to benefit at the expense of the less wealthy homeowners, indicating that a land-value tax is "highly regressive." Such a tax change would be difficult to pass unless it is also accompanied by a substantial tax credit to particular groups. A two-rate tax system which still maintains some level of tax on structures is even more politically feasible than a pure land-value tax since there is less of a redistribution effect when moving from a uniform system (assuming tax revenues are held constant). In combination with a tax credit, a two-rate tax system could be developed to offset and even reverse some of the redistributional effects from increasing the land-value tax.

Fane, G. (1984). "The Incidence of a Tax on Pure Rent: The Old Reason For the Old Answer." <u>Journal of Political Economy</u> 92(2): 329-333.

      theoretical, peer reviewed

      Re-emphasis on the neutrality of a tax on land rent in response to conclusions of non-neutrality in the literature. Feldstein (1977) and Calvo, Kotlikoff and Rodriguez (1979) find that a tax on land rent is not neutral only because they do not allow for the effects of the tax to be fully compensated. "Any uncompensated tax is equivalent to a compensated tax together with a lump-sum redistribution of income, and there is really nothing 'surprising' about the fact that lump-sum redistributions of income may alter relative prices." Full compensation can be achieved either through use of government debt-financing, where bond proceeds are given to landowners and the timing of interest payments and tax revenue receipts coincide, or through the use of intergenerational bequests.

Feldstein, M. (1977). "The Surprising Incidence of a Tax on Pure Rent: A New Answer to an Old Question." <u>Journal of Political Economy</u> 85(2): 349-360.

      theoretical, peer reviewed

      Argues against the Ricardian proposition that a tax on pure land rent will not be shifted and will only result in decline in annual rental income and in land prices. The Ricardian result only holds in a static model when the supply of other factors of production is fixed. An overlapping-generations model is developed in which a land-value tax reduces the price of land and, therefore, encourages landowners to put more of their savings into capital. As more capital is accumulated the marginal product of capital and the rate of interest on capital falls, passing on a portion of the land-value tax incidence to owners of capital.

Finnis, F. H. (1963). "Site Valuation and Local Government." <u>Canadian Tax Journal</u> 11(2): 118-126.

      institutional, international

Considers the potential effects of adopting a site-value tax system in Canada. The historical use of site-value taxation in Canada is summarized and compared to that of other countries, primarily Australia and New Zealand. While the use of site-value taxes in Canada may have discouraged the holding of large areas of idle land and encouraged building construction, it did not prevent land speculation. In western Canada land may have been over-developed due to overly optimistic views of future growth in combination with a site-value tax system. While there may be benefits to the adoption of site-value taxes, such a tax system will only encourage development when other prospects for economic growth already exist. Other detriments to adopting such a system include its inability to raise large tax revenues, the non-uniformity of its effects across different localities and the costs of adopting such a system. If the goal of adopting site-value taxes is to correct existing social or economic problems, other legislative programs are recommended as a better alternative than a change to the tax system in Canada.

Flaherty, J. and K. M. Lusht (1996). Site Value Taxation, Land Values, and Development Patterns. <u>Working Paper</u>, Institute for Real Estate Studies, Pennsylvania State University.

empirical, international, not peer reviewed

Empirical analysis of the effects of property taxation on housing development in Melbourne. Local districts have a choice over the tax base on which property taxes will be applied in Australia. The current empirical study includes analysis of housing development in 53 Melbourne districts, some of which apply site value taxation while others apply uniform property taxes on land and structures. Districts with site value taxation are found to have significantly more residential units per acre of land than districts with uniform property taxes. However, there is no significant difference in housing values across types of taxing districts.

Follain, J. R. and T. E. Miyake (1986). "Land Versus Capital Value Taxation: A General Equilibrium Analysis." <u>National Tax Journal</u> 39(4): 451-470.

simulation, international, peer reviewed

Analysis of the effects on the Jamaican economy from a reduction of income taxes with revenues replaced by either a land-value or uniform property tax (or "capital value tax"). A general equilibrium model is developed with parameters primarily "chosen to be consistent with the economic experience in Jamaica." The results of the model indicate that use of a land-value tax on its own to replace some portion of income taxes would require such a high tax rate that it is "tantamount to expropriation of the land" even though the welfare gains from such a change are substantial. Using a uniform property tax would not require as high of a tax rate as a land-value tax, but it can potentially result in more deadweight loss, particularly in an open economy. The model also indicates employment growth will result under utilizing either of the two forms of property taxes rather than an income tax.

Follain, J. R. and T. E. Miyake (1991). Land versus Property Taxation: A General Equilibrium Analysis. <u>The Jamaican Tax Reform</u>. R. Bahl. Cambridge, MA, Lincoln Institute of Land Policy: 641-676.

Forster, G. A. (2000). "Land-Value Taxation Around the World: Australia." <u>American Journal of Economics & Sociology</u> 59(5): 399-416.

institutional, literature review, international

A summary of studies on the effects of the site-value tax in Australia. The primary focus of these studies is on revenue collection and development. A 1960 study found that Australian states that relied on land-value taxes had relatively higher levels of development both agriculturally and in terms of new housing. Even though other studies report similar results regarding the relationship between housing development and site-value taxation government "revenue from site rents as a percentage of total revenue has been falling."

Franzsen, R. C. D. (2002). The Taxation of Rural Land. <u>Property Taxes in South Africa: Challenges in the Post-Apartheid Era</u>. M. E. Bell and J. H. Bowman. Cambridge, MA, Lincoln Institute of Land Policy: 215-231.

Franzsen, R. C. D. (2005). Land Value Taxation in Western Australia. <u>Land Value Taxation: An Applied Analysis</u>. W. J. McCluskey and R. C. D. Franzsen. Burlington, VT, Ashgate Publishing Company: 190-226.

institutional, international, not peer reviewed

Description of the property tax system in Western Australia. Rural property in Western Australia is taxed based on the unimproved value of land while urban land is taxed based on its "gross rental value." The difference in valuation exists because it is more difficult to determine the unimproved market value of land in urban areas. Tax rates are determined by local governments, with most governments choosing to adopt differential rates for different categories of land. There are also land taxes at the state and national level.

Franzsen, R. C. D. (2005). Property Taxation in South Africa. <u>Land Value Taxation: An Applied Analysis</u>. W. J. McCluskey and R. C. D. Franzsen. Burlington, VT, Ashgate Publishing Company: 147-189.

institutional, international, not peer reviewed

Considers the history of and rationale for moving away from a combined site-value, "flat-rating", and split-rate (or "composite rating") property tax system to a uniform system of property taxation on "capital improved values" in South Africa. The primary rationale for the change is that it will provide for more uniform assessment on one valuation of property across all municipalities then the current system currently provides. It is also presumably easier to understand and "can achieve a better distribution of the tax burden."

Franzsen, W. J. M. a. R. C. D., Ed. (2005). <u>Land Value Taxation: An Applied Analysis</u>. Burlington, VT, Ashgate Publishing Company.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Furtado, F. (2000). "Land-Value Taxation Around the World: Colombia." <u>American Journal of Economics & Sociology</u> 59(5): 97-110.

Gaffney, M. (1962). Ground Rent and the Allocation of Land among Firms. <u>Rent Theory: Problems and Practices</u>. F. Miller. Columbia, MO, North Central Regional Research Publication 139, University of Missouri Columbia Research Bulletin 810: 30-49, 74-82.

theoretical, not peer reviewed

Analysis of the impact of land taxes on development when there are inefficient lending markets. A distinction is made between speculators in land and users of land. The first group consists of investors with relatively low discount rates while the second is comprised of investors with relatively high discount rates. Rigidities in the credit market can preclude some investors of obtaining access to funds even if they are good credit risks. In such cases, a tax on land value can reduce lending market imperfections by reducing the price of land, thereby making it more attractive to those with relatively high discount rates and less attractive to those with low discount rates. Land is, therefore, less likely fall in the hands of speculators, who would leave the land idle.

Gaffney, M. (1969). "Land Planning and the Property Tax." Journal of the American Institute of Planners 35(3): 178-183.

conceptual, peer reviewed

Promotes the adoption of site value taxation as a tool in assisting land planners in achieving their goals. A site value tax system will "unleash the market to do its constructive work." At the same time, it also "supports and presupposes good public planning." Seven examples of how site valuation accomplishes both are enumerated and include allowing planners to influence land use through taxation, promoting public rather than private investment, promoting the planning of open space rather than its random occurrence, diminishing the period between "site renewals," and fostering more community "linkages."

Gaffney, M. (1970). Adequacy of Land as a Tax Base. The Assessment of Land Value. D. M. Holland. Madison, WI, The University of Wisconsin Press: 157-212.

conceptual, not peer reviewed

A response to the literature that claims a tax on land rent cannot provide adequate revenues and, therefore, should not be considered as a fiscal option for government. Using site contour maps for the city and county of Milwaukee, it is shown that land is under-assessed by approximately three times its actual value, and that such under-assessment (if not the degree of under-assessment) is typical of most localities. Under-assessment can occur systematically across locations because of political pressures and assessment lag, among other reasons. It is proposed that the actual value of land as a percentage of the total value of real estate is at least 50%. Taxing land at a higher rate and buildings at a lower rate would provide for more economic efficiencies through greater utilization of land and more economic growth, both of which will be reflected in higher land values. These increases in land values, which increase the tax base, are typically ignored in the literature arguing against land as an adequate source of tax revenue.

Gaffney, M. (1973). An Agenda for Strengthening the Property Tax. Property Tax Reform. G. E. Peterson. Washington, D.C., Urban Institute: 65-84.

conceptual, U.S., not peer reviewed

Advocates the adoption of site value taxation at the local and state levels as an improvement to the current application of property taxation in the United States. A tax on land value is more progressive than a general property tax "[i]f factor proportions are skewed towards a greater relative use of land among wealthier producers." Legislative changes would not be necessary if land was properly assessed closer to its true market value. Allowing states to tax property rather than localities would diminish local property tax differentials which create location incentives for

individuals and businesses. It would also allow for more efficient tax administration. Site value taxes, as opposed to uniform property taxes, would also lead to economic growth and development.

Gaffney, M. (1973). "Land Rent, Taxation and Public Policy: Taxation and the Functions of Urban Land Rent." American Journal of Economics and Sociology 32(1): 17-34.

conceptual, peer reviewed

Considers the effects of land value taxation on urban land rent. Five ways in which "land taxation helps rent perform its functions" are analyzed: "by by-passing price discrimination in credit; by reducing land appreciation; by obviating other taxes which bias land use choices; by replacing log-rolling as a paramount guide to public spending; and by overcoming land market imperfections."

Gaffney, M. (1973). Tax Reform to Release Land. Modernizing Urban Land Policy. M. C. Clawson. Baltimore, MD, Johns Hopkins University Press: 115-151.

conceptual, not peer reviewed

Analyzes the land-use effects of the current property tax system and compares them to the theoretical effects on land use in a land value tax system. A primary argument is that moving to a land value tax system equalizes land use among the poor and the rich. Since the poor do not have equal access to credit markets, land will tend to be held to a large degree by the wealthy. A tax on land values will, therefore, impose a greater burden on the rich and "undo" the regressive effect of interest rates in capital markets, allowing the poor more access to the purchase of land. "This occurs through subdivision of large holdings, accelerated release of ripening land to higher uses, consolidation of very small holdings, and sales of land from the rich to the poor."

Gaffney, M. (1975). The Many Faces of Site Value Taxation. Twenty-Seventh Tax Conference of the Canadian Tax Foundation.

Gaffney, M. (1992). "Equity Premises and the Case for Taxing Rent." American Economic Review 82(2): 274-279.

conceptual, peer reviewed

Considers the "equity arguments" for and against taxes on land rents from past and current economic thought. Most of the pro-taxation arguments focus on allocative efficiency, incentive effects, and "intergenerational equity", while the cons focus primarily on the equity of the "status quo." The status quo arguments have been more successful historically, but "[t]he hope for the 'pro' case is that champions of status quo equity...are now advancing more extreme, outrageous claims at exactly the wrong moment in history."

Gaffney, M. (2001). "The Role of Ground Rent in Urban Decay and Revival: How to Revitalize a Failing City." American Journal of Economics and Sociology 60(5): 57-83.

conceptual, peer reviewed

Considers and supports the arguments by George on the use of taxes on land rent to revitalize urban areas. The primary social benefits of such taxation are that it "overcomes the traditional

trade-off between equity and efficiency..., promotes renewal by permitting a reduction of taxes on buildings,...encourages construction by reducing the liquidity constraints on developers of new buildings,...[results in] positive spillover effects in the surrounding region,...[encourages] more efficient land use,...stimulates capital formation,...[and] discourages corruption in government." Each benefit is discussed in detail with particular reference to the goal of revitalization.

George, H. (1879). <u>Progress and Poverty</u>. New York, Robert Schalkenbach Foundation, 1956.

conceptual, not peer reviewed

Originally published in 1879h, George's treatise on land ownership, social inequality and economic development was the most widely read economic text of the 19th century. Inspired by the classical political economy of Smith, Ricardo and Mill and informed by contemporary economic events in the U.S., George argued that private ownership of land would concentrate the benefits of capital accumulation and technological innovation in relatively few hands. He also predicted that private land ownership would contribute to asset speculation and macroeconomic instability. His proposed remedy was to tax away all of the rents appropriated by landowners.

Gerstein, F. S. (2000). "Land-Value Taxation Around the World: Argentina." <u>American Journal of Economics & Sociology</u> 59(5): 49-63.

Giugni, P. D. (1988). "Land Tax in Australia." <u>The Valuer [Australia]</u> 30(3): 104-107.

Gloudemans, R. J. (2000). "Implementing a Land Value Tax in Urban Residential Communities." <u>Journal of Property Tax Assessment and Administration</u> 5(4).

conceptual, empirical, U.S., not peer reviewed

Addresses the problems of property appraisal and the shifting of tax burdens in municipalities that choose to adopt a land-value tax system. Using data from three municipalities in the United States, the study shows that combined property value appraisals on both land and structures can be used to estimate the appraisals on land values. Such an appraisal method does not require the availability of data on "vacant land sales" as would normally be required in a land-value tax system and provides for more accurate estimates of land values, especially in those cases where this data does not exist.

Gottlieb, M. (1969). "Site Value Taxation and Urban Renewal, Part I." <u>Assessors Journal</u> 4: 3-27.

Gottlieb, M. (1971). "Land Value Inflation and Taxation: A Critique of the Douglas Report." <u>Quarterly Review of Economics and Business</u> 11(2): 27-39.

Grey, A. L. (1969). Urban Renewal and Land Value Taxation. <u>Land and Building Taxes: Their Effect on Economic Development</u>. A. P. Becker. Madison, WI, University of Wisconsin Press: 81-96.

conceptual, not peer reviewed

Considers the usage of land value taxation to finance urban redevelopment projects. Public property is sold to private holders with part of the development costs subsidized by the municipal government and paid with the proceeds of a land value tax. A land value tax has the benefit of encouraging the new private owners to maintain their properties at adequate levels. Land will be used more intensively since land value taxes discourage idle land and open space. Additionally,

since land value taxes will lower the price of land in the urban area, more urban residents would be able to purchase land for housing.

Grieson, R. E. (1974). "The Economics of Property Taxes and Land Values: The Elasticity of Supply of Structures." <u>Journal of Urban Economics</u> 1(4): 367-381.

theoretical, peer reviewed

Provides theoretical support for the efficiency of the land tax as the most preferable form of property taxation. A property tax creates inefficiencies by reducing the demand for and the price of land. Since land has a fixed supply, the property tax will have the effect of lowering the demand for structures and, thereby, reducing structural density. Depending on the elasticity of structural supply, however, assessors can reduce the impact of a property tax on structural density by lowering the assessment on properties with relatively higher supply elasticities. Such adjustments to "assessment ratios" essentially result in a system of property taxation that is relatively more efficient and approaches the efficiency of land value taxation.

Grosskopf, S. (1981). "The Revenue Potential of a Site Value Tax: Extension and Update of a General Equilibrium Model with Recent Empirical Estimates of Several Key Parameters." <u>American Journal of Economics and Sociology</u> 40(2): 207-215.

empirical, peer reviewed

Provides empirical estimates of parameters in the model developed by Grosskopf and Johnson (1980) to determine whether there is enough revenue potential in a land value tax to replace a local property tax. Using estimates from the literature for both the price elasticity of demand for housing and the elasticity of substitution between land and capital, it is determined that a land-value tax can provide sufficient revenue to replace a property tax provided that land values increase as a result of the tax, providing the system with a larger tax base.

Grosskopf, S. and M. B. Johnson (1982). Land Value Tax Revenue Potentials: Methodology and Measurement. <u>Land Value Taxation: The Progress and Poverty Centenary</u>. R. W. Lindholm and A. D. Lynn. Madison, WI, The University of Wisconsin Press: 41-67.

literature review, not peer reviewed

Literature review of the effects on tax revenues due to a switch to land value taxation in partial equilibrium, general equilibrium and dynamic models. In partial equilibrium models, the relevant question regarding revenue adequacy is the land value tax rate that must be set in order to generate the same revenues as a uniform property tax. In such models, the price of land is held constant. The problem arises when the tax rate on land value has to be set at such a high rate as to essentially "confiscate" the value of the land from the owner. Both Heilbrun (1966) and Douglas (1978) find that in most localities tax rates on land would have to be set at extremely high rates; however, there is much debate about the proportion of total property value allocated as land value in these studies. General equilibrium models allow the value of land and land rents to change as a result of lowering the tax on buildings while increasing the tax on land values. If the value of land rises, the tax base is broader than that used in the partial equilibrium models, and a land value tax is more likely to be revenue adequate. In dynamic models, there is consideration of the growth of land value taxes relative to the growth in expenditures to determine revenue adequacy. Stone (1975) finds that revenue adequacy depends on the growth rate of capital, but this result depends on some very strict assumptions.

Guevara, M. (2004). Real Property Taxation in the Philippines. International Handbook of Land and Property Taxation. E. Slack and R. M. Bird. Northhampton, MA, Edward Elgar: 152-158.

Guild, L. R. (1930). "The Operation of the Pittsburgh Graded Tax Plan." The Journal of Land and Public Utility Economics 6(1): 10-17.

      empirical, U.S., peer reviewed

      Analyzes the empirical effects of a graded property tax on the city of Pittsburgh subsequent to the adoption of such a tax system in 1913. While the empirical results tend to support the theoretical arguments in favor of land-value taxation, the study suggests that these results are also subject to alternative explanations. For example, the presence of stable land prices in the presence of increasing prices on urban goods and building values need not be supportive of the theoretical impact of land-value taxation if assessors consistently under-value appraisals on land. The increased construction of buildings, change in types of buildings, and patterns of development that are predicted by the theoretical impact of a land-value tax, also can be explained by considering other empirical conditions at the time of the analysis.

Gwartney, J. T. and N. Tideman (1996). "The Jerome Levy Economic Institute Conference: Land, Wealth, and Poverty." American Journal of Economics and Sociology 55(3): 349-356.

Hagman, D. G. (1965). "The Single Tax and Land-use Planning: Henry George Updated." UCLA Law Review 12: 762-788.

Hagman, D. G. (1978). Land-Value Taxation. Windfalls for Wipeouts: Land Value Capture and Compensation. D. G. Hagman and D. J. Miscynski. Washington, D.C., American Planning Association.

      literature review and institutional, U.S. and international, not peer reviewed

      A review of the literature on site value taxation: its various forms and its applications in a variety of countries and localities. The site value tax is promoted as a "windfall recapture device" that appropriately recaptures increases in the value of land for public as opposed to private benefit. The issues of "equity, administrative feasibility, practicality, and the effects of the tax" are considered in theory as are applications of the tax in Australia, New Zealand, Canada, England, Honolulu, Pittsburgh, Fairhope, and special tax districts in California.

Hansen, R. R. (1969). George: Economics or Theology? Property Taxation, USA. R. W. Lindholm. Madison, WI, University of Wisconsin Press: 65-76.

Harris, C. E. (1971). "Site Value Taxation: Economic Incentives and Land Use Planning." Harvard Journal on Legislation 9: 115-155.

Harrison, D. C. (1964). "Housing Rehabilitation and the Pittsburgh Graded Property Tax." Duquesne University Law Review 2: 213-243.

Harriss, C. L. (1970). Transition to Land Value Taxation: Some Major Problems. The Assessment of Land Value. D. M. Holland. Madison, WI, University of Wisconsin Press: 213-251.

      conceptual, not peer reviewed

Considers the difficulties of adopting a site value tax system in urban areas. The initial effects of a site value tax would be a dramatic rise in taxes on land value and a dramatic drop in taxes on improvements. While land values are expected to decline as a result, communities that change their tax structure would experience an in-flow of capital for buildings, increasing the demand for land, and potentially bringing land prices closer to their original values. This result is much more likely for communities that adopt site value taxation before it is used in other competing communities, however. If all communities in the United States implemented site value taxation, land prices would fall and land value taxes would have to be that much higher. Maintaining some taxation on buildings would alleviate this to some degree. Tax payers would likely respond against any change by trying to bias the assessed values on land relative to improvements, thus complicating an already difficult assessment process. Property exemptions and influence from the federal government may be needed to make site value taxation politically feasible.

Harriss, C. L. (1979). Land Taxation in Taiwan: Selected Aspects. The Taxation of Urban Property in Less Developed Countries. R. W. Bahl. Madison, WI, The University of Wisconsin Press: 191-204.

Harriss, C. L. (1999). Fundamental and Feasible Improvements of Property Taxation. Land-Value Taxation: The Equitable and Efficient Source of Public Finance. K. C. Wenzer. Armonk, NY, M. E. Sharpe: 100-108.

Hartzok, A. (1997). "Pennsylvania's Success With Local Property Tax Reform: The Split Tax Rate." American Journal of Economics and Sociology 56(2): 205-219.

literature review, case studies, U.S., peer reviewed

Empirical comparisons of the effects of split-rate taxation in Pittsburgh and Harrisburg to support theoretical claims about the benefits of land-value taxation. In 1996, Pittsburgh had a 5.61 to 1 "land to building tax ratio," while the ratio was 4.00 to 1 for Harrisburg. Using data from previous studies and current sources, the advantages of taxing land values in each location are noted to be the distributional effects, impact on urban sprawl and growth in the number of new buildings in Pittsburgh, as well as the decline in vacant structures, increased employment and lower crime rate in Harrisburg.

Hartzok, A. (1999). Pennsylvania Farmers and the Split-Rate Tax. Land-Value Taxation: The Equitable and Efficient Source of Public Finance. K. C. Wenzer. Armonk, NY, M. E. Sharpe: 239-268.

case studies and literature review, U.S., not peer reviewed

Analysis of the impact of land value and split-rate taxation on farmers in Pennsylvania. The study uses data and information from past and current empirical studies to conclude that adoption of a pure land tax would be more progressive since the current property tax structure tends to favor larger farms. Split-rate taxation could "decrease pressures of land cost on farmers" that arise due to urban sprawl and land speculation, as well as encourage sustainable agricultural practices rather than large scale farms.

Hashimoto, H. and M. Sakuragawa (1998). "Land-Tax, Transfer and Growth in an Endogenously Growing Economy with Overlapping Generations." Japanese Economic Review 49(4): 412-425.

theoretical, peer reviewed

Considers the impact of a tax on land rent on economic growth and welfare. Using an

overlapping generations model similar to Feldstein (1977), it is shown that an increase in the tax on land rent "has the potential to increase the growth rates of both capital stock and the price of land." Feldstein's model has a similar result, however the price of land only increases in that model if savings is inversely related to interest rates. The current model finds that growth occurs even if savings is "non-decreasing in the interest rate." Such growth occurs as individuals shift their portfolio of investment away from land and toward capital, resulting in economic growth and ultimately to higher demand for and prices for land. This result does not necessarily hold, however, if the revenues from the tax on land rent are transferred to the older generation, which is assumed to have a negative savings rate. It is also shown that a tax on land can never be Pareto improving since landholders are "strictly worse off" under any of the transfer programs considered.

Hassan, A. (2005). The Local Government Rating System in Fiji. Land Value Taxation: An Applied Analysis. W. J. McCluskey and R. C. D. Franzsen. Burlington, VT, Ashgate Publishing Company: 65-90.

institutional, international, not peer reviewed

Description of the historical and current system of property taxation in Fiji. Fiji has a national land value tax system referred to as the Unimproved Capital Value System (or UCV). The tax base is the "value of land in its original state, disregarding the nature or value of buildings and other structural improvements on the land." Only urban land is taxed and cities may levy an additional tax for local finances in addition to the UCV.

Haughwout, A. F. (2004). Land Taxation in New York City: A General Equilibrium Analysis. City Taxes, City Spending: Essays in Honor of Dick Netzer. A. E. Schwartz. Northampton, MA, Edward Elgar.

simulation, U.S., not peer reviewed

Simulation study of the adoption of a land value tax to replace more distortionary taxes in New York City. Two scenarios are considered. In the first scenario, all taxes other than the land value tax are eliminated and the land tax is maintained at its current level. In spite of a reduction in public services due to lower tax revenues, there are potential gains to the local economy due to the elimination of distortionary taxes. Such gains include growth in output, land values, capital, and population. In the second scenario, all distortionary taxes are again eliminated; however, the land value tax increases enough to keep local government revenues, and thus local government spending, constant. Increases in local output, capital and population are again predicted in this scenario while land values are expected to decline. The decline in land values is hypothesized to occur because of the substantially higher tax on land required to keep revenues constant.

Haveman, M. (2004). "Evaluating the Feasibility and Burden-Shifting Effects of a Statewide Land Value Tax on Commercial and Industrial Property." State Tax Notes 34(11): 745-751.

conceptual, case study, U.S., peer reviewed

Analysis of the effects of land-value taxation on commercial and industrial property for the state of Minnesota. Empirical results indicate that most of the burden of a land value tax would shift to the metropolitan Twin Cities, where land values are higher, with a relatively greater burden on those properties with relatively lower "building-to-total value ratios." Politically, such a tax is not very feasible since "losers are likely to feel proportionately larger increases in taxes than the winners would receive in tax reductions."

Heilbrun, J. (1966). <u>Real Estate Taxes and Urban Housing</u>. New York, NY, Columbia University Press.

Heilbrun, J. (1969). Reforming the Real Estate Tax to Encourage Housing Maintenance and Rehabilitation. <u>Land and Building Taxes: Their Effect on Economic Development</u>. A. P. Becker. Madison, WI, University of Wisconsin Press: 63-79.

> conceptual, not peer reviewed

> Considers the advantages and disadvantages of a site value tax in improving the quality of housing in urban areas. A site value tax is stated to have advantages over a uniform property tax in providing incentives to both maintain and rehabilitate houses in urban areas. However, the concern with site value taxation is that it is unlikely to provide revenues comparable to a uniform property tax since the tax base is limited to land value. Even though land value should increase because of the decline in the tax rate on structures, this increase in land value is not likely to be enough to provide an adequate tax base. Split rate taxation is recommended as a compromise that has the benefits of site value taxation while still maintaining some of the revenue yield from a (lower) tax on buildings and structures. Tax abatements could be used in combination with this tax system to encourage even more housing rehabilitation and construction, if necessary.

Heilbrun, J. (1983). "Who Bears the Burden of the Property Tax?" <u>Proceedings of the Academy of Political Science</u> 35(1): 57-71.

> theoretical, U.S., not peer reviewed

> Theoretical consideration of the burden of property taxes. Land is considered separately from improvements since the burden of an appropriately assessed tax on "the market value of unimproved land" cannot be shifted while the burden of a tax on improvements can. For the tax on improvements, there are two distinct points of view: the "old view" in which the burden of the tax is passed on to renters and the "new view" by Mieszkowski (1972) in which a relatively greater share of the burden remains with capital owners if the tax is levied nationally (even if at different local tax rates) and the savings rate remains constant. The property tax is relatively more regressive if the old view or the "excise effect" of property taxation dominates and it is relatively more progressive if the new view of the "global effect" holds true. Estimates of property tax incidence by income level for U.S. households in 1970 are presented to illustrate this result.

Henderson, J. V. (1994). "Community Choice of Revenue Instruments." <u>Regional Science and Urban Economics</u> 24(2): 159-183.

> theoretical, peer reviewed

> Theoretical analysis of whether fees or taxes will be selected as revenue instruments by communities. The model indicates that if communities choose the revenue instrument based on principles of profit-maximization, fees and user charges will be preferable to taxes and will be set above the costs of providing public services. If voters within the communities choose the revenue instrument, then taxes will be preferable to fees, and land taxes will be used to "usurp all land rents whether the proceeds must be spent on public services or not." This result relies on the assumption that landowners and "voter-residents" are two separate groups of individuals. The results under both types of choices (profit-maximization and voters) will change depending on tax restrictions, balanced budget requirements and the degree of competition for residents across communities.

Henley, A. T. (1969). Land Value Taxation by California Irrigation Districts. <u>Land and Building Taxes: Their Effect on Economic Development</u>. A. P. Becker. Madison, WI, University of Wisconsin Press: 137-145.

    case study, U.S., not peer reviewed

    Comparative effects of a land value tax applied by irrigation districts in California. The Wright Act of 1887 set up irrigation districts in California, allowing them to place an assessment on land values to receive revenue in exchange for providing water supply. Land within the district is assessed based on land value, while exempting the value of improvements. The land is assessed regardless of whether it actually uses water for irrigation or not. Two cities are compared: the city of Dinuba, which is within an irrigation district, and the city of Arvin, which is not. The two cities are "highly comparable geographically and in resource potential and yet their differences were striking." Dinuba consists of a community of smaller farms with more "community welfare," while Arvin consists primarily of larger farms with very few "social developments."

Hicks, U. K. (1970). Can Land Value be Assessed for Purposes of Site Value Taxation? <u>The Assessment of Land Value</u>. D. M. Holland. Madison, Wisconsin, University of Wisconsin Press: 9-24.

    institutional, international, not peer reviewed

    Analyzes the relative successes in assessing land values across countries that have adopted land value taxation. In order for land value taxation to work efficiently and equitably, periodic reassessments of land value must be undertaken and they must be accurate. In cities like Nairobi and Lusaka, there is the ability to accurately measure land values because current data on bare-site sales can be used. In the more developed cities of Australia and New Zealand, site values must be calculated by subtracting the replacement cost of buildings from the overall value of property. This is not an accurate measure of site value, however, since two adjacent properties may be assessed with very different site values through this method. Attempts to predict future development and to forecast its impact on current site values, while theoretically correct, are not very accurate since they must estimate an appropriate discount rate as well as supply an accurate prediction for the timing of development.

Hobson, P. A. R. (1991). "Spatial Pricing Policy and the Henry George Theorem in an Optimally Sized Market with Land Rents." <u>Economics Letters</u> 37(2): 209-213.

    conceptual, peer reviewed

    Provides theoretical support for the Henry George theorem which states that "in an optimally sized jurisdiction, a tax on land rents will just cover the cost of local public expenditures." The model shows that the government can apply a tax on land rent to subsidize a local monopoly producer and provide for a local planning solution that is equivalent to the market solution.

Hoff, K. (1991). "Land Taxes, Output Taxes, and Sharecropping: Was Henry George Right?" <u>World Bank Economic Review</u> 5(1): 93-111.

    conceptual, peer reviewed

    Theoretical consideration of the efficiency of land value taxation in the presence of credit market imperfections. Since a land tax is paid regardless of the revenues earned from agricultural

production, the presence of the tax increases risk for farmers when they do not have access to efficient credit markets. In such conditions, it is Pareto superior to have output (export) taxes and land value taxes in a combined tax system since together they will reduce market distortions in consumption and production caused by the imperfect credit markets, while at the same time provide for better land use incentives.

Holland, D. M., Ed. (1970). <u>The Assessment of Land Value</u>. Madison, WI, University of Wisconsin Press.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Holland, D. M. and J. R. Follain (1991). The Property Tax in Jamaica. <u>The Jamaican Tax Reform</u>. R. Bahl. Cambridge, MA, Lincoln Institute of Land Policy: 605-639.

Hoyt, W. H. (1991). "Competitive Jurisdictions, Congestion, and the Henry George Theorem: When Should Property be Taxed Instead of Land?" <u>Regional Science and Urban Economics</u> 21(3): 351-370.

theoretical, peer reviewed

Theoretical analysis of the choice between uniform property taxation and land taxation for small and large tax jurisdictions. The goal in any tax jurisdiction is to maximize "net rent" of residents. In small jurisdictions, the model assumes that a change in tax policies will not affect housing prices or policies in other jurisdictions. Adopting a land value tax rather than keeping a uniform property tax in these jurisdictions will result in lower land values for residents and attraction of immigrants to the region. These immigrants will require more public services, but they will not contribute toward the costs of those services since they are only assumed to be taxed through capital (housing). Thus, landowners will face higher taxes in addition to facing lower land values in the face of land value taxation in small jurisdictions, and they will choose to maintain a uniform property tax. In large tax jurisdictions, the optimal tax policy depends on how much housing prices change as a result of the change in policy. While capital should still be taxed in larger jurisdictions, land values should be taxed at a higher rate, with the difference between the two rates depending on the size of the jurisdiction and the number of jurisdictions within the metropolitan area. The larger the number of jurisdictions, the greater "[t]he fraction of government expenditures financed by the property [or capital] tax rate."

Hughes, M. A. (2005). Why So Little Georgism in America: Using the Pennsylvania Case Files to Understand the Slow, Uneven Progress of Land Value Taxation. <u>National Tax Association's 98th Annual Conference on Taxation</u>. Miami, FL.

institutional, case studies, U.S., not peer reviewed

Considers the issue of why land value taxation is not more widely adopted by examining the political processes and debates involving split-rate property taxation in Pennsylvania. Four cities are examined: Pittsburgh, Allentown, Harrisburg and York. The split-rate tax system ended in Pittsburgh in 2001, largely due to an attempt to reassess properties at full-market value during the same period as a mayoral election. Allantown adopted a split-rate tax system in 1996 and survived an attempt to repeal that adoption in May of 1997. The attempt to repeal was largely led by area car dealers, who owned large tracts of undeveloped car lots that would be taxed more heavily under a split-rate system. Harrisburg adopted a split-rate tax of 23 mills on land to 17 mills on buildings in 1975 to encourage development in the face of abandoned and run-down properties after Tropical Storm Agnes hit the area in 1972. In 1982, the ratio of land to building

taxes in Harrisburg was raised to 6:1. Since that point, "the city has recorded 30,429 building permits that represent over $3.46 billion in new investment...and 85 percent reduction in the number of vacant properties." York has never successfully adopted land value taxation, potentially because the biggest political "power players" in York also happen to be the property owners who would have the most to lose under a land value tax system.

Hutchinson, A. R. (1963). Public Charges Upon Land Values. Melbourne, Australia, Land Value Research Group.

empirical, international

Comparative study of development in Australian states imposing land value taxes versus states imposing uniform property taxes. The study finds that for those Australian states imposing a land value tax, there is a higher ratio of new dwellings per 100 marriages, relative to those states imposing a uniform property tax (65.4 percent vs. 61 percent respectively). The value of improvements is almost double for the land-value-tax states and the mortgage assets of financial institutions is five times higher.

Ihori, T. (1990). "Economic Effects of Land Taxes in an Inflationary Economy." Journal of Public Economics 42(2): 195-211.

theoretical, peer reviewed

Analyzes the effects on the price of land as a result of a land tax when the savings portfolio includes three assets: land, capital and money. The introduction of money in an overlapping-generations model provides a result similar to Feldstein (1977) in that the price of land can increase in the long-run as the result of a land value tax. This occurs when "the income effect due to the reduction in lump-sum taxes on the younger generation is stronger than the substitution effects due to an increase in land taxes." Additionally, there may be a crowding-out effect as a result of the land value tax as individuals substitute away from land and capital in their savings portfolios in order to hold more money.

Itaya, J.-I. (1997). "The Incidence of a Tax on Pure Rent in an Altruistic Overlapping Generations Economy." Public Finance 52(2): 161-185.

theoretical, peer reviewed

A response to the Calvo, Kotlikoff and Rodriguez (1979) result that landowners will bear the burden of a land-value tax and therefore be neutral in its effects, even in an overlapping-generations model. The model introduces three separate extensions ("impure altruism, a nonlinear inheritance tax or a nonlinear property income tax"), all of which demonstrate that the neutrality result will not necessarily hold under each condition. In all three cases, "higher rates of land taxes promote capital accumulation and thus improve the social welfare of all succeeding generations." Whether current landowners gain or not depends on whether land prices rise or fall as a result of the land tax.

Jane H. Malme, a. J. Y., Ed. (2001). The Development of Property Taxation in Economies in Transition: Case Studies from Central and Eastern Europe. Washington D.C., World Bank.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

John van Rooyen, J. G., Simphiwe Ngquangweni and Tamas Fenyes, Ed. (1998). Agricultural Policy Reform in South Africa. Cape Town, South Africa, Francolin Publishers.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Kaizuka, K. (1994). The Tax System and Economic Development in Japan. Taxation and Economic Development Among Pacific Asian Countries. R. A. Musgrave, C.-h. Chang and J. Riew. Boulder, CO, Westview Press: 44-63.

institutional, international, not peer reviewed

Historical perspective on the use of land taxes for economic development in Japan. The land tax reform in 1873 established the land tax as the primary source of tax revenues through 1894. Land was taxed at a fixed rate of three percent of land value and has been associated with economic development in Japan during that time period.

Keall, R. D. (2000). "Land-Value Taxation Around the World: New Zealand." American Journal of Economics & Sociology 59(5): 417-438.

Kelly, R. (2004). Property Taxation in Kenya. International Handbook of Land and Property Taxation. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 177-188.

institutional, international, not peer reviewed

Description of the property tax system in Kenya. Local governments in Kenya have the choice of taxing either land or land and improvements. In reality, improvements are not taxed, however. Compliance is very low, with collection rates in the range of 10 to 60 percent, and properties are systematically under-assessed.

Klutznick, P. M. (1983). "The Effects of Property Taxation on Investment Decisions." Proceedings of the Academy of Political Science 35(1): 72-85.

conceptual and institutional, U.S., not peer reviewed

Examines the role of property taxes on the decision to locate businesses in particular localities. While property taxes are one criterion used by businesses when making the decision to locate in a particular area, they are not the only criterion and likely not the most important. Therefore offering tax abatements or preferential assessments are not necessarily the best option for localities and will result in lower local tax revenues. Several examples of urban commercial investments are provided to illustrate these points. A better alternative would be a tax policy which places a higher rate of taxation on land values and a relatively lower rate on the value of improvements. This would provide for more development of urban land and promote more efficient use of urban space while at the same time not diminishing local tax revenue.

Kochanowski, P. S. (1991). "Site Value Taxation in a Declining City." American Journal of Economics and Sociology 50(1): 15-58.

conceptual, peer reviewed

Considers how the declining growth in a city affects the likelihood of passing a site value tax. Cities that are facing economic decline are less likely to enact site value tax systems because of

political opposition and the response to declining growth by the local government. Political opposition primarily comes from the group that will have to pay more taxes due to the change in tax structure and will experience very low efficiency gains as a result of the tax. Under a site value tax system, those individuals with relatively lower "improvements to land ratios" will bear a greater tax burden. As city populations spread toward the suburbs, "many properties in the core of the city will find a reduction in their improvements to land ratios" as businesses relocate toward the suburbs. Suburban land will, therefore, see increasing improvements-to-land ratios while land in the central city will experience declining ratios, making adoption of a site value system in the city less politically feasible. A typical response by local governments experiencing such decline is to exempt property improvements from future taxation in order to attract investment in vacant properties. Such action on the part of the government further decreases the advantages to property owners of adopting a site value tax system.

Ladd, H. F. (1998). Theoretical Controversies: Land and Property Taxation. Local Government Tax and Land Use Policies in the United States: Understanding the Links. W. E. Oates. Northampton, MA, Edward Elgar: 25-49.

 review of the literature, not peer reviewed

 Considers the relative effects on efficiency and equity of land value and uniform property taxation largely through a review of the literature. A land value tax is neutral in spite of theoretical arguments by Feldstein (1977). The Feldstein result is obtained by effectively changing the initial endowments of taxpayers, which should have a real impact on economic decision-making, and has nothing to say about the neutrality of a tax on land values. Land value taxes are noted to be preferable to head taxes in financing public goods in competing tax jurisdictions, especially in the presence of economies of scale in providing public goods. Whether property taxes, in combination with "perfect" zoning laws, can result in non-disrting decisions by households is controversial in the literature, and largely hinges on whether "perfect" zoning laws are feasible, especially in rural areas and in "large...heterogeneous cities." The effects on tax incidence and development when switching to a land value tax depend on whether the tax restructuring includes all cities or is only done in a single location: there are greater effects on development when the restructuring only applies to a single metropolitan area.

Lam, A. H. S. (2000). "Land-Value Taxation Around the World: Republic of China (Taiwan)." American Journal of Economics & Sociology 59(5): 327-336.

 institutional, international

 Considers Taiwan's reliance on the use of land-value and land-value-increment taxes since 1977 as a means of preventing land speculation.

Laurent, J., Ed. (2005). Henry George's Legacy in Economic Thought. Northampton, MA, Edward Elgar.

 An edited volume. Citations to specific chapters are shown separately in this bibliography.

Lee, K. (2003). "Should Land and Capital be Taxed at a Uniform Rate?" The Canadian Journal of Economics 36(2): 350-372.

 theoretical, peer reviewed

 Offers a theoretical explanation for why uniform property taxes exist when communities could

tax land and capital at different rates and result in less economic distortions. The model considers the presence of absentee landowners in comparing the efficiency effects of a "separate tax" and a property tax. A separate or two-rate property tax is preferable when there are no absentee owners (the primary result from past literature). However, as absentee ownership increases, public goods will be "inefficiently overprovided" under a two-rate system as residents increase taxes on land to provide for their public goods, while setting the rate on capital structures low or equal to zero. If jurisdictions were constrained to set a single property tax on land and structures, they would choose to set a somewhat lower single tax rate so as not to discourage capital formation within the tax district. This would also diminish the inefficiencies from an overprovision of the public good in the two-rate or "separate" tax system.

Lee, T.-I. (2000). "Land-Value Taxation Around the World: Republic of Korea (South Korea)." American Journal of Economics & Sociology 59(5): 371-383.

institutional, international

Considers the effects a national landholding tax and a land-value increment tax. These taxes were primarily passed to deter increasing land prices as a result of speculation.

Lefmann, O. and K. K. Larsen (2000). "Land-Value Taxation Around the World: Denmark." American Journal of Economics & Sociology 59(5): 185-204.

Lent, G. E. (1967). "The Taxation of Land Value." International Monetary Fund Staff Papers 14: 88-121.

conceptual and institutional, international, not peer reviewed

Analysis of land value taxation as a means "to meet the social needs of developing communities without adverse effects on incentives." Three forms of taxation are considered: a tax on unimproved land value, a tax on increments in land value and a land betterment tax. For all three, the contribution considers applications of the tax in different countries as well as its equity and economic effects. Despite the difficulty with administration, a tax on unimproved value has been used in many countries, including Australia, New Zealand and Canada, and particularly in Canada there is evidence of a positive impact on economic development from the tax. A tax on increments in land value had been applied in Denmark, Italy, and Israel as well as in some African and Latin American countries, with little evidence of providing adequate revenues and the additional problem of "inhibiting" land sales. A land betterment tax has seen applications in England and many South American countries, including Venezuela, Columbia, Ecuador and Uruguay.

Lent, G. E. (1977). "Taiwan's Land Tax Policy." Bulletin for International Fiscal Documentation 31(7): 291-299.

institutional, international, peer reviewed

Lent, G. E. (1978). "Experience with Urban Land Value Tax in Developing Countries." Bulletin for International Fiscal Documentation 32(2): 75-83.

institutional, international, peer reviewed

Levy, J. (1997). "Land Rent, Ethics, and Capitalism's Gestation Crisis: A Jerome Levy Economics Institute Paper." American Journal of Economics and Sociology 56(1): 31-40.

conceptual, international, peer reviewed

Provides a justification for land rent taxation by considering the relationship between rising land values and economic problems that exist in industrialized countries, with particular emphasis on the U.S. and Europe. High unemployment rates in Europe and the widening gap between the rich and the poor can be explained, in part, by rising land values that reward non-productive resources while increasing the costs of living to productive resources, i.e. workers. Rising land values also allow for an increasing portion of limited private profits to flow to landowners, who undertake no production or risk in acquiring said profits, as opposed to owners of productive resources. Taxation of land rent is recommended as a means to correct for these persistent economic problems.

Lichfield, N. and O. Connellan (1997). Land Value Taxation in Britain for the Benefit of the Community: History, Achievements and Prospects. Cambridge, MA, Lincoln Institute of Land Policy Working Paper.

institutional, international, not peer reviewed

Constructs the historical context of the issue of site value taxation in Britain and discusses current issues as related to planning. There is a conflict between the current planning system and a potential site value taxation system in Britain. Under a site value tax system, land should be valued according to its unimproved site value, based on its highest and best use. The possibility exists that while the value of land for taxing purposes would be calculated based on the assumption that it can be used according to its highest valued use, that use may, in fact, not even be allowable according to the current planning permits for a parcel of land. The two systems of planning and taxing, therefore, would need to be administered together should a site value tax system be enacted in Britain.

Lim, D.-H. (1992). "The Nonneutrality of the Land Value Tax: Impacts on Urban Structure." Journal of Urban Economics 32(2): 186-194.

theoretical, peer reviewed

A response to the proposed neutrality of a land tax in terms of its impact on the timing of development. A model similar to Mill's (1981) is utilized to show that a land tax which changes over time will result in real effects on urban growth. More specifically, an increase in a land tax will cause land to be developed earlier for residential purposes as opposed to owners holding on to land for later industrial development. The urban area is, therefore, larger in the first period with the residential development and smaller in the second due to lower industrial development. Total output and labor supply likewise are higher than they otherwise would be in the first period due to development, but the magnitude of their predicted decline in the second period is uncertain as it relies on the level of development in the first period.

Lin, C. (1994). Property Taxation as a National Policy Tool in Taiwan. Taxation and Economic Development Among Pacific Asian Countries. R. A. Musgrave, C.-h. Chang and J. Riew. Boulder, CO, Westview Press: 104-116.

institutional, international, not peer reviewed

Describes the use of property taxes in solving problems of distribution, development and economic stability in Taiwan. The land value tax is one of three types of land taxes levied in

Taiwan. The tax rate is intentionally progressive since its goal is to "penalize large landowners." Whether this has been effective or not is questionable since landowners can diversify their land-holdings among several tax jurisdictions to avoid the higher progressive tax rate in a single jurisdiction. A vacant lot tax of "two to five times the level" of the land value tax is levied in urban areas on designated plots in order to suppress the rapid increases in land prices. However, the tax has only been levied by two municipalities due to the administrative difficulties associated with it.

Lin, Z.-F. (1995). "Neutrality of a Differential Land Value Tax in an Urban Growth Economy." <u>Academia Economic Papers</u> 23(3): 227-254.

theoretical, peer reviewed

Provides support for the literature which claims that a land tax is not neutral in its effects on the timing of development. A two-period model similar to Mills (1981) and Lim (1992) is developed in which four economic agents (industrial firms, residential housebuilders, urban households and absentee landlords) make decisions regarding consumption and production of land and a "composite good." A uniform land value tax is shown to be non-neutral in its effects on development because the endogenous variables in the model (including resource usage and income among others) all change when a land value tax is imposed: in particular land is developed more quickly and total real output falls for the combined two periods. A land value tax that is applied at different rates depending on the use or type of land may be neutral, however, because it can eliminate arbitrage opportunities that occur across different types of land ("which have different revenues") when a uniform land value tax is applied.

Lindholm, R. W. (1965). "Land Taxation and Economic Development." <u>Land Economics</u> 41(2): 121-130.

conceptual, international, not peer reviewed

Theoretical consideration of the benefits of land value taxation on economic development in developing countries. Land rent is a preferable source of tax revenue in developing countries both for philosophical reasons (since no individual earns the individual rights to land rent) and for development reasons. It can be particularly useful for countries with large agricultural sectors because it will encourage better use of agricultural land as well as stimulate "orderly urban growth". Additionally, land value taxes are easier to administer and are subject to less potential "government graft" due to the inability of individuals to hide the fact that they own land. Despite these perceived benefits of land value taxation, however, countries continue to rely very little on it as a major source of revenue, and instead rely too heavily on income and export taxes.

Lindholm, R. W., Ed. (1969). <u>Property Taxation, USA</u>. Madison, WI, University of Wisconsin Press.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Lindholm, R. W. (1972). "Twenty-one Land Value Taxation Questions and Answers." <u>American Journal of Economics and Sociology</u> 31(2): 153-161.

Lindholm, R. W. (1979). "Public Choice and Land Tax Fairness." <u>American Journal of Economics and Sociology </u>38(4): 349-356.

conceptual, peer reviewed

Analyzes the reasons for lack of public acceptance of land value taxation. In spite of the positive effects of land value taxation in terms of efficiency and ethics, it is not strongly supported by the public politically. A number of explanations are offered. There is confusion among the public about what a land value tax is and, considering it another tax on property, do not view it favorably. There is a lack of public data on the incidence of income and sales taxes by income group that could help inform the public about the relative efficiencies of a land value tax relative to other tax systems. Finally, any proposed system of tax revenues should be closely linked to the expenditures it will finance and provide taxpayers with some leeway in paying their share of the tax burden.

Lindholm, R. W. and A. D. Lynn, Eds. (1982). Land Value Taxation: The Progress and Poverty Centenary. Madison, WI, The University of Wisconsin Press.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Lindholm, R. W. and R. G. Sturtevant (1982). American Land Tax Roots: Plus Experimentation in Oregon. Land Value Taxation: The Progress and Poverty Centenary. R. W. Lindholm and A. D. Lynn. Madison, WI, The University of Wisconsin Press: 83-94.

simulation, U.S., not peer reviewed

Analyzes the simulated effects on Eugene, Oregon of switching from a uniform property tax to a land value tax. It is estimated that in order to replace the revenues generated by a uniform property tax of 3%, land value would have to be taxed at 10.9%. The effects of this shift on the city of Eugene are predicted to be an increase in capital intensity and a 13.8% reduction in the "land consumed for single family residences." The "tax burden per lot" is expected to remain constant as lot sizes diminish and population grows. Land values are expected to increase while the cost of structures will decline. Overall growth in Eugene is predicted to be more compact.

Liu, B.-C. (1985). "Mathis and Zech's 'Empirical Test' of Land Value Taxation: A Critique of a Commendable but Unsuccessful Effort to Measure the Effects of a Basic Levy." American Journal of Economics and Sociology 44(2): 137-143.

Lusht, K. (1975). "Redistribution of Tax Burden upon Adoption of Site Value Taxation in Non-metropolitan Jurisdictions." Assessor's Journal 9: 23-33.

Lusht, K. (1992). The Site Value Tax and Residential Development. Cambridge, MA, Lincoln Institute of Land Policy.

simulation, international

Empirical predictions of the impact of site value taxation on development in Melbourne. Of the 56 municipalities in Melbourne, almost half use site value taxes while the other half use a uniform property tax to generate local revenues. While a number of different models are estimated, the results consistently indicate that the use of site value taxation results in approximately 50 percent more development as measured by such variables as residential value per acre and number of building permits issued.

Mair, D. and R. Damania (1988). "The Ricardian Tradition and Local Property Taxation." Cambridge Journal of Economics 12(4): 435-449.

Malme, J. H. (1999). "Taxes on Land and Buildings: Case Studies of Transitional Economies." <u>Land Lines</u> 11(3).

    institutional, international, not peer reviewed

    Comparative analysis of the use of property taxation in Eastern European countries. As decentralization of government activities is occurring in former Soviet-bloc countries, there is a need for local revenues to finance expenditures. Land-value and property taxation are particularly attractive options since they also encourage the development of private property and efficient property markets. Estonia, however, has been one of the few countries to adopt a land tax based on market value rather than on "the basis of land or building area, adjusted by coefficients related to...factors not derived directly from market indicators." Persistent "financial hardships" and administrative costs of transition are significant barriers to establishing broad property or land-value taxes as significant sources of local revenue.

Malme, J. H. and W. J. Brzeski (2001). Property Tax Developments in Poland. <u>The Development of Property Taxation in Economies in Transition: Case Studies from Central and Eastern Europe</u>. J. H. Malme and J. M. Youngman. Washington D.C., World Bank: 11-26.

    institutional, international, not peer reviewed

    Description of the past and current property tax system in Poland. Taxes on property in Poland are applied per square meter of property as opposed to based on market value. Land is taxed at a rate different than buildings and structures, but the rates depend on type of land (agricultural, forest, residential, commercial) and type of building (residential, other purposes). "Buildings used for economic purposes" are taxed at a substantially higher rate than "land in economic use."

Malme, J. H. and N. Kalinina (2001). <u>Property Tax Developments in the Russian Federation</u>. Washington, D.C., World Bank.

    institutional, international, not peer reviewed

    Historical context on and current analysis of property taxation in the Russian Federation. Buildings and land have historically been separated since land is considered a natural resource and "had no value under communism except in its productive capacity." Land tax rates are currently set very low and are not based on market value, with the revenues from land taxes shared among national, regional and local governments.

Malme, J. H. and T. Tiits (2001). The Land Tax in Estonia. <u>The Development of Property Taxation in Economies in Transition: Case Studies from Central and Eastern Europe</u>. J. H. Malme and J. M. Youngman. Washington, D.C., World Bank: 27-38.

    institutional, international, not peer reviewed

    Historical context on property taxation and current analysis of the land tax in Estonia. The national land tax in Estonia was adopted in 1993, with the purpose of encouraging more efficient use of land. Proceeds of the land tax are shared among local governments, but "accounted for only 6.5 percent of local revenues" in 1995. The tax was based on market values of land at a time when there were not well established real estate markets. Thus, valuation was initially accomplished by establishing "price zones" for urban areas, where prices were determined based on location, quality and usage of the land.

Manning, H. J. and C. O'Faircheallaigh (2000). "Land-Value Taxation Around the World: Papua New Guinea." American Journal of Economics & Sociology 59(5): 385-395.

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

empirical, U.S., peer reviewed

Provides empirical tests for "differential tax" or two-rate tax systems to differentiate among the competing results of theoretical models in the literature. Using measurements for per capita construction values in 27 localities in Pennsylvania as the dependent variable, the study finds no significant correlation between the dependent variable and two different (and separately modeled) ratios of the tax rate on land to the tax rate on buildings for the various localities. It must be noted, however, that only 3 of the 27 localities had "differential tax systems" at the time of the study so the values of these ratios were equal to unity for 24 of the 27 observations.

McCalmont, D. B. (1976). "Differential Taxation of Site Values and Structures." Southern Economic Journal 43(1): 924-936.

conceptual and simulation, U.S., peer reviewed

Considers the revenue effects and feasibility of lowering the tax rate on structures while increasing the tax rate on land. Since the value of structures and land will change as the result of the new tax rates, the model encompasses two time periods: the short-term, when prices have not yet adjusted, and the long-term, when prices of structures and land can fully adjust. Since the value of structures and land will be the base of the tax in a two-rate system, these values are vital for any analysis of the revenue impact of the tax change. The price change on structures is shown to be proportional to the change in the "physical stock of structures," and is assumed to be positive, while the change in land values is assumed to be negative. Since there are offsetting effects on revenues, a specific example of a change in the property tax system for Franklin County, Ohio is considered. If the tax rate on structures was reduced by 40%, it is shown that the land-value tax rate would have to be higher when prices have fully adjusted, than it would be in the short-run because the effect of lower land values on tax revenues outweighs the effect of higher structural values.

McCluskey, W. J. (2005). Land Taxation: The Case of Jamaica. Land Value Taxation: An Applied Analysis. W. J. McCluskey and R. C. D. Franzsen. Burlington, VT, Ashgate Publishing Company: 19-63.

institutional, international, not peer reviewed

Historical background on and current description of the property tax base in Jamaica. The basis of the property tax in Jamaica was determined to be according to its land value in the Land Valuation Act of 1956. By 1974, revaluations of property based on the "unimproved value of the land" were completed. The primary reasons for taxing land were to put a tax system in place that would not tax the efforts put into land use and to discourage "the withholding of land from use." The land tax currently accounts for over 25% of the revenue for local parish councils. The efficiency of the land tax system is somewhat limited, however, by the fact that there have only been four revaluations of land since the 1956 Act.

McCluskey, W. J. (2005). Property Tax Systems and Rating in New Zealand. Land Value Taxation: An

Applied Analysis. W. J. McCluskey and R. C. D. Franzsen. Burlington, VT, Ashgate Publishing Company: 115-146.

institutional, international, not peer reviewed

Description of the property tax system in New Zealand. Since 1896, localities in New Zealand have had three options for local property tax bases: the total value of land, buildings and improvements; the site value of land; and the annual rental value. Site value assessment has been the most widely adopted system, with over 60% of localities electing to use such assessment in 2002. Localities have the ability to set differential tax rates for different classes of property.

McCluskey, W. J. (2005). Site Value Taxation in Queensland. Land Value Taxation: An Applied Analysis. W. J. McCluskey and R. C. D. Franzsen. Burlington, VT, Ashgate Publishing Company: 227-252.

institutional, international, not peer reviewed

Provides the political basis for and current description of the site value tax system in Queensland. Queensland is the only Australian state to use the unimproved value of land as the tax base for all property taxation, both urban and rural. The use of unimproved land value is becoming increasing more complicated and many states in Australia have elected to use the site value of land as an alternative since it includes the value of all permanent improvements to the land.

McCulloch, J. (1979). Site Value Rating in Johannesburg, South Africa. The Taxation of Urban Property in Less Developed Countries. R. W. Bahl. Madison, WI, The University of Wisconsin Press: 263-267.

McDonald, J. F. (1981). "Capital - Land Substitution in Urban Housing: A Survey of Empirical Estimates." Journal of Urban Economics 9(2): 190-211.

literature review, peer reviewed

Evaluates empirical estimates of the elasticity of substitution between capital and land in the urban housing market from the past literature. The overall findings are that estimates will vary across and within metropolitan areas and that all estimates are likely to be "biased toward zero because of measurement error in the estimates of land values."

McFarlane, A. (1999). "Taxes, Fees, and Urban Development." Journal of Urban Economics 46: 416-436.

theoretical, peer reviewed

Builds on Anderson (1986) and Turnbull (1988) by assuming that the timing of development and capital density are not exogenously related when taxes and fees on land are varied. While the model considers an assortment of fees and taxes, both pre- and post-development, it generally finds that the use of fees will tend to slow development and increase capital density, while the use of land-value taxes will tend to speed development and lower capital density. These results are ambiguous, however, depending on the existence of positive rents on agricultural land prior to development as well as the prospects for urban growth.

McGuire, T. J. and D. L. Sjoquist (2003). Urban Sprawl and the Finances of State and Local Governments. State and Local Finances Under Pressure. D. L. Sjoquist. Northampton, MA, Edward Elgar: 299-326.

conceptual, not peer reviewed

Analysis of the causation of and problems created by urban sprawl. The contribution draws on empirical and theoretical literature to examine why urban sprawl is a concern how it can impact local government financing. Among the proposed solutions available to localities is a switch from a uniform property tax to a land-value tax. Property taxes are identified as one of the contributors to sprawl since they create distortions which can potentially lead to "excessive expansion of an urban area." Even though land-value taxes would eliminate such distortions, there are no U.S. localities that rely on land value as the sole source of property taxation.

McLean, I. and J. Nou (2006). "Why Should We Be Beggars with the Ballot in Our Hand? Veto Players and the Failure of Land Value Taxation in the UK 1909-14." British Journal of Political Science 36(4): 575-592.

conceptual, international, peer reviewed

Analyzes the rejection of land value taxation proposals in Britain from 1909 to 1914. Two competing explanations are explored. The first is based on the traditional explanations of political incompetence and economic impracticality. An alternative explanation is that land value taxation was defeated because of the rise of "veto players" in the British political system from 1909 to 1914. It is demonstrated that during that time period, there was a suspension of the constitutional features which ensured that only elected politicians formed policy in Britain. These included veto actions by the monarchy and the House of Lords that were particular to the time frame under consideration and were made to the benefit of landowners.

McMahon, T. (1930). "The Operation of the Graded Tax Law in Pittsburgh." Annals of the American Academy of Political and Social Science 148(1): 139-144.

institutional, U.S., not peer reviewed

Considers the impact of the 1913 graded tax law in Pittsburgh. As Chief Assessor of the City of Pittsburgh, the author cites anecdotal and statistical evidence that individual homeowners have primarily benefited through lower tax burdens as a result of the law, while many industrial properties have lower tax burdens as well when the building values on said property are substantially greater than the land values. Evidence of development in the city can also be seen by considering the examples of new investment by companies like U.S. Steel, Bell Telephone, Allegheny Heating Corporation and three railroad companies. While this is only "anecdotal evidence" of prosperity that may be attributed to other factors as well, the new tax laws do not appear to hinder growth or increase tax burdens on households.

Mera, K. (1992). "Land Taxation and Its Impact on Land Price: The Case of Japan in the 1990s." Review of Urban and Regional Development Studies 4(2): 130-145.

case study, international, peer reviewed

Considers the potential impact of the Land Value Tax in Japan, which became effective in January 1992. The tax was enacted in 1991 partly in response to rising land prices in Japan during the 1980s and partly due to the desire to improve on the efficiency of urban land use. A national tax rate of 0.3% of assessed land value was established by the act; however, exemptions were made for smaller land holdings and for "land whose value falls below 30,000 yen per square

meter." Capital gains taxes from the sale of land were also increased from 26% to 39% by the act. The land tax rate was set at a relatively low level due to political pressure and, as a result, the expected impact on both land values and urban land use are very minor. However, more efficient land use and lower land prices may result from proposed increases in the assessment ratios for land.

Mieszkowski, P. (1972). "The Property Tax: An Excise Tax or a Profits Tax?" <u>Journal of Public Economics</u> 1: 73-96.

theoretical, peer reviewed

Theoretical consideration of the incidence of a property tax on "reproducible, shiftable, capital." If such a property tax is levied at the same rate in all localities, then capital owners will bear the entire burden of the tax. When different property tax rates are levied across localities, however, there are two effects: one, the after-tax return on capital falls by the average tax rate and two, the cost of capital services (i.e. housing rents) increases in high-tax localities and decreases in low-tax localities until the after-tax rate of return is equal across all localities. The incidence of the property tax is in this way shifted to consumers of these services. And if residential capital is taxed more heavily than industrial capital, "the price of housing in general will rise relative to the price of industrial goods; there will be a reallocation of resources." Consumers of goods and services other than housing will gain as the prices on these other goods and services fall relative to the price of housing. There will also be changes in the returns to other factors of production, where changes in wages are likely to be smaller than changes in the value of land since labor is relatively more mobile.

Mieszkowski, P. and G. R. Zodrow (1989). "Taxation and the Tiebout Model: The Differential Effects of Head Taxes, Taxes on Land Rents, and Property Taxes." <u>Journal of Economic Literature</u>.

theoretical, peer reviewed

A survey of the efficiency and distributional effects of different local taxes. The property tax is examined and evaluated from the perspectives of a non-distortionary "benefit tax" (such as "the head tax envisaged by Tiebout") vs. a distortionary "excise tax." The role of these different types of taxes in "Tiebout-type models" is examined with particular emphasis on the efficiency of head taxes vs. land-value taxes. It is demonstrated that while a head tax may be efficient in the strict Tiebout metropolitan model, these efficiencies disappear in a regional model because taxes can be avoided by moving to another location. Thus, in regional models, a tax on land rents proves to be more efficient. Since land rents are "created through the advantages of collective consumption," it is also efficient to tax those rents in order to maintain the collective consumption.

Mills, D. E. (1981). "The Non-Neutrality of Land Value Taxation." <u>National Tax Journal</u> 34(1): 125-129.

theoretical, peer reviewed

Builds on Bentick (1979) which finds that a tax on land value is not neutral when the tax base is current market value. The Bentick model is extended by considering how decisions about use of land and, thus its potential income streams, are impacted by the imposition of a land-value tax. Results indicate that while a tax on land income is neutral in its effects on land allocation, a tax on land value is not. The reason offered is similar to Bentick: "the imposition of the tax has an effect on land value equivalent to raising the discount rate…[which] would favor the project with the early-payoff income stream…, it distorts resource allocation."

Mills, D. E. (1983). The Timing of Urban Residential Land Development. <u>Research in Urban Economics</u>. J. V. Henderson. 3: 37-57.

>theoretical, not peer reviewed

>Provides a model for the timing of urban land development that considers the impact of property taxation. A dynamic model of land development is constructed and an equilibrium is defined as one in which "all [development] options actually exercised will be equally profitable in a present value sense." The imposition of a property tax in the model ultimately results in less residential units of all types being developed during the construction phase and favors the development of more land-intensive housing.

Mills, E. S. (1998). The Economic Consequences of a Land Tax. <u>Land Value Taxation: Can It and Will It Work Today?</u> D. Netzer. Cambridge, MA, Lincoln Institute of Land Policy: 31-59.

>theoretical, not peer reviewed

>Theoretical model that compares the relative impacts on a metropolitan area of a land value tax versus a uniform property tax. The model demonstrates the non-neutrality of a uniform property tax in the form of lower capital-to-land and labor-to-land ratios than would result under either a land value tax system or a system with no taxes. The model further indicates that under a uniform property tax, the metropolitan area will have lower employment, less capital structures, lower total production and a smaller land area. The latter two results are particularly significant contributions to understanding the different predicted impacts of the two tax systems.

Miscynski, D. G. H. a. D. J., Ed. (1978). <u>Windfalls for Wipeouts: Land Value Capture and Compensation</u>. Washington D.C., American Planning Association.

>An edited volume. Citations to specific chapters are shown separately in this bibliography.

Mueller, A. (1995). Agricultural Land Tax and the Transition to Market Economy. <u>Agricultural Landownership in Transitional Economies</u>. G. Wunderlich. Lanham, MD, University Press of America, Inc.

>conceptual, international, not peer reviewed

>Compares the relative advantages and disadvantages of property taxes and income taxes as sources of revenue for rural areas in transitional economies. A land or property tax is recommended as a tax that is relatively efficient, equitable and suitable as a source of local funds relative to the income tax. An income tax has particular problems in transitional economies because of collection issues and the accounting skills that are required for individuals. The primary disadvantages of land taxation are its high administrative costs and the fixed value of land taxes relative to varying farm incomes. Since land value taxes reduce land prices in the short-run, relatively high land value taxes should be levied if the goal of the government is to reduce the holdings of large private owners. This would lower "the government's costs of expropriating the land."

Nechyba, T. J. (1998). Replacing Capital Taxes with Land Taxes: Efficiency and Distributional Implications with an Application to the United States Economy. <u>Land Value Taxation: Can It and Will It Work Today?</u> D. Netzer. Cambridge, MA, Lincoln Institute of Land Policy: 183-204.

theoretical, simulation, U.S., not peer reviewed

Extends the Brueckner 1986 model to addressing the issue of replacing a capital tax system with a land tax system in a small open economy. The model mimics past results that "capital is used more intensively as the tax rate on capital declines, and output rises as the relative share of tax revenue raised through land taxes increases." Regarding applications to the U.S., the required tax on land would have to increase considerably (within a range of 195 to 388%) to fully replace a tax on capital. The distributional effects would vary depending on the elasticity of substitution, although landowners may experience net gains if their "land was initially valued the same before the tax reform."

Nechyba, T. J. (2001). Prospects for Land Rent Taxes in State and Local Tax Reforms, Lincoln Institute of Land Policy Working Paper.

simulation, theoretical, U.S., not peer reviewed

Simulation study of the effects on individual U.S. states as well as an "average" state when implementing a revenue-neutral tax reform to replace distortionary taxes on labor or capital with a tax on unimproved land rents. The results indicate that such reform is economically feasible in all states and that, on average, a reduction in taxes on capital (i.e. corporate income taxes and property taxes) would require a smaller increase in land taxes than a similar reduction in labor taxes. These reductions in taxes on capital would also reduce losses to landowners, who would be paying a higher tax on land, making such a tax reform both more politically feasible as well as more economically beneficial for individual states because of the added economic growth. The detailed results for individual states are widely divergent depending on the economic conditions and tax structures of the states. In general, however, the study indicates that economic growth is more likely to occur in lower-income states and those states with higher distortionary tax systems currently in place.

Netzer, D. (1962). "The Property Tax and Alternatives in Urban Development." Papers and Proceedings of the Regional Science Association 9: 191-200.

Netzer, D. (1966). Economics of the Property Tax. Washington, D.C., The Brookings Institution.

conceptual, not peer reviewed

Considers site value taxation in a chapter on alternatives to the property tax. Site values taxes are argued to be administratively feasible in spite of a number of arguments on that basis against them. While site values are difficult to estimate in the absence of any sales data on unimproved sites, property values are likewise difficult to estimate when similar properties are not bought and sold in the market. This is particularly true for relatively expensive properties and for those properties that have "highly specialized" uses. Site values have been taxed successfully in a number of different locations around the world, so using site values as a tax base is, indeed, feasible. While the effects of site value taxes are assumed to be largely neutral, there are theoretical arguments that it may cause more intensive development of land. This is certainly true, relative to a system that utilizes a uniform property tax. However, the distortion in usage is actually caused by the property tax since it encourages under-utilization of land, and switching to a tax on site values merely removes this distortion. While there may be benefits to having open space through property taxation, open space that can be better achieved through public acquisition of land than through a distortive property tax. Redistributional (equity) and revenue adequacy

issues are more significant concerns for site value taxation although the revenue adequacy issue may be over-inflated due to inaccurate estimates of land values in empirical studies.

Netzer, D. (1984). "On Modernizing Local Public Finance: Why Aren't Property Taxes in Urban Areas Being Reformed into Land Value Taxes?" American Journal of Economics and Sociology 43(4): 497-501.

Netzer, D., Ed. (1998). Land Value Taxation: Can It and Will It Work Today? Cambridge, MA, Lincoln Institute of Land Policy.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Netzer, D. (1998). The Relevance and Feasibility of Land Value Taxation in the Rich Countries. Land Value Taxation: Can It and Will It Work Today? D. Netzer. Cambridge, MA, Lincoln Institute of Land Policy: 109-136.

conceptual, international, not peer reviewed

Addresses the issue of why rich countries do not rely heavily on land value taxation given its theoretical benefits. The author considers empirical data on 23 "rich OECD countries" to determine the relative importance of local to national government revenues and the relative importance of property tax to other tax revenues to determine whether a land-value tax system is feasible in these countries. The remaining analysis considers whether there is enough revenue potential in a land tax to replace other taxes and issues of compliance/collection costs. Given the lack of "reliable data" (as noted by the author), no clear conclusions are stated.

Netzer, D. (2001). "What Do We Need to Know about Land Value Taxation?" American Journal of Economics and Sociology 60(5): 97-118.

conceptual, peer reviewed

Addresses the question of whether land-value taxation is an appropriate consideration in the modern world.   While there is much yet to be examined in the academic literature, there is even more work to be done to convince policy-makers that land-value taxation is both relevant (can provide adequate revenue) and feasible from an administrative perspective.   A land value tax is noted to be more relevant when local governments are responsible for most local services and when most local government spending must be financed through local revenues. The feasibility of such a tax is noted to be higher in countries that already have a property tax system in place with valuations based on the market value of property. To address the issue of relevance, a study of "the 23 'rich' OECD countries" is conducted to determine the relative centralization of government and the level of financing done by local governments. The feasibility issue is addressed primarily in terms of the U.S. system and by noting that the administrative and compliance costs of a land-value tax system are substantially lower than those for income and sales tax systems. Feasibility and relevance are significantly bigger problems for developing economies.

Netzer, D., Ed. (2003). The Property Tax, Land Use and Land Use Regulation. Northampton, M.A., Edward Elgar.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Neuner, E. J., D. O. Popp, et al. (1974). "The Impact of a Transition to Site-Value Taxation on Various Classes of Property in San Diego " <u>Land Economics</u> 50(2): 181-185.

       simulation, U.S., peer reviewed

       A simulation study of the differential effects on property values upon adoption of a site-value tax in San Diego. The study indicates that "[t]he classes which would most benefit, as a percentage of their current tax, would be public utilities, commercial and industrial parcels, apartments, and hotels and motels." These classes of property all have relatively high "ratio[s] of net assessed value to land value" due to the relatively high value of structures on the properties. The classes of property that would have a higher potential tax incidence are single-family houses, trailer parks, and "combined business and dwelling units," as well as undeveloped property. Within the class of single-family houses, middle-income classes would potentially experience a decline in tax incidence under site value taxation, with greater incidence falling on relatively higher and lower income households.

Neutze, M. (1969). Property Taxation and Multiple-Family Housing. <u>Land and Building Taxes: Their Effect on Economic Development</u>. A. P. Becker. Madison, WI, University of Wisconsin Press: 115-128.

       theoretical, not peer reviewed

       Considers the effects of uniform property and site value taxation on multi-family dwellings. Site value taxes, relative to uniform property taxes, are expected to discourage future development of large-scale apartments and encourage current construction of single-family homes. Large scale development is discouraged because it redistributes land to less wealthy households. The only positive effect of site value taxes on large scale, multi-family developments is through encouraging the demolition of buildings in slum areas by increasing the holding (speculation) costs of such properties.

Neutze, M. (1970). "The Price of Land for Urban Development." <u>Economic Record</u> 46: 313-328.

Nixon, G. B. (2000). "Land-Value Taxation Around the World: Canada." <u>American Journal of Economics & Sociology</u> 59(5): 65-84.

       institutional, international

       Historical and current usage of land taxation in Canada. The contribution provides a brief descriptive comparison of developmental impact from having different tax rates on structures in two suburban areas around Vancouver. New Westminster has historically had lower taxes on improvements and "is a compact, well developed city." However, the neighboring suburb of Surrey," largely developed after tax exemptions for improvements were abolished, is a sprawling eyesore reminiscent of Los Angeles."

Noguchi, Y. (1981). "On the Intertemporal Non-Neutrality of Taxes on Land: A Dynamic Market Clearing Model." <u>Hitotsubashi Journal of Economics</u> 22: 20-31.

Oates, W. E., Ed. (1998). <u>Local Government Tax and Land Use Policies in the United States: Understanding the Links</u>. Northampton, MA, Edward Elgar.

       An edited volume. Citations to specific chapters are shown separately in this bibliography.

Oates, W. E. and R. M. Schwab (1997). "The Impact of Urban Land Taxation: The Pittsburgh Experience." National Tax Journal 50(1): 1-21.

> empirical, U.S., peer reviewed

> An empirical study of the effects of changing the two-rate taxation system in Pittsburgh in 1979-80. After the change, land is taxed at "five times the rate on structures" with the effect that Pittsburgh is the only city in its region in the 1980s to experience a statistically significant increase in building activity. The study further indicates that this growth in building activity was limited only to the city of Pittsburgh and not its surrounding suburbs, which were not affected by the tax change. The authors note that it is difficult to determine whether all of the positive effects on building activity were entirely due to the change in the tax structure as other urban renewal programs occurred during the same time period.

Oldman, O. and M. M. Teachout (1979). Some Administrative Aspects of Site Value Taxation: Defining "Land" and "Value"; Designing a Review Process. The Taxation of Urban Property in Less Developed Countries. R. W. Bahl. Madison, WI, The University of Wisconsin Press: 207-245.

> conceptual, international, not peer reviewed

> Consideration of the theoretical and real-world issues involved in properly valuing land for a site-value tax system. The definition of land is determined to be a "unit of space or 'site'" as opposed to merely the locational ground of a property. Once defined, the land should then be valued according to its highest and best use. If this use is already known for a particular area, the value can be more readily estimated based on properties of similar type and a "standard state." For localities with largely improved land, a "parcel-by-parcel market value method" can be applied to determine the appropriate site value. For those localities with largely unimproved land, a "benchmark method" that relies on sales data of unimproved properties can be used to determine the site value. Under either system, there should be a method through which the valuations can be both reviewed as needed and challenged by taxpayers where desired.

Oldman, O. and C.-m. Wu (1979). The Elasticity of Property Taxes on Site Value and Improved Value. The Taxation of Urban Property in Less Developed Countries. R. W. Bahl. Madison, WI, The University of Wisconsin Press: 237-245.

> conceptual, not peer reviewed

> Compares the income elasticities of a site value tax versus other forms of property taxation. The income elasticity of a site value tax is hypothesized to be higher, and therefore a preferred form of taxation, in a growing economy "because land prices may rise faster than construction prices in growing urban areas." Empirically, this assumption about the relative growth in land versus construction prices is observed in both Taiwan and New Zealand in the 1960s, but not in the United States in the 1950s (where the two prices tended to rise at a similar rate). Theoretically, there are problems with using the income elasticity of a tax as a predictor of future tax revenues. These include lack of reliable measurements of elasticities, the dependence of property value taxation on assessment values, the "allocative and equity uncertainties of the property tax," identification of the appropriate variable to measure the value of income, and the changing values of other important variables over time.

Olima, W. H. A. (2005). Land Value Taxation in Kenya. Land Value Taxation: An Applied Analysis. W. J. McCluskey and R. C. D. Franzsen. Burlington, VT, Ashgate Publishing Company: 91-114.

institutional, international, not peer reviewed

Description and analysis of land value taxation in Kenya. Kenya has had experience with land taxation since the early 1900s and localities in Kenya rely on the land value tax "to close the deficit between other revenues and estimated expenditure." This is because localities have more control over land value taxes than they do over other sources of local revenues due to either local or state restrictions on other revenues. Land value taxes throughout Kenya are levied on the "market value of the unimproved bare land." While taxes on improvements are allowed, they are not utilized because of their negative impact on development and because, for practical purposes, there is very little building value to be taxed in many Kenyan localities. Land value taxes accounted for 27% of municipal council revenues in 1999. Despite the seeming success with land value taxation, localities still experience many problems in administering the tax, including issues of appraisal and collection.

Orr, L. L. (1968). "The Incidence of Differential Property Taxes on Urban Housing." <u>National Tax Journal</u> 21(3): 253-262.

empirical, U.S., peer reviewed

Provides empirical support against the commonly-held view that the burden of an improvements tax is shifted by property owners to tenants in the form of higher rental prices. This assumed shift of the tax burden only occurs under the assumption of a perfectly elastic supply of improvements, which is arguably only true in the long-run. In the short-run, renters have relatively more mobility than physical property and improvements; therefore, demand for housing is relatively more elastic than supply and the burden of a tax on improvements should be borne relatively more by property owners than by renters. Only "the portion of the tax which is common to all taxing jurisdictions in the area cannot be avoided and may indeed be shifted forward in the form of higher rents." A cross-sectional regression analysis of 31 localities in the Boston area supports the idea that while differences in median monthly gross rents in the 31 localities are significantly related to differences in local land prices, public services, accessibility to employment opportunities and the quality of housing, they are not significantly related to property tax differences.

Ott, A. F. (1999). "Land Taxation and Tax Reform in the Republic of Estonia." <u>Assessment Journal</u> 6(1): 40-49.

institutional, international

Historical perspective on and current analysis of the use of land value taxation in Estonia. In 1993, Estonia passed new laws that established tax sources for the national and local governments. The land tax was established as a revenue source for both the national and local governments, with a national rate "set equal to 0.5 percent of the tax base, and a local rate, which was to be decided by municipalities within a band of 0.3-0.7 percent." In 1995, the national land tax was abolished and the land tax became a source of revenue reserved for local governments. A lower tax rate applies to agricultural land relative to urban land and the base for the tax is the assessed market value of land. Empirical results indicate that the yield from the land tax is likely to be very low since the "average effective rate of taxation [is only] slightly more than one-half of 1 percent." While the personal income tax is the largest source of local tax revenues, arguments are made to expand the land tax, especially on agriculture land, for both revenue and efficiency reasons.

Owen, M. S. and W. R. Thirsk (1974). "Land Taxes and Idle Land: A Case Study of Houston." <u>Land Economics</u> 50(3): 251-260.

    empirical, U.S., peer reviewed

    Empirical analysis of the effects of property taxation on land usage in Houston. Using data for Harris County (which includes all of Houston), regression results indicate that the percent of undeveloped land by census tract in 1972 is not significantly related to tax rates on property in those tracts. Eight equations are modeled and the only significant explanations for the percent of undeveloped land that are consistent across all models are distance from the central business district and the quality of land. These results indicate that property taxation does not tend to influence land usage patterns in metropolitan areas with the rationale that the "property tax is capitalized and therefore does not affect land use decisions." While the tax rates used in the study are uniform property tax rates, the implications can extend to any tax on land or property since there were no significant effects on development from differing tax rates.

Pack, G. B. a. J. R., Ed. (2006). <u>Brookings-Wharton Papers on Urban Affairs: 2006</u>. Washington D.C., Brookings Institution Press.

    An edited Volume. Citations to specific chapters are shown separately in this bibliography.

Parliament, S. W. (1990). Land Tax Review. G. T. A. Committee, Sydney: South Wales Parliament.

Pasha, H. A. (1990). "The Differential Incidence of a Land Tax." <u>Urban Studies</u> 27(4): 591-595.

    theoretical, peer reviewed

    Theoretical analysis of the incidence of a land-value tax on consumers and landowners in an urban area. Assuming that the level of government expenditures within the urban area is constant and that a land-value tax is applied at equal rates across all communities, an increase in the land-value tax lowers the utility to urban consumers because they will have to pay higher rents on the land as a result. The amount of the tax borne by consumers relative to landowners depends on the elasticity of substitution between land and other goods for consumers. If there is relatively elastic substitution, the relative burden on consumers "decreases as the periphery [of the city/urban area] is approached." If the elasticity is equal to unity, the burden borne by consumers is the same everywhere within the city. And if there is relatively inelastic substitution, there is a relatively greater burden on consumers living on the periphery of the city.

Peterson, G. E., Ed. (1973). <u>Property Tax Reform</u>. Washington D.C., Urban Institute.

    An edited volume. Citations to specific chapters are shown separately in this bibliography.

Peterson, G. E. (1978). Differential Taxation of Land and Improvement Values. <u>Technical Aspects of the District's Tax System</u>. U. H. o. R. Committee on the District of Columbia. Washington D.C., U.S. Government Printing Office: 193-229.

    conceptual, peer reviewed

    Provides a summary of the theoretical challenges to land-value taxes. One, externalities and government policies reduce the efficiency benefits of land-value taxes. Two, any reduction in

taxes on buildings or improvements will only provide for efficiency gains as long as the elasticity of substitution between land and capital is relatively elastic. Three, because reassessment of property happens so infrequently and only when major improvements occur, property owners do not take property taxation into account when determining improvements to property.

Petrucci, A. (2003). "Taxing Land Rent in an Open Economy." Sustainability Indicators and Environmental Valuation.

Petrucci, A. (2006). "The Incidence of a Tax on Pure Rent in a Small Open Economy." Journal of Public Economics 90(4-5): 921-933.

    theoretical, peer reviewed

    Shows that the effects of a tax on land rent in a small open economy depend on how the tax revenues are distributed. The model assumes that the choice of labor supply is endogenous, which distinguishes it from past work in the literature. When tax revenues are "distributed as lump-sum payments," the effects of the tax are a decrease in capital stock and labor supply, and an increase in consumption and wealth. When tax revenues are "used to finance an increase in the government spending," there are no effects on any variables because neither consumption nor labor supply will be affected. When there is "a revenue-neutral tax reform that reduces labor income taxes in favor of land taxes," the result is an increase in consumption and wealth as in the first case, but with indeterminate effects on capital stock and labor supply.

Pettengill, R. B. (1939). "Reflections on the Single Tax: In Light of the California Plan of 1938." The Journal of Land and Public Utility Economics 15(1): 68-75.

Phang, S.-Y. (2000). "Land-Value Taxation Around the World: Hong Kong and Singapore." American Journal of Economics & Sociology 59(5): 337-352.

Plassmann, F. and T. N. Tideman (2000). "A Markov Chain Monte Carlo Analysis of the Effect of Two-Rate Property Taxes on Construction." Journal of Urban Economics 47(2): 216-247.

    empirical, U.S., peer reviewed

    An empirical study of the relationship between two-rate taxation and urban development in 219 localities in the state of Pennsylvania. The dependent variable is the total value of construction and is derived as the product of the number of building permits ("generated by a Poisson process" and the use of Markov chains) and the value per permit. The study finds a statistically significant and positive relationship between the dependent variable and the "adjusted tax differential," a measurement of the difference between the tax on land and the tax on buildings in each city.

Pollakowski, H. O. (1982). Adjustment Effects of a Tax on Land: The Pittsburgh Case. Working Paper. Cambridge, MA, Lincoln Institute of Land Policy.

Pollock, R. L. and D. C. Shoup (1977). "The Effect of Shifting the Property Tax Base from Improvement Value to Land Value: An Empirical Estimate." Land Economics 53(1): 67-77.

    empirical, U.S., peer reviewed

    Empirical analysis of the effects on capital intensity from lowering the tax rate on improvements and increasing the tax rate on land value. A real estate revenue production function is estimated

using data from 30 large hotels built in Waikiki from 1965 to 1973. Capital and land serve as independent variables in estimating the production function. The estimated coefficients on capital and land are then used to estimate the "marginal net revenue product of capital" function, which shows the amount of capital that will be utilized at different interest rates and tax rates. The elasticity of investment with respect to the tax rate is estimated to be -0.25. The 1973 "effective tax rate on hotel buildings" in Honolulu was 1.07%, and if this tax was eliminated, it is estimated that capital investment would increase by approximately 25%. It is acknowledged that this estimate may be high since the model ignores general equilibrium effects of changing construction costs in its analysis.

Popp, D. O. and F. D. Sebold (1972). "Redistribution of Tax Liabilities Under Site-Value Taxation: San Diego County." American Journal of Economics and Sociology 31(4): 413-426.

simulation, U.S., peer reviewed

A simulation study of the effects on property values upon the adoption of a site-value tax in San Diego. According to the results of the study, 53.5 percent of the land parcels would have to pay higher taxes under a site-value tax than under the current uniform property tax system in San Diego. Within the different classes of property, it is shown that "two-thirds of the county's homeowners would enjoy a tax decrease" with the overall tax bill for residential properties declining by 6.3 percent. Tax incidence would be particularly heavy on vacant lot holders, who would have to pay more than double their current tax liabilities. This increase in taxes on vacant land is especially high for those parcels with 10 or more acres of land.

Prentice, P. I. (1974). "Twelve Ways to Sell Property Tax Reform." American Journal of Economics and Sociology 33(1): 103-112.

Prest, A. R. (1981). The Taxation of Urban Land. Manchester, England, Manchester University Press.

institutional, international

Consideration of a land tax from the perspective of the U.K. Provides theoretical comparisons of the efficiency and equity effects of site value taxation versus land gains taxation. While the taxes appear very similar in terms of their respective tax bases (the capital value of land versus the capital gains on land), the effects on efficiency, equity and even administration are very different. While the U.K. does have a tax on land gains in the form of a Development Land Tax that was passed in the 1970s, there has never been a site value tax even though there is a long history of policy debate about such a tax. Future suggestions for the U.K. tax system are made based on empirical experience and theoretical comparisons. In particular, it is recommended that the U.K. consider a local site value tax in combination with the national Development Land Tax.

Prest, A. R. (1982). United Kingdom Land Taxation in Perspective. Land Value Taxation: The Progress and Poverty Centenary. R. W. Lindholm and A. D. Lynn. Madison, WI, The University of Wisconsin Press: 139-149.

Prest, A. R. (1985). "Some Issues in Australian Land Taxation." Environment and Planning C: Government and Policy 3: 97-110.

Pullen, J. (2005). The Philosophy and Feasibility of Henry George's Land-Value Tax: Criticisms and Defences, with Particular Reference to the Problem of the Land-rich-and-income-poor. Henry George's Legacy in Economic Thought. J. Laurent. Northampton, MA, Edward Elgar: 177-195.

Reece, B. F. (1992). <u>State Land Taxation: A Critical Review</u>. Sydney, Australian Tax Research Foundation.

Reece, B. F. (1999). Issues for Land and Property Resource Taxes in Tax Reform. <u>Resource Tax Policy in Countries of the Asia Pacific Region</u>. T. Dwyer. Canberra, Australia, Asia Pacific Press: 9-74.

>institutional, international, not peer reviewed

>Analysis of land taxation and stamp duty on the transfer of property as minor sources of revenue in a broader tax system. Land taxation provides only a minor fraction of overall government revenues for Asian Pacific countries.   In 1996-97, land taxes accounted for only 4.9% of state government revenues and 1% of all government revenues in Australia, with both percentages on the decline. In both Australia and the Philippines, the land tax is underutilized as a source of revenue and has significant compliance and assessment problems.

Reschovsky, A. (1998). Can the Land Value Tax Play an Important Role in the Financing of State and Local Governments in the United States? <u>Land Value Taxation: Can It and Will It Work Today?</u> D. Netzer. Cambridge, MA, Lincoln Institute of Land Policy: 211-246.

>literature review, U.S., not peer reviewed

>A review of current studies and an examination of current statistical data to analyze the issue of whether a land value tax can replace or combine with other tax systems for state and local governments in the United States. In general, the author finds that "the average state would experience modest efficiency gains by adopting a land value tax instead of increasing existing income or sales tax rates." If substitution does occur, the system is likely to be more progressive if sales taxes are replaced by a land-value tax while the relative progressiveness is less clear if income taxes are replaced. The author finally notes that while efficiency gains are apparent for cities that adopt land-value tax systems, the "feasibility of assessing land values" is a constant debate.

Richard A. Musgrave, C.-h. C., and John Riew, Ed. (1994). <u>Taxation and Economic Development Among Pacific Asian Countries</u>. Boulder, CO, Westview Press.

>An edited volume. Citations to specific chapters are shown separately in this bibliography.

Risden, O. S. C. (1979). A History of Jamaica's Experience with Site Value Taxation. <u>The Taxation of Urban Property in Less Developed Countries</u>. R. W. Bahl. Madison, WI, The University of Wisconsin Press: 247-261.

Rybeck, W. (1974). "Can the Property Tax Be Made to Work For Rather than Against Urban Development?" <u>American Journal of Economics and Sociology</u> 33(3): 259-271.

Rybeck, W. (2000). "Land-Value Taxation Around the World: United States." <u>American Journal of Economics & Sociology</u> 59(5): 137-182.

>institutional, case studies, U.S.

>Consideration of successful adoptions of land-value and two-rate property tax systems by localities in the United States.   Communities such as Fairhope, Alabama and The Ardens in

Delaware are cited as successful examples of communities built on the Georgist principle of a single tax on land. New York City for a period from 1921 to 1926 allowed new residential buildings to enjoy a property tax exemption for ten years on the value of the structures, but not on the value of the land. The result was "a building boom [which] commenced two months after the 1921 ordinance passed. The building frenzy increased in volume year after year until the ordinance was phased out in 1926." The positive impact of two-rate taxes on cities and localities in Pennsylvania is also discussed and summarized.

Saunders, V. I. (1999). In Defense of the Two-Rate Property Tax. <u>Land-Value Taxation: The Equitable and Efficient Source of Public Finance</u>. K. C. Wenzer. Armonk, NY, M. E. Sharpe: 269-276.

conceptual, international, not peer reviewed

Compares the relative economic and distributional effects of a uniform property tax and a split-rate property tax. Uniform property taxes discourage investment in housing and structures, while at the same time encouraging land speculation. Land value taxation could eliminate these distortive effects of property taxation and also provide for more equitable taxation by placing a relatively greater tax burden on wealthy landowners. Many localities in Australia have adopted land value taxation with the result that "[b]y 1979, two-thirds of Australian jurisdictions taxed only land as their sole source of revenue." Split-rate and land-value taxation are much less predominant in the United States although they are now allowed in many tax jurisdictions, particularly in Pennsylvania and New York.

Sazama, G. W. and H. Davis (1973). "Land Taxation and Land Reform." <u>Economic Development and Cultural Change</u> 21(4): 642-654.

empirical, international, peer reviewed

Empirical effects of land value taxes in Colombia and Chile. Two neighboring municipalities in Colombia are considered: one in which properties were newly assessed, and therefore subject to a higher effective rate of taxation on land values, and one in which properties had not been reassessed for over eight years. The study finds that there are no statistically significant differences in land usage between the two areas. This, however, is justified by the fact that land value taxation was applied at fairly low rates in the two communities, "deliquency was high, and land values reappraised for tax purposes were quickly eroded by inflation." In the study based in Chile, there is no evidence that land value taxation has had any significant impact on agricultural output. However, interviews with individual farmers reveal that the tax has affected agricultural decision-making to some degree.

Schaaf, A. H. (1969). "Effects of Property Taxation on Slums and Renewal: A Study of Land-Improvement Assessment Ratios." <u>Land Economics</u> 45(1): 111-117.

empirical, U.S., peer reviewed

Analyzes empirical evidence of how uniform property taxation encourages slums and advocates the use of a land value tax to encourage renewal of slum areas. If "slum properties" are assessed at relatively lower tax rates than other properties, it will discourage property renewal. The empirical study considers the land-improvement ratios of properties in Northern Alameda County, California. Previous research in New York City and Dayton, Ohio indicated that assessed values on land and improvements in those cities resulted in constant land-improvement ratios across the cities, even in slum neighborhoods. If slum areas consist of low quality

buildings on highly valued land, one would expect these ratios to be much higher in slum areas so the conclusion is that land is being under-assessed by current property tax assessors. The California study did not support the earlier results, finding that land-improvement ratios were positively related to the economic indicators of slum conditions: presence of older buildings, low-income residents and "potentially high reuse values." If localities shifted to a land-value tax system, it is shown that the tax incidence would be relatively higher for commercial properties and lower-income residential properties.

Schaaf, A. H. (1970). "Some Uncertainties About the Desirability of Site Value Taxation." <u>Tax Policy</u> 37: 33-41.

Scheper, W. and H. Reichenbach (1975). "Land Taxation, Land Prices, and the Accumulation of Capital." <u>Kyklos</u> 28(4): 777-802.

theoretical, peer reviewed

Applies a neo-classical growth model to determine steady state effects on land prices and capital accumulation as a result of changes in taxes on rent and on the capital gains from land. The model indicates that an increase in either tax will result in an increase in the investment ratio and capital accumulation if the private propensity to save is less than the governmental propensity to save. While this condition makes theoretical sense, the model also indicates that the investment ratio may increase even if the government has a lower propensity to save than private renters and landowners. Changes in the two taxes will also impact land prices, with land prices typically falling as either tax increases (except under unusual theoretical circumstances). The impact on land prices is relatively larger for a change in the tax on rent as opposed to the tax on land, especially when rent is taxed at a high rate. Changes in taxes on the capital gains from land, however, have a relatively greater impact on land prices when land is taxed at a relatively lower rate. Therefore, if the government has a policy goal of influencing land prices through property taxation, taxes on rent and land "are not good substitutes and it is therefore appropriate to apply both."

Schwab, R. M. and M. R. Harris (1997). An Analysis of the Graded Property Tax. <u>Taxing Simply, Taxing Fairly</u>, District of Columbia Tax Revision Commission: 219-258.

conceptual, U.S., not peer reviewed

Considers the impact of adopting a graded property tax system in Washington, D.C. A thorough survey of the theoretical and empirical literature regarding a graded property tax is developed to determine the key concerns and issues. Particular emphasis in the empirical section is on the incidence of a graded property tax since two previous studies offer conflicting points of view of the impact on residential homeowners in Washington, D.C. The empirical results indicate that the adoption of a land value tax would result in a significant shift of property tax burden away "from the owners of rental residential and non-residential property to homeowners." Homeowners would pay approximately 50 percent more in property taxes if such a change occurred. The study notes that part of the reason for this drastic shift of burden onto homeowners is that Washington, D.C. currently does not have a strictly uniform property tax system because of a homestead exemption. Eliminating this exemption alone would shift a substantial portion of the tax burden to homeowners, and homeowners are demonstrated to be better off under a land tax than they would be under a uniform tax system. Under a split-rate tax system where land is taxed higher than structures, homeowners will face lower tax burdens if all homeowners experience the same proportional changes in tax rates. The burden in this case is borne primarily

by commercial property owners. Such a change would not be simple to administer, however, due to the various classifications of housing within the District.

Schwartz, A. E., Ed. (2004). <u>City Taxes, City Spending: Essays in Honor of Dick Netzer</u>. Northampton, MA, Edward Elgar.

Shanda, X. and W. Daoshu (2004). Land and Property Taxation in China. <u>International Handbook of Land and Property Taxation</u>. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 165-174.

institutional, international, not peer reviewed

Description of the property tax system in China. Buildings and land are assessed separately for urban properties where it is possible to determine the "standard value" for each separately. Where the standard value cannot be separately determined, they are assessed together. Standard values are based on the grade and location of the buildings and land with reference to construction and market values in those areas.

Simon, H. A. (1943). "The Incidence of a Tax on Urban Real Property." <u>Quarterly Journal of Economics</u> 57(3): 398-420.

theoretical, peer reviewed

Compares four major schools of thought on property tax incidence. The classical division of site value and improvements and a division of their incidence between owners and occupiers based on the overall property value is summarized by Pierson (1902) Edgeworth (1925) argues that taxation effects should not be separated and the incidence of property taxation is borne by the occupier of the property since demand is inelastic. Seligman (1910) promotes the distinction between taxation of "selling value" versus rent, reaching the same conclusions as the classical thought regarding the taxation on rent. Brown (1924) also divides the tax but concludes that the tax incidence of improvements is borne by capital owners. Three general conclusions about the differences are reached. First, Brown is correct in observing that the burden of property taxation will fall to some degree on capital holders. However, this is by no means a necessary outcome, particularly in general equilibrium models. Second, the differences between Pierson and Edgeworth cannot be attributed to differences in net and gross rent as stated in Seligman, but rather rely on differences in assumptions. The differences between Pierson and Edgeworth are deemed to be not substantial under similar assumptions. Third, Pierson and Edgeworth reach different conclusions based on different assumptions of substitutability between "marginal" and "super-marginal" housing.

Sjoquist, D. L., Ed. (2003). <u>State and Local Finances Under Pressure</u>. Northampton, MA, Edward Elgar.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Sjoquist, D. L. (2005). An Analysis of the Jamaican Land Value Tax Rate Structure, Georgia State University Working Paper.

case study, international, not peer reviewed

Analysis of the historical and current rate structure of the land value tax in Jamaica, with emphasis on opportunities for reform. Jamaica has had a land value tax in place since 1957. The tax system is progressive, but because of property tax caps within the progressive rate system, it

results in "discontinuities in the tax rate structure" and "inequities in the property tax." Alternative systems could eliminate the caps and replace them with either exemptions or a different rate structure to reduce the inequities. Advantages and disadvantages to proposed changes are considered. In particular, a flat rate structure (that produces the same tax revenues as the current structure) would provide better incentives regarding sub-division of parcels; however, it would also place a relatively lower burden on owners of higher-valued land. With the exception of this highest class of land-owners though, owners of the lower valued land typically would have a lower tax liability and the liability would increase for those with higher land values.

Skaburskis, A. (1995). "The Consequence of Taxing Land Value." <u>Journal of Planning Literature</u> 10(1): 3-21.

literature review, international, peer reviewed

Provides an extensive review of the literature regarding the relative implications of land value and uniform property taxation. Both theoretical arguments and empirical studies are included in the contribution and particular emphasis is placed on the development effects as well as the "spatial consequences of land taxation."

Skaburskis, A. and R. Tomalty (1997). "Land Value Taxation and Development Activity: The Reaction of Toronto and Ottawa Developers, Planners, and Municipal Finance Officials." <u>Canadian Journal of Regional Science</u> 20(3): 401-417.

literature review, international, peer reviewed

A survey of the literature on land-value and split-rate taxation and the results of interviews in Toronto and Ottawa regarding a move to a property tax system with a higher tax rate on land values. The interviews indicate that land developers and city officials agree with the major theoretical findings regarding land-value taxation: that they "would speed up development…, lead to more intense land use…, and reduce speculation." However, there are concerns about the efficiency of such a system, its political feasibility, as well as "spatial redistribution effects."

Skinner, J. (1991). "If Agricultural Land Taxation Is So Efficient, Why Is It So Rarely Used?" <u>World Bank Economic Review</u> 5(1): 113-133.

conceptual, international, peer reviewed

Theoretical analysis of why agricultural land value taxes are not used. Countries that have applied taxes on agricultural land in the past are lowering such taxes in favor of taxes on exports or income. Three potential explanations for the reluctance to rely on an agricultural land value tax as a major source of revenue are examined. The first explanation is that such taxes meet substantial disapproval from landowners since "they bear more than 100 percent of the tax burden" in the form of lower land prices (the "capitalization effect" of the tax). The model shows that the capitalization effect is even greater for export taxes than it is for land taxes so this explanation is not valid. A second explanation is that land taxes expose farmers to relatively more risk since the tax is a constant annual cost while farm revenues will vary. Hoff (1991) shows that a combination of a land and output tax is preferable, but if the two are considered separately, a land tax is preferable to a high export tax because the welfare losses from credit market imperfections can be offset by using "precautionary saving" in high revenue years to offset losses in low revenue years. The third explanation is that site value is difficult to measure in rural markets so the administrative costs of ensuring compliance by landowners may offset any

efficiency gains. This argument tends to be the most theoretically sound and it is shown that a distortionary export tax is preferable to an inefficiently administered land value tax.

Skinner, J. (1991). "Prospects for Agricultural Land Taxation in Developing Countries." World Bank Economic Review 5(3): 493-511.

> institutional, international, peer reviewed

> Examination of the land tax from a theoretical and institutional perspective, with particular emphasis on agricultural areas. The theoretical element compares the economic and welfare effects of an export tax on agricultural goods to a land tax. Three types of land taxes are considered: one based on land area, another based on the market value, and a third based on "objective features of the land." Case studies on Bangladesh, Argentina and Uruguay are considered before concluding that land taxes are theoretically appealing, but they have real shortcomings, including difficulty in administration, political infeasibility and lack of real efficiency gains.

Skouras, A. (1978). "The Non-Neutrality of Land Value Taxation." Public Finance 33(1-2): 113-134.

> theoretical, peer reviewed

> Provides the theoretical result that a land-value tax is not neutral in a dynamic model. The model considers the motives of speculators and land users and determines that a land-value tax will affect motives in such a way as to both bring more land into use (rather than remaining idle in the hands of speculators) and "promote [more] economic activity on that land" since a tax on land increases the its holding costs.

Skouras, A. (1980). "Land and Its Taxation as Issues in Economic Theory: What Is the Reason for Their Eclipse?" American Journal of Economics and Sociology 39(4): 373-382.

Slack, E. (2004). Property Taxation in Australia. International Handbook of Land and Property Taxation. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 91-97.

> institutional, international, not peer reviewed

> Description of the property tax system in Australia. Australian states levy a land tax on the unimproved value of land, while municipalities can levy property taxes on unimproved land value, site value, the improved value of land and buildings or the rental value of land and buildings.

Slack, R. M. B. a. E., Ed. (2004). International Handbook of Land and Property Taxation. Northampton, MA, Edward Elgar.

> An edited volume. Citations to specific chapters are shown separately in this bibliography.

Smith, R. S. (1977). "Land Prices and Tax Policy: An Historical Review." American Journal of Economics and Sociology 36(4): 337-350.

> institutional, international, peer reviewed

> Considers the use of land taxes as a policy tool to deter rising land values. The historical uses of

land taxes in the face of rising land prices are considered for Kiauchau, Germany, England and Canada. The current uses of four different forms of land taxation: site value taxation, vacant land taxes, taxes on land-value increments and property transfer taxes are compared and contrasted for various countries.

Smith, R. S. (1978). "Land Prices and Tax Policy: A Study of Fiscal Impacts." American Journal of Economics and Sociology 37(1): 51-69.

conceptual, peer reviewed

Compares the relative impact of four different forms of land taxation on land prices, the timing of development and land speculation. It is difficult to meet all three objectives via a single form of taxation. Of the types of taxation considered, site value and vacant land taxes could slow the growth of land prices and prevent speculation relatively better than increment value or transfer taxes. Site value and vacant land taxes can also speed up the development of undeveloped land. The taxation of increment values has unknown effects on the price of land and has "proved to be ineffective on a number of occasions." Transfer taxes have proven problematic as well since they may "disrupt transactions which would lead to the more productive use of land, usually raise little revenue, and may in the short run result in higher prices and postponed development for vacant land."

Smith, R. S. (1979). The Effects of Land Taxes on Development Timing and Rates of Change in Land Prices. The Taxation of Urban Property in Less Developed Countries. R. W. Bahl. Madison, WI, The University of Wisconsin Press: 137-162.

conceptual, not peer reviewed

Considers the impact of different forms of land taxes on the rate of change in land prices as opposed to the level of land prices. The concern over the rate of change in prices is directly related to the issue of land speculation. The assumption is made that site value taxes in particular should provide disincentives to speculators of holding idle land, but they should not necessarily affect the pattern of future land prices. According to theory, land will be developed earlier as a result of a site value tax, but the impact on future land prices ultimately will depend on the supply of land available for earlier development. This is generally not predictable and where site value taxes have been applied, they are typically applied at such low rates that they have little impact on speculation or the pattern of land prices. Other forms of land taxes such as vacant land taxation and value increment taxation are considered as well, with similar theoretical results.

Smith, T. R. (1970). "Land Value Versus Real Property Taxation: A Case Study Comparison." Land Economics 46(3): 305-313.

case study, U.S., peer reviewed

Simulation study of San Bernadino to compare the distributional effects of a uniform property tax to a land value tax. For the 25 commercial and industrial properties considered, 14 would experience a higher tax incidence if a land value tax were implemented. Of those 14 properties, six are drive-in restaurants or service stations that sit on large land parcels so their ratios of land-to-improvements are fairly high. Eleven of the seventeen multi-residence units are predicted to experience a decline in tax incidence under a site-value tax. For single family residences, 135 of the 182 properties examined would experience a decline in tax incidence. Most of these properties are located in the "newer regions of the city," where the ratio of land to improvements

is very low.

Solomon, D. (1985). "The Site Value Tax: An Evaluation." <u>South African Journal of Economics</u> 53(3): 248-257.

Solomon, D. (1986). "The Site Value Tax: A Reply [The Site Value Tax: An Evaluation]." <u>South African Journal of Economics</u> 54(4): 432-436.

Stilwell, F. and K. Jordan (2005). Land Tax in Australia: Principles, Problems and Policies. <u>Henry George's Legacy in Economic Thought</u>. J. Laurent. Northampton, MA, Edward Elgar: 216-242.

    conceptual, international, not peer reviewed

    Promotes the case for land taxation in Australia by considering current theoretical and empirical issues. Rising land and housing prices in Australia provide evidence of intergenerational inequities and raise the question of whether individuals should benefit from the private ownership of land. This is particularly true in urban areas where a good portion of that increasing land value is the result of public expenditures and urban growth, and not the result of individual efforts. Estimates indicate that only 12% of the increases in land value in New South Wales from 1993 to 2003 are captured by the government through land-based taxation. Although New South Wales does have land taxation, it is not broadly applied at a very high rate. In fact, owner-occupied property is exempt from the land tax throughout Australia. A uniform land tax would reduce speculation in the land and housing markets as well as provide revenues for public infrastructure and other social benefits.

Stone, G. W., Jr. (1974). "Land Taxes and Ricardian Economic Growth." <u>Land Economics</u> 50(3): 301-305.

    theoretical, peer reviewed

    Considers the revenue adequacy of a site value tax in a dynamic model. Previous models were primarily static and analyzed the tax rate that would be necessary for a site value tax to replace the revenues of a uniform property tax. However, even if site value tax revenues are lower than the expenditures they are financing at a specific point in time, tax revenues can become adequate over time as long as the revenues generated grow faster than the expenditures being financed. The model uses a Ricardian growth model to determine that the length of time needed or the population required for a site value tax to become revenue adequate relies on assumptions of positive growth in per capita rents over time and a decreasing returns production function. Since growing communities spread public expenditures over a broader population, the population will eventually expand to a level at which the budget will balance, and this point will be reached more quickly (or at a lower level of population) depending on "the proportion of output designated as public output and how rapidly returns to the variable factor decline."

Stone, G. W., Jr. (1975). "Public Spending, Land Taxes and Economic Growth: An Empirical Analysis of the Adequacy of Land as a Tax Base." <u>American Journal of Economics and Sociology </u>34(2): 113-126.

Stone, G. W., Jr. (1975). "Revenue Adequacy of Land Value Taxation." <u>Southern Economic Journal</u> 41(3): 442-449.

    theoretical, peer reviewed

Analysis of the revenue adequacy of a site value tax in a dynamic model similar to Stone (1974). The model assumes that some fraction of public expenditures can be funded by a site value tax and that under particular "community characteristics", such a tax can become adequate over time even if it is not presently. The model indicates that "the rate at which capital must grow to assure a balanced public budget depends on the rate of growth of population, the share distribution of income, and the elasticities of substitution." For higher elasticities of substitution between land and capital, a higher rate of capital growth is needed to assure revenue adequacy. Likewise, for higher "expenditure elasticities with respect to population and per capita income," the higher the growth in capital required. It is also shown that communities with more access to land will rarely find that a site value tax can be adequate since land values will tend to remain stable at relatively low prices as growth occurs.

Strasma, J. (2000). "Land-Value Taxation Around the World: Chile." <u>American Journal of Economics & Sociology</u> 59(5): 85-96.

Swint, J. M., G. W. Stone, Jr., et al. (1985). "The Revenue Adequacy of Land Value Taxation in a Ricardian System of Economic Growth." <u>American Journal of Economics and Sociology</u> 44(1): 107-119.

theoretical, peer reviewed

Builds on Stone (1974) by determining the conditions necessary for a site-value tax to become revenue adequate in a dynamic model. The model indicates that when public expenditures depend on population, than a local site-value tax will generate enough revenue to cover designated expenditures as long as per capita rent exceeds "per capita expenditures demands." This condition is more easily met "the more rapidly returns to the variable factor decline." When public expenditures depend on per capita income, a site-value tax is revenue adequate "whenever the share of income going to landowners exceeds the share devoted to public output." This condition is more easily met the higher the per capita income elasticity.

Tanzer, E. P. (1985). "The Effect on Housing Quality of Reducing the Structure Tax Rate." <u>Journal of Urban Economics</u> 17(3): 305-318.

empirical, U.S., peer reviewed

Provides an empirical analysis of the impact on housing quality and quantity when the tax rate on structures is reduced. Past studies by Grieson (1974), Pollack and Shoup (1977) and DeSalvo (1971) primarily consider the impact on the quantity of housing supplied due to a change in the tax rate on structures. Heilbrunn (1966) predicts "that quality rises when the structure tax rate falls, [but] no empirical testing of this important conclusion is provided." A theoretical model is developed to show that "[r]educing the effective structure tax rate...causes housing quality to rise if capital is a noninferior input." The empirical study uses pricing, income, and temperature data from 91 SMSA's around the country to test the impact on changes in housing quality and quantity on "FHA-mortgage-insured single-family homes" for different property tax rates across communities in 1972. Using an unobservable variables model to estimate a value for "quality" and simultaneous equations regression analysis, it is shown that differences in average property tax rates across localities affect both the quality and quantity of housing by approximately the same magnitude: with an elasticity of -.34 for quality and -.35 for quantity with respect to the difference in property taxes. These are smaller elasticities than might be expected due to an inability to capture the income effect of such a tax difference and due to the fact that the data is on FHA loans so households may choose to limit improvements on housing when taxes are relatively lower in order to maintain eligibility requirements for the mortgage.

Tassonyi, A. (2004). Land-based Taxes in Hungary. <u>International Handbook of Land and Property Taxation</u>. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 219-235.

    institutional, international, not peer reviewed

    Description of the property tax system in Hungary. Localities can levy a plot tax on undeveloped land in municipalities. "The tax is levied on unimproved value of land plots larger in size than the average in the municipality." The tax accounted for only 1.2 percent of all local tax revenues in 2001.

Tideman, N. (1998). Applications of Land Value Taxation to Problems of Environmental Protection, Congestion, Efficient Resource Use, Population and Economic Growth. <u>Land Value Taxation: Can It and Will It Work Today?</u> D. Netzer. Cambridge, MA, Lincoln Institute of Land Policy: 263-276.

    conceptual, not peer reviewed

    Relates efficiency and equity arguments of land value taxes to resource and environmental issues. Since pollution lowers the value of land but has an unknown effect on structures, a system of payments for pollution controls and resource usage can be devised based on the estimated losses to land values.   If polluters can be made to reveal their preferences regarding pollution, a market for pollution rights can be established that are "payments for appropriating for themselves land rent that was everyone's common heritage." Congestion fees and resource usage costs can be considered in a similar fashion. By taxing for the use of "natural opportunities" in this manner, taxes on capital and labor can be lowered, leading to productivity gains and economic growth, especially when combined with the other efficiency effects of land value taxes.

Tideman, T. N. (1982). "A Tax on Land Value Is Neutral." <u>National Tax Journal</u> 35(1): 109-111.

    theoretical, peer reviewed

    Theoretical argument against the results in Bentick (1979) and Mills (1981) that a land value tax is not neutral. The non-neutrality conclusions are based on a definition of land value that is the present value of all future returns if land is committed to its current use. This is incorrect both empirically and theoretically since the future returns on land also depend on the uses and returns of other inputs used with land, and neither the aggregate return on land nor the individual returns for these inputs can be calculated at the present time. The value of land should be expressed as the selling price of the land site in the market and this selling price will be determined by the value of the highest and best use of that land if it were bare, not the value of the land in its current use.

Tideman, T. N. (1990). "Integrating Land-Value Taxation with the Internalization of Spatial Externalities." <u>Land Economics</u> 66(3): 341-355.

    theoretical, peer reviewed

    Theoretical argument that a tax on the "full rental value of land" can correct for externalities created by individual uses of land. A land rent tax is proposed because it corrects for several inefficiencies associated with land rent: the rent on land that is not due to any individual activity (the Georgist claim), the rent on land that is a result of public activities, and the rent that is a result of the activities of others (an externality). Taxing rent for the last reason also provides a

government with a source of revenue to subsidize such activities. Through a process of "competitive assessment," the sources of spatial externalities can be identified and an appropriate land tax correctly assessed. When an externality affects the value of improvements to land or human capital as opposed to land values, a tax on land rent would not be appropriate and should be dealt with through a separate administrative process.

Tideman, T. N. (1999). Taxing Land is Better than Neutral: Land Taxes, Land Speculation, and the Timing of Development. Land-Value Taxation: The Equitable and Efficient Source of Public Finance. K. C. Wenzer. Armonk, NY, M. E. Sharpe: 109-133.

theoretical, not peer reviewed

Use of a theoretical model to show that land taxes can be "better than neutral" when markets are inefficient. A model is developed to show that land rent is "the opportunity cost of leaving unimproved land unused." Using this definition, it is shown that an ad valorem tax on land will be fully capitalized into the price of land and is neutral in its effects. Contributions to the literature that suggest such a tax is not neutral are either using a different form of a land tax ("a tax on the 'present value of planned net income'") or are not considering a land tax over a continuum of time that includes both pre- and post-development of the land.

Timofeev, A. (2004). Land and Property Taxes in Russia. International Handbook of Land and Property Taxation. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 236-245.

institutional, international, not peer reviewed

Description of the property tax system in Russia. The land tax is used as one form of payment to the government for the use of land. There are separate tax rates applied to agricultural land and "rates are doubled for land plots not in use or used for purposes different from intended." Rural land taxes are a source of revenue for local governments while urban land tax revenues are split among the federal, state and local governments. In 2002, land taxes and land fees accounted for 3.37 percent of local tax revenues.

Tomson, A. (2000). "Land-Value Taxation Around the World: Estonia." American Journal of Economics & Sociology 59(5): 205-210.

institutional, international, peer reviewed

A summary of the effects on Estonia after the adoption of a land tax in 1993. While the land tax revenues only represent approximately 1% of all tax revenues in 1999, it "reportedly has encouraged some property owners who stood to benefit by keeping their land idle…either to develop it or to sell it."

Turnbull, G. K. (1987). "Land Taxes, Income Taxes, and Land Use." National Tax Journal 40(2): 265-269.

theoretical, peer reviewed

Analyzes the effects of income and land-value taxes in a "simultaneous tax system." Rather than analyzing the effects of a land tax versus an income tax separately, the two are analyzed together since they are often utilized together in a broader tax system and since the tax liabilities for each are not independent of one another. The two taxes are combined with a capital gains tax to reveal

that with respect to land allocation decisions: current-use land taxes and capital gains taxes are never neutral, and income taxes are only neutral when levied by themselves. The welfare losses imposed by a current-use land tax are found to be lower when the tax is part of a "simultaneous tax system," than when levied by itself.

Turnbull, G. K. (1988). "Property Taxes and the Transition of Land to Urban Use." <u>Journal of Real Estate Finance and Economics</u> 1(4): 393-403.

Vaillancourt, F. (2004). Land and Property Taxation in Tunisia. <u>International Handbook of Land and Property Taxation</u>. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 210-215.

institutional, international, not peer reviewed

Description of the property tax system in Tunisia. Three types of urban property taxation exist in Tunisia: a tax on the rental value of housing, a tax on unbuilt land, and a local business tax. The tax revenues on unbuilt land are very low, however, since it is difficult to determine actual landownership and these taxes are seldom paid. In 2000, they only accounted for 1.6 percent of the revenues for urban areas.

van Ryneveld, P. and M. Parker (2002). Property Tax Reform in Cape Town. <u>Property Taxes in South Africa: Challenges in the Post-Apartheid Era</u>. M. E. Bell and J. H. Bowman. Cambridge, MA, Lincoln Institute of Land Policy: 157-173.

simulation, international, not peer reviewed

Considers the potential impact on tax incidence and economic development in Cape Town if it had accepted a site-value taxation system proposed in 1990. A split-rate tax system with land taxed at 10 times the value of improvements was proposed for Cape Town in 1990 by the Steyn Commission. For various reasons such a proposal was never accepted. The current study considers the effects on Cape Town if site value taxation had been accepted. The results indicate that there would have been a dramatic shift in tax incidence from commercial to residential property owners. There also would have been a change in incidence from "high-value improvement" properties toward those with lower improvement values, with a significant amount of the incidence of the tax being placed on small manufacturers. Less wealthy black families would also bear a relatively higher burden of the tax in locations where housing improvements substituted for locational changes by affluent black families who were unable to relocate to wealthier neighborhoods in the Apartheid era. Overall it is questionable whether the long-term development gains from a site value tax would offset the short-run costs of inequitable patterns in tax incidence.

van Schalkwyk, H. (1998). Possible Effects of Agricultural Land-Tax in South Africa. <u>Agricultural Policy Reform in South Africa</u>. J. van Rooyen, J. Groenewald, S. Ngqangweni and T. Fenyes. Cape Town, South Africa, Francolin Publishers: 136-146.

simulation, international, not peer reviewed

Empirical analysis of the potential impact of land value taxes on land prices in South Africa. The simulation results indicate that a 1% tax on land values would result in a 5.3% decline in real agricultural land prices in South Africa as a whole and a 2.5% decline in real agricultural land prices in the province of Gauteng. The lower impact on land prices in Gauteng is expected because land prices in that region are more heavily influenced by other factors, "like expectations

that near-by city borders will be expanded."

Varanyuwatana, S. (2004). Property Tax in Thailand. International Handbook of Land and Property Taxation. R. M. Bird and E. Slack. Northampton, MA, Edward Elgar: 159-164.

institutional, international, not peer reviewed

Description of the property tax system in Thailand. In addition to a property tax on land and buildings, there is an additional land development tax. This tax is on the site value of land and is determined by the area of land multiplied by the median value of land for that tax district.

Vickrey, W. S. (1970). Defining Land Value for Taxation Purposes. The Assessment of Land Value. D. M. Holland. Madison, WI, University of Wisconsin Press: 25-36.

conceptual, not peer reviewed

Considers the issue of the appropriate assessment for land value in a land tax system. Land can be considered an appropriate source of taxation if it meets the criteria of neutrality, yield, non-confiscation and legitimacy. These criteria are more closely met if the value of land is based on the "original and inexhaustible powers of the soil" and not on the value derived from its current use. This can provide difficulties in assessment, however, so a definition of a "standard state" for land is a viable alternative. The problem of externalities generated by large-scale developers versus single-parcel development can be solved by not taxing improvements and by providing a subsidy or tax credit for a portion of the external values created.

Vickrey, W. S. (1999). Henry George, Economies of Scale, and Land Taxation. Land-Value Taxation: The Equitable and Efficient Source of Public Finance. K. C. Wenzer. Armonk, NY, M. E. Sharpe: 24-36.

conceptual, not peer reviewed

Theoretical consideration of using land-value taxes to cover the costs of local government services. Government services provide positive externalities and are "considered an extreme case of economies of scale." In a market setting, appropriate prices should be set for these services to allow for a producer to take full advantage of the economies of scale and this typically requires a subsidy in addition to the market price. In the public sector, a tax should provide for the same type of subsidy but not cause further market distortions. Subsidization through a land-value tax is discussed for local services such as fire protection and utilities, while other public services can be more efficiently paid for through alternative forms of subsidies.

Vickrey, W. S. (1999). Propositions Relating to Site-Value Taxation. Land-Value Taxation: The Equitable and Efficient Source of Public Finance. K. C. Wenzer. Armonk, NY, M. E. Sharpe: 37-45.

Vickrey, W. S. (2001). "Site Value Taxes and the Optimal Pricing of Public Services." American Journal of Economics & Sociology 60(5): 85-96.

conceptual, peer reviewed

Advocates marginal-cost-pricing of public services with a subsidy provided by land-value tax revenues. The advantage of living in urban areas is due to the presence of economies of scale and transportation costs. Under the conditions of scale economies, a subsidy is required to provide for the proper level of public services if they are to be provided at marginal cost to users. A tax

on the rental value of urban land above the value of rural land is arguably the best source of that subsidy and will adequately cover the fixed costs of providing public goods and services. Specific examples of urban public services illustrate the analysis.

Virtanen, P. V. (2000). "Land-Value Taxation Around the World: Finland." <u>American Journal of Economics & Sociology</u> 59(5): 211-220.

Wassmer, R. W. and J. E. Anderson (2001). "Bidding for Business: New Evidence on the Effect of Locally Offered Economic Development Incentives in a Metropolitan Area." <u>Economic Development Quarterly: The Journal of American Economic Revitalization</u> 15(2): 132-148.

Watson, J. P. (1934). The City Real Estate Tax in Pittsburgh. Pittsburgh, PA, Bureau of Business Research, University of Pittsburgh.

Weir, M. and L. E. Peters (1986). "Development, Equity, and the Graded Tax in the City of Pittsburgh." <u>Property Tax Journal</u>: 71-84.

empirical, U.S., peer reviewed

Empirical analysis of the two-rate tax system in Pittsburgh. Two samples of property, residential and commercial, are created and analyzed statistically with the finding that the "graded tax has not been a factor in Pittsburgh's recent building boom." The primary impact of the tax has been "a shift in the tax burden from single-family residential properties to multifamily residential properties in poorer neighborhoods and to older commercial and industrial properties."

Welch, R. B. (1976). "Property Tax Developments: Modernization, Classification, Site Value Taxation." <u>National Tax Journal</u> 29(3): 322-327.

Wenzer, K. C., Ed. (1999). <u>Land-Value Taxation: The Equitable and Efficient Source of Public Finance</u>. Armonk, NY, M.E. Sharpe.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Wildasin, D. (1982). "More on the Neutrality of Land Taxation." <u>National Tax Journal</u> 35(1): 105-108.

theoretical, peer reviewed

A response to the Mills (1981) and Bentick (1979) results that land value taxation is not neutral in its impact on the timing of development. A model is developed to show that these results only hold when the tax is on the current market value of land, but not when the tax is per unit of land and at a fixed rate (regardless of how the land is used). Land value taxes that are per unit and "use-independent" are shown to be non-distortionary in their impact on the timing of development even though they are also difficult to administer.

Williams, E. T. (1974). "Site Value Taxation--How Does it Relate to Forest Land?" <u>National Tax Journal</u> 27(1): 29-44.

conceptual, international, peer reviewed

Relates the theoretical concepts of site-value taxation to forest land. The contribution discusses the use of such taxes applied specifically to forest land in Denmark, Australia, and New Zealand

and argues a case for such a tax in the United States. The article concludes by considering the short-term and long-term impacts of site-value taxation as discussed in the previous literature and applies those general findings more specifically to the potential impact on forest land.

Williams, P. R. (1962). "Pittsburgh's Pioneering in Scientific Taxation." American Journal of Economics and Sociology 21(1): 37-56.

Williams, P. R. (1962). "Pittsburgh's Pioneering in Scientific Taxation, II." American Journal of Economics and Sociology 21(2): 209-224.

Williams, P. R. (1963). "The Graded Tax in the Redevelopment of Pittsburgh." American Journal of Economics and Sociology 22(2): 251-262.

Williams, P. R. (1963). "Pittsburgh's Experience with the Graded Tax Plan." American Journal of Economics & Sociology 22(1): 149-172.

Wolff, E. N. (1998). Distributional Consequences of a National Land Value Tax on Real Property in the United States. Land Value Taxation: Can It and Will It Work Today? D. Netzer. Cambridge, MA, Lincoln Institute of Land Policy: 61-104.

> simulation, U.S. not peer reviewed

> Makes use of a simulation study to consider the distributional impact of shifting from a federal income tax system to a national property (or land) tax system. To determine the distributional impact of such a change, "real property to income ratios" are calculated for various income and demographic groups to determine the relative incidence of the different taxes. The major findings are that such a change would be more regressive with respect to income and result in higher relative tax burdens for elderly households and for wealthier households.

Woodruff, A. M. and L. L. Ecker-Racz (1969). Property Taxes and Land-Use Patterns in Australia and New Zealand. Land and Building Taxes: Their Effect on Economic Development. A. P. Becker. Madison, WI, University of Wisconsin Press: 147-186.

> case studies, international, not peer reviewed

> Relative impact of different property tax systems on land use in Australia and New Zealand. Localities in Australia and New Zealand have a choice over the tax base to be utilized for property taxation, including a uniform property tax and a site value tax among those choices. Despite the differences in tax bases across communities, there are no significant observable differences in land-use patterns. This observance does not support the proposed theoretical benefits of land value taxation. It is argued that such benefits are not evident for a few main reasons. First, local tax rates on property are relatively low so they will not be a major factor in individual's decisions on land use. Second, even when incentives might be affected by land value taxes, decisions regarding the use of land are not necessarily affected because of the existence of exemptions on certain classes of land. Hardship exemptions, in particular, allow individuals to keep property in current and potentially less efficient uses even in the presence of land value taxation.

Woolery, A. (1982). The Fairhope, Alabama, Land Tax Experiment. Land Value Taxation: The Progress and Poverty Centenary. R. W. Lindholm and A. D. Lynn. Madison, WI, The University of Wisconsin Press: 197-204.

institutional, U.S., not peer reviewed

Summary of the experiences of Fairhope, Alabama, a "Single Tax Colony" established in 1894. Much of the dissent regarding the single tax on land values in Fairhope has revolved around the issues of the appropriate level of taxation on land rent and the level of public services being provided in the community. Whether the colony will continue to survive or not depends to a great extent on how the community and individuals within the community respond to the untapped oil reserves in the land.

Wunderlich, G., Ed. (1995). Agricultural Landownership in Transitional Economies. Lanham, MD, University Press of America, Inc.

An edited volume. Citations to specific chapters are shown separately in this bibliography.

Wunderlich, G. (1997). "Land Taxes in Agriculture: Preferential Rate and Assessment Effects." American Journal of Economics and Sociology 56(2): 215-228.

Wyatt, M. D. (1994). "A Critical View of Land Value Taxation as a Progressive Strategy for Urban Revitalization, Rational Land Use, and Tax Relief." Review of Radical Political Economics 26(1): 1-25.

conceptual, peer reviewed

Provides dissenting analysis on the perceived benefits of land value taxation. According to theory, land prices should fall due the capitalization effect of a land value tax and rise due to the incentive effect of relatively lower taxes on improvements. The capitalization effect relies on the assumption that land is fixed in supply, which is typically not true for any specific land market. It also relies on the assumption that the tax cannot be shifted onto consumers, which may indeed be possible if owners and renters of land and property have market power. The incentive effect is only likely to be strong in urban areas that are already attracting development. In fact, there may actually be a disincentive to invest in central cities if the effect of land value taxation in these areas is to increase the price of land. In that case, land value taxes would not solve the problem of urban sprawl, but would contribute to it. The positive redistributional effect of land value taxation also relies on the assumption that land prices will fall, allowing more access to the purchase of land. In fact, land ownership is already so concentrated that in order to reduce those effects, land value tax rates would have to be so high that they would be "nearly confiscatory" and, therefore, not feasible politically. Finally, while land value taxation may provide some "property tax relief to homeowners..., there are other more direct methods to achieve this same end."

Yamasaki, Y. and R. V. Andelson (2000). "Land-Value Taxation Around the World: Japan." American Journal of Economics & Sociology 59(5): 353-363.

Yang, C. W. and D. B. Means, Jr. (1992). "A Welfare Analysis of the Site Value Taxation Model." Journal of Real Estate Finance and Economics 5(3): 281-290.

theoretical, U.S., peer reviewed

Adaptation of the Brueckner (1986) long-run model of two-rate taxes to consider short-run equilibrium effects. Holding tax revenues and land values constant, the short-run model employed concludes that a shift to a graded tax system will increase capital improvements and

housing output, as well as improve on welfare in the form of higher consumer surplus. These theoretical conclusions are supported by simulation studies.

Yinger, J., H. S. Bloom, et al. (1988). <u>Property Taxes and House Values: The Theory and Estimation of Intrajurisdictional Property Tax</u>. San Diego, CA, Academic Press.

Youngman, J. and J. Malme (1999). "Issues in Land Taxation and Property Taxation in Central and Eastern Europe." <u>Proceedings: Ninety-first Annual Conference on the National Tax Association, Austin, Texas, November 8-10, 1998</u>: 137-143.

    institutional, international, not peer reviewed

    Discussion of the use of property and land taxation in transitional economies in Europe. Although local governments require a strong tax base to finance expenditures, property taxation in these countries is particularly problematic because of the lack of proper markets to assess property values accurately and the inability of property to generate adequate income for owners to pay taxes. Countries that have adopted property or land-value taxation as a part of their tax system typically set relatively low tax rates and, therefore, earn a relatively small fraction of local tax revenues from this source. An exception to this is in Estonia, where rural localities earn 25% of their tax revenues from a land-value tax.

Youngman, J. M. and J. H. Malme (1994). <u>An International Survey of Taxes on Land and Buildings</u>. Boston, MA, Kluwer Law and Taxation Publishers.