An Essay on the Political Economy of Two-Rate Property Taxation

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Abstract

This paper surveys the various economic arguments in favor of taxing land values more heavily than building values and then explores why two-rate property taxation has not yet been adopted in the United States outside several Pennsylvania cities. An important obstacle to property tax reform is that shifting from a uniform tax rate to dual tax rates tends to confer tax cuts on some property owners and impose tax hikes on other property owners. The prospective losers are likely to coalesce in opposition to introduction of two-rate property taxation. Simulations using tax parcel data from a small city in New Hampshire suggest that this political opposition to tax reform can be blunted if the introduction of two tax rates is accompanied by a generous credit on each property tax bill.

About the Author

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Introduction

As practiced in the United States, the property tax seems to be a perpetual source of controversy and topic of debate. This notoriety stems partly from the visibility of property taxation. Owners of real estate owe the tax collector large annual payments levied on the assessed values of their holdings. Retail sales or value added taxes, by comparison, are much less visible since they collect small doses of revenue as market transactions occur throughout the year.

Another source of opposition to the property tax is the widespread perception that this form of taxation treats taxpayers in a regressive fashion (Youngman 2002). Although the research literature on this question is far from unanimous, the alleged regressivity of real estate taxation dampens popular support for this particular source of government revenue.

Still another reason for opposition to property taxation is that revaluation of properties in hot real estate markets results in taxation of unrealized capital gains of property owners, a fiscal impact widely perceived to be unfair. This treatment of capital gains contrasts with that under the personal income tax: Capital gains on ownership of financial assets are taxed as personal income only when those gains have been realized via asset sale.

Should we then entertain scrapping property taxation altogether? I think not. A major virtue of the real estate tax is that it is a stable revenue source with which to pay for essential public services. That is, over the course of a national or regional business cycle, the yield from taxing property values is far less volatile than the revenue flows from taxing corporate profits, personal incomes or even retail sales. Hence, relying on property tax revenues is less likely to result in painful budgetary fluctuations from year to year.

For this and other reasons, property taxes will continue to play a major role in the U.S. tax system, especially at the local level of government. As various authors have argued, the property tax should be retained but reformed in order to fully realize its economic potential as a key component of the U.S. tax system. Property tax reform is unlikely to occur, however, if it threatens to impose significant losses on many property owners. Thus, the efficiency and distributive effects of tax reform proposals need to be considered simultaneously if reform efforts are to succeed.

The Case for Property Tax Reform

William Vickrey (1999: 17) outlined the case for property tax reform by pointing out the dual character of the traditional property tax:

> The property tax is, economically speaking, a combination of one of the worst taxes – the part that is assessed on real estate improvements … and one of the best taxes – the tax on land or site value … A tax on land, properly assessed independently of the use made of the lot, is virtually free of … 'excess burden,' while the tax on improvements imposes serious burdens on construction ….

This recognition that the uniform property tax is actually a pair of levies on improvement and land values employing the same tax rate points the way to various tax reform possibilities. Why not tax site values at a higher rate than improvement values, the two-rate reform option? Why not rescind taxation of real estate improvements altogether and rely entirely upon taxation of site values, the pure land value tax option?

There are a number of compelling economic arguments in support of heavier taxation of land values accompanied by lighter taxation of improvement values. One is that this sort of tax reform would foster denser patterns of land development, thereby helping to prevent metropolitan sprawl (Brueckner 2001). Another is that heavier taxation of land values would tend to lower land prices so that homebuilders and homebuyers could participate in the housing market with less debt on their balance sheets (Netzer 2003). Still another argument for taxing land values more heavily is that this would permit lighter taxation of commercial and industrial capital assets, thereby stimulating local employment and income growth, while holding total tax revenue constant (England 2003).

These arguments rooted in economic theory are supported by an actual case study: According to Oates and Schwab (1997), Pittsburgh weathered the transition from steel manufacturing center to postindustrial city surprisingly well. These authors attribute that economic success, at least in part, to its reliance upon two-rate property taxation.

Political Obstacles to Property Tax Reform

If the case for two-rate property taxation is so strong, then why has the U.S. experience with this form of taxation been limited to a few cities in Pennsylvania? No doubt there are several reasons, one being the challenge that municipal assessors would face if they attempted to value building and site values separately and accurately.

In this essay, I focus not on that technical and administrative challenge but rather on the likely opposition of some taxpayers to property tax reform. Even if two-rate property taxation would generate substantial efficiencies for society as a whole, some property owners could be worse off after its adoption. Thus, the political challenge is to design reform proposals that offer social efficiency gains without provoking formation of anti-reform coalitions.

The potential of land value taxation to harm particular taxpayers has been noted by several authors. Wolff (1998), for example, estimates that a proportional federal tax on land values in place of the federal income tax would be strongly regressive and would also shift the federal tax burden to the elderly. Nechyba (1998) finds that replacing taxes on capital with taxes on land would, under particular empirical circumstances, depress the market prices realized by landowners if they sold their land parcels. Hence, owners of undeveloped land are likely opponents of two-rate property taxation.

In their study of the District of Columbia, Schwab and Harris (1997) found that a shift to dual property tax rates could shift the tax burden significantly among neighborhoods and property categories: This helps to explain their guarded conclusion (p. 254) that “a graded [two-rate] tax could offer important advantages to the District, but it is a decision that needs to be considered carefully.”

Building Equity into Tax Reform Proposals

Of course, the existing uniform property tax poses its own set of equity and distributional issues. Allen (2003), for example, reports that lower-valued multi-family residential properties are often assessed at higher percentage of market value than are higher-valued properties. Harris and Lehman (2001) also find that cheaper residential properties tend to have higher ratios of assessed value to market value.

Many state legislatures have attempted to respond to perceived inequities in the uniform, or single-rate, property tax by enacting circuit-breakers for lower-income or elderly residents. Other states have enacted homestead exemptions providing that a limited amount of assessed value on each tax bill is free from taxation. Mississippi is notable as a state that has attached a tax credit provision to its property tax system in an effort to provide tax relief for less affluent property owners (Duncombe and Yinger 2001: 254-5).

Following the lead of Mississippi, one can imagine a reformed property tax that taxes land values more heavily than building values and simultaneously offers a standard tax credit to each taxpayer. Consider the hypothetical example in Figure 1. A homeowner with a $200,000 assessed value would face a tax hike after introduction of two-rate taxation in the absence of such a credit. However, if the introduction of dual tax rates were accompanied by a generous credit, his or her tax payment would actually fall. (Note that the tax rate on land values has to be higher with the introduction of a credit on each tax bill in order to collect the same amount of revenue citywide.)

<table>
<tr><td colspan="3">Figure 1
Tax Rates and Tax Credits</td></tr>
<tr><td colspan="3">Building value = $150,000
Land value = $50,000</td></tr>
<tr><td>Single tax rate = 2% per year

Annual tax bill = $4,000</td><td>Land tax rate = 6% per year

Building tax rate = 1% per year

Annual tax bill without credit = $4,500</td><td>Land tax rate = 7% per year

Building tax rate = 1$ per year

Annual tax bill with $1200 credit = $3800</td></tr>
</table>

A tax reform plan along these lines would embody a number of desirable features:

- It would encourage housing construction and maintenance of existing housing units by lowering the tax rate on the assessed value of residential structures.
- It would encourage commercial and industrial development by lowering the tax rate on the assessed value of business structures.
- It would encourage denser development of vacant parcels by raising the tax rate on land relative to that on buildings and other capital improvements.
- It would protect owners of less expensive properties, many of them elderly or recipients of modest incomes, from higher property tax bills.

A Case Study of Dover, New Hampshire

These general points can be illustrated by using actual tax parcel data from a specific jurisdiction to simulate the distributional effects of property tax reform. I have chosen Dover, New Hampshire, as an illustrative case.

As Table 1 reveals, Dover is a small, but growing, city north of metropolitan Boston. The city's resident population ranges from poor to affluent, reflecting its history as a New England mill town and the presence of desirable waterfront properties. Because various governmental and nonprofit agencies have located in Dover, more than 2400 acres of its land area are exempt from property taxation. However, more than 5200 acres are undeveloped and taxable. In 2000, the market value of taxable land and buildings exceeded $2 billion.

Table 1

A Profile of Dover

Land area (2002)	
• Taxable	13,188 acres
• Exempt	2,418 acres
• Undeveloped	>5,215 acres
Total population (2000)	26,884
Population change (1990-2002)	2,637
Median family income (1999)	$57,050
Family Incomes > $100K (1999)	14.7%
Equalized total tax rate (2002)	1.89%
Equalized valuation (2000)	$2.033 billion

The landscape of Dover is heterogeneous: It encompasses an older downtown district, newer office and retail developments in outlying districts, apartment and condominium complexes, trailer parks, single-family subdivisions, industrial properties, and tracts of undeveloped land. As Table 2 documents, this heterogeneity of land uses results in substantial diversity of parcel sizes, assessed land and building values, and property tax payments. Hence, one should expect that alternative property tax reform plans would have very different implications about changes in the distribution of tax payments among the city's taxpayers.

Table 2

Taxable Parcels in Dover (2002)

	Mean	Standard Deviation	Sum
Parcel Size	1.47 acres	6.74 acres	13,188 acres
Assessed Value	$208,055	$475,810	$1.87 billion
Tax Payment	$2,907	$6,650	$26.16 million

Let us suppose that the State of New Hampshire enabled its cities to adopt two-rate property taxation with a uniform credit on each tax bill. The City of Dover would then face a menu of fiscal options ranging from retention of a single rate but with a credit available on each taxable parcel to adoption of a pure land value tax, also with a credit on each tax bill. If one assumes a (maximum) credit of $1000 annually and that the two-rate option applies only to municipal and local school taxes, not to the county and statewide property taxes collected from Dover property owners, then one can design a number of alternative tax plans yielding the same amount of local revenue as the existing uniform property tax. Several of these plans are described in Table 3.

Table 3

Revenue-Neutral Tax Plans for Dover (2002)

Tax Plan	Land Rate (per thousand dollars)	Building Rate (per thousand dollars)	Maximum Credit
One rate, No credit (baseline case)	$13.98	$13.98	0
One rate, With credit	$18.50	$18.50	$1,000
Two rate A, With credit	$27.89	$13.98	$1,000
Two rate B, With credit	$32.04	$11.98	$1,000
Two rate C, With credit	$38.22	$8.98	$1,000
Pure land tax, With credit	$56.64	0	$1,000
Two rate D, No credit	$24.40	$8.98	0

Note that if a single tax on land and buildings were retained, then that uniform rate would need to rise from $13.98 to $18.50 per thousand dollars of assessed valuation in order to grant $8.4 million of credits on nearly nine thousand tax bills and still collect $26.2 million, as before, to pay for municipal and local public education expenses. If, alternatively, the tax rate on building values remained at $13.98, then the tax rate on land values would need to increase to $27.89 per thousand in order to grant the tax credit on all tax bills and also guarantee revenue neutrality in the aggregate.

If one envisioned cutting the building value tax rate by $2 or $5 per thousand, perhaps to stimulate construction activity within the city, then the land value tax rate would need to rise still higher, to $32.04 or $38.22 per thousand. Interestingly, if one wanted to cut the building rate by $5 and dispense with tax credits, then a land value tax rate of $24.40 would suffice to guarantee revenue neutrality. At the extreme, a pure land value tax rate with a maximum credit of $1,000 on each tax bill would require a rate of $56.64 per thousand dollars of assessed land value. The political feasibility of a land value tax of that magnitude is dubious, to say the least.

What can one say about the redistribution of tax payments that would occur for alternative revenue-neutral property tax reforms adopted by the City of Dover? Table 4 reports the Pearson correlation coefficients between several parcel characteristics and the tax differences for the owners of those properties under various tax reform plans.[1]

Table 4

Tax Plans, Parcel Characteristics and Redistribution of Tax Payments

Difference from Current Uniform Property Tax					
Parcel Characteristics	Two-Rate D, *No Credit*	Two-Rate C, *With Credit*	Two-Rate B, *With Credit*	Two-Rate A, *With Credit*	One-Rate, *With Credit*
Assessed Value	-0.902	-0.633	-0.193	+0.561	+0.995
Acres	-0.187	-0.057	+0.099	+0.287	+0.279
Resident Owner	+0.035	-0.011*	-0.061	-0.106	-0.076
Building-Land Value Ratio	-0.382	-0.385	-0.278	-0.032	+0.279

If one inspects the top row of correlation values, one finds a very interesting pattern. If the building rate were cut by $5 per thousand, the land rate were increased by $10.42 per thousand, and no tax credits were granted (plan D), one would witness a strong correlation between expensive properties and tax cuts. If one retained a single tax rate on buildings and land, on the other hand, but introduced a generous tax credit on each property tax bill, then one would witness a strong correlation between cheaper properties and tax cuts. At first blush, then, convincing owners of modest properties to support land value taxation would seem a difficult task.

Note, however, that the correlation between the assessed value of a property and the change in its tax payment is positive and significant <u>if</u> a generous credit is introduced as part of the tax reform and <u>if</u> the building tax rate remains the same, thereby helping to finance those tax credits (option A). Although the correlation is far from perfect in this case, there are many small property owners who would enjoy a tax cut despite the shift towards taxing land values more heavily.

Although a desire to shift tax burden to absentee property owners could motivate heavier taxation of land values by a local government (Lee 2003), that does not appear to be a relevant consideration in Dover, New Hampshire. The correlation between residency of the property owner and the tax change under various tax reform plans is extremely weak. Thus, it seems unlikely that one could mobilize a coalition of voters in support of land value taxation by arguing that absentee owners would bear the brunt of tax reform.

Although informative, the correlations reported in Table 4 are highly aggregative and tell us nothing about the impact of property tax reform on specific land use categories. If one is interested in understanding the political economy of tax reform at the local level, then one needs to look at how homeowners, apartment landlords and their tenants, condo owners, manufacturers, retailers and other owners of real estate would be affected by tax reform. If most owners within a specific property category stand to gain or lose from a tax reform proposal, they are very likely to coalesce as a political coalition to defend their common interest.

Take condominium owners, for example. As Table 5 documents, this category of owner would be likely to favor almost any kind of property tax reform in Dover. For example, if a single tax rate were retained and a tax credit implemented, 771 condo owners would enjoy lower tax bills and only 78 would face higher tax bills. As a property class, condominium owners stand to gain from tax reform for a pair of reasons:

- Most have total assessed values that are relatively modest and thus a uniform tax credit is quite beneficial to many of them.
- Most have properties with relatively high ratios of building value to land value and thus they benefit from a shift towards taxing land values more heavily.

Table 5

Condominium Owners and Tax Reform Plans

	Number of gainers	Number of losers
Two-Rate D, No Credit	684	165
Two-Rate C, With Credit	776	73
Two-Rate B, With Credit	794	55
Two-Rate A, With Credit	783	66
One-Rate, With Credit	771	78

How would owners of single-family homes fare under alternative tax reform plans? That depends upon the type of residential property that one considers. Houses in Dover range in total assessed value from $55,000 to nearly $1.2 million. Their assessed ratios of building value to land value also range from more than seven to less than a tenth. One should expect, then, that a particular tax reform plan would affect various homeowners in very different ways.

Let us examine this point by looking at the potential impact of the five tax plans on different segments of the single-family housing market, as measured by total assessed value of a property. As Table 6 shows, those owners who houses fall in the top quintile of the distribution are likely to have some strong opinions about the tax plans. Because their homes are expensive ones, all would pay higher taxes if a single rate were retained and a credit introduced. In effect, they would be helping to finance the tax cuts enjoyed by owners of less expensive single-family homes who would benefit from the credit. If, on the other hand, a significant shift to land value taxation were to occur and no credit were introduced (option D), then a large majority of owners of expensive homes would enjoy tax cuts. Hence, this quintile of homeowners could probably be organized to support land value taxation if a progressive credit were omitted from the tax proposal.

Table 6

Owners of Top-Quintile Houses and Tax Reform

	Number of gainers	Number of losers
Two-Rate D, No Credit	785	265
Two-Rate C, With Credit	670	380
Two-Rate B, With Credit	576	474
Two-Rate A, With Credit	422	628
One-Rate, With Credit	0	1050

The impact of property tax reform plans on the middle and bottom quintiles of Dover homeowners would be strikingly different. As Table 7 reveals, many owners of less expensive homes would gain from tax reform but only if the adopted plan included a generous tax credit. Large majorities of middle- and bottom-quintile homeowners, for example, could support a $2 per thousand cut in the building tax rate accompanied by an $18 per thousand increase in the land tax rate if they received a (maximum) credit of $1,000 on their annual tax bills (option B). Large majorities, however, would oppose a $5 per thousand cut in the building tax rate accompanied by an even larger hike in the land tax rate if no credit were offered to sweeten the tax reform (option D). Hence, it seems that owners of less expensive homes could be mobilized to support a modest shift towards land value taxation if that switch to two-rate property taxation also included a progressive tax credit provision.

Table 7

Impact of Tax Reform Plans on Owners of Middle- and Bottom-Quintile Houses

	Number of gainers (middle, bottom)	Number of losers (middle, bottom)
Two-Rate D, No Credit	165, 10	892, 1040
Two-Rate C, With Credit	659, 388	398, 662
Two-Rate B, With Credit	794, 933	263, 117
Two-Rate A, With Credit	903, 1026	154, 24
One-Rate, With Credit	1057, 1050	0, 0

How would owners of Dover business properties fare under the alternative property tax reform plans? The answers to that question are more complex than one might imagine. All owners of large apartment complexes, forty one in number, would lose from retention of a single tax rate and introduction of a tax credit. That makes perfect sense because a thousand dollar credit would provide almost no benefit to the owner of a multi-million property but he or she would face a higher uniform tax rate to help finance $8.4 million of credits citywide. On the other hand, almost all owners of large apartment projects would gain from a two-rate tax plan without a credit (option D).

The owners of bank and office buildings, shopping malls and big box retail stores would probably have a less unified response to tax reform initiatives. If a revenue-neutral shift to dual rates was adopted without a tax credit, 45 of these commercial properties would receive tax cuts and 49 would experience tax hikes. Inclusion of a tax credit in the reform plan would certainly reduce the number of gainers. However, even if the tax rate on building values stayed the same and a fairly modest boost in the tax rate on land values were used to pay for tax credits (option A), nineteen of these commercial property owners would still be gainers. This reflects the fact that some office buildings in Dover are inexpensive structures on small lots and hence have assessed values no higher than a moderately valued house. The lesson is that not all commercial properties are created equal (and valued equally) and hence one should not make broad generalizations about the impact of property tax reform on this property category.

In a similar fashion, one finds that owners of industrial properties in Dover are unlikely to rally behind a particular reform proposal. If option D were implemented ($5 per thousand cut in the improvements tax rate, more than $10 per thousand hike in tax rate on land, no credit), then 84 industrial properties would enjoy lower property tax bills. However, sixty seven properties would face a tax hike. At the other end of the reform proposal spectrum, retention of a single tax rate and introduction of a uniform credit would raise the taxes on 90 industrial properties but reduce 61 tax bills in that category.

Perhaps the most surprising result of this simulation study is that owners of undeveloped land do not necessarily have to fear the introduction of a two-rate property tax system. Of course, if land values are taxed at a higher rate and no tax credit is offered to landowners, then all of them stand to lose from tax reform. However, if a tax credit is included as part of the reform package, then owners of undeveloped lots with modest assessed values are unlikely to oppose tax reform. In the case of Dover, adoption of option B would split the owners of commercial and industrial properties down the middle (61 gainers, 59 losers) and find a majority of the owners of residential lots inclined to support tax reform (309 gainers, 222 losers). Although the owners of large tracts of undeveloped land with high assessed values would certainly lose from heavier taxation of land values, the owners of smaller vacant lots with modest assessed values have nothing to fear from two-rate property taxation if a credit is introduced at the same time.

Conclusions

This summary of simulation results for a small city in New Hampshire points the way to some conclusions about the political economy of property tax reform. Considerations of economic efficiency, preservation of open space, and local economic development suggest that a shift to two-rate property taxation is advisable from a social perspective. However, taxing land values more heavily and improvement values more lightly would raise the annual tax bills of many homeowners and all owners of vacant land. Thus, considerations of social equity and political feasibility tend to undermine the case for two-rate property taxation. These obstacles to tax reform can be reduced to a substantial degree if the introduction of dual tax rates is accompanied by a uniform tax credit on every property tax bill.

Endnotes

[1] Note that the only correlation value in Table 4 that is insignificant at the one percent level is the one marked by an asterisk**.** Also, note that the residency of the property owner was measured by whether the tax bill was mailed to a Dover street address or not**.** That is, of course, an inaccurate measure of residency.

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