

**Property Taxes for Local Finance: Research Results and Policy Perspectives  
(Reconsidering Property Taxes: Perhaps Not So Bad After All)**

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## **Abstract**

Although property taxes continue to be one of the fundamental fiscal foundations for local government in the U.S., they also remain exceptionally controversial (even among taxes). The political or policy objections to property taxes generally amount to a charge that the tax is “unfair” to particular taxpayers or because of its operation. In contrast, economists and other tax analysts usually consider the economic efficiency aspects of the property tax and its alternatives. This report is intended to represent fairly the research evidence and current thinking of tax analysts about the property tax, focusing especially on the various concerns that the property tax is unfair. After clarifying understanding of the magnitude and importance of property taxes, three main property tax questions are addressed. To what extent are the political concerns about property taxes valid, and which are misimpressions? For the valid concerns, are there policy changes that might mitigate the problems? What are the advantages of property taxes generally, especially compared to the alternatives?

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## **“Property Taxes for Local Finance: Research Results and Policy Perspectives” (“Reconsidering Property Taxes: Perhaps Not So Bad After All”)**

### **I. Introduction**

Although property taxes continue to be one of the fundamental fiscal foundations for local government in the U.S., they also remain exceptionally controversial (even among taxes). A number of authors have detailed the political or policy objections to property taxes, which generally amount to a charge that the tax is “unfair” – unfair in its distribution among various income classes, unfair to particular groups of taxpayers (home owners, senior citizens, farmers, and so on), unfair because increases in property value are taxed without a cash gain to offset the higher tax, unfair because of inept or corrupt administration, unfair for funding education because of wide disparities in property values, and so on.

In contrast, economists and other tax analysts often evaluate the property tax and its alternatives based on the economic efficiency of the taxes. Primary concerns about the efficiency implications of property taxes include the effect on efficient housing consumption, on locational decisions of both households and businesses, on the supply of capital and capital intensity of production, and on local government decisions about the efficient quantity of public services (Zodrow 2008).

As a consequence of the policy perceptions and sometimes supported by efficiency concerns, the property tax seems continually to be under assault, the target for reform, reduction, or even elimination. The adoption of Proposition 13 by California voters in 1978 signaled one recent phase of the “property tax revolt.” Voters in other states adopted limitations similar to those in California or created a number of exemptions, abatements, credits, or special features to reduce or constrain property taxes for various groups. In the 1980s and 1990s, state legislative changes to reform the financing of education, sometimes required or encouraged by litigation, led to decreases or structural changes in property taxes, often involving substitution of other revenues. In the last several years, there seems to have been a resurgence of the “property tax revolt” as a number of states have considered proposals to reduce or even eliminate the property tax by expanding alternative revenues. Many of these latest proposals involve substitution of increased state taxes coupled with new state intergovernmental grants for the local property tax. As such, these proposals imply a change in the fiscal autonomy of local governments as well as movement away from the property tax.

Although not uncommon in the world of public policy analysis, the analysis of property taxation seems to be one area where the gap between popular and political perceptions, on the one hand, and the views of tax analysts on the other, is especially wide and dramatic. Reflecting President Kennedy’s (1962) warning that “too often we hold fast to the clichés of our forebears,” it seems that many popular comments and criticisms of property taxes either reflect the state of tax administration well in the past or ignore recent research results that provide a new and substantially different perspective. This is, of course, as much the fault of tax analysts as it is political officials. Still, the topic of property taxation seems to be one for which improved education and understanding is especially necessary.

This report is intended to represent fairly the research evidence and current thinking of tax analysts about the property tax, focusing especially on the various concerns that the property tax is unfair. Importantly, the report is intended particularly for policy makers, public policy administrators, and informed citizens. As such, new theoretical models and empirical evidence are not presented. Rather, the results of previous theoretical and empirical analysis are described in a non-technical manner with a focus on practical implications for state-local policy decisions. Three main property tax questions are addressed. To what extent are the political concerns about property taxes valid, and which are misimpressions? For the valid concerns, are there policy changes that might mitigate the problems? What are the advantages of property taxes generally, especially compared to the alternatives?

## **II. How Important are Property Taxes?**

### **To Governments**

The \$346.3 billion of property taxes collected in fiscal year 2005 accounted for about 28 percent of all local government general revenue and more than 72 percent of local government taxes, as shown in Figure 1. Although the relative importance of the property tax to local governments declined in the 1960s and 1970s, there has been essentially no change in the relative importance of property taxes for local governments in the past 20 years.

Of course, the importance of property taxes to local governments in the aggregate masks the vast differences among types of local governments, as shown in Figures 2 and 3. Property taxes collected for school districts account for the largest share of the property tax (about 43 percent in 2002) and provide about one-third of general revenue for public schools nationally. Townships, many of which provide public services in more rural areas, also remain heavily dependent on property taxes, which provide about 55 percent of revenue. In contrast, property taxes provide about a quarter of revenue to county governments and about one-fifth of revenue for cities, on average.

Considering all taxes collected by all US governments, sales taxes, property taxes, and corporate income taxes are all roughly of the same magnitude – in the \$350 to \$450 billion range – as shown in Figure 4. In 2005, property taxes (\$346.3 billion) were essentially equal to federal and state corporate income taxes (\$355 billion). Total sales taxes (\$469 billion) exceeded property taxes, although property taxes were greater than both of the major components of sales taxes – general sales taxes (\$271.2 billion) and selective excise taxes (\$197.8 billion). Property taxes, as well as sales and corporate income taxes, were far less than personal income taxes (\$1,184.2) and social insurance taxes (\$874.8 billion), however.

An alternative perspective, allocating tax amounts by the economic form of the tax base, is shown in Figure 5. This comparison aggregates personal income and social insurance taxes as taxes on personal income, property taxes and corporate income taxes as taxes on capital (or returns from capital), and sales and excise taxes as taxes on consumption.<sup>1</sup> Taxes on personal income dominate, although taxes on capital are substantially greater (by half) than taxes on consumption.

## To Taxpayers and Homeowners

If property taxes represent about 30 percent of local government revenue, how important or large are typical property tax payments for individual property owners? Two caveats are important in addressing this question. First, the focus will be on owner-occupied housing (as opposed to rental housing or commercial or industrial properties) both because there is more available information about taxes on owner-occupied homes and because this seems to be an important driving force in political concerns about the property tax. Second, “typical” tax payments may be misleading, as both average property values and property tax rates differ substantially geographically, obviously between states but also among regions within states.

One simple measure of the personal importance of property taxes is to compare the total tax amount to personal income. Kenyon (2007) reports that aggregate property taxes in the US in 2005 amounted to about 3.15 percent of total personal income.<sup>2</sup> This ratio of property taxes to income is about the same that existed in the 1950s. In the 1960s and 1970s, property taxes increased to about 4 percent of income. Since 1982, however, property taxes have remained at about 3 percent of income (increasing very modestly from about 2.85 to 3.15 percent). This perspective allocates all property taxes however collected to income received by persons, reflecting the view that in the long run, all taxes must be paid by people in some capacity. Importantly, however, property taxes may not impose equal economic burdens on all taxpayers, as discussed later in this report.

A second simple measure of the importance of property taxes is to compare tax amounts on types of properties to the aggregate value of those properties. Data about effective property tax rates (tax as a percentage of value) have not been generally available in recent years because property value determinations are made locally or by state, and that information had not been collected and tabulated. However, Gravelle (2007a, 2007b) collected data from state assessment, tax, or auditing departments to determine market values of taxable property by state based on the property assessment practices in each jurisdiction. She used those market values with property tax collection data to estimate effective property tax rates by state.

Gravelle calculates average effective property tax rates on real property (land and buildings) among the states using three methods, with results of 1.49, 1.57, and 1.65 percent. The median effective property tax rate among the states is the same in all three methods – 1.68 percent. These calculations suggest, then, that typical property taxes on all real property are between 1.5 and 1.7 percent of market value. There are several important cautions to note about these estimates. First, there is wide geographic variation; estimated average effective property tax rates by state varied from .51 percent (in Hawaii) to 2.69 percent (in New Hampshire). Second, effective property tax rates may also vary by type of real property, something that Gravelle was not able to calculate. For instance, if a state assesses commercial and industrial property at a higher ratio than owner-occupied housing and then applies the same tax rate, the effective tax rate on housing will be lower than that on commercial and industrial property.

A third option is to use information collected in the annual American Housing Survey to measure property tax amounts on owner-occupied housing. For instance, the American Housing Survey for 2005 found there were about 75 million year-round, owner-occupied housing units in the US.

For these units, the median market value was \$165,344, and the median monthly real estate tax was \$127. Using the median values, this suggests annual property taxes of \$1,524, or an effective property tax rate of .92 percent. Again, there was substantial variation among properties. Property taxes were more than 2 percent of value for 15 percent of owner-occupied houses; effective tax rates were between 1 and 2 percent for about 30 percent of homes; and property taxes were less than 1 percent of value for about 55 percent of homes.

By 2007, the median owner-occupied home value had risen to about \$191,000, with a median monthly property tax of \$144 or \$1,728 annually (American Housing Survey 2007). Even with this growth in values between 2005 and 2007, only about 20 percent of owner-occupied homes had property tax of at least \$300 per month, and fewer than 10 percent face monthly taxes of \$500 or more. With the recent housing market crisis, prices have declined from the peak 2007 levels, of course. Consequently, the data from the 2005 Housing Survey may be a more accurate reflection of the current state of the housing market than the 2007 data. The median owner-occupied home value in 2007 was 16 percent greater than in 2005. If housing values in 2008 declined by more than 16 percent (which is the case in many markets), then even the 2005 data may overestimate current amounts.

Sample illustrations of combinations of owner-occupied housing values and effective tax rates are presented in Table 1. The row for a property value of \$165,000 is highlighted, as this is the median house value in the 2005 American Housing Survey. The effective tax rate of 0.9 percent is consistent with the AHS, whereas the effective tax rate of 1.7 percent reflects the median rate on all types of real property in Gravelle's work. So, what is the "typical" property tax situation for a homeowner? The "median" homeowner likely pays annual property taxes of \$1,500 to \$2,800 depending on the tax rate, or roughly \$125 to \$230 per month. Many homeowners – those with lower-value homes or in lower tax rate areas – pay much less. Indeed, the American Housing Survey results suggest that half of US homeowners pay less than \$125 per month in property tax.

But homeowners in metropolitan areas where property values are unusually high or those in states with especially high property tax rates (or both) could pay annual property taxes of \$4,000 to \$10,000 (\$330 to \$830 monthly) or even more. The AHS shows that about one-quarter of owner-occupied houses (more than 19 million) had market values of more than \$300,000 in 2005. Even at relatively low effective tax rates, such homeowners could easily face monthly property taxes of \$300 to \$400 or more. Data collected for the 2000 Census show that there were 10 communities, each with population of at least 100,000, where the median house value was at least three times greater than the national median. In these communities (7 in California, 1 each in Connecticut, Hawaii, and Massachusetts), median house values are estimated to be a minimum of about \$500,000. In such cases, monthly property taxes of \$400 to even \$1,000 are not unlikely.<sup>3</sup>

### Residential Tax Share

One important change in property tax distribution in the U.S. over the past 30 years or so has been the growing share of property tax collected from residential properties, especially owner-occupied housing. Although national data showing this trend are no longer collected by the

Census Bureau, the trend is clear from examining reports from various states. For instance, Strauss (2000) reports data from 18 different states covering the period up to the middle 1990s. In each case, the share of total assessed value due to residential properties had increased in the period examined and was at its maximum in the latest year for which data had been collected in the 1990s. As illustrations, the residential share had increased in Massachusetts from 64 percent in 1983 to nearly 79 percent in 1995, and in Texas from 33 percent in 1983 to 41 percent in 1994. In Michigan, residential property accounted for 69 percent of taxable value in 2006 compared to 66 percent in 2003 and 59 percent in 1966 (from Strauss).

Most analysts attribute the increasing share of taxable property value from residential properties to several factors. First, homeownership has increased, partly due to federal income tax incentives and other mortgage subsidies. Owner-occupied homes represented about 44 percent of the housing stock in 1940, but 62 percent by 1960 and 68 percent by 2007. Second, partly because of the increased homeownership and other economic growth factors, housing prices have increased substantially more than for other goods or investments. Using the Conventional Mortgage Home Price Index, owner-occupied home prices increased at an annual average rate of nearly 10 percent per year in the 1970s, 5.5 percent in the 1980s, 4.3 percent in the 1990s, and 7.3 percent since 2000 (until 2008). Third, encouraged by federal tax policy and production changes, businesses invested relatively more in equipment (personal property that is often not taxed) rather than facilities (real property that is taxed). Fourth, many states and localities have provided property tax incentives for economic development purposes that reduced taxable values for industrial and commercial properties. And fifth, it is often more difficult to accurately assess commercial and industrial properties compared to residential property, contributing to inaccurate assessments or more litigation about business property assessments.

Whatever the combination of factors, it does seem clear that an increasing share of property tax revenue is being collected from residential property owners. When deciding on local government budgets or proposals for increased taxes and services, both homeowners and renters accurately calculate that they will pay (directly) a higher share of the increased costs now than in the past. If voters perceived that their liability from property taxes collected from business property was low (or even zero), it is not surprising that citizens/voters/homeowners are less supportive of property taxes than in the past.

### Property Tax Relief for Homeowners

The illustrative amounts for property tax payments do not include the effect of any homestead property value exemptions or property tax credits (circuit breakers) that would serve to reduce property taxes at a given home value. For instance, currently some groups of property taxpayers in 34 states and the District of Columbia are eligible for property tax rebates or credits (usually applied against state income tax due). The rebates or credits typically apply to property taxes that exceed some specified percentage of income. Of the 35 “circuit breaker” property tax credit/rebate programs, 24 are limited to elderly taxpayers (or sometimes elderly and disabled taxpayers) with 19 of the 24 applying to renters as well as homeowners. Taxpayers of all ages are eligible for the credits or rebates in another 11, all of which allow both renters and homeowners to benefit. All but one of the states with these programs impose an income ceiling

on eligibility, although that ceiling varies widely (from \$3,750 in Arizona to \$82,650 in Michigan for single taxpayers in 2002).

Looking back at the sample property tax amounts in Table 1, one would expect that many taxpayers in lower-valued homes and senior citizens in high-value homes would be eligible for rebates or credits, effectively reducing annual and monthly property tax payments. In addition, to the extent that the effects of homestead property value exemptions are not captured in the measured effective tax rates, these too could lower the sample property tax amounts.

### **III. Common Strengths and Weaknesses of the Property Tax**

#### **Criticisms of Property Taxes**

Despite their importance as a revenue source for local governments (or perhaps because of it), property taxes seem continually to be a target for reform, reduction, or even elimination. The relative dislike of property taxes, compared even to other taxes, seems to stem from a combination of misunderstanding about the process and effects of the tax and concern about the magnitude of the tax for certain groups of taxpayers. Six major criticisms of the property tax are noted next.

#### **Assessment Process**

The property tax is different from other state-local government taxes in that both the tax rate and the tax base are determined by government. Unlike an income or sales tax, for which the value of the base (income or sales) is usually identified by private economic activity, the property tax base, property value, often must be estimated when market transactions are unavailable. The methods and procedures for assessing the value of property for tax purposes may be misunderstood and sometimes are sometimes perceived as unfair.

#### **Revenue and Rate Determination**

The separation of responsibility for assessing property and setting tax rates can contribute to taxpayer confusion about the source of property tax increases. If property is properly assessed as fraction of market value, then increases in the market value of property *should* lead to increases in assessed values. But if assessed values increase and *tax rates remain constant*, property tax revenues will increase. A general rise in property values allows local governments to increase property tax collections without increasing tax rates. Not surprisingly, some individuals are led to conclude that the assessment increase *caused* the tax increase

#### **Distribution Issues**

There seems to be a widespread perception (at least among some policy makers and taxpayers) that property taxes impose relatively higher burdens on lower income individuals; i.e. that the property tax is “regressive.” And even if not strictly regressive in the way that economists or tax professionals apply that term, the perception seems to be that property taxes impose relatively greater burdens on “average” or typical individuals than do alternative taxes, income taxes and

even sales taxes. Accurate information about the relative distribution of tax burdens by income group or type of individual for various taxes is necessary to clarify this issue, independent of which group policy makers wish to focus on the most.

### **Financial Planning, Capital Gains, and the “Monthly Payment” Problem**

Increases in property taxes that result from increased property values essentially are taxes on unrealized capital gains. This fact is often used to argue that specific taxpayers (senior citizens are most commonly identified) may not have sufficient current income to pay the increased taxes. But the issue applies to a broader set of taxpayers than seniors. If individuals purchase homes based on some measure of expected lifetime income (rather than current income), then it is expected that mortgage and tax payments initially may be a relatively high fraction of current income. Increases in value and taxes may make monthly payments so high as to be an unreasonable burden on current income.<sup>4</sup> Some mechanism to relate taxes to current income (often accomplished through “circuit-breakers”) or to spread out tax payments over a longer period (tax deferral programs) have been tried as a means to address this issue.

### **Incentive Effects**

Differential property tax rates are often identified as a factor affecting investment in a jurisdiction, and through that affecting property values, wages and employment, and other general economic conditions. In this view, relatively high property tax rates (even when balanced by government services) are considered to affect economic growth negatively. Concerns regarding the intensity of land use, as well as the treatment of open-space and farmland are often expressed in addition.

### **Visibility**

It is sometimes argued that the property tax is an especially “visible” tax because taxpayers make either large direct payments, usually twice per year, or monthly payments that are part of mortgage payments (and often identified separately). Certainly the property tax may be more visible to individuals than sales or excise taxes, but the contrast to income taxes seems somewhat problematic. Certainly for those paying property taxes along with mortgage payments, it is difficult to see a substantial difference between monthly mortgage and tax payments and monthly (or weekly) income tax withholding (with annual settlement).

### **Relative Advantages of Property Taxes**

#### Responsiveness to Economic Growth and Cycle Stability

Evidence supports the view that property taxes are very stable revenue sources, especially compared to sales taxes, and that property values in the U.S. have reflected long-run economic growth. This makes budget planning easier and provides revenue to fund increased demand for public services. Over the past 60 years or so, property values (and especially residential property values) increased substantially in response to economic and population growth, as well as from new business investment. If property assessments for tax purposes reflect market values, then

the property tax base grows with economic growth. Improvements in assessment practices have made it more likely that taxable property values do change in response to changes in market values. The short-run stability of the property tax base reflects the economic fact that capital investment (both residential and business) is by nature a long-run decision influenced more by long-run expectations than short-run economic circumstances. Accordingly, property values traditionally do not decline substantially with each recession, an outcome that is also the result of the typical lag in the assessment process.

### **Exporting or Net Revenue Burden**

Property taxes may be exported (impose burdens on non-residents) in two primary ways. If individuals itemize deductions for the federal income tax, then part of local property taxes are offset by reductions in federal tax liability. As a result, local taxpayers pay less than \$1 for each dollar of local tax revenue, effectively shifting some of the tax burden to other federal taxpayers. This is a contrast to sales taxes, which generally are not deductible.<sup>5</sup> In addition, property taxes are expected to create burdens on landowners, property owners, and workers. To the extent that these individuals are non-residents, then tax burden is exported. If non-residents receive benefits from local public services, then it is appropriate that non-residents pay part of the costs.

### **Distribution by Income Class**

There is now significant support for the view that, as one of the few substantial taxes on wealth and capital, property taxes impose substantial burdens on capital owners. As such, property taxes may be a more progressive element in the state-local tax structure than commonly believed, and certainly more so than sales or excise taxes in most instances. In addition, if jurisdictions with above-average property tax rates tend to be above-average income jurisdictions as well, then the tendency for the property tax to impose higher tax burdens on higher-income taxpayers is strengthened.

Although this perspective is sometimes referred to as the “new view” or the “capital tax view” of the property tax, at some point the newness should wear off. After all, this perspective has been prominent in economic analysis of taxation since the early 1970s. Peter Mieskowski’s 1972 pioneering analytical paper about property tax incidence was published more than 35 years ago. And Mason Gaffney in 1971 had previewed some of those analytical results when he wrote “To own property is to be rich, in the measure that one owns, and to tax the quality of richness should not be presumed to burden the poor more than the rich” (1971, 408).

### **Political Accountability and Efficient Provision of Services**

Historically, property taxes have been central to the independence of local governments and their ability to provide the type and quality of public services demanded by residents. Indeed, property taxes continue to provide about 30 percent of the revenue of local governments, on average. In many jurisdictions, residents vote on local budgets and/or property taxes, and there is strong evidence that individuals consider both local public services and property taxes in making locational decisions. With this perspective, it may be more accurate to think of local property taxes as charges or fees for residing or locating in a local jurisdiction and consuming the

public services provided through that local government. In this way, local property taxes may not have the traditional characteristics of “taxes” at all, but rather serve as “prices”. These “prices” help to ensure that local government are efficient in providing the services desired by local voters.

#### **IV. Distribution of Property Tax Burden: Regressive, Progressive, or ...?**

##### **Understanding Incidence vs. Tax Payments (tax payments vs. tax burden)**

The previous discussion of property tax amounts focused on direct tax payments, but policy based on the distributional effects (regressivity or progressivity) of the property tax properly should be determined by what economists call *tax incidence*: the analysis of the ultimate burden of a tax after the economic changes caused by the tax. Incidence is the change in private real incomes and wealth because of an adoption or change of a tax. Because individuals and firms may react to taxes by changing behavior, the taxpayers who bear the ultimate burden of a tax – that is, the economic incidence – may be different than the taxpayers from whom the tax is initially collected or levied upon, the direct tax payments. If payroll taxes collected from employers cause wages to be lower than without the tax, then workers bear the ultimate burden of the tax (even though the tax is “paid” by the employer).

Determining tax incidence requires analyzing which prices change and by how much as a result of the tax (or the tax and spending package). Prices of both consumer goods and services and factors of production can change, so a tax may affect individuals both because of their purchases as consumers (their uses of income) and through effects on factor prices such as wages, rents, and interest (their sources of income). The tax burden or incidence on any group or class of taxpayers depends both on the quantities of goods that are consumed or supplied by those individuals and the changes in prices of those goods. Once the incidence of a tax is determined, burden is characterized by its effect on the income distribution.

##### **What Time Frame: Annual vs. Lifetime Income?**

Once tax burdens on particular groups of taxpayers are determined, the burden is to be measured relative to income; but what income? Commonly, property tax burdens are compared to current annual incomes. But family or individual choices about the type of residence to purchase or own are long-run decisions, depending not just on current income but also on expected future income. Typically individuals do not change houses annually as their incomes change. It might be more appropriate, therefore, to compare property tax burdens to some measure of average lifetime income (or at least income over some longer period than one year). Current incomes are often poorly correlated with average lifetime incomes for taxpayers in temporary circumstances (students, young workers, retired, unemployed, those with special capital gains, and so on) that place them at the bottom and top of the income distribution. If housing choices are based on average long-run incomes, then comparing property tax burdens to that same long-run income gives a more accurate picture of the true income distribution of the burden. If property tax burdens are compared to average lifetime income rather than annual or current income, the resulting effect on distribution is less regressive or more progressive.

## Capital Tax Perspective

The modern economic analysis of property taxes considers them as one of several taxes levied on the income from or value of capital, which is one of the major inputs (with labor and materials) into the production of goods and services. That property taxes are a tax on an input seems clear for agricultural, commercial, industrial, and rental housing industries, but may be less clear for owner-occupied housing. It is possible, however, to think of an owner as producing a good called “housing service,” which requires land, a structure and contents, utilities, labor, and so on. In that case, the property tax (usually on the land and structure) is a tax on inputs. What is confusing, of course, is that the homeowner is both producer and consumer.<sup>6</sup>

The first implication of this perspective is that a uniform national tax on all property at a single rate would impose a burden – which cannot be shifted, at least in the short run – on all property owners. If all property is taxed at the same rate in all jurisdictions, changes in the location of the property or the type of property owned by an investor or will not reduce tax liability. The only option to avoid the tax is to reduce the amount of property owned overall, that is, to reduce investment nationally.<sup>7</sup> It follows that this component of aggregate property tax burden – called the capital tax effect – falls on *all* capital owners (including owners of property exempt from property taxation) through a reduction in the national rate of return (unless capital investment falls nationally). The effect of the average national property tax rate is thus a burden imposed on all owners of capital or property nationally.<sup>8</sup>

Actual property taxes are not uniform nationally, however, with effective tax rates differing both among jurisdictions and types of property. Because of these differences, investors can avoid the tax by decreasing their investment in higher-tax jurisdictions and increasing investment in lower-tax ones or by decreasing investment in taxable property and increasing investment in exempt property. These investor reactions will cause additional changes to the prices (and rate of return) of property and possibly to prices and quantities of other goods as well – called the “excise tax effects” of the property tax. These changes assume that investors can and will reallocate investment among locations or types of property in order to seek the highest returns, that is capital is assumed to be mobile. The excise tax effects arise solely due to *differences* in tax rates (and not the overall rate of tax).

Consider differences in effective property tax rates among localities or states. Differentials in tax rates between jurisdictions will reduce the amount of investment (property) and increase the user's price for property in the higher-tax jurisdictions, with just the opposite effects in the lower-tax jurisdictions. Thus, property tax burdens ultimately may be imposed on profits, wages, or land rents in addition to consumption. The expected excise tax effect for two important cases is as follows:

\*\*\*If capital is perfectly mobile, while workers and consumers are perfectly immobile, the effect of the tax-rate differential is to cause lower wages and land values and higher prices for locally produced consumer goods (housing) in the higher-tax jurisdictions as compared to the lower-tax ones.<sup>9</sup> This component of the tax burden (the excise tax effect) would then fall on local property owners and landowners and local workers (not all of whom may be residents).

\*\*\*If workers, consumers, and capital are perfectly mobile, the effect of any tax-rate differential is to lower the value of land in the higher-tax jurisdictions as compared to that in the lower-tax rate jurisdictions. This component of the tax burden would then fall on local landowners at the time the tax differential was created.

The overall burden of a property tax is the combined result of the capital tax and excise tax effects. Part of the burden arises because of the national average rate of property taxation and part because of the differences in effective rates among jurisdictions and uses. This view of aggregate property tax incidence being composed of two effects is summarized in Table 2.

An important implication is that it may not make great sense to think of *the* incidence of a property tax because the incidence (or distribution of burden) depends on the nature of the tax (uniform or differential) or the nature of any property tax change. As presented in Table 3, a federal grant program that results in a uniform, nationwide reduction in property taxes is expected to have a very different effect than if one state were to replace its property tax with an alternative revenue source. The first has only a capital tax effect and no excise effect, whereas the second has only an excise tax effect on the state reducing property tax. A nationwide reduction in property tax would benefit all owners of capital, proportional to the amount of capital owned. If one state eliminated the property tax, the benefit would go to landowners, housing consumers, and workers in that state. Whether such a change is pro-rich or pro-poor depends on the income level of workers and homeowners in that state.

Similarly, if one local government eliminates the property tax (by switching to a local income or sales tax, for example), again there is only an excise tax effect. Because one locality is small and it would be relatively easy for owners, consumers, and workers to move, the benefit of the property tax reduction would go almost exclusively to landowners in the locality when the tax was reduced. The distributional effect depends on the economic characteristic of those landowners.

A simplified illustration of one state's property tax status is shown in Table 4. The average effective tax rate is 2 percent, but community A has "low" taxes (1.5% rate) and community D has "high" taxes (2.5 %). Thus, there is an average 2% tax on all capital owners (the capital tax effect). Jurisdiction A has a positive excise tax effect because its taxes are relatively low, which is expected to benefit landowners (and possibly workers and housing consumers) in that community. In contrast, jurisdiction D experiences a negative excise tax effect, hurting landowners (and possibly workers and housing consumers). If residents of jurisdiction A have below average income, on average, whereas residents of D are high-income, then the excise tax effect from the property tax differential helps low-income residents and hurts high-income citizens; the tax differences add progressivity to the overall tax burden.<sup>10</sup>

The illustration in Table 4 can also be used to consider property tax changes within the state. A statewide property tax reduction would have no effect on the tax *differences* between communities; jurisdiction A has low taxes and jurisdiction D high taxes both before and after the property tax change. Unless the state is very large, there should be only a minimal effect on the national average rate of taxation. What does change is the average rate of tax in that state compared to others, which is expected to benefit housing consumers, landowners, and workers in

the state. In contrast, a property tax reduction in one jurisdiction in the state (D) is expected to benefit landowners in that locality. There is little (if any) benefit to the state as a whole because the average rate of tax in the state changes minimally.

### **Relationship of Property Tax Rates to Local Community Income**

It is clear that thinking of the property tax as a tax on capital leads to two separate implications – a change in the rate of return to all capital (the “capital tax effect”) and changes in labor, land, and housing prices in specific locations or uses (the “excise tax effects”). The distributional implication of the capital tax effect seems clear, but the distributional implications of the excise tax effects depend on the economic circumstances of the communities (or people) that benefit and that lose. For instance, if jurisdictions with high property tax rates are high-income communities on average, then the excise effects from the high property taxes (possibly including lower land values, lower wages, higher housing prices, lower employment, and so on) are burdens on higher-income individuals; the excise effects increase overall tax progressivity. On the other hand, just the opposite would be true if the communities with high property tax rates are lower-income, on average.

So, what does the evidence show? In a classic, but now somewhat dated, analysis of property tax incidence, Aaron (1975) reported that among the states there was a positive correlation between per-capita income and effective property tax rates; the high-tax-rate states tended also to be the high-income states. Aaron also reported a positive relationship between income and property tax rates among counties within states, although that relationship was not as strong or clear-cut as that among the states. In contrast, Aaron found a negative relationship between property tax rates and income among localities within counties in New Jersey, suggesting that the tax burdens that arise from property tax rate differentials within counties or metropolitan areas may, in fact, be regressive.

In a recent analysis by Plummer (2003) of residential property tax burdens in Dallas County, Texas, Plummer (2003, 752) reports that “After allowing for the federal income tax deduction of property taxes, total [residential] property taxes combined are approximately proportional.” This aggregate result arises because she finds that county and school taxes are proportional or slightly progressive (higher tax rates in higher-income jurisdictions), whereas city property taxes are regressive. Plummer explains that “Tax rates contribute to the regressivity of city taxes because lower-income cities tend to have relatively high tax rates.” Of course, the results reported by both Aaron and Plummer reflect those specific cases. The evidence may vary by state or even for different areas within a state, so the facts need to be examined for specific cases.

The most recent and comprehensive examination of the excise tax effects that arise from interstate property tax differentials is that by Gravelle (2007). Recall that Gravelle estimated effective property tax rates by state for tax year 2000. She reports that the excise tax effects (the incidence that results because of interstate differences in effective tax rates) account for 30 to 40 percent of the aggregate property tax burden. States with above-average tax rates incur tax burdens, whereas states with below-average tax rates enjoy tax subsidies or benefits. She suggests that between 35 and 49 percent of the subsidies (depending on the estimation method) went to states with per capita income lower than the national average. (Of course, this implies

that 51 to 65 percent went to high-income states.) She also reports that 35 to 40 percent of the excise tax burden went to low-income states (or 60 to 65 percent of the excise tax burden fell in high-income states). This suggests that the excise taxes and subsidies for lower-income states about offset each other, implying, in aggregate, that the excise effects from interstate property tax rate differentials have little impact on overall progressivity.<sup>11</sup>

Even if, in aggregate, the low-income states that are hurt by high property tax rates are about offset by the low-income states that benefit from low property tax rates, this aggregate perspective is of little consequence to those states that are hurt (have high tax rates). This again illustrates the important point that the efficiency and distributional effects of property taxes need to be considered for each specific case. Even if state-local property taxes are progressive (or at worst proportional) in aggregate, the tax can impose costs on specific states or localities that are not high-income. In the narrow local sense, then, the relatively high property taxes can have a regressive local impact.

### **What the Evidence Shows**

Using assumptions based on the results of the theoretical analysis, several studies, which are summarized in Table 5, have attempted to estimate the overall distributional effect of property taxes. The analyses differ in the assumptions made about incidence, the year and source of data, and the basis (household, family, individual; annual income or income over some longer period) to which tax burden is compared. Several generalizations seem possible.

If one assumes that tax burdens fall on owners of capital (a national uniform property tax or only the capital tax effect) and compare tax burden to current annual income, the tax distribution is U-shaped with respect to income – regressive for the bottom 30 to 40 percent of households and proportional for the remaining great majority of households, with a progressive pattern at the top of the income distribution (top 5 to 10 percent). With the same incidence assumption, but comparing tax burden to some measure of permanent or lifetime income, the overall tax burden is essentially proportional. On the other hand, if one assumes that property tax burdens fall on consumers (homeowners, renters, consumers of other goods), which represents only the excise tax effect, and compare to current annual income, then tax burdens are regressive for the bottom 20 to 40 percent of taxpayers and proportional for the remainder.

The differences are not that substantial. The overall distribution of property tax burden seems roughly proportional for middle income taxpayers, the difference being the magnitude of the “middle.” Property tax burden seems regressive among the lowest-income taxpayers (roughly the bottom 20 percent) and progressive or proportional for the highest-income taxpayers (the top 5 to 10 percent).

### **How Relevant are Incidence Studies for Policy Purposes?**

There are at least three reasons to think that these estimates of overall property tax incidence may not be relevant for specific policy decisions considered by individual states or local governments. First, as discussed previously, the theoretical analysis shows clearly that the expected economic effects of a specific tax change may differ from the average overall burden. For instance, if

(only) one city raises property tax (and there is no offsetting improvement in public service), the expected ultimate effect is a reduction in land values in that city. The distributional impact depends on the economic status of those landowners, on average. If the landowners have relatively higher income (perhaps because the city is high income in general or because landowners are non-resident high income individuals), then the distributional effect of the tax increase is progressive.

Similarly, if property taxes are increased uniformly (all localities) in one state, the expected economic effect is a decrease in wages, a decrease in land values, and higher housing costs in that state. So, the burden falls on housing consumers, land owners, and workers in the state. Again, the distributional result may be different than for aggregate property taxes, on average. A property tax increase (or above average use of property taxes) by a high income state adds progressivity to the overall tax system; above average property tax use by a lower-income state adds regressivity.

Second, the structure of the tax (property, income or sales) can affect the distribution of tax burden. Differential assessment, homestead exemptions, property tax credits or rebates (circuit breakers), and tax abatements can all be used to make a property tax more (or less) progressive than it would otherwise be by reducing tax burden for specific groups of taxpayers.<sup>12</sup> Differential assessment by property class is used in some states to tax residential property at a lower effective rate than business property. Homestead exemptions and tax credits or rebates are used in many states to reduce tax burden for homeowners (and sometimes renters) with relatively low income or assets and for senior citizens. Use of these features by a state (or even a locality) implies that the distribution of property tax burden would be different – presumably relatively more progressive – than that measured by overall incidence studies.

Finally, some portion of property taxes levied by a state or locality may impose burdens on individuals who do not live in that jurisdiction; that is, some of the burden may be exported. If property tax burdens are borne at least partly by owners of land or properties (including business properties), then non-resident owners effectively pay part of the property tax. This obviously reduces the burden on residents, but if the non-resident owners have higher income on average than residents, this also adds progressivity to the tax system. Taxes may be exported, therefore, to non-resident homeowners, or even more importantly, to non-resident owners of businesses (including corporate stockholders). In addition, some portion of property tax burden may be exported through the federal income tax itemized deduction for state-local property taxes. This deduction reduces the income tax of taxpayers who itemize, so that other federal taxpayers effectively bear part of the burden of the itemized tax. Although federal itemized deductions of local property taxes reduce the net tax burden on residents, it makes the overall distribution of taxes less progressive because relatively more higher-income taxpayers itemize deductions.

It follows, therefore, that the average estimated incidence or distribution of property taxes may not apply to the property tax in a specific state or locality or to a proposed change in the level of property tax. It seems preferable for each case to be considered and analyzed separately.

## **Benefit Tax Perspective**

Under certain conditions, the property tax serves as the "price" for living in a given community and consuming the local services provided through that local government. Each taxpayer pays the costs that their consumption imposes on the government. In that case, it does not make sense to consider the incidence of the tax separate from the provision of public services, because the tax simply reflects the demand for the services. This requires that consumers choose residential locations based on the property tax and service package offered by the local government, that there be a number of different communities from which to choose, and that there is some mechanism (such as zoning rules) to maintain the equilibrium. This perspective and the necessary conditions are described in detail in Fischel (2001).

In this situation, individuals who desire the same fiscal package are grouped together. For instance, if a high-income community has high property taxes because residents demand a relatively large quantity of public service, the correlation between income and tax rates does not reflect any redistribution among various taxpayers. Individuals are simply paying for the services they use. In addition, if property taxes do serve as benefit taxes or fees, then the taxes do not distort allocation decisions. The taxes would not change rates of return to capital or create incentives for reallocation of capital between jurisdictions or between uses.

Therefore, whether to think of property taxes as taxes on mobile capital or as fees for residing in a particular jurisdiction and benefiting from the services provided in that jurisdiction remains a controversial issue among some public finance analysts. Supporters of the benefit tax view point to studies showing the predominance of Tiebout-type sorting among localities (many varied localities in a metropolitan area with each being relatively homogeneous) and to the popularity of complicated zoning rules that may maintain community homogeneity. But there does need to be a large number of separate, homogeneous communities in any metropolitan area to make the benefit tax view applicable and the zoning rules must be effective and related to housing type or quality.

Many public finance specialists believe that this perspective applies quite well in suburban areas of relatively large metropolitan regions (see Inman 1994, for example). Individuals often have many, relatively small and homogeneous communities to select from without changing work location. In that environment, it does seem appropriate to think of the property tax as a price or benefit charge – the price for living in a given locality. There is less agreement whether this perspective applies to rural areas and large central cities. In rural areas, individuals may have few residential choices because of the geographic size or area of communities or find it infeasible to separate the work and residential location choice. But if individuals in rural areas have very similar demand for public services, then again the property tax could simply cover the benefits of those services.<sup>13</sup> This possibility seems least likely to apply in large cities, which are inherently quite heterogeneous. Individual property taxes in large cities, therefore, do not necessarily correspond to the benefits from public services, so the distributional effect of the tax is important.

The idea of local property taxes serving as benefit charges or community prices suggests that the property tax may be an especially appropriate local government tax for suburban communities in

metropolitan areas. Thus, states might want to consider using or allowing different types of local taxes for different types of local governments.<sup>14</sup>

## V. Capital Gains and the “Monthly Payment” Problem

In a well-functioning property tax system, taxes are related to the market value of the property, subject to the state assessment laws. This requires that property tax administrators must use some mechanism to reassess property as values change. Although only a few governments fully reassess all properties separately each year, most state and local governments adjust market and taxable values annually to reflect changes in market values for some groups of properties, often by neighborhood. Consequently, if market values of owner-occupied homes increase, taxable values will, in most cases, increase also.

An important issue is whether annual increases in market and taxable values of properties are accompanied by increases in property tax amounts. But increases in property values need not lead to corresponding increases in property taxes. It is obvious that if the market and taxable values of properties in a jurisdiction rise and the tax rate is kept constant (or if the tax rate is reduced, but less than proportionally to the increase in values), then total property tax revenue will increase. In that case, the property taxes on those properties that are increasing in value will also increase. In essence, part of the increase in value of a property – a capital gain – is taxed through the higher property tax. This fact has sometimes led to the charge that taxpayers face higher property taxes without additional money income (cash) to pay the higher tax amount. Historically, this concern has been raised particularly with respect to senior citizens, who may no longer work and rely on annual fixed incomes (or income with limited growth potential). But the issue may apply to a broader class of taxpayers, especially if property values (and property taxes) are rising rapidly.

This issue may be especially problematic for individuals who purchased homes based on the maximum monthly payment that the household could afford. Over the past 10 to 20 years, housing values increased substantially in some regions of the country so that average ratios of home value to income in some states became high by historical standards (above 5), implying that monthly mortgage payments also were high relative to income by historical standards. The homeowner’s expected monthly housing payments could change for two reasons. One is the now well-known problem created by adjustable rate mortgages if interest rates increase. The other is increases in property taxes. If households made housing purchase decisions based on an expectation of a fixed monthly payment and if those payments were high relative to income, then an increase in monthly payments – from interest rate or property tax changes – could be problematic.

The potential for this type of effect is illustrated in Table 6. In that illustration it is assumed that households purchase homes with initial values of \$200,000, \$300,000, or \$400,000 by making 10% down payments and borrowing the remainder with a 30-year fixed-rate mortgage. Household incomes are \$80,000, \$100,000, and \$120,000, implying ratios of housing value to income of 2.5, 3.0, and 3.3 for the three cases. Two property tax possibilities are shown for each house, one with an effective property tax rate of 1% (the median effective rate in the American Housing Survey) and the other at 1.7% (the median effective rate in Gravelle’s research).

Consequently, these households have monthly housing expenses (principal + interest + property tax) of \$1,217 to \$2,667, which represents between 18 and 27 percent of income.

How does the situation change for these households if property value and income increase? From 2000 through 2006, home prices in the U.S. increased an average of nearly 9% per year, according to the Conventional Mortgage Home Price Index computed by Freddie Mac.<sup>15</sup> Therefore, for this illustration, it is assumed that the market and taxable values of the houses increase at a rate of 9% per year for five years and that effective property tax rates remain constant.<sup>16</sup> In contrast, income is assumed to increase at an annual average rate of 3%.<sup>17</sup> The effects on housing values, the value-to-income ratios, property taxes, and monthly housing expense (principal plus interest plus property tax) are shown in the table.

Over this five-year period, market and taxable values rise by 54 percent, so that property taxes also increase by that rate assuming constant effective tax rates. Over the same period, income increases by about 16 percent. Monthly property tax payments increase between \$92 and \$312 depending on home value and property tax rate. So, it is easy to see how some homeowners would view these tax increases with alarm, with property taxes rising much faster than income. However, total monthly housing payments (including the fixed mortgage payment and variable property tax) increase between 7 and 12 percent, again depending on the case. Total housing expense increases at a rate *less than* the income increase. This occurs, despite the large increase in property tax, because the mortgage payment is constant and substantially greater than the tax. For each household/tax rate case, the ratio of housing expense to income *falls!*<sup>18</sup>

The example of a household with a \$100,000 income and a home with an initial value of \$300,000 may be instructive. Initially, the household has a monthly mortgage payment of \$1,600 and a monthly property tax payment of \$250 or \$425, depending on the tax rate. Housing expenses represent 22 to 24 percent of income for this household. Over a five year period, the value of the house increases to about \$460,000, whereas income increases to \$115,900. Assuming constant effective tax rates, property tax liability rises from \$3,000/\$5,100 to \$4,600/\$7,820. Monthly property taxes increase from \$250 to \$383 or from \$425 to \$652, which implies overall housing payment *increases* of \$133 or \$227 *per month*. On the other hand, the ratio of housing expense to income has fallen (from 22/24 percent to 21/23 percent). And the household's home equity has increased from \$30,000 (the initial down payment) to roughly \$190,000, a \$160,000 capital gain.

What qualifications might one apply to this illustration? First, one might argue that household income may have increased at a faster rate over this period. But for property tax to remain as a constant fraction of income, income would have to increase as fast as property value. Certainly that is possible for individual cases, but nationally in the last decade income growth has been substantially less than the growth of home values.

Second, one might argue that there is no reason to assume that effective property tax rates would remain constant as taxable values rise. Local governments could lower tax rates and still collect additional tax revenue.<sup>19</sup> But other factors may be changing simultaneously. One issue concerns the costs of producing local government services. If costs are rising faster than incomes, then increases in taxes relative to income are necessary to maintain constant service levels. Local

governments may also be faced with declining grants from the national or state governments, requiring localities to fund a greater share of the costs of local public services. Aggregate taxable value in the locality may not be rising as fast as the value for selected properties. In that case, the rise in property tax amounts occurs only for the properties whose values are rising at this high rate. Finally, the increase in home values may cause local residents to demand more local public services as a result of a wealth effect; this occurs if homeowners believe they are richer and demand for local public services is income elastic (more is demanded as consumers become richer). Of course, providing more (or better) local public services requires additional revenue (beyond the increase in unit production costs).

What are possible or appropriate responses to this situation? It seems important to note that no policy response may be necessary. After all, these homeowners *are* wealthier, at least on paper. Indeed, one could argue that many individuals purchased homes with the expectation and desire that the value would increase. In discussions about the potential regressivity of the property tax, which may apply to the bottom 20 to 40 percent of households, it seems incongruous to be concerned about the tax liability of a homeowner with a \$400,000 or \$500,000 home and a \$100,000 to \$200,000 (or more) capital gain. Note that according to the American Housing Survey for 2005, a home value of \$300,000 is in the top quarter of all year-round owner-occupied homes. Mason Gaffney stressed the importance of gains in wealth:

The property tax in concept is progressive precisely because it is based on capital value. Owners of appreciating property often complain that capital value as a base hits them harder than would current income or service flow as a base, and they are right. That is precisely what makes the property tax, correctly administered, so progressive (Gaffney, 1971, 426).

Despite the increase in (paper) wealth, I believe that tax increases of this type have become an important factor influencing calls for property tax limitation or reduction. Although I have no hard evidence, my suspicion is that situations like this are one of the two primary factors driving the calls for major property tax reduction, or even elimination, over the last decade. The other factor, I believe, is the relationship between property taxation and school funding equity, as discussed in Kenyon, 2007.

Still, such households may face a liquidity problem because their increased wealth is in a physical asset (the house) and is not turned into cash (“realized”) until the asset is sold. States and localities use two primary mechanisms to deal with this concern. One is the widespread use of circuit breakers, discussed previously, which provide tax credits or rebates if property tax amounts exceed some threshold of income. If property taxes rise faster than income, then a circuit breaker credit or rebate may effectively reduce the amount of the tax increase. In every state that uses them, however, eligibility for circuit breaker credits or rebates is limited to those below specific income or wealth levels. Households with the home values and monthly payments in the illustrations in Table 6 would likely be ineligible for rebates or credits in many states.

A second possible solution is to permit households to defer property tax payments (or at least the increase in payments) until the house is sold or some other later time. When the house is sold,

the homeowner realizes whatever capital gain led to the higher tax amounts and has the cash to pay the deferred tax (with appropriate interest charges, as the homeowner is effectively borrowing from the state or local government). Baer (2003) reported that 24 states and the District of Columbia operated property tax deferral options in 2002, with 20 of the 25 programs limited to senior citizens or disabled persons. Theoretically there is no reason why such deferral options could not be made available to all taxpayers. For the \$300,000 house case in Table 6, if the owner sold the house after five years and had deferred only the *increase* in property tax amounts compared to when the house was purchased, the owner would owe about \$4,560 in back taxes (plus interest), but would have a \$160,000 capital gain from which to pay the deferred tax! Although deferral programs have been operated by state governments, there might be an opportunity for a private security market to arise around these types of loans, which in concept are identical to home-equity loans (except that use is limited to paying taxes).

Evidence shows, however, that few taxpayers who are eligible for a property tax deferral option take advantage of them. Baer (2003) reported that only 20 percent of AARP members surveyed were aware of property tax deferral programs, and only one percent of those aware and eligible participated. The reluctance may be due to a lack of information or understanding, to a desire to maintain the full value of any capital gain for future consumption or a bequest, to the uncertainty about the market value of a house and the magnitude of any possible capital gain, or to a belief on the part of taxpayers that local taxes should be based on something other than property value. In the U.S., eligibility for a wide range of income support, subsidy, or tax reduction programs is defined by current annual income. The property tax, based on the value of an asset that is influenced more by average lifetime income than annual income, stands out as an exception to the common U.S. practice.

One option for responding to what I have called the “monthly payment problem” (effective taxation of an unrealized capital gain), which has not yet been tried as a public policy, is to permit taxpayers to borrow directly against the increase in value of a home to pay the increased property tax. With deferral options, taxpayers effectively borrow from the local or state government. But taxpayers already borrow directly against increases in home value for other purposes, through second mortgages or home-equity loans. The proceeds from those loans may be used for home improvements, for financing college education, and so on. States and localities, in cooperation with the financial sector, may want to explore the opportunity for “home-equity property tax loans” as a way for homeowners to capture part of the increase in home values to pay the resulting increase in property taxes.

## **VI. Policy Perspectives: What are Policy Makers to Do?**

Even if taxpayers or public officials object to property taxes on distributional, efficiency, or administrative grounds, the more relevant issue is how property taxes compare to the alternatives. Assuming that public services are to continue at a constant level, then property tax reduction or elimination requires alternative or substitute revenue. Four options are usually considered: (a) local sales tax, (b) local income tax, (c) user fees, or (d) a combination of increased state taxes (sales or income) coupled with an intergovernmental grant structure to distribute the increased state tax revenue to local governments.<sup>20</sup> In this section of the report, property taxes are compared to these alternatives along three policy and economic dimensions.

First is the impact on budget planning as a result of the growth potential and revenue stability of the revenue source. Second is the effect on taxation of nonresidents and the implications for efficient service provision. Third is the effect of the various revenue sources on efficient economic choices in the market system.

## **Budget Planning**

Two issues traditionally considered in evaluating taxes are the long-run responsiveness of the tax base to economic growth (and particularly growth of income) and, in the short run, the degree of variability of the tax base across the business cycle. Does the tax base grow automatically in response to economic growth? And to what degree does the tax base vary from year-to-year as the economy fluctuates? The first issue is important because demand for public services is expected to increase with economic (income) growth, requiring additional revenue to provide additional services. On the other hand, if a tax base varies substantially as national economic conditions vary, then budget planning becomes more difficult. Tax rates may need to be changed often or some form of revenue saving adopted to provide stability.

The general perception is that property taxes are very stable revenue sources, especially compared to sales taxes, and that property values in the U.S. have reflected long-run economic growth. Both the growth potential and relative stability of property taxes arise from economic as well as administrative factors. Over the past 60 years or so, property values (and especially residential property values) increased substantially in response to income and population growth, new family formation, suburbanization, and improvements in transportation, as well as from new business investment. As long as property assessments for tax purposes are kept current to reflect market values, then the property tax base expands with economic growth. Improvements in assessment practices have permitted these changes in market values to be tracked. The short-run stability of the property tax base reflects the economic fact that capital investment (both residential and business) is by nature a long-run decision influenced more by long-run expectations than short-run economic circumstances. Accordingly, property values traditionally have not declined substantially with each recession. And when they have declined, the typical lag in assessments has maintained taxable property values at least through the first part of the economic downturn.

The limited available recent evidence supports this general perspective. Winters (2007) examined the revenue growth and variability for the property tax, state sales tax, state personal income tax, and the state corporate income tax in Georgia from 1970 to 2005.<sup>21</sup> He reports that the property tax had the second highest average growth rate over this period (behind the personal income tax, but ahead of the sales tax and corporate income tax) and that the property tax had the smallest amount of annual variation (with the corporate income tax the most variable, followed by the personal income tax and then sales tax).<sup>22</sup> Similarly, Giertz (2006) examined the annual growth and variation in tax *bases* in Illinois from 1980 to 2004. He reports that the property tax base had the highest average growth rate among the four main tax bases and that the property tax base had the smallest variation (tied with the sales tax but less than the personal income tax and corporate tax). Giertz (2006, 700) also found, consistent with Winters, that "...the property tax growth rates were negatively correlated with the growth rates of the other tax bases." In other words, property tax bases grew at the times when sales and income tax bases declined.

Focusing only on the major state taxes (and thus not examining the property tax), Sobel and Holcombe (1996) nonetheless reach similar, but more precise, conclusions to the two studies noted above. Two of their findings seem most important for purposes of considering realistic alternatives to the property tax. First, they report that a sales tax that excludes purchases of food (which is the practice in 28 of the 45 sales tax states) is substantially more variable in the short run than a personal income tax (but still less variable than the corporate income tax). Second, they report that personal income taxes have the highest long-run response to economic growth among the various state taxes. These results suggest that if policymakers plan to substitute a different tax for the property tax, use of a personal income tax is likely to create a smaller effect on revenue growth and stability compared to increased use of a sales tax. But the property tax has been more stable than both.

Of course, it is important to understand that future growth patterns of these taxes may differ from past experience. In that context, it seems reasonable to ask whether the recent (2007-08) mortgage crisis and broad decline in housing values change this analysis. Certainly there has been a major correction in housing values, as housing prices were driven up by an unsustainable demand fueled, in part, by incentive mortgages and speculation. So, in the short run, taxable property values in some states and communities may eventually decline as properties are reassessed. But this will not happen uniformly. If property reassessment is delayed, then taxable values remain constant in the near term and may not ever decline if housing prices have recovered when the reassessment does occur. In some states with limits on taxable values, the current taxable values may be well below the appropriate level given market values. So even with decreases in market values, taxable values may not have to change.<sup>23</sup> And few expect that, after the correction, housing values will not eventually begin to increase again at more sustainable, long-term growth rates similar to the 1980s and 90s.

In theory (if not in practice, given the magnitude of property taxes), governments might institute or increase user fees to substitute for property taxes. The long-run responsiveness to economic growth and short-run economic variability can differ dramatically for different types of user charges. After all, user fees are just prices, so revenue variability depends on the consumption of the underlying product. Two examples illustrate this point well. State revenue from alcoholic beverage sales (either from state monopoly pricing or state liquor taxes) is among the least variable state revenue sources. Some estimates even show that liquor sales (and state revenue) are countercyclical. But responsiveness to long-run economic growth is also low. In other words, demand is quite inelastic with respect to both price and income. On the other hand, revenue from state gasoline excise taxes (a proxy for road user fees) can be quite variable. When gasoline prices increase and consumers respond by altering transportation behavior, states often experience a sharp decline in gasoline excise taxes. So, user fees can be subject to the same revenue variability as some taxes.

### **Taxation of Nonresidents**

The treatment or effect on nonresidents of various taxes is an important issue for many local governments and can be important for efficient functioning of the public sector. If nonresidents benefit from local public services, then there may be both equity and efficiency reasons why nonresidents should pay toward providing those public services. If the local public service is a

pure public good (additional individuals can benefit from the public service at no cost, so that nonresident consumption does not increase costs), the social benefit from the service will be under perceived by the local government and too little provided from a social perspective. One solution is to have nonresidents pay part of the cost, effectively reducing the local cost and inducing the community to select the efficient quantity. If the local public service is a congestible public good (so that nonresident consumption takes away from resident consumption, such as a crowded road), the higher cost on residents must be offset by a payment from nonresidents to achieve efficiency. In a political sense, it often also is perceived as “fair” if nonresidents contribute toward the costs of services they consume.

This perspective can be taken too far, however. In some instances, state or local governments may attempt to “export” tax burden to nonresidents beyond any measure of nonresident service benefit, merely as a way of benefiting residents. In this case, if local costs of public services become too low, then the government may be induced to select too much of the public service from a social perspective.<sup>24</sup> Thus, “exporting” of tax burden to nonresidents can be either a necessary or a negative factor from the perspective of efficient provision of local public services. The main tax options for local government – property, income, and sales – can differ greatly in the degree of exporting to nonresidents, depending on the tax structure and local economic circumstances.

Property taxes can be “exported” to non-residents in three primary ways. First, and most obviously, non-residents may be owners of property or land in a jurisdiction. If the effect of the property tax is to reduce rates of return to property owners or to reduce land values, then non-resident owners bear (pay) part of a locality’s property tax. This seems apparent for owners of residential properties or vacant land, but may be less apparent in the case of business property. The owners of business property are the corporate stockholders or the partners, many of whom may not be residents of the local jurisdiction. In fact, in the case of large national or international corporations, nearly all of the property owners (stockholders) may be nonresidents (except for the small fraction of corporate stock owned by residents). This form of “exporting” may also affect the distribution of tax burden by income. If part of the property tax in a low-income city is transferred to stockholders of major corporations, the overall effect of the local property tax rate differential becomes more progressive.

Second, property taxes also may be “exported” as a result of other economic market adjustments caused by the property tax. As discussed previously, property tax rate differentials may induce capital to leave higher tax locations or uses and move to lower tax locations or uses. As a result, wages may decline in jurisdictions with relatively high tax rates (assuming that labor is immobile). To the extent that workers in a jurisdiction are non-residents, those employees bear (pay) part of the local property tax. Thus, the local property tax may, in some cases, be a way to have commuters pay part of a local jurisdiction’s property tax and cost of local public services.<sup>25</sup>

These first two exporting mechanisms may provide an important distinction for property taxes compared to local income taxes. Often local income taxes are payroll taxes, applying to labor income only, and in many instances non-residents are exempt or taxed at lower rates. Thus, in the first instance, a local income tax may not apply to the capital income of non-residents, whereas local property taxes may explicitly burden property income. And in the second instance

in which non-residents are exempted from local payroll taxes for all types of income, then nonresidents may contribute nothing toward local public service costs through local income taxes.

Third, property taxes may be “exported” through federal income tax deductions taken by taxpayers who itemize deductions in calculating federal income tax. Under current federal tax law, taxpayers who itemize deductions may deduct state-local property taxes and *either* income taxes *or* sales taxes. For states that have both income and sales taxes, it is almost always better for taxpayers to deduct the income rather than sales tax. Thus, federal deductibility can be a major advantage of local property taxes compared to local sales taxes. In 2006, about 35 percent of federal income taxpayers itemized deductions, although that percentage is about 84 percent for taxpayers with AGI above \$75,000 (a group that includes only about 20 percent of returns but about 63 percent of total income). The importance of itemizing deductions also is greater in states with higher income or higher state-local taxes. For instance, the share of itemizers is relatively large in such states as Maryland (50 percent), Connecticut (46 percent), New Jersey (45 percent), Massachusetts (42 percent), and California (40 percent). With the top federal marginal income tax rates at 33 and 35 percent, there is potential for a substantial fraction of local property tax to be “exported” through federal income tax deductibility. For example, if itemizers account for 60 percent of total property tax and face a 33 percent federal marginal tax rate, then about 20 percent of local property tax is “exported” (paid by non-residents) as a result of deductibility.<sup>26</sup>

### **Economic Efficiency**

The efficiency cost of a tax refers to the lost private welfare beyond that caused by the transfer of private income to the government for tax revenue. This is often called the excess burden of taxation, that is, the burden over and above the tax revenue generated. The efficiency loss or cost of a tax arises because individuals and businesses change their behavior due to the tax. By consuming or producing different amounts or types of goods, which are less desirable than those that would be consumed in the absence of the tax, and by supplying different amounts of factors of production, the economy is moved to a less efficient or lower welfare position by the tax change. It is generally accepted that essentially all taxes have some efficiency cost, as all are expected to cause some changes in behavior by individuals or businesses. The issue, then, for policy makers is to compare the efficiency effects of alternative tax structures.

The possible effects of property taxes on economic efficiency have been noted previously in this report. If the tax is not fully offset by public service benefits, then a differential property tax rate (a higher tax rate in some locations or for specific types of property) may cause a reallocation of capital to other, lower-taxed uses or to locations with lower effective tax rates. Either can create efficiency losses. Of particular issue is whether property taxes on residential property reduce housing consumption, whether differential property tax rates induce capital to move to lower-tax communities, or whether the overall use of property taxes nationally affects the aggregate supply of capital (amount of investment). The first two possibilities are particularly controversial, as noted previously. If the property tax operates as a benefit charge, then there are no efficiency effects, but if part of the tax raises housing prices, then housing consumption is affected. Similarly, there is considerable uncertainty in the evidence about the degree to which differential property tax rates affect the location of business investment decisions. In any case, it seems

important to note that each of these effects arises because of tax rate *differentials* rather than the overall amount of property taxation.

The main alternatives to property taxes – local income and sales taxes – also create efficiency costs, of course. Regarding local sales taxes, the major efficiency costs arise from three factors: commodities that are exempt from the sales tax, intermediate goods (business purchases) that are taxed and should not be, and differences in tax rates along borders. Evidence suggests that all three effects can be substantial. Most state and local sales taxes apply only to purchases of a subset of goods (with food and housing commonly exempt) and to purchases of very few services (and never medical care). Consequently, state and local sales taxes apply only to 35 to 60 percent of personal consumption, with that share declining over time as the importance of services in consumer budgets continues to increase. Because sales taxes are collected on a narrow tax base, there is great potential for substitution of non-taxed commodities. Also, if state-local sales taxes are intended to be retail taxes on the final sale of consumer goods and services, then sales of all goods used in production should be exempt. If the purchase of input goods used in production *and* the sale of the final product are taxed, then the overall effective tax rate is higher than the nominal rate. Therefore, there is an incentive for businesses to integrate vertically, that is to provide various stages of production in-house rather than through suppliers. Evidence shows that a relatively large fraction of state-local sales tax revenue arises from taxing (inappropriately) business purchases of inputs. Ring (1999) reports that more than one-third and as much as 40 percent of states sales tax revenue in aggregate arises from taxes on business purchases.

Finally, sales taxes create incentives for changes in purchase locations. Individuals may purchase goods in one state or locality for delivery to a different location, presumably the state or locality where the individual lives. The individual is not subject to sales tax in the jurisdiction of the purchase, but is subject to any use tax levied by the jurisdiction of residence. If that use tax is not or cannot be collected, no state or local consumption tax is levied on the purchase. Second, if purchases of goods or services are taxed at a lower rate in one jurisdiction than in another, an individual may make purchases and take possession in the lower-tax jurisdiction and thus pay the lower sales tax rate. Both of these opportunities are particular concerns along borders between states or between localities where local sales taxes are used, although internet sales make this a broader issue. There have been quite a number of studies examining the degree to which sales tax rate differentials actually do induce consumers to change the location of purchases. These studies are quite consistent in finding that a disadvantageous sales tax rate differential leads to a statistically significant but relatively small reduction in sales in the higher-tax jurisdictions. So, local governments that elect to rely on local sales taxes can expect decreases in local sales, especially if transportation and transaction costs are low.

Regarding local income taxes, efficiency issues also arise through three primary factors. First, because income taxes are primary revenue sources for the federal government and states, localities effectively compete for tax base with those other government levels. The combination of the federal, state, and local tax rates can make overall marginal tax rates quite substantial, increasing the effects of income taxes on labor supply and investment decisions. Essentially, adding a local income tax to the existing state and federal taxes reduces the efficiency (or increases the efficiency cost) of all three. Second, local taxes are most commonly taxes on labor

income only (payroll or wage taxes), with the treatment of nonresident income varying widely. Local income taxes are generally residence-based (with the primary tax based on where one lives), although in a few states the tax of the jurisdiction where the income is earned has preference (Alabama, California, Kentucky, Ohio, and Philadelphia (which is different from the rest of Pennsylvania)). If the local income tax finances general city or county services that provide benefits to nonresidents who work in the jurisdiction (such as local police protection, traffic control, or local parks), then the income tax should be based on income origin, which is rare. As a consequence, local income taxes often are not effective mechanisms for having commuters pay for services they receive, leading to inefficiency in public service provision.

Third, if local income taxes are used by only some local governments or if tax rates differ between jurisdictions, then the tax rate differentials can affect locational decisions. Income (as opposed to property) taxes have their greatest effect on the supply of labor (or workers). If labor (workers) moves in response to a local income tax, labor costs will rise in the taxing jurisdiction and fall in surrounding jurisdictions (with no tax or a lower tax rate). As a consequence, employment in the taxing jurisdiction falls. This type of locational effect is expected to be greater the smaller the jurisdiction levying the tax and the larger the metropolitan area. In large metropolitan areas, it is often quite easy for workers in small local jurisdictions to find other jobs in the same metropolitan area. So, it may be particularly problematic for only one or a few smaller jurisdictions in large metropolitan areas to use a local income tax.

### **Property Tax Policy Options**

Although some of the political policy concerns about property taxes may be due to inaccurate or exaggerated impressions, those concerns clearly influence policy decisions. Therefore, it may be useful to consider policy options that might address some of the more important or valid concerns and, in the process, make the property tax more viable politically.

The argument that property taxes operate as benefit taxes or charges, with no efficiency or distributional implications, seems most apt for suburban communities in relatively large metropolitan areas. In contrast, the argument may apply least to large cities. Large cities typically have a great variation in demand for both public services and housing among residents. Unless the relatively restrictive conditions necessary for intrajurisdictional capitalization of housing (or land) prices are satisfied (so that property values decline if service benefits are less than tax paid), the property tax may operate as a distorting tax on capital for such jurisdictions. So, one possibility is treat property taxes levied by large, central cities differently than property taxes in small suburban communities or even rural areas.

There would seem to be two rather obvious mechanisms to do this (treat property taxes levied by large, central cities differentially). One possibility is to target state circuit breakers to residents of large cities. In that way, the argument that property taxes are separated from current ability-to-pay is mitigated for residents in these large cities. Most current state circuit-breaker programs already are targeted in some fashion (by age, income, wealth, and so on), so this would be a matter of considering a different (or additional) targeting variable. A second possibility is to permit or encourage large central cities to use a different local tax than the property tax. So, suburban communities in metropolitan areas (and possibly rural communities) might use

property taxes and large central city governments might use income taxes (which would seem preferable to sales taxes). To reduce inefficiency and administration costs, the city income taxes might be piggy-backed on the state income tax (which would imply that the tax is broad-based and collected from both residents and nonresidents).

One might ask whether it would be legal and feasible to treat large central cities differently than other local governments with regard to property taxes. Obviously, the answer may vary by state based on differences in state constitutions or statutes. In Michigan, for instance, there are statutory and constitutional provisions that treat local governments differently based on population (“cities with more than one million population”, targeted at one time to Detroit) and on legal form (cities as opposed to townships or villages). On the precise example, cities in Michigan are permitted to adopt a local income tax, whereas counties, townships, and villages are not, and cities with population of more than one million have tax rate options not available to smaller cities. So, feasibility may be less of an issue than legality, at least in some states.

If state circuit breakers are used to reduce residential property tax burdens for residents of large central cities, it is important that the circuit breaker be limited to only a relatively small segment of the city residents. If all (or nearly) residents are eligible, then the marginal cost of property taxes may be reduced for such a large fraction of voters that inefficiency may result. Individuals may be induced to vote for higher property taxes (counter productive to the objective) to finance inefficiently large quantities of public service. Rather, circuit breaker eligibility might be limited by income or property value.

To deal with the “monthly payment problem”, the growth in property value and taxes greater than income, some mechanism to address liquidity may be appropriate. The objective is to convert some of the growth in value (the unrealized capital gain) into current income that can be used to pay the higher property taxes (without requiring that the property be sold). As noted previously, the common policy option is to permit taxpayers to defer the tax, essentially taking an implicit loan from the state or local government. One problem with the deferment option is that taxpayers are uncertain about the magnitude of the loan because future taxes at the time of the deferment are unknown and deferral is on an annual basis. The interest costs of the deferment also may be uncertain. And taxpayers clearly are nervous about a lien on the property with such uncertainty.

An alternative is for taxpayers to use a home equity loan or home equity line of credit to realize cash from the increased property value. Each year the taxpayer can decide or adjust the amount borrowed to pay the increased property tax. And as long as the amount of the home equity loan is less than the difference between the market value and other outstanding mortgages (which would be true if property values increased substantially), the interest on the loan is deductible for federal income tax itemizers. If taxpayers are concerned about confusing various purposes for home equity loans, it might be feasible for financial institutions to establish separate equity lines of credit explicitly for property tax purposes, what might be called “Home Equity Property Tax Assistance” (or something of this nature). With these options, no one should be forced to sell a home that has substantially increased in value in order to acquire cash to pay the property tax.

Finally, it might be appropriate to suggest that local governments consider broadening the property tax base by including relatively more industrial and commercial and agricultural property. In essence this policy would require a reversal of the common practice that has evolved over the past 30 years of providing tax abatements to businesses for economic development purposes, rather than any explicit statutory action.<sup>27</sup> It is hardly surprising that homeowners would oppose a property tax limited to residential property. More than 30 years ago Helen Ladd (1975) showed that local voters were sensitive to the composition of the local property tax base, essentially perceiving that portions of the tax on business property were exported. Broadening the property tax base may also provide efficiency gains, a version of the well-known broad base/low rate argument. A substantial number of analytical studies – summarized in Fisher (2007), Anderson and Wassmer (2000), Wasylenko (1997) and Bartik (1991) – have questioned the effectiveness and efficiency of local economic development incentives. To the extent that local governments have reduced property taxes on business capital without corresponding economic gains (or have already reduced taxes so much that there would be no subsequent or marginal gains), reallocating property taxes would improve economic efficiency (especially if the tax on residential property has induced inefficiency in housing consumption). This does not imply necessarily that all property needs to be taxed equally. In Ladd’s analysis, voters perceived that industrial capital was more mobile (and thus might be taxed less) than commercial capital. So, differential treatment still may be appropriate even while broadening the base overall and contributing to improved efficiency and property tax acceptability.

## **VII. Summary**

What might be said, then, in defense of property taxes relative to the main alternatives of local sales and income taxation? Property taxes clearly have been responsive to economic growth and relatively stable cyclically, perhaps the most stable of all tax bases. Property taxes are relatively economically efficient compared to alternatives, especially if the local governmental structure and regulations serve to convert property taxes to benefit charges, so that taxpayers are consuming and paying for the public services they demand. Because local property taxes in most cases impose burdens on nonresidents, they provide a mechanism for nonresidents to contribute toward the public service benefits they receive, thereby also improving the efficiency of local public finance. Property taxes are relatively visible taxes and thus contribute to government accountability. Finally, contrary to some popular perceptions, property taxes may add to overall tax progressivity compared to the alternatives, and especially compared to sales taxes. This happens, in part, because a substantial share of property tax burden falls on capital owners generally, and in part because many jurisdictions with relatively high property tax rates are also higher income communities.

In short, maybe the property tax is not so bad after all.

## Tables and Figures

**Table 1. Sample Property Tax Amounts, Owner-Occupied Houses (annual and monthly)**

Market Value of Property	Effective Tax Rates				
	0.90%	1.00%	1.40%	1.70% (median for all real property)	2.00%
\$50,000	\$450 \$37.50	\$500 \$41.67	\$700 \$58.33	\$850 \$70.83	\$1,000 \$83.33
\$100,000	\$900 \$75.00	\$1,000 \$83.33	\$1,400 \$116.67	\$1,700 \$141.67	\$2,000 \$166.67
\$150,000	\$1,350 \$112.50	\$1,500 \$125.00	\$2,100 \$175.00	\$2,550 \$212.50	\$3,000 \$250.00
<b>165,000 (median)</b>	<b>\$1,485 \$123.75</b>	<b>\$1,650 \$137.50</b>	<b>\$2,310 \$192.50</b>	<b>\$2,805 \$233.75</b>	<b>\$3,300 \$275.00</b>
\$200,000	\$1,800 \$150.00	\$2,000 \$166.67	\$2,800 \$233.33	\$3,400 \$283.33	\$4,000 \$333.33
\$250,000	\$2,250 \$187.50	\$2,500 \$208.33	\$3,500 \$291.67	\$4,250 \$354.17	\$5,000 \$416.67
\$300,000	\$2,700 \$225.00	\$3,000 \$250.00	\$4,200 \$350.00	\$5,100 \$425.00	\$6,000 \$500.00
\$400,000	\$3,600 \$300.00	\$4,000 \$333.33	\$5,600 \$466.67	\$6,800 \$566.67	\$8,000 \$666.67
\$500,000	\$4,500 \$375.00	\$5,000 \$416.67	\$7,000 \$583.33	\$8,500 \$708.33	\$10,000 \$833.33
\$750,000	\$6,750 \$562.50	\$7,500 \$625.00	\$10,500 \$875.00	\$12,750 \$1,062.50	\$15,000 \$1,250.00

**Table 2. Summary of Property Tax Incidence Effects**

<b>Summary: Property Tax Incidence</b>			
<i>Incidence Component</i>	Capital Tax Effect		Excise Tax Effect
<i>Source</i>	Average Tax Rate		Differences in Tax Rates (geographically or by type of property)
<i>Expected Burden</i>	Burden on all capital (taxed and exempt)		Burden on immobile economic activity (possibly landowners, property owners, workers)
<i>Changes in Economic Variables</i>	Reduced rate of return to owners/investors		If workers & consumers immobile: lower wages, higher housing costs
			If workers & consumers mobile: lower land values

**Table 3. Types of Property Tax Reductions**

Tax Change	Method(s)	Economic Result	Distributional Effect
National reduction in property tax	Federal grant to states for property tax relief Or National program requiring/encouraging states to substitute a different tax for the property tax	Increase in the rate of return to capital	Benefit proportional to capital ownership; relatively greater benefit to higher-income individuals
One state reduces property tax uniformly within the state	State grant program to all localities Or Uniform tax substitution in the state	Increase in capital investment, assuming some interstate mobility of capital; increase in wages and land values; decrease in housing costs	Depends on the economic characteristics of landowners, workers, and housing consumers in the state; for a lower-income state, the effect obviously would be proportionally greater for lower income individuals; if some landowners and workers are non-residents, then some of the benefit is exported
One locality in one state reduces property tax	Switch to a different local revenue source (Not a reduction in local services)	Increase in investment and employment (assuming mobility of capital and labor); increase in land values	Depends on the economic characteristics of landowners in the city, who may or may not be residents; for a lower-income city, this may provide relative benefits to lower income individuals (except for high-income non-resident landowners)

**Table 4. Sample State Property Tax Case**

	<i>Jurisdiction A</i>	<i>Jurisdiction B</i>	<i>Jurisdiction C</i>	<i>Jurisdiction D</i>		Aggregate
<i>Effective Property Tax Rate</i>	1.50%	2%	2%	2.50%		2%
<i>Capital Tax Effect</i>						Capital owner burden
<i>Excise Tax Effect</i>	Capital inflow			Capital outflow		
	Landowners benefit			Landowners hurt		
	Possible benefit to consumers & workers			Possible cost to consumers & workers		
<b>Tax Change, Case A</b> (25% uniform reduction)						
<i>Effective Property Tax Rate</i>	1.125%	1.50%	1.50%	1.875%		1.50%
	No change in relative position or excise effects			No change in relative position or excise effects		Decrease in burden on capital owners in the state
<b>Tax Change, Case B</b> (25% reduction in D only)						
<i>Effective Property Tax Rate</i>	1.50%	2.00%	2.00%	1.875%		1.85%
				Improvement in relative position		Small decrease in burden on capital owners in the state
				Capital inflow		
				Landowners benefit		
				Possible benefit to consumers & workers		

**Table 5. Summary of Property Tax Incidence Studies**

<i>Author</i>	<i>Data Year</i>	<i>Incidence Assumption</i>	<i>Distributional Welfare Measure</i>	<i>Incidence Result</i>
Phares (1980)	1975-76	Owner-occupied housing: owners (proportional to value); Business: 2/3 to consumers and 1/3 to owners	Annual family income	Regressive bottom 60% families; proportional for next 35% families; progressive for top 5%
		Capital owners	Annual family income	Regressive bottom 40%; proportional next 40%; progressive top 20%
Pechman (1985)	1980	Consumers	Annual family income	Regressive bottom 40%; proportional top 60%
		Capital owners	Annual family income	Regressive bottom 20%; proportional for the next 75%; progressive top 5%
Metcalf (1994)	1989	Capital owners	Annual household expenditure (lifetime income)	Proportional
		Capital owners	Annual household income	Progressive bottom 30%; regressive next 60%; progressive top 10%
McIntyre <i>et al.</i> (2003)	2002	Owner-occupied housing: owners; Rental housing: 1/2 tenants, 1/2 owners	Annual income, married couples	Regressive for bottom 20%; proportional for the remaining 80%



**Illustration of Property Value and Property Tax Growth**

	<b>HOUSE A</b>		<b>HOUSE B</b>		<b>HOUSE C</b>	
<i>Market Value</i>	\$200,000	\$200,000	\$300,000	\$300,000	\$400,000	\$400,000
<i>Household Income</i>	\$80,000	\$80,000	\$100,000	\$100,000	\$120,000	\$120,000
<i>Value to Income Ratio</i>	2.5	2.5	3.0	3.0	3.3	3.3
<i>Mortgage Amount</i>	\$180,000	\$180,000	\$270,000	\$270,000	\$360,000	\$360,000
<i>Monthly Mortgage Payment (principal + interest)</i>	\$1,050	\$1,050	\$1,600	\$1,600	\$2,100	\$2,100
<i>Effective Property Tax Rate</i>	1.00%	1.70%	1.00%	1.70%	1.00%	1.70%
<i>Annual Property Tax</i>	\$2,000	\$3,400	\$3,000	\$5,100	\$4,000	\$6,800
<i>Monthly Property Tax</i>	\$167	\$283	\$250	\$425	\$333	\$567
<i>Total Monthly Expense (principal + interest + tax)</i>	\$1,217	\$1,333	\$1,850	\$2,025	\$2,433	\$2,667
<i>Monthly Housing Expense/Income</i>	0.18	0.20	0.22	0.24	0.24	0.27
<b>9% Annual Growth, 5 Years</b>						
<i>New Market Value</i>	\$310,000	\$310,000	\$460,000	\$460,000	\$620,000	\$620,000
<i>Household Income (3% growth)</i>	\$92,750	\$92,750	\$115,900	\$115,900	\$139,100	\$139,100
<i>Value to Income Ratio</i>	3.3	3.3	4.0	4.0	4.5	4.5
<i>New Annual Property Tax</i>	\$3,100	\$5,270	\$4,600	\$7,820	\$6,200	\$10,540
<i>New Monthly Property Tax</i>	\$258	\$439	\$383	\$652	\$517	\$878
<i>New Total Monthly Expense (principal + interest + tax)</i>	\$1,308	\$1,489	\$1,983	\$2,252	\$2,617	\$2,978
<i>Change, Monthly Expense</i>	\$92	\$156	\$133	\$227	\$183	\$312
<i>Growth Rate, Monthly Expense</i>	1.08	1.12	1.07	1.11	1.08	1.12
<i>Monthly Housing Expense/Income</i>	0.17	0.19	0.21	0.23	0.23	0.26
<i>Change, Annual Property Tax</i>	\$1,100	\$1,870	\$1,600	\$2,720	\$2,200	\$3,740

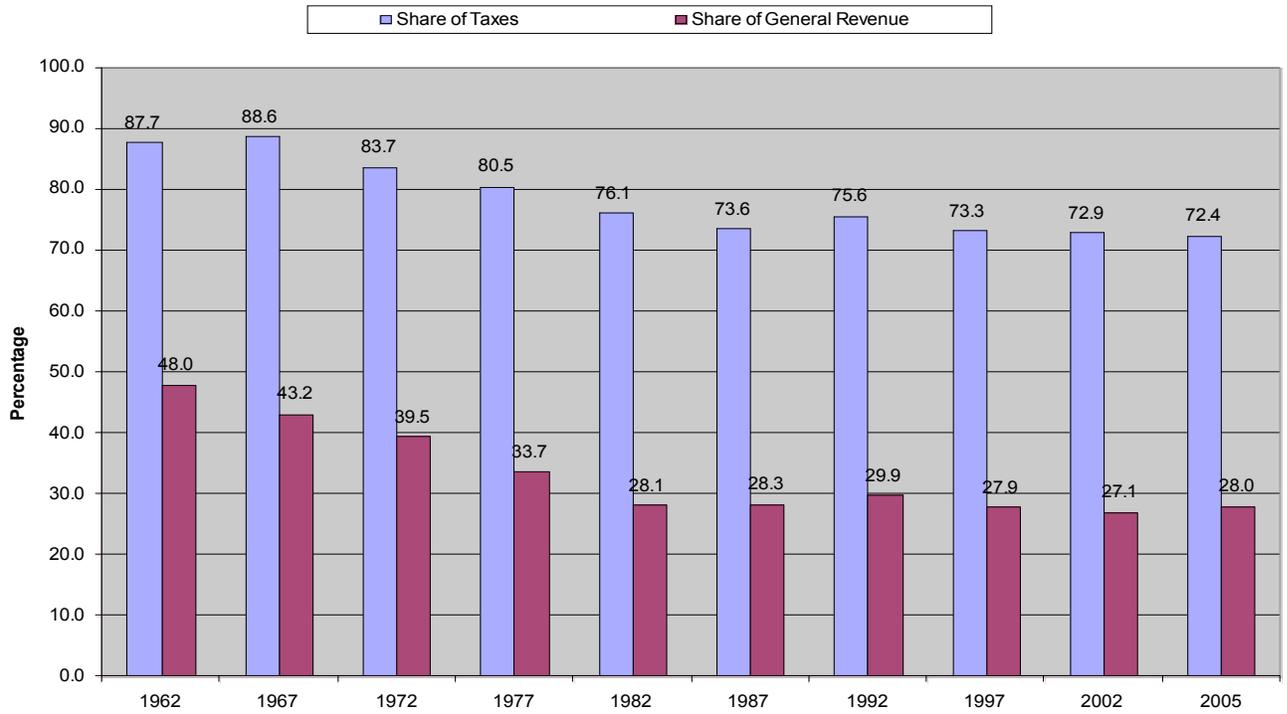
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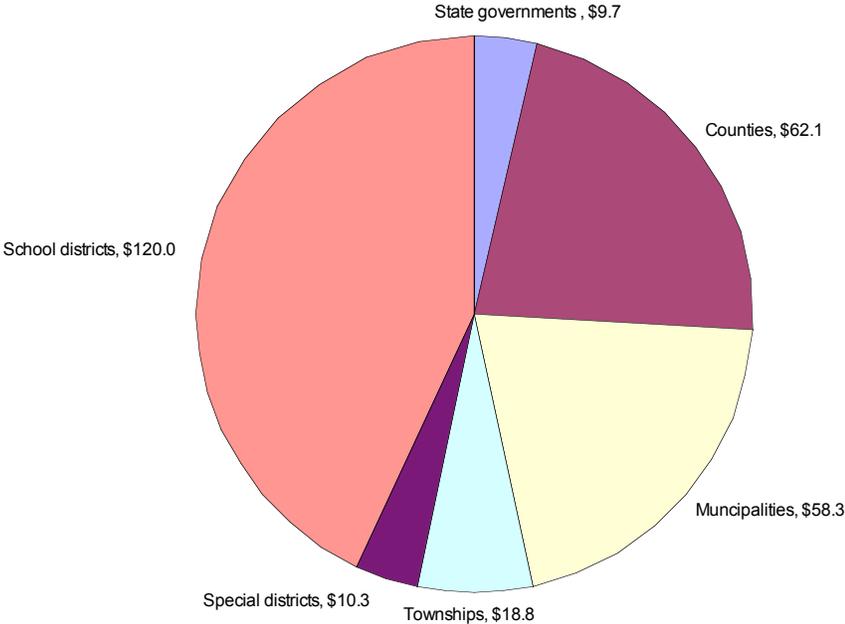
**Figure 1**

**Local Government Property Taxes as a Percentage of All Taxes and General Revenue, 1967-2005**



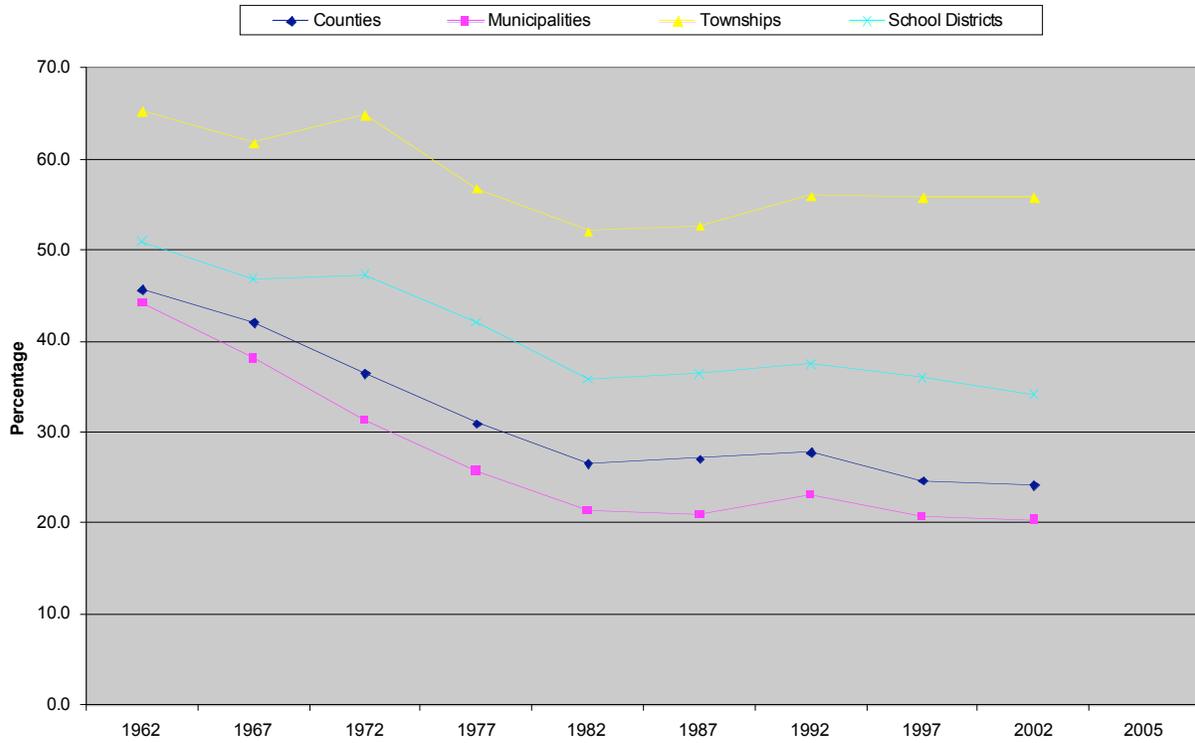
**Figure 2**

**Property Tax Amounts by Type of Government, 2002 (billions of dollars)**



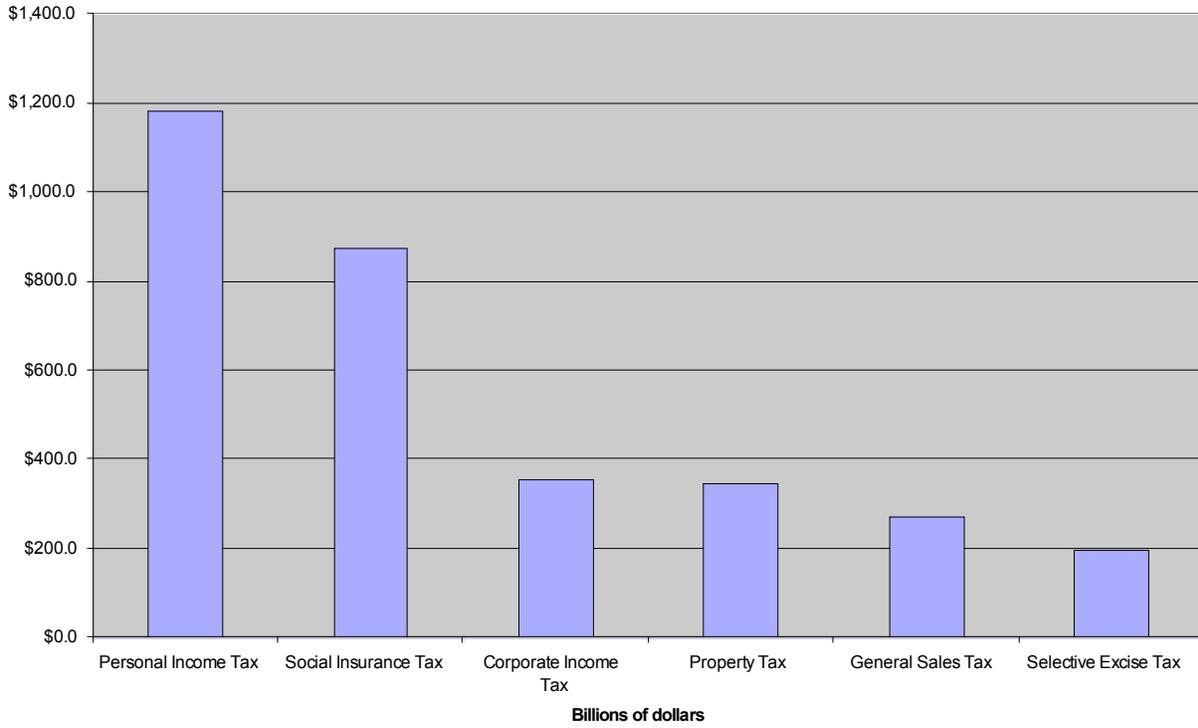
**Figure 3**

**Property Taxes as a Percentage of General Revenue, by Type of Government, 1962-2005**



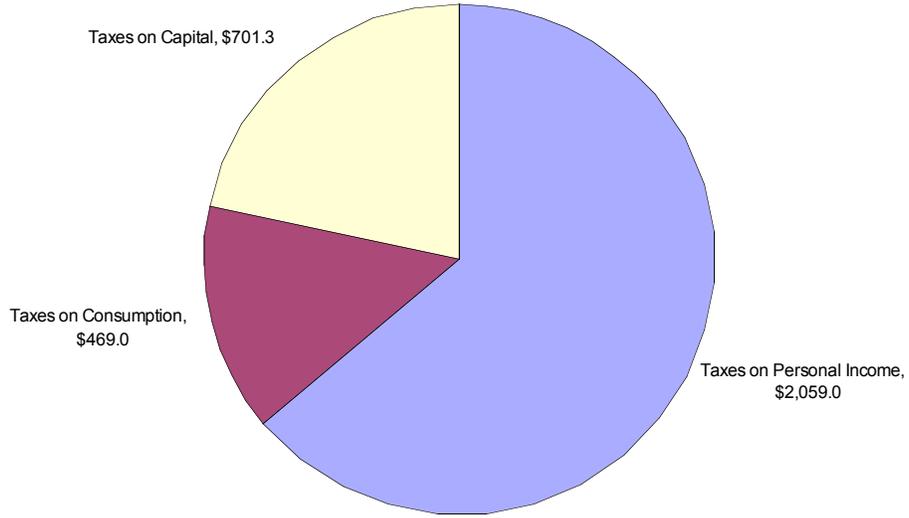
**Figure 4**

**Tax Amounts, All U.S. Governments, 2005**



**Figure 5**

**All US Taxes, by Tax Base, 2005 (billions of dollars)**



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## Endnotes

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<sup>1</sup> This assumes that personal income taxes and social security taxes ultimately are burdens on income; that property and corporate income taxes are taxes on capital, reducing rates of return; and that sales taxes impose burdens related to consumption. These assumptions are discussed subsequently.

<sup>2</sup> To put this in context, total state and local taxes represented about 11 percent of personal income, whereas total taxes for all governments represented about 24.5 percent.

<sup>3</sup> Although Honolulu, Hawaii is one of the localities with very high median property values, effective tax rates in Honolulu and Hawaii are very low, .5% in Gravelle's estimates. So property taxes on a \$500,000 median-valued house in Honolulu might be about \$2,500 or just a bit more than \$200 monthly.

<sup>4</sup> This issue is, of course, related to the problem of adjustable rate mortgages, which also can increase monthly payments to unsustainable levels in interest rates increase. The combination of increased loan and property tax payments obviously exacerbate the problem.

<sup>5</sup> Itemizing taxpayers have the choice of deducting either state-local income or general sales taxes. In states with a broad-based income tax, it is almost always better for itemizing taxpayers to deduct the income tax.

<sup>6</sup> In addition, owner-occupied housing competes with other uses or industries for available land and capital.

<sup>7</sup> A property owner would not be able to avoid the tax by selling the property to another investor because any potential buyer would be willing to offer less for the property because the future after-tax return is lower than in the absence of a tax.

<sup>8</sup> Gaffney (1971, 420) described the analytical results to come later as follows: "In a completely closed economy, capital should bear most of the tax on capital. If it cannot emigrate, its escape routes are limited to dissaving and tax-exempt public works. Supply being fairly inelastic, capital has to accept a lower rate of return after taxes."

<sup>9</sup> These mobility conditions arise if investors can reallocate investment to get the highest return but individuals do not change the location of work or residence because of property tax differences.

<sup>10</sup> Of course, if the high tax community is low income, whereas the low tax community is high income, then just the opposite effect arises; the effects of the tax differential add regressivity.

<sup>11</sup> Another rough way to think of this is that about 55 percent of low-income states had low tax rates and about 45 percent had high tax rates. The excise taxes and subsidies for low-income states about offset each other.

<sup>12</sup> The same is true for income and sales taxes. For instance, a local income tax that taxes only earned income and has no exemptions or deductions is expected to be regressive, rather than having the progressive distribution of burden often associated with income taxation.

<sup>13</sup> The rural communities become homogeneous not because folks move, but because they have similar tastes.

<sup>14</sup> In Michigan, for instance, the property tax is the only permitted major local tax for most jurisdictions. However, cities (but not counties, townships, or school districts) are given authority to use local income taxes, as well.

<sup>15</sup> From 2000 through 2006, the Conventional Mortgage Home Price Index increased by an annual average of 8.67 percent. In 2007, this Index rose only 2.58 percent.

<sup>16</sup> Assuming constant effective tax rates is equivalent to assuming that local governments do not alter (reduce) tax rates as values rise.

<sup>17</sup> From 2000 through 2006, median household money income increased at an annual average rate of 2.5%.

<sup>18</sup> If these home purchases had an adjustable-rate mortgage and loan rates increase, then the combined effect of higher mortgage and property tax payments would be more dramatic. In that instance, both the mortgage payment and property tax would increase, so that the ratio of housing expense to income could also increase.

<sup>19</sup> To deal with this issue, a number of states have adopted special procedures that local governments must follow to generate additional property tax revenue. Typically these require that tax rates be reduced if aggregate taxable value increases more than some specified amount, unless there is an explicit vote to set higher tax rates.

<sup>20</sup> A fifth option would be increased state taxes without redistribution to local governments. Instead, service responsibility would be transferred to state government along with the funding responsibility. As a practical matter, this is seldom considered seriously in the U.S.

<sup>21</sup> Winters measured changes in tax *revenue*, which are caused by a combination of changes in the tax base and tax rates. The general results are not changed after accounting for two legislated major structural changes in the sales tax.

<sup>22</sup> Interestingly, Winters reports that a combination of property and sales tax has a higher growth rate and less variability than the property tax or sales tax alone. In essence, the variability of the two taxes offsets each other, leading to more stability from a diversified tax structure.

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<sup>23</sup> In Michigan, for instance, taxable house values may *increase* even while market values are decreasing. Annual increases in taxable values are limited to the lesser of 5% or the change in the CPI. Thus, many properties are currently assessed at well below the state's targeted assessment ratio of 50 percent of market value. Thus, taxable values may continue to rise at the same rate as the CPI.

<sup>24</sup> In addition, local taxes directed primarily at nonresidents may alter the location of economic activity, depending on the degree of price elasticity.

<sup>25</sup> This is most likely to apply for large cities in metropolitan areas, where the option to move employment outside of the jurisdiction is limited.

<sup>26</sup> The effect of federal income tax deductibility is reduced by the Alternative Minimum Tax, so that the fraction of taxpayers required to pay the AMT is an important factor in determining the impact of deductibility, as well.

<sup>27</sup> States could take statutory action, of course, to restrict local governments from granting business property tax abatements, rather than relying on local governments to act independently.