Abstract - In most states, the property tax departs markedly from the ideal of a low-rate, broad-based tax that treats various types of real property uniformly. Recently, many states have responded to rapidly rising residential property values with new constraints such as assessment caps. This paper will review property tax performance and analyze several arguments relating to alleged deficiencies of the property tax. The analysis suggests that the property tax has performed well by most measures and that it ranks high in terms of both stability and revenue elasticity. The restrictions and constraints imposed on the property tax are likely the result of the pursuit of political objectives by decision makers and not the result of structural problems with the tax itself.

INTRODUCTION

The property tax in the United States has not withered away as many observers predicted and some hoped. In fact, it has remained a remarkably resilient component of state and local revenue systems. However, rather than a broad-based, low-rate tax that treats all types of real property uniformly, the tax in most states is characterized by a bewildering array of constraints and preferences including classified bases, rate limits, revenue limits and caps, assessment exemptions, freezes and caps, circuit breakers, and special incentives for business. 1 Recently, steps have been taken in many states to reduce the impact of rising residential property values on homeowners.

It has been argued that the property tax is a poor revenue source that is revenue inelastic (fails to keep pace with the economy) and regressive. These alleged defects are often cited as reasons justifying the use of the constraints that are placed on the tax. In this paper, the analysis indicates that the property tax, rather than being a poor performing tax, ranks high in terms of both stability and revenue elasticity and that the regressivity concerns are likely ill-founded. The paper suggests that the restrictions and constraints imposed on the property tax are likely the result of the pursuit of political objectives by decision makers and not the result of structural problems with the tax itself.

The paper begins with a review of the role of the property tax in state and local revenue systems in the U. S., including the increased importance of residential property in the tax

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1 See Anderson (2006) for a detailed discussion of limitation measures.
base. Then, the stability and responsiveness of the property tax within the state and local tax system are analyzed using an efficient portfolio approach borrowed from finance. Next, incidence issues related to the property tax are briefly summarized. The paper concludes with a discussion of alternative explanations for the existence of constraints on the property tax.

PROPERTY TAX RELIANCE: A REVIEW

The property tax in the U.S. has been a growing and consistent source of revenues for local governments since the late 1980s. Figure 1 presents the combined state and local tax collections in the U.S. for the four most important tax sources in most states: the property tax, the individual income tax, the general sales tax, and the corporate income tax. The revenues for each tax are normalized by setting 1988 levels at 100. The results combine the impacts of economic growth as well as rate and base changes. Note that through 2005 property tax revenues have kept pace with the individual income tax and outpaced both the corporate income and sales taxes, but without the cyclical variations of the other taxes, most notably the corporate income tax. Annual percentage changes in property tax revenues are more stable as measured by their standard deviation than any other taxes. Only selective excise taxes such as the motor fuels and alcoholic beverage taxes are more stable, but they have lower growth rates.


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2 The property tax is almost exclusively a local government tax while the corporate income tax and to a lesser extent the individual income tax are predominately state-level taxes. The general sales tax is used by both state and local governments with the states playing a more important role.
For this same period, Figure 2 shows that the property tax is still the single largest source of state and local tax revenues, accounting for nearly one-third of all tax revenues. There was, in fact, a significant increase in property tax reliance after 2000. The increased reliance on the property tax was the result of a reduction in individual and corporate income tax revenues after the stock market decline in 2000 and the recession in 2001 and increases in property tax revenues that were used to compensate for reductions in state aid to local governments.

There has also been a significant increase in the residential component of the property tax base. This is illustrated using Illinois data in Figures 3 and 4, which show the increase in the residential component of the property tax assessment base. The use of Illinois data allows the analysis to focus on the tax base of assessed value rather than tax revenues. These figures show a long-term increase in the residential share of the property tax base in Illinois. This is the result of a steady increase in residential property values accompanied by a reduction in the importance of manufacturing in the state that is real-property-intensive compared with other types of business activities.

ATTRIBUTES OF THE PROPERTY TAX

Revenue Elasticity and Stability

For many years the property tax was considered an inferior revenue source because it failed to keep pace with a growing economy compared to the income and sales taxes that were assumed to track economic activity better. To analyze this

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3 A Google search of “property tax” and “inelastic” yields thousands of results, often from local jurisdictions bemoaning their reliance on property tax revenues.
Figure 3. Residential Assessed Value as Percentage of Total Assessed Value (Illinois)

Source: Property Tax Statistics (Various Years), Illinois Department of Revenue.

Figure 4. Assessment Shares by Class of Property (Illinois)

Source: Property Tax Statistics (Various Years), Illinois Department of Revenue.
assertion more directly, the four major state and local taxes are treated as if they are assets that comprise an overall state and local tax portfolio. Each tax base has a historic annual average growth rate as well as a measure of stability. Correlations among the growth rates of the various tax instruments are also important. These inputs are then used to construct an “efficient frontier” detailing various growth and stability combinations that can be achieved by the judicious combinations of the various taxes.

This approach is borrowed directly from asset allocation theory in finance developed by Nobel Prize winner Harry Markowitz where an efficient frontier comprising various risk–return combinations is derived using combinations of various assets. Each asset has a historic risk and return associated with it as well as return correlations with other assets. These inputs are used to construct an efficient frontier illustrated in Figure 5. Movement along the frontier is achieved by combining assets with differing risk–return characteristics. The low–risk, low–return options in the lower left would presumably be comprised largely of money equivalents and fixed income instruments, while points farther to the right would have larger allocations of more risky, but higher return, assets such as equity. Note that the efficient frontier does not dictate the optimal risk–return combination. This is ultimately determined by the risk–return preferences of the investor as illustrated by the tangency of the investor’s indifference curve with the efficient frontier.

Applying this approach to analyze the mix of taxes is instructive, but something of a stretch. Several caveats should be noted. First, the mix of state and local taxes

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**Figure 5.** Portfolio Analysis: A Review

![Portfolio Analysis Graph](attachment:image.png)
is not decided by one entity. Instead, it is
the outcome of decisions made by the state
government and a number (often large)
of local jurisdictions. State revenues are
spent, for the most part, without regard
to the areas where they are raised, while
property taxes usually remain in the local
jurisdiction where they are levied. Fur-
ther, taxes used by governments, unlike
investments made by small investors, are
not scalable because risk–return charac-
teristics may change with the intensity
of use. For example, even if a state was
attracted to the risk–return characteristics
of a minor tax such as the cigarette tax, the
state would not be able to use it to replace
a major tax such as the individual income
tax. Finally, while investors are primarily
interested only in the risk–return attrib-
tutes of assets, politicians are concerned
with aspects of taxes that go well beyond
the growth–stability characteristics. For
example, equity concerns such as the
degree of progressivity of the system are
ignored in this analysis as are regional
redistribution issues.

Using the portfolio approach, an opti-
mal growth–stability frontier is con-
structed for the state of Illinois. Tax base
data for the individual income tax, the
corporate income tax, the sales tax, and
the property tax are available for a 25–year
period from 1980 to 2004. The focus here
is on the tax base (adjusted as much as
possible for legal changes in the base),
not tax revenues, which are the result
of both rate and base changes. Table 1
presents the basic ingredients that are
used in deriving the optimal frontier. In
this period, the property tax base was a
truly superior “asset” in the sense that it
had the highest growth rate and the low-
est standard deviation in growth rates.4
Further, the tax had another really valu-
able characteristic in that the property tax
growth rates were negatively correlated
with the growth rates of the other tax
bases. This provides important diversifi-
cation advantages. The other three taxes
had positive growth rate correlations with
each other.

When these characteristics are put into a
mean–variance estimator, the efficient tax
mix frontier emerges as shown in Figure
6. The curve shows the various combina-
tions of growth and stability that could be
achieved by the efficient mix of various
taxes. The actual mix of the four taxes
for ten different points on the frontier is
detailed in Table 2. Note that the property
tax comprises a significant portion (more
than 50 percent) of every portfolio mix on
the frontier. Parenthetically, the corporate
income tax is a truly inferior tax “asset”
in that it does not make its way into any
efficient tax mix. The reason for this is that
the corporate income tax had the lowest
rate of growth along with the highest

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|}
\hline
 & Corporate & Individual Income & Sales & Property \\
\hline
Annual Change & 4.3% & 5.2% & 4.5% & 6.3% \\
Variance & 0.023 & 0.002 & 0.001 & 0.001 \\
Standard Deviation & 0.151 & 0.049 & 0.030 & 0.030 \\
\hline
Correlation Coefficients & 1.00 & 1.00 & 1.00 & 1.00 \\
\multicolumn{2}{c|}{Corporate} & Individual Income & Sales & Property \\
\multicolumn{2}{c|}{} & 0.62 & 0.65 & 1.00 \\
\multicolumn{2}{c|}{Sales} & 0.52 & -0.52 & -0.57 \\
\multicolumn{2}{c|}{Property} & -0.42 & -0.52 & -0.57 \\
\hline
\end{tabular}
\caption{Characteristics of Tax Bases: 1980–2004 (Illinois)}
\end{table}

\footnote{It should be noted that part of the property tax base’s stability may come from institutional, not economic,
factors resulting from lags in the assessment process in dynamic property markets.}
variation in growth rates of the four taxes, while also being highly correlated with the growth rates for the individual income tax and sales tax.

It is important not to make too much of this analysis. The widely heard warning in the investment arena that “past performance is no guarantee of future returns” applies here as well. There is no assurance that the next 25 years will be like the last period. In particular, real estate markets may be quite different in the future compared to the past. In addition, Illinois may not be exactly like other states. Nevertheless, the analysis soundly refutes the assertion that the property tax is an anemic tax instrument characterized by slow growth.

Regressivity

Another long–standing and widely held belief about the property tax is that it is highly regressive. This assertion is the hallmark of many tax study reports that urge reduced reliance on the property tax with replacement revenues coming from more progressive sources such as the individual income tax. The tax is often assumed to be borne by users of residential property, either directly for owner–occupants or indirectly through

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5 Similar although not identical results are achieved when national state and local tax receipts data are used to derive an efficient frontier.

6 As with the revenue inelasticity issue, a Google search of “property tax” and “regressive” yields over 100,000 results. Numerous tax study reports from the U. S. and Canada feature this assertion about the regressivity of the property tax. The regressivity belief is also documented in Youngman (2002).

7 The opposition to the property tax on grounds of its regressivity may be a variation of the theme raised by Slemrod (2006) where survey results suggest that many taxpayers support the replacement of the individual income tax with less progressive taxes such as a national sales tax or value added tax because they mistakenly view the income tax as regressive.
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higher rents for renters. Since lower-income residents pay a larger share of their income in housing costs compared to those with higher income, the tax is considered regressive.

In contrast, a recent article by Zodrow (2006) provides a valuable summary of current thinking by economists about the incidence of the tax—an issue that is still not fully resolved among tax experts.8 Zodrow characterizes two current views of the incidence of the property tax.9 The "benefit tax" view treats the property tax as a kind of user charge for local public services with little redistributive impact. Under this view, the property tax is a user charge where local public services are allocated efficiently in a Tiebout world based on willingness to pay with no redistributive consequences where regressivity and progressivity measures are not really appropriately applied.

The alternative "capital tax view" is a derivative of the Harberger (1962) general equilibrium analysis first applied to the corporate income tax. Under this view, the property tax is treated as a tax on the use of capital that redistributes investments inefficiently between high and low tax jurisdictions based upon tax considerations with the burden falling on owners of capital in all jurisdictions through lower rates of return. Because capital ownership is highly progressive, the property tax under this view is progressive. Zodrow (2006, 15) summarizes the impact of this view on incidence in the following way: "Because the primary effect of nationwide use of the property tax is a reduction in after-tax returns to capital owners, it is a highly progressive tax. Nevertheless, from the perspective of a single taxing jurisdiction, the local tax is not borne by capital owners as a whole but rather by local residents and is a roughly proportional tax."

### POSITIVE EXPLANATIONS OF PROPERTY TAX CONSTRAINTS AND PREFERENCES

Rather than being a wounded, defective tax instrument, the property tax unbound appears to be a productive tax with a number of positive attributes, not the least of which is that it provides "fiscal empowerment" to local governments. For local governments to be effective in a federal system, they must have independent sources of revenue. The property tax base is one of the few taxes that is not either preempted by higher levels of government or severely hampered by the mobility of the tax base. If this is the case, why then is the property tax so constrained? It will be suggested here that the restrictions and constraints imposed on the property tax are likely the result of political factors in the decision-making process, not structural problems with the tax itself.

A number of possible explanations will be considered here. Many of the explanations are speculative in nature and no single explanation provides a full understanding of the phenomenon.10 First, it should be noted that few participants in the tax decision-making process place the same importance on economic efficiency as do economists. Decision makers are often willing to sacrifice efficiency to achieve equity goals or redistributive outcomes that further pragmatic political objectives. In addition, there may be fundamental misunderstandings among politicians and taxpayers about the basic structural characteristics of the tax similar to those found by Slemrod (2006) relating to the income tax.

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8 The debate about the regressivity of the property tax is also summarized by Youngman (2002).
9 Zodrow's approach, in a sense, is an updated and expanded version of the "old view--new view" analysis explained in Aaron (1975).
10 For an earlier analysis of this issue, see Giertz and McGuire (1991).
It is possible that the property tax is constrained not because it is a bad tax, but because it is such a powerful and productive tax instrument. Buchanan (1975) suggests that taxes may be purposely bound by making them inefficient in an effort to control the size of government. One example of the “starve the beast” explanation emerged in the debate about taxation of sales over the Internet. Some of the opposition to requiring out-of-state vendors to collect sales taxes was not based on tax policy considerations. Instead, it was simply a means to reduce the size of state and local governments by making it more difficult for them to collect the sales tax.

A more sophisticated version of this argument suggests that there may be a systemic inability of elected local governments to exercise effective control over the size of their operations. It might be expected that the decisions made by democratically elected officials would represent the median citizen’s preferences. In regard to the “problem” of rapidly rising assessment levels, local governments have it within their power to reduce tax rates to offset the assessment increases without the needs for caps, freezes, and the like. Why are additional controls necessary?

Many local governments operate in a kind of information vacuum where most voters know little about the jurisdiction’s activities and have little incentive to spend the time and effort to acquire more information. The elected officials are the ones who have the greatest interest in the activities of their particular government. They may behave in at least a limited way as budget-maximizers in the Niskanen (1971) mode. In such situations, it may be more efficient for relatively disengaged citizens to impose broad, continuing restrictions on taxing capacity rather than attempting to monitor local government actions on an ongoing basis.

However, such restrictions are usually not imposed at the local jurisdiction level where the tax and spending decisions are made, but at the state level. In most states, local jurisdictions must operate according to general rules determined at the state level. State-imposed restrictions on local discretion can be of two types. They may be imposed to impart fiscal discipline that is lacking at the local level through broad, general rules. Alternatively, they may be a means by which state politicians grant special favors to various interest groups, receiving the political credit while the local jurisdictions bear the costs.

In summary, while there is an incomplete understanding of the positive reasons for the existence of property tax constraints, the argument that the intrinsic deficiencies in the property tax give rise to the restrictions is dubious.

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