# TAX EXPENDITURE LIMITATIONS AND THEIR EFFECTS ON LOCAL PUBLIC FINANCES

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> > Initial Draft

August 30, 2007

# **1. INTRODUCTION**

The modern political landscape is dominated by the belief that localities are critical to the governance of America. An influential report issued by the National Conference of State Legislatures (1997), asserted that public service responsibilities should be assigned to the lowest level of government to foster accountability and best meet local citizens' needs. Such views of localism are broadly accepted by political leaders, academics, and the general public (Brunori 2003).

There is little debate that local governments are the most efficient providers of certain public services. Scholars have long recognized that federal, state, and local governments are each capable of providing some services more effectively than other levels of government. Public services should be provided by the jurisdiction covering the smallest area over which benefits are distributed (Oates 1972, and Gramlich 1993). As Bird (1993, 211) asserted "so long as there are variations in tastes and costs, there are clearly efficiency gains from carrying out public sector activities in as decentralized fashion as possible."

Another rationale for localism is that it promotes democratic values and practices (Frug 1980). That is, government closer to the people will not only better reflect citizen desires, but it will encourage them to participate in public affairs and participate in the democratic process. As one prominent political scientist observed: "The bedrock of American local democratic theory is that the role of the local government is to reflect the will of the people and that direct individual participation in local government is the best means of achieving this end" (Wolman 1997, 136). And there is scholarly evidence that

the public desires local government because of the democratic ideals that such government fosters (Haselhoff 2002).

The theory of localism outlined above is dependent upon local governments having an independent source of revenue within their political control (Peterson 1995) that is also adequate to meet local needs for goods and services. An implication is that local governments, through their elected officials, must have the ability to impose taxes on their citizens without undue interference from state or federal law. Without such ability, local governments cannot effectively or efficiently provide public services or respond to the needs of their citizens. As Bird (1993, 211) stated, "Local governments should not only have access to those revenue sources that they are best equipped to exploit—such as residential property taxes and user charges for public services—but they should also be both encouraged and permitted to exploit these sources without undue central supervision."

It has now become part of public finance lore, however, that the local property tax is often thought to be the "worst tax." During the latter half of the 20th Century, the Advisory Commission on Intergovernmental Relations (ACIR) conducted an annual public opinion poll to gauge the people's views on the federal, state, and local tax systems. One of the most cited aspects of the poll was the request for people to identify the tax that they dislike the most. Over the course of the ACIR polling, the property tax was annually listed as the worst tax or the second worst tax following the federal income tax.

So it is not surprising that virtually all states have some limitations on local government ability to impose property taxes. There are three primary methods states have

used to limit local government taxing authority, particularly with respect to property taxation. States have placed limits, either through constitutional amendment or statutory enactment, (1) on rates, (2) assessment increases, or (3) general revenue and expenditure increases. Some states are subject to more than one type of limitation and a few states such as California are subject to all three.

The proliferation of such property tax limitations has curtailed local taxing authority and as a consequence hindered local political autonomy. There is some evidence that locally elected officials are concerned about this loss of autonomy. For example, in a recent survey by the National League of Cities, 54 percent of elected city officials said they would not trade local tax revenue authority for a larger share of state revenues (Hoene, 2005).

In addition to such property tax limitations, many states have also instituted broader tax and expenditure limitations (TELs) on state and local governments. Such TELs are controversial. Some see TELs as a necessary means of protecting the public from politicians who set taxing and spending levels higher than the public actually prefers. Others see TELs as an unwarranted attack on local autonomy. According to a recent survey of elected city officials, respondents were pretty evenly split on the desirability of TELs. Just over half of city officials responding to the survey felt TELs were sometimes a good idea (47 percent of respondents) or always a good idea (6 percent of respondents). Alternatively, 24 percent of respondents felt TELs were sometimes a bad idea and 16 percent felt they were always a bad idea (Hoene, 2005).

The objective of this paper is to summarize the state of knowledge about such *local* tax and expenditure limitations, also known as TELs, with special emphasis on the

effects of TELs on local public finance.<sup>1</sup> We begin by discussing the history of TELs, and present a typology of the variants of TELs that are presently in existence. This discussion is followed by a survey of the empirical evidence on the various effects of TELs on local public finances. We conclude with a summary of the main findings of the empirical research on TELs and a discussion of research remaining to be done.

# 2. A BRIEF HISTORY OF TAX AND EXPENDITURE LIMITATIONS

These various limitations arose from the public's well-documented unhappiness with the property tax. But contrary to what many believe, the tax limitation movement did not start with California's Proposition 13. Rather, the initial push to limit property tax increases began during the Great Depression.

Despite the harsh economic realities of the depression, the under- and unemployed were still faced with paying their property taxes. While property values (and hence property tax burdens) were falling, the dramatic loss of income forced many homeowners into or near bankruptcy. By 1932 real estate values fell by 92 percent (Beito 1989). But tax assessments did not fall nearly as far or as fast. Moreover, the share of income absorbed by the property tax doubled between 1929 and 1932, reaching 11.3 percent (O'Sullivan 2000).

Local governments remained heavily dependent on the property tax. In 1932, for example, property taxes accounted for 85.2 percent of local government own source revenue. The depression produced an upsurge in tax delinquencies, bankruptcies, and foreclosures. Nationwide, localities had property tax delinquency rates of over 26 percent

<sup>&</sup>lt;sup>1</sup> For a recent analysis of *state* level TELs see Bae and Gais (2007).

(O'Sullivan 2000). The sheer volume of delinquencies and the threat of losing homes gave rise to the most serious tax revolts in America since the Whiskey Rebellion.

As early as 1930, unhappiness with property tax burdens caused a storm of protest across the country. Thousands of taxpayer organizations, all created specifically to fight for property tax relief, were formed. These protests had significant repercussions. In 1932 and 1933 alone sixteen states and numerous localities adopted some form of limitations on property taxation (O'Sullivan 2000). Throughout the Great Depression states began to limit local property taxation. Michigan (1933), Nevada (1936), Ohio (1929), Oklahoma (1933) all placed statutory or constitutional limits on property tax rates during the early years of the Great Depression. West Virginia (1939) and Washington (1944) would later place limits on rates.

The property tax unrest during the Great Depression also spurred states to adopt property tax relief measures such as homestead exemptions. But the early limitation movement and the proliferation of homeowner relief did not quell the public's dislike of the property tax. That dislike combined with a growing cynicism and distrust of government led to the most significant development in American property tax history -the tax revolts of the late 1970s and early 1980s.

Proposition 13 and its progeny not only dramatically changed property taxation but also were a defining moment in the public's attitudes toward taxation in general in the United States. The tax revolts changed the way many local governments raised revenue. But they also signaled the beginning of a new and decidedly anti-tax political philosophy that continues to this day.

The causes of Proposition 13 were varied. The public was frustrated by continuously rising property tax burdens. California real estate values were increasing 25 percent a year in the decade before the passage of Proposition 13. The public was equally frustrated with local government leaders that refused to lower tax rates and state government leaders who refused to offer relief. Political leaders around the state were aware of the property tax problem for at least a decade before 1978. Governor Ronald Reagan proposed limiting property taxes in 1973. Los Angeles County assessor Phil Watson led two property tax limitation drives in 1968 and 1972. These efforts were unsuccessful, and as Lo (1995) noted the California legislature refused to provide property tax relief for four straight years before the proposition passed.

Another cause for Proposition 13, and indeed other property tax protests, was school finance litigation. In 1972, the California Supreme Court declared that the system of financing education through local property taxes was unconstitutional. The court ordered that the state assume the primary role in financing the schools. That decision had the effect of diminishing public support for property taxes and is arguably one of the reasons for the public's willingness to approve Proposition 13 (Fischel 1989).

On June 2, 1978, two thirds of California voters chose to radically reduce and limit property taxes in the state. Proposition 13 rolled back assessment values to 1976 levels. It limited increases in assessed value to two percent a year as long as the property was not sold. It imposed a one percent limit on the property tax rate. The measure also required that all state tax increases be approved by a two thirds vote of the legislature and that all local tax increases be approved by a vote of the electorate.

The effect was dramatic. Property tax revenue immediately fell by 57 percent across the state. Local governments in California collected over \$6.6 billion less in property tax revenue in 1979 than they did in 1978 (Citrin 1984). California property taxes went from being 51 percent above the national average in 1978 to being 22 percent below the average in 1981.

California local governments became much more dependent on state aid as a result of Proposition 13. They also began significantly increasing user fees and charges (which were not subject to limitation). Between 1978 and 1981, local government user fee revenue increased by 48 percent; and Los Angeles increased user fee revenue by 67 percent (Richter 1984).

The immediate impact of Proposition 13 was significant. Within six months after the passage of Proposition 13, tax limitation measures were on the ballots in 17 states and all but five were approved. There were 58 ballot measures during the 1979-84 period concerning property tax classification, exemptions, assessment reform, and rollbacks. Among the most successful were tax and expenditure control measures. Forty-three states adopted new property tax limitations or relief plans between 1978 and 1980. Idaho and Massachusetts followed California's lead and adopted measures that both cut and limited property taxes. New state spending limits were set in New Jersey and Colorado. Several states (Arizona, Michigan, Louisiana, Oregon, Utah, and Washington) tied growth in local government spending or revenue to growth in personal income or population. Michigan restricted growth in local property tax revenues to the rate of inflation, and state revenues were limited to the share of personal income they represented in 1978-79.

Although the tax revolt movement lost momentum in the latter half of the 1980s, continued dislike of the property tax together with the fiscal pressures resulting from the recent recession have served to maintain interest in changing the tax and spending activities of state and local governments. In 1992, voters in Florida approved a 3 percent limit on assessed value increases until sale for homeowner property. In a historic move, the Michigan Legislature in 1993 voted to eliminate all property taxes for school operations.

# **3. TAX AND EXPENDITURE LIMITATIONS TODAY**

California's proposition 13, which many would regard as the "paradigmatic" example of a tax expenditure limitation is, in fact, a specific form of tax and expenditure limitation among several different variants. Just as states differ in their decision to adopt a limitation measure or not, states and localities that have chosen to adopt limits differ in the design of limitations that they choose to implement. Important distinctions are: (a) whether limitations are imposed at the state or at the local level; (b) how the limitation is administratively imposed, and (c) whether the constraint implied by the limitation is considered to be binding or non-binding. A listing of the various forms of TELs currently in existence is provided in Appendix Tables A-1, A-2, and A-3.

## 3.1 State vs. Local Limits

One important distinction is between state TELs and local TELs (Joyce and Mullins 1991; Mullins and Joyce 1996; Shadbegian 1996; and Shadbegian 2003). State TELs refer to limitations imposed on the state government while local TELs refer to those imposed on local governments by the state. Both types of limitations were

simultaneously adopted in a number of states. As is discussed in more detail below, constraints on state revenue or expenditure are a new invention of the most recent tax revolt (Joyce and Mullins 1991), but they are found to be less effective than local TELs in controlling the size and growth of government because states have greater capacity to circumvent those limitations (Joyce and Mullins 1991; Mullins and Joyce 1996; Shadbegian 1996; and Shadbegian 2003).

## **3.2.** Administrative Implementation of Limitation

In the case of property taxes, three options for limitation present themselves: (a) limiting the base of the property tax through assessment limitation, (b) limiting the rate at which the base may be taxed, and (c) limiting revenues and/or expenditures.

#### 3.2.1. Assessment Limitations

Nineteen states have some form of limitation on the amount assessed values can increase each year. The assessment limits usually apply only to residential property and rarely to other uses. For example, there are few commercial property assessment limitations in the United States. The states with assessment limits along with a brief description and legal authority are listed in Appendix Table A-1.

Assessment limitations vary widely. For example, some states such as California, Florida, Oklahoma, and New Mexico have flat percentage limitations on yearly increases in assessed value. California's Proposition 13 limits the increase in assessed value for residential property to two percent a year unless the property is sold. When the property is sold it acquires a market value for assessment purposes.

But not all assessment limits are so straightforward. Colorado mandates that residential property comprises no more than 45 percent of total assessed value. This

requirement serves to limit the growth of residential assessment, but property owners have a difficult time determining how much. Georgia limits only conservation use assessments. New York only limits Nassau County assessments. Virginia has a one percent annual assessment limitation, but that limit can be overridden by a simple majority vote of the legislature of the taxing jurisdiction.

## 3.2.2. Rate Limitations

Thirty-seven states have some form of limitation on the property tax rate that can be levied by a local government. Like assessment limitations, rate limitations are set by statute and/or the constitution. The states with rate limitations are set forth in Appendix Table A-2.

Rate limitations also vary from state to state. Some states (California, Florida, and Wyoming, e.g.) have rate limit laws that do not allow for any increases. But many states have rate limit laws that can be overridden in particular circumstances. Alabama, Ohio, and Michigan for example allow their rate limits to be increased after a majority vote of the electorate. Oregon and Nebraska require a supermajority vote of the electorate to override a rate limit. In some states (Maryland, Minnesota and Illinois) the property tax rate limit limitation is a local option.

#### 3.2.3 Revenue and Expenditure Limits

Thirty-six states have some form of limitation on revenue and/or expenditure increases in local governments. The states with revenue and expenditure limits are listed in Appendix Table A-3. In every state, with the exception of Alaska and Arkansas, the limits can be overridden by either the electorate or the legislative body in the taxing jurisdiction. In Alaska, local governments cannot collect more than \$1,500 per capita. In

Arkansas, property tax revenue cannot increase more than ten percent from the previous year.

Like other limitations, there are wide variations among the states limiting revenue and expenditure growth. In many cases, expenditures are limited by some combination of population growth and inflation. Some states place a flat percentage limit on growth. Some states tie expenditure growth to personal income growth. And some states (Massachusetts, Arizona, Arkansas, Indiana, Maine, and South Dakota) limit revenue growth only to the property tax.

#### **3.3. Binding vs. Non-Binding Limits**

Scholars also distinguish between different types of local TELs based on their stated target and their stringency or degree to which the constraint is binding.<sup>2</sup> Joyce and Mullins (1991) identify six categories of TELs, namely overall property tax rate limit<sup>3</sup>, specific property tax rate limit<sup>4</sup>, assessment increase limit<sup>5</sup>, property tax levy limit<sup>6</sup>, general revenue or general expenditure limit<sup>7</sup>, and full disclosure or truth-in-taxation<sup>8</sup>. Tax rate limits and assessment limits are expected to be potentially binding if combined with each other. Limits on the overall property tax levy, or on general revenues or expenditures, are also considered potentially binding due to the fixed nature of the

<sup>&</sup>lt;sup>2</sup> See Anderson 2006; Brown 2000; Joyce and Mullins 1991; Mullins and Joyce 1996; Preston and Ichniowski 1991; Poterba and Rueben 1995; Shadbegian 2003; Sokolow 1998; and Sokolow 2000. <sup>3</sup> Overall tax rate limit sets a ceiling on the aggregate tax rate of all local governments.

<sup>&</sup>lt;sup>4</sup> Specific tax rate limit applies to specific types of local government, such as school districts, or narrowly defined service areas.

<sup>&</sup>lt;sup>5</sup> Assessment increase limits cap the growth rate of assessed values and intend to control the ability of local governments to raise revenue by reassessment of property or through natural or administrative escalation of property values.

<sup>&</sup>lt;sup>6</sup> Property tax levy limit constrains the growth rate of total revenue that can be raised from the property tax, independent of the rate.

<sup>&</sup>lt;sup>7</sup> General revenue or general expenditure limit caps set the maximum growth rate of total revenue and/or spending.

<sup>&</sup>lt;sup>8</sup> Full disclosure, or truth-in-taxation, requires public discussion and a specific legislative vote before enactment of tax rate or levy increases.

ceiling, whereas full disclosure is considered nonbinding, as the local legislative body can easily raise the tax through a formal vote (Joyce and Mullins 1991). Some states have adopted a combination of the potentially binding limitations while some have implemented only the least binding type. As states with potentially binding TELs vary in the size of their cap on the growth rate of property taxes, Shadbegian (2003) suggests five percent as the threshold to distinguish between stringent and nonstringent limitations. Poterba and Rueben (1995), on the other hand, classify limits on property tax revenues, property tax rates, or general revenues or expenditures as effective limitations and, assessment limits, along with full disclosure, as ineffective. In Anderson's review (2006), assessment limits offer better insurance against large property tax increases for homeowners than limits on rates and revenues.

TELs may also be divided into those with an override mechanism and those without (Cutler, Elmendorf, and Zeckhauser 1999; Figlio and O'Sullivan 2001). Override provisions provide a method for overcoming tax and expenditure limitations. Override provisions can be as simple as allowing a majority vote of the governing body. But most are much more difficult to implement, often requiring a supermajority vote of the electorate in a special election.

The next section examines the effects of TELs on local public finances.

# 4. EFFECTS OF TELS ON LOCAL PUBLIC FINANCES

Because local governments have traditionally been so dependent on the property tax, limitations have had several effects on local public finances. Some local governments have responded to TELs by increasing reliance on user charges and fees. In

other cases, reduced locally and independently generated revenues have been replaced by revenues from the state, leading to greater centralization in the finance of local public services. In 2000, for example, the state share of state-local tax revenue in the U.S. was 61 percent, compared with 55 percent in 1970, and Sokolow (2000) has argued that local property tax restrictions are a cause of diminished local government autonomy and increased fiscal centralization. In fact, Sokolow (1998) found state control over local government finances has been increasing for more than two decades and the rising state share of state-local revenue best illustrates the increased level of state control. The various limitations have forced local governments to increasingly rely on state aid to fund services once paid for exclusively by the localities. This is especially true in the case of primary and secondary education.

There is also a substantial empirical literature on the various effects of TELs on the public finances of the communities that are subject to these limitations. Broadly speaking, these empirical studies fall into four broad groups: (1) studies that examine whether TELs have indeed had their intended effect of restraining government revenue and spending; (2) studies that examine the effect of TELs on education expenditures; (3) the impact of TELs on property values; and (4) studies that have analyzed the distributional effect of TELs.

## 4.1 Effects of TELs on Taxes and Spending

Because most TELs have the explicit purpose of constraining property tax revenues and containing the growth of government, there is an extensive empirical literature focusing on the effects of TELs on the fiscal structure of state and local

governments. <sup>9</sup> These studies in turn can be grouped into those that focus on the extent to which different types of TELs impose binding or non-binding constraints, as well as the effect of TELs on: revenue from property taxes; the level of government spending; and the mix of local financing sources.

## 4.1.1 Are TELs Binding or Not?

The degree of interstate variation in the design of TELs as discussed earlier implies heterogeneity in their effects on government finance. Not surprisingly, binding limitations are more likely to assert an influence than those that are less binding (Joyce and Mullins 1991). One indirect way of testing this conjecture is to compare the effects of TELs imposed on state spending and taxes with those that constrain local spending and taxes. One might expect that the former variety of TELs would have less of a constraining effect than the latter because of the breadth and diversity of state revenue and spending compared to local revenue and spending. Shadbegian (2003) examines the impact of both state and local tax and expenditure limitations on school finance. His analyses of the state-level data provide support for a negligible impact of state-level limits on local education spending per student, in contrast to local-level limitations which have a substantial impact.

Shadbegian (1999) found that the effects of tax caps appear to increase with their stringency. For example, he found that less stringent TELs reduced property taxes by about \$32 per capita and "other" taxes by roughly \$12 per capita, but local governments

<sup>&</sup>lt;sup>9</sup> See Bland and Laosirirat 1997; Brooks and Phillips 2006; Cornia and Walters 2005; Cornia and Walters 2006; Cutler, Elmendorf and Zeckhauer 1997; Cutler, Elmendorf and Zeckhauer 1999; De Tray and Fernandez 1986; Dye and McGuire 1997; Dye, McGuire and McMillen 2005; Elder 1992; Figlio 1998; Figlio and O'Sullivan 2001; Galles and Sexton 1998; Glickman and Painter 2004; Joyce and Mullins 1991; Merriman 1986; Mullins and Joyce 1996; O'Sullivan, Sexton, and Sheffrin 1995; Preston and Ichniowski 1991; Shadbegian 1996; Shadbegian 2003; Sokolow 1998; Sokolow 2000; and Waters, Holland, and Weber 1997.

facing less stringent TELs raised about \$23 per capita in additional miscellaneous revenues for a net reduction of \$22 per capita (about 4 percent) of own-source revenues. On the other hand, he found that more stringent TELs reduced property taxes by \$44 per capita, raised "other" taxes by \$3 and raised \$6 per capita less in miscellaneous revenues than expected, leading to an overall net reduction in own-source revenues of \$47 per capita (about 9 percent). [pp. 233-4]

The cross-state analysis by Preston and Ichniowski (1991) empirically corroborated Joyce and Mullins' (1991) findings about the degree to which various types of limitations impose binding or nonbinding constraints. Property tax rate limits, when coupled with assessment limits, result in the largest reduction in the growth of per capita property tax revenue. Property tax levy limits and general revenue limits have significant yet smaller impacts. Similarly, Brown (2000) argues that the comprehensive revenue and expenditure limit in Colorado is more effective than the earlier assessment limit in controlling the growth of government.

## 4.1.2. Effect of TELs on Property Tax Revenue

Both empirical studies of TELs based on data from individual states,<sup>10</sup> and studies based on cross-state comparisons<sup>11</sup> marshal compelling evidence that state-imposed limitations on local property tax rates, levies, and assessments have a significant impact on property tax revenue—reducing these revenues absolutely, or as a share of local ownsource or general revenue. Dye, McGuire and McMillen (2005) also find evidence that in Illinois, these effects become more pronounced over time. Illinois school districts with

<sup>&</sup>lt;sup>10</sup> See Cornia and Walters 2006; Cutler, Elmendorf and Zeckhauer 1999; Dye and McGuire 1997; Dye, McGuire and McMillen 2005; Elder 1992; Galles and Sexton 1998; O'Sullivan, Sexton, and Sheffrin 1995. <sup>11</sup> See Joyce and Mullins 1991; Mullins and Joyce 1996; Preston and Ichniowski 1991; Sokolow 1998; and Sokolow 2000.

the cap in effect for 4-9 years saw a more dramatic decline in the growth rate of property tax revenue than those in which the cap was in place for 1-3 years.

Findings regarding the effects of full disclosure laws, as distinct from explicit restrictions, are more mixed. Consistent with the expectation that full disclosure is a nonbinding type of limitation, Bland and Laosirirat (1997) conclude from their analysis of city-level panel data in Texas that truth-in-taxation requirements have little or no effect on real per household property tax burdens. Cornia and Walters (2006), on the other hand, contend that the full disclosure law in Utah strikes a balance between restraint and local discretion by allowing property tax revenues to grow, though less rapidly than would have been expected based on growth in property values. A 2005 paper by the same authors also suggests that full disclosure in Utah may have provided a benefit initially unforeseen by legislators: namely it has promoted uniformity in the administration of the property tax.

#### 4.1.3 Effects of TELs on Government Revenue Raising

Despite evidence that at least some variants of TELs have had a significant constraining effect on property tax revenue, aside from Poterba and Ruben (1995) who found that effective property tax limits are associated with slower wage and employment growths for local government employees, there is little empirical evidence that TELs have had much effect on the overall size of government, as measured by indicators such as the level and growth of general revenue and general expenditure.<sup>12</sup> There is, however, evidence that TELs have had a significant effect on the composition and structure of

<sup>&</sup>lt;sup>12</sup> See Cutler, Elmendorf and Zeckhauer 1997; Galles and Sexton 1998; Joyce and Mullins 1991; and Mullins and Joyce 1996.

government revenues as well as on the mix of state and local financing of local public services.

A number of studies have found that adoption of TELs has fostered increased local reliance on narrow-based non-tax revenues and state-level centralization of school finance.<sup>13</sup> Local governments have sought to replace revenue foregone due to TELs with alternative revenue sources such as user fees, charges, and with intergovernmental aid from the states, thus eliminating the need to cut down spending.

Using multi-state cross-sectional data, Joyce and Mullins (1991) show that, in response to the recent tax revolt, non-tax revenue has grown as a share of state and local revenue. Shadbegain concludes that

"...evidence indicates that local governments located in TEL states substitute miscellaneous revenue for tax revenue, but that this substitution is less than dollar-for-dollar. In particular, the point estimates indicate that for each \$1 reduction in taxes per capita, there is a corresponding \$0.27 increase in miscellaneous revenue per capita." (Shadbegian 1999, 233)

In addition, Joyce and Mullins (1991) find that states with TELs increased their aid to local governments, which led to the shifting of responsibility for certain expenditure functions from local government to state government. Joyce and Mullins confirm these findings in a 1996 study with updated data.

Galles and Sexton's comparative analysis of California and Massachusetts (1998) reports that local revenues and expenditures were initially reduced by the limitations but that state and local governments soon made up lost revenues through increased use of

<sup>&</sup>lt;sup>13</sup> See Dye and McGuire 1997; Galles and Sexton 1998; Joyce and Mullins 1991; Mullins and Joyce 1996; Shadbegian, 1999; Sokolow 1998; and Sokolow 2000.

fees and charges and were able to exceed their pre-limit real per capita revenues and expenditures in 1990. Glickman and Painter (2004) have also found that there is a positive relationship between the presence of TELs and a state's adoption of lottery. The authors' explanation is that the median voter may strategically use the combination of limitation and state lottery to lower his or her tax burden without affecting the desired level of public services.

Another fiscal response to the presence of TELs has been the replacement of lost property tax revenues with grants from higher levels of government, associated with increases in state aid to local governments and in the share of state taxes in total state-local revenue (Sokolow, 1998 and 2000). The trend is most pronounced in the financing of K-12 education, which has traditionally depended heavily on the local property tax as a revenue source.

Public finance experts have expressed their concerns over the viability of non-tax revenue and state aid as a long-term substitute for property tax revenues foregone under TELs. Unlike broader-based property taxes, user fees and charges have very limited revenue-generating capacity (Joyce and Mullins 1991). Moreover, the shift to non-tax revenue may change fundamentally the way in which public services are financed. While property tax revenues go into a general fund for general services, user fees and charges are collected to cover the costs of specified services and are imposed on those who consume those services. Thus, even when TELs do not change the amount of taxes collected, they do change how specific goods and services are financed. Over time, such a shift toward more dedicated sources of revenue tied to the provision of specific local

public goods and services has the potential to alter the mix of goods and services provided by local government.

When TELs shift greater reliance from localities to states, a potential risk is that this revenue source is highly susceptible to substantial cuts at times of an economic downturn. In addition, state centralization of traditional local expenditure functions, such as elementary and secondary education, undermines local fiscal control and increases the distance between the locus of responsibility for delivering public services and the population to be served.<sup>14</sup> Since state government is less responsive to diverse local preferences, the shift to state finance of local services reduces the potential gains in efficiency to be had from providing local public goods in a decentralized manner.

# **4.2 Effects of TELs on Education Expenditures**

Although the weight of the evidence suggests that local governments may have had some success in replacing revenue foregone due to TELs with other revenue sources, TELs nonetheless have affected revenues available for specific public goods and services. Given that a predictable effect of TELs has been to reduce property taxes, which have traditionally been a main, often earmarked, source of revenue for education, it is natural that empirical studies of the effects of TELs on provision of local public services have focused on whether and how TELs have affected the provision of public education.<sup>15</sup>

It remains unclear how voters came to believe they could cut taxes without cutting public services or compromising the quality of services. Undisputedly, the property tax constitutes a cornerstone of the U.S. education system by performing consistently in

<sup>&</sup>lt;sup>14</sup> See Joyce and Mullins 1991; Mullins and Joyce 1996; Sokolow 1998; and Sokolow 2000.

<sup>&</sup>lt;sup>15</sup> See Dye and McGuire 1997; Dye, McGuire and McMillen 2005; Bradbury, Case, and Mayer 1998; Downes, Dye, and McGuire 1998; Downes and Figlio 1999; Figlio 1997; Figlio 1998; Figlio and O'Sullivan 2001; Figlio and Rueben 2001; and Shadbegian 2003.

generating money for public schools. It is therefore important to examine what impact, if any, tax limits have on the provision of education services, both in terms of inputs and outcomes.

The general question to be answered is "Does the enactment of TELs sufficiently constrain revenue (and in some cases expenditure) on local public schools to materially affect the "amount" of public education provided? Answering this question empirically requires that one has an operational measure of educational "output" or "outcomes."

Although outcome measures are hard to come by in practice, several empirical studies have made use of quantitative measures of "outcomes" as measured by indicators such as test scores. Figlio's cross-sectional analysis (1997) suggests that tax limitations worsen student performance on standardized tests in mathematics and various subjects. Downes, Dye and McGuire (1998) find a modest negative impact of the tax cap in Illinois on mean math scores of third graders but not on reading scores of eighth graders.

Conventional wisdom has it that per pupil spending, student-teacher ratios, starting teacher salaries, and teacher quality should be related to student educational outcomes. Although these indicators are ultimately measures of inputs rather than outputs or outcomes, other empirical studies have substituted such measures of educational inputs for measures of actual output or outcomes to assess the effects of TELs.

One way to gauge the amount of input in public education is to see how much money local governments have invested in public schools, and how funds have been spent on different parts of local education budgets. In their 1997 study of the property tax revenue limits in Illinois, Dye and McGuire find that the state-imposed cap had a

constraining effect on school district *operating* expenditures, but no effect on school district *instructional* spending. To the extent that operating expenditures are regarded as having more to do with the "administrative overhead" of operating a school system, while instructional expenditures are viewed as having more to do with the provision of actual educational output, the authors interpret the differential effect as evidence that TELs improved efficiency by reducing "less essential" public spending while preserving "essential" spending.

In a subsequent study, however, Dye, McGuire and McMillen (2005) find that the cap reduced both operating and instructional spending, especially in the long run and thus had no differential effect, Based on this evidence the authors conclude that while the short-run effect of TELs may have been "efficiency-enhancing" by reducing only the "fat" but not the "muscle" of public spending on education in Illinois jurisdictions, the longer run effect may have been to cut both less essential and arguably essential spending.

The notion of using the effects of TELs on different components of educational spending to infer whether TELs achieve their stated purpose of trimming only "wasteful" spending is intriguing. However, Downes and Figlio (1999) caution against taking for granted the assumed linkage between inputs and outcomes in education. In particular, they note that instructional spending might actually be more susceptible to being cut in jurisdictions in which administrative costs are already at a minimum, or in districts that are populated by budget-maximizing bureaucrats who see cutting essential educational spending as a strategy to "inflict enough pain" to encourage voters to subsequently support overrides of TELs.

The differential effect of TELs on different kinds of services is further highlighted by Figlio and O'Sullivan (2001), who suggest that local politicians may strategically manipulate the teacher-administration ratio (i.e. instructional vs. administrative spending) in order to enlist citizen support for overrides of tax caps. The larger the demonstrated loss in public goods (i.e. teachers), the more likely citizens are to approve an override.<sup>16</sup> Such strategic manipulation of spending reductions in response to TELs makes interpretation of prior studies more difficult.

Student-teacher ratios, teacher salaries, and teacher quality are other input measures that have been used to assess the effects of TELs. Using countrywide school district data between 1988 and 1991, Figlio (1997) demonstrates that local property tax limitations led to higher student-teacher ratios and lower starting salaries for teachers. In a comparative study of Oregon and Washington, Figlio (1998) also found that stateimposed limitations significantly increased student-teacher ratios while the ratio of administrative to educational spending remained unchanged or increased.

Using test scores and college selectivity as measures of ability, Figlio and Rueben (2001) also find evidence that tax limitations significantly reduce the average quality of new public school teachers, who may face longer queues for an opening as a result of limitations. Shadbegian (2003) finds that stringent local limits increase student-teacher ratios only slightly but exert no significant impact on teacher salaries. The author cites this as evidence for improvement in efficiency by local governments that are subject to caps.

<sup>&</sup>lt;sup>16</sup> In the same vein, local politicians may reduce the ratio between uniformed police and police administration in exchange for voter support for limitation overrides.

Some researchers have tracked the experience of a single state or a couple of states (Bradbury, Christopher and Case, 2001; Downs, Dye and McGuire, 1998; Dye and McGuire 1997; Dye, McGuire and McMillen 2005; Figlio 1998; O'Sullivan, Sexton, and Sheffrin 1995), while cross-sectional analyses have almost exclusively relied on aggregate data at the state level (Mullins and Joyce 1996; Shadbegian 2003), with the exception of Figlio (1997). With about 96 percent of their tax revenue coming from the property tax, school districts would feel most acutely the impact of tax caps on their finance system. Yuan (2006) seeks to extend the current literature with an analysis of the impact of TELs on education spending using school districts, not states, as the unit of analysis. Specifically, she utilizes district-level panel data for fiscal years 1990-2000 provided by the National Center for Education Statistics (NCES).

While there is no conclusive empirical evidence for the positive relation between monetary input in education and student performance, spending is often used as an indicator of the level of education service being provided by local government. Yuan follows that convention and uses per pupil expenditure on elementary and secondary education to account for the effect of enrollment on spending and per pupil instructional expenditure to approximate the quality of service being provided. Yuan also distinguishes between different types of property tax limitations and estimates their effects on school expenditures in both ordinary least squares (OLS) and fixed-effects models.

The following table summarizes state-by-state adoption of different types of tax limitations applicable to school districts<sup>17</sup>, including the year in which the limits were first enacted. The data in the table shows that by the year 2006, 21 states had specific tax

<sup>&</sup>lt;sup>17</sup> Limits that apply to local governments other than school districts (e.g. counties or municipalities) have not been included in the table.

rate limits, 12 had overall rate limits, 15 set a ceiling on property tax revenue, and 8 cap

the growth of assessed values.

State	Overall	Specific	Property	Assessment	General	General	Full
	Property	Property	Tax	Increase	Revenue	Expenditure	Disclosure
	Tax	Tax	Revenue	Limit	Limit	Limit	
	Rate	Rate	Limit				
	Limit	Limit					
Alabama	1972						
Alaska	None						
Arizona	1980			1980		1974	
Arkansas			1981				
California	1978			1978		1979	
Colorado		1992	1992		1992	1973	1992
Connecticut	None						
Delaware	None						
Florida		1855		1995			1974
Georgia		1945					1991
Hawaii	None						
Idaho	1978	1963					1991
Illinois			1991				1981
Indiana		1975	1973				
Iowa		1989		1978		1971	
Kansas							1999
Kentucky		1946	1979				1979
Louisiana		1974	1978				
Maine	None						
Maryland	None						
Massachusetts	None						
Michigan	1933		1978				1982
Minnesota						1971	1988
Mississippi			1983				
Missouri		1875	1980				
Montana		1971					
Nebraska		1921				1991	
Nevada	1936	1956					1985
New	None						
Hampshire							
New Jersey						1976	
New Mexico	1914	1973	1979	1979			
New York		1894					
North	None						
Carolina							
North Dakota	None						
Ohio	1929		1976				
Oklahoma	1933			1996			

Table 1. Summary of Tax and Expenditure Limitations on School Districts

Oregon	1991	1991		1997			
Pennsylvania		1959	2006				
<b>Rhode Island</b>			2006				
South							1975
Carolina							
South Dakota		1915					
Tennessee	None						
Texas		1883		1999			1982
Utah		1929					1986
Vermont	None						
Virginia	None						
Washington	1944		1979				1990
West Virginia	1939	1939	1990				
Wisconsin					1994		
Wyoming		1911					
Total	12	21	15	8	2	7	14

Source: Authors' compilation of state constitutions and statutes. Please refer to tables A1-A3 for further details.

Yuan finds partial yet compelling empirical evidence for the negative impact of property tax limitations on the provision of public education. The analysis distinguishes between property tax limitations that place a ceiling on tax rates, on assessed value, and on property tax revenue or general revenue and expenditures. While existing literature suggests that caps on revenue and expenditures are potentially more binding than the other two types, Yuan's fixed-effects estimates provide no support for more restraining effects of revenue and expenditure limits. The district-level data seem to support significant effects of property tax rate limits and assessment limits. The findings should be interpreted with caution; however, as the results are driven by information about districts in states that switched limit status during the 1990-2000 period. They would be more convincing if longer time series were available for all the districts.

The regression results also provide indirect evidence for the revenue substitution effects of intergovernmental aid. Both federal and state funds are shown to boost local spending on education, while federal aid seems to be more readily translated into

expenditure than state assistance. Although the "income" variable fails to perform as expected, the other two indicators of district wealth (or rather district poverty) hint at the connection between revenue-raising capacity and education expenditures. A higher percentage of students eligible for school lunch programs indicate that the districts are relatively poor and have fewer resources at their disposal. On the other hand, a higher percentage of minority students may suggest either greater diversity of the student body or greater degree of segregation. In either case, minority students are likely to be disadvantaged in public education, receiving lower level or lower quality of services.

While the connection between property tax limitations and property tax revenue growth has been well established in the literature, the effects of limitations on the provision of public education remain understudied. Future research may focus more on the link between education input and education outcome as well as the impact of property tax limits on student performance.

#### **4.3 Effects of TELs on Property Values**

In principle, TELs should affect property values, with the direction of the effect indicative of the underlying "political economy" of TELs. If the effect of TELs is to disrupt an underlying "Tiebout equilibrium" in which voters are efficiently sorted among different communities based on their preferences for public goods and services, which in turn are supplied by politicians and bureaucrats acting in citizens' self-interest, TELs would have the undesirable effect of constraining tax rates below levels truly desired by citizens. If the net fiscal surplus derived from local supply of public goods is capitalized into housing prices, the effect of TELs in such a setting would be to lower property values in constrained communities by making them less attractive to current and potential

residents. If, however, consistent with the Leviathan hypothesis, TELs act to bring taxes and spending more in line with residents' preferences, as opposed to preferences of politicians and bureaucrats, TELs would be predicted to have the opposite effect of raising property values in constrained jurisdictions by making them more attractive to their residents.

A still different set of predictions about TELs and property values are implied by the non-resident taxpayer self-interest model. In that case the value of property other than owner-occupied housing would be predicted to increase since, as Vigdor (2004) notes, lower tax rates would shift some of the rents garnered from properties owned by nonresidents away from the public fisc and back to non-resident owners. In contrast, the impact of restrictions on resident owner-occupiers is theoretically ambiguous. Resident owners would gain from a reduction in tax rates, but would lose from any associated reductions in public services.

In view of the potentially important effects of TELs on the value of taxable property, and hence on the tax base of local jurisdictions, as well as the relevance of directions and patterns of change in property values for assessing the effect of TELs on voter well-being, surprisingly little empirical research exists on the effect of TELs on changes in local property values. Vigdor's 2004 paper is a notable exception in attempting to provide such estimates.

In principle, to estimate the effects of TELs on property values one should observe the time path of property values in communities affected by a TEL with and without the presence of the TEL. In practice, such a counterfactual is impossible to observe. Vigdor constructed a "synthetic" counterfactual by comparing the time path of

property values in Massachusetts communities affected by Proposition 2 <sup>1</sup>/<sub>2</sub> with those in communities in the neighboring state of Connecticut with characteristics similar to those in the Massachusetts communities. Based on this comparison, he found that the net impact of Proposition 2 <sup>1</sup>/<sub>2</sub> on values of owner-occupied housing was positive. Vigdor also found that the estimated increase in property values was greater in communities that initially opposed the ballot measure: a finding consistent with the view that it is non-resident property owners who favor statewide TELs rather than residents (who benefit from the ability to export local property taxes to nonresidents).

# 4.4 Distributional Effects of TELs

In their assessment of the impact of limitations, a number of researchers also address the incidence of TELs both among communities with differing characteristics, and among taxpayers in different income classes. For example, David Merriman (1986) concluded from his analysis that high tax capacity and low density communities in New Jersey experienced the most severe spending cuts as a result of the statewide expenditure limit. In their examination of the fiscal effects of the Illinois' property tax limit, Dye and McGuire (1997) found, in addition to their other results, that the magnitude of the cap's impact varied across different types of jurisdictions, including park districts, fire districts, library districts, municipalities, and school districts. Brown (2000) found that smallersized municipalities were more constrained by the TABOR amendment in Colorado than larger municipalities, even though the measure applied uniformly to all jurisdictions.

A few studies have attempted to estimate the effect of TELs on the distribution of tax burdens and public services among different income groups. The findings of these studies are mixed.

De Tray, and Fernandez (1986) draw on the "new view" of property tax incidence which holds that the burden of the component of local property taxes that corresponds to the national average effective property tax rate falls on owners of capital, while the incidence of the component that deviates from that national average falls on local immobile land, labor, and consumers. Using incidence assumptions that are consistent with the new view, De Tray and Fernandez allocate local property taxes collected in four California and four New Jersey cities to individual taxpayers before and after the passage of TELs in each state. A key assumption of the authors' analysis is that what "matters" for the distribution of relative local tax burdens is mainly the effect of TELs on the deviation of local property taxes from the national average. Using this procedure to allocate and compare local tax burdens before and after the enactment of TELs, the authors find that when the local burden is assumed to be borne entirely by owners of land, the initial effect of adopting TELs in both California and New Jersey was to shift state and local tax burdens from lower to higher income households, (in part by shifting what remains of state and local tax burdens toward relatively more progressive state income taxes) although the effect was smaller in New Jersey (because of a less progressive state income tax). These findings are robust for alternative shifting assumptions (e.g. that local property taxes are also borne by local consumers and labor) in the case of California cities, but not New Jersey cities, where TELs have a regressive impact under some alternative local shifting assumptions.

Subsequent research on the distributional effects of California Proposition 13 by O'Sullivan, Sexton, and Sheffrin (1994) reached conclusions broadly consistent with those of De Tray and Fernandez with regard to vertical equity among residential

homeowners. One important feature of Proposition 13 is that it severely limits annual growth in annual assessments to a maximum of 2 percent per year unless the property is sold, at which time its taxable value is re-assessed based on actual market conditions. While not quite "freezing" the assessed value, the result is to base assessments more on acquisition-value than on actual market value. In a real estate market such as California's the effect of such a system is to benefit less mobile homeowners, who the authors argue are more likely to be low-income and older households.

Of course, a direct corollary, as Sexton, Sheffrin, and O'Sullivan (1999) note, is that while less mobile households benefit from the fact that their property taxes will rise quite slowly, the fact that the taxable value of property can increase quite significantly upon sale creates a substantial horizontal inequity among households in the same income class depending on when a property is purchased. For example, Sheffrin (2005) notes that in Los Angeles county in 1992, 43 percent of homeowners had been in their homes since 1975 and faced an effective property tax rate of 0.2%, compared with an effective rate of 1.0% (five times greater) for newly purchased homes. (Downes and Figlio (1999) caution, however, that the advantage of remaining "locked-in" to one's home under Proposition 13 is a somewhat unique feature of this particular form of TEL.)

In contrast to the studies discussed above, other research finds less progressive effects of TELs. When evaluating the effects of limits on the quality of education, Downes and Figlio (1999) found that among communities subject to TELs, economically disadvantaged communities suffered larger reductions in student performance. Using a Computable General Equilibrium (CGE) model to simulate the economic and fiscal effects of Oregon Measure 5, Waters, et. al. (1997) estimate that higher-income Oregon

households garnered disproportionate benefits from Measure 5 in the form of higher factor incomes resulting from reductions in production costs caused by lower property taxes. The simulated effect of Measure 5 on the overall progressivity of the Oregon tax system was mixed, reducing progressivity at the top of the income distribution, while increasing it at the bottom.

# 5. CONCLUSIONS AND DIRECTIONS FOR FURTHER RESEARCH

The emergence of the tax revolt in the 1970s and the subsequent support for measures intended to limit local taxes and spending have caused much to be written about such measures. From the standpoint of local public finance, what should one make of widespread, if not uniform support for TELs in many communities?

TELs restrict local government autonomy when they are legally and administratively structured to be binding. Since local fiscal autonomy is widely recognized to be critically important to the American Federalist system, and local governments are seen to be the most efficient and effective methods of providing local services, what offsetting advantages, if any, can be identified with enacting such measures?

The answer to this question lies in the recognition that even democratic systems of government are human, and hence, imperfect institutions. When citizens believe, for good or ill, that elected leaders and bureaucrats are apt to use the tax and spending powers of the government to pursue a variety of self-interested objectives, or when one group of taxpayers seeks to insulate itself from paying what it believes to be unjustified

taxes imposed by other groups of taxpayers, incentives are created for voters to support the voluntary imposition of fiscal restraints on elected officials and bureaucrats.

From the standpoint of both positive and normative local public finance, the embrace of such democratically-imposed limitations both by state and local governments raises a number of questions. How have such restrictions operated in practice? How have they affected local public finances? On balance, have such measures had desirable or undesirable effects?

The empirical literature on TELs summarized above provides answers to some of these questions.

- TELs that are legally and administratively structured to be binding are most likely to have measurable effects on local public finances than are TELs whose constraints are more readily circumvented.
- When TELs are binding they have constrained growth in property tax revenue, which has long been the main broad-based source of revenue for local governments. Property tax rate limits that are coupled with assessment limits are particularly binding, resulting in greatest reduction in the growth of per capita property tax revenue.
- Local governments have reacted to such constraints by substituting other local, though more narrow, revenue sources such as fees and charges, and by increased reliance on intergovernmental grants from state government.
- TELs have constrained local spending on public schools, as measured by a variety of indicators such as student-teacher ratios, teacher salaries, and teacher quality.
- TELs are not only associated with reduced spending on education inputs, but also with lower educational outcomes, as measured by test scores.
- Evidence from Proposition 2 <sup>1</sup>/<sub>2</sub> in Massachusetts suggests that TELs may have actually raised property and home values in constrained jurisdictions.
- Enacting TELs creates both "winners" and "losers" among taxpayers. Potential winners include: nonresident taxpayers, which include both nonresident workers and absentee property owners, while residents of

communities with the ability export tax burdens to non-residents are potential losers.

• Evidence on whether TELs favor lower vs. higher income taxpayers is mixed. California Proposition 13 may have benefited lower income homeowners. There is somewhat weaker evidence that the TEL enacted in New Jersey had a similar effect. In contrast, there is also evidence that lower income communities experienced larger reductions in educational outcome from TELs; and Oregon Measure 5 was estimated to have benefited higher income taxpayers, and to a lesser extent, the lowest income taxpayers.

## **5.1 Future Research**

These broad findings provide important insights for gauging the broad effects of TELs on local public finances. Further research, however, is needed to provide more definitive quantitative answers to the question of how TELs affect local public finances.

## 5.1.1 Empirical Evidence on Effects of TELs

Attempts to quantify the effects of TELs on local public finances confront the usual challenges associated with establishing that statistical relationships estimated from non-experimental data are in fact causal relationships. It is difficult to isolate the effects of TELs vis-à-vis other confounding factors that affect local public finances, and to rule out the possibility that some unobserved characteristics of local jurisdictions are responsible for both the adoption of TELs and changes in local fiscal systems and public services. The research summarized above has employed the usual statistical approaches for addressing the problem including the use of "difference-in-difference" designs, fixed effects estimators to account for unobservable factors, and the use of quasi-experimental control groups such as the use of Connecticut as a comparison group for Massachusetts by Vigdor. Much of this literature, however has drawn upon a relatively small number of state- or jurisdiction-specific "natural experiments" with TELs. Further replication of

these findings using more natural experiments drawn from a larger number of states, and types of TELs would be of value, especially if such natural experiments can be shown to deal "decisively" with the problem of inferring causation.

#### 5.1.2 Distributional Effects of TELs

There has also been relatively little conceptual and empirical modeling of how TELs affect the distribution of tax burdens. Such distributional effects are apt to vary considerably with the type of TEL, and the specific offsetting fiscal response to the TEL by local and state governments. Hence, more analysis of different types of TELs, drawing both on microsimulation modeling of tax burdens along the lines of De Tray and Fernandez, and/or general equilibrium modeling along the lines of Waters, *et. al.* is warranted.

In addition to exploring the distributional effects of TELs across income groups, more analysis needs to be done on the differential spatial consequences of TELs across local governments. For example, the overall fiscal conditions of jurisdictions differ as a result of different revenue structures and expenditure needs. According to a recent survey of city fiscal conditions, 46 percent of central cities indicated they were in excellent or good fiscal condition. This is less than rural areas (63 percent), and substantially different than suburban areas (67 percent). In central cities the fiscal situation is probably more difficult because they have limited, or declining, revenue bases, but high expenditure needs (Hoene 2005). In rural areas, there are probably less in the way of expenditure needs relative to their limited ability to generate revenues from own-sources. Suburbs are probably better off because there is a stronger economic base and more limited expenditure needs.

These differences are even more pronounced when the size of the jurisdiction is considered. For example, 63 percent of cities with populations under 50,000 indicate they have excellent or good fiscal conditions while only 48 percent of cities over 100,000 population characterize their fiscal conditions as good or excellent.

A primary factor in determining the effect of TELs on individual local governments is the composition of local revenues. A recent study of the fiscal capacity of local governments within metropolitan areas documented substantial variation of the relative importance of property taxes to municipal own-source revenues. For example, in the Miami metropolitan area Miami City relied on property taxes for 54.8 percent of their own-source revenues, while the relative importance of property taxes in suburban jurisdictions within the metropolitan area ranged from 95.9 percent in Golden Beach Town and 71.2 percent in Key Biscayne City to 14.7 percent in Homestead City and 16.4 percent in Aventura City. Similarly, in San Francisco metropolitan area local property taxes accounted for 34.1 percent of San Francisco's own-source revenues, but ranged from 79.8 and 83.3 percent of own-revenues in San Mateo and Marin counties respectively to 10.6, 17.0 and 19.5 percent of own-revenues in Half Moon Bay City, Burlingame City and San Anselmo Town respectively (Atkins et al 2005). TELs will have substantially different effects across individual jurisdictions based, in part, on the difference in the revenue structure of those jurisdictions.

#### 5.1.3 Benefit-Cost Evaluation of TELs

Lastly, as noted by Downes and Figlio (1999), it would be useful to derive quantitative estimates of the net benefits/costs of TELs. The framework for such an assessment should be the standard public finance paradigm of estimating: (a) the size of

tax reductions due to TELs; and (b) the reduction in the economic costs (excess burden) of taxation attributable to TEL-induced reductions in tax liabilities: and then (c) comparing these magnitudes to the economic value of public services foregone due to lower tax revenues.

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# TABLE A1: ASSESSMENT LIMITATIONS

State	Limit	Citation
Alabama	None	
Alaska	None	
Arizona	Assessed value cannot increase by more than the lesser of 10% or 25% of the difference between the last year's assessed value and the current year fair market value	AZ Statutes 42-13301
Arkansas	Homestead value limited to 5%; all other real prop capped at 10%	Arkansas Constitution Amendment 79
California	Assessment increase cannot exceed 2% per year	Proposition 13
Colorado	Constitution requires residential property to comprise no more than 45 percent of total assessed value	Colorado Const. Art. IX
Connecticut	None	
Delaware	None	
Florida	Residential assessments limited to 3% or CPI	FL Const. Article VII, Sec. 4
Georgia	Conservation use property cannot exceed 3% per year	O.C.G.A. 48-5-7.4 & 48-5-269

Hawaii	None	
Idaho	None	
Illinois	7% cap on annual equalized assessment valuation.	35 ILCS 200/15-170 Expires in 2006
Indiana	None	
Iowa	Increase of total statewide assessments cannot exceed 4% annually	Iowa Code sec. 44121 (4)-(5)
Kansas	None	
Kentucky	None	
Louisiana	None	
Maine	None	
Maryland	State cap at 10% annual; county and municipal governments can set limits from 0-10 %; no limits for school districts	MD Statutes Title 9. Sec. 9.105
Massachusetts	None	
Michigan	Total assessed tax base cannot exceed the lesser of 5 % or the rate of inflation without a rate rollback	Mich constitution Art. IX, sec. 3
Minnesota	The value is limited to the greater of: a) 15% increase over last year's limited value or, b) 25% of the difference between this year's estimated value and last year's limited	Minn. Statutes Chapter 273

	value. This only applies to agricultural, residential, timberland, or noncommercial seasonal recreational residential (cabins) property	
Mississippi	None	
Missouri	None	
Montana	None	
Nebraska	None	
Nevada	None	
New Hampshire	None	
New Jersey	None	
New Mexico	3% cap on residential property unless title changes	NM Statutes 7:36: Sec. 7-36-21.2
New York	Nassau County - prop cannot incr. More than 5% per year	Authorized by NYSA chapter 50-A
North Carolina	None	article 18 sec. 1805
North Dakota	None	
Ohio	None	

Oklahoma	Assessment cannot increase more than 5% per year Unless title to property is sold	Const. Article 10, Sect. 8B
Oregon	Taxable assessed value cannot increase more than 3% each year	Oregon Constitution Article XI
Pennsylvania	None	
Rhode Island	None	
South Carolina	None	
South Dakota	None	
Tennessee	6% cap on assessments of Greenbelt properties	Tenn. Statutes 67-5-1008
Texas	Residential assessed value limited to 10% * number of years since last reappraisal	Title 1, D 23.23 Texas Tax Code
Utah	None	
Vermont	None	
Virginia	1% on any reassessment, can be overridden by simple legislative vote after public hearing	VAC 58.1-3321
Washington	Total assessments for the district cannot increase more than 25% than previous total assessments (special assessment districts only)	Revised Code of Washington 35.85.030
West Virginia	None	
Wisconsin	None	
Wyoming	None	

# TABLE A2: PROPERTY TAX RATE LIMITS

State	Limit	Override	Citation
Alabama	Residential tax rates cannot exceed 1% FMV	can increase rate by majority vote in a special election	State Const. Amend 373 of Section 217
Alaska	Municipalities: 3% of assessed value Second Class Cities: 2% of assessed value	none	AS 29.45.090 AS 29.45.590
Arizona	Cannot exceed 1% of full cash value	override by majority vote of electorate	AZ const. Art 9, Section 18 (1)
Arkansas	All governments 5 mills	none	Ark Const. Art. 12 sec. 4 (municipalities); Ark Code 26-25- 101 (counties)
California	Cannot exceed 1%	none	Calif Const. Proposition 13
Colorado	All govs limited to rate of previous year	override by majority vote of Electorate	Col Const Art X, sec 20(7)
Connecticut	None		
Delaware	Kent County (only) limited to 50 cents per \$100 of assessed value	none	Del Sta Title 9, Ch 80
Florida	All governments 10 mills	override by majority vote of electorate	Fl Const. Art. VII. Sec.9
Georgia	Rate for school districts: 20 mills No Limits for independent cities/counties	override by majority vote of electorate	O.C.G.A. 48-5-8 GA Const. Art VIII, sec 6
Hawaii	None		
Idaho	see attached appendix		

Illinois	Local option	referendum	35 ILCS 100/18-125
Indiana	\$0.6667/\$100 municipal \$0.4167/\$100 all other local gov.	none	Indiana statutes Sec. 6-1.1-18-3
Iowa	Counties 3.5 mills Municipalities 8.1 mills	majority vote of electorate in special election	Iowa Code sec. 331.423
Kansas	None		
Kentucky	<ul><li>\$.75-\$1.50/\$100 municipalities (sliding scale)</li><li>\$.50/\$100 county</li><li>41.50/100 School District</li></ul>	voter Approval	KY Const. Sec. 157
Louisiana	4 mills 7 mills Orleans Parish 5 mills Jackson	majority vote of electorate	LA Const. Part 3, Sec. 26
Maine	None		
Maryland	No state limit, but Prince George's county limit at	96 cents per \$100	
Massachusetts	None		
Michigan	15 mils for all governments ca except 18 mils for counties	n be increased to 50 mils with voter approval	Mich Const. Article 9, Sec. 6
Minnesota	Local option	referendum	MN SA 275.011
Mississippi	None		
Missouri	Municipalities - \$1 on the \$11 assessed valuation Counties - 35cents on \$100 assessed valuation	2/3 vote of electorate majority of electorate for schools	State Const. Article 10, Sect. 11b

	School districted formed of cities &towns - \$2.75 on All other school districts - 65cents on \$100	\$100	
Montana	The maximum number of mills that a governmental may impose is established by calculating the number required to generate the amount of property tax actu assessed in the governmental unit in the prior year b the current year taxable value, less the current year's newly taxable property, plus one-half of the average inflation for the prior 3 years.	entity majority of electorate of mills ally pased on value of rate of	MT Code 15-10-420
Nebraska	Rate limit for count govt is 50cents per \$100 Schools - \$1.05 per \$100 Counties - 50cents per \$100 Cities- 45cents per \$100 Natural resource districts - 4.5cent per \$100 Community Colleges - 8cents per \$100	School boards can vote in an additional 1% over limit. Requires a supermajority	Neb statutes 77.3442
Nevada	Rate capped at 5 cents per \$100 assessed value	can vote on additional levy. Proposal placed on general or special election ballot.	State Const. Article10 Sect. 2 NRS 354.5982
New Hampshire	None		
New Jersey	None		
New Mexico	\$11.85/\$1,000 county \$.50/\$1,000 school district \$7.65/\$1,000	majority of electorate	NMSA 7-37-7
New York	The New York State Constitution sets a limit on the amount raised by the property tax for county purposes. This tax limit is 1.5% of the full market value of taxable real estate, averaged over the last five years. For municipalities the limit is 2%. For N the limit is 2.5%	none YC	NY Const. Article 8 sec. 10
North Carolina	Counties and municipalities may levy taxes for	majority vote in referendum	North Carolina Statutes - 153A-149

several specified purposes up to a combined rate of \$1.50 per \$100 assessed value

North Dakota	23 mills (county limit) Various other special levy limits	limits can be overridden by 2/3 vote of gov body plus	NDSA 57-15-06 NDSA 57-15-06.7
	38 mills (city limit) 18 mills (township limit)	majority vote of electorate NSDA 57-17-01	NSDA 57-15-08 NSDA 57-15-20
Ohio	Rate limit at 1% of taxable value	majority vote of electorate	Ohio Revised Code 5705.02 Ohio Revised Code 5705.19 Ohio Constitution art 12.02
Oklahoma	Mill levy limits for: common schools 5-15 Vo-tech schools 5 county govt 2.5-10 municipal gov 5 special districts 3-4 assessment districts 3-10	majority vote of electorate (school districts only)	Oklahoma Const. Article10, sec. 9
Oregon	School prop tax rates capped at 0.5% of FMV Non-school tax rates capped at 1% of FMV	increases must be voted on by double majority	Oregon Constitution Article XI
Pennsylvania	Tax rates cannot exceed 12 mills of market value	none	PA.S. 53.6917
Rhode Island	None		
South Carolina	None		
South Dakota	General county limit \$12/thousand Snow removal fund \$1.20/thousand Highway reserve \$1.20/thousand Courthouse .90/thousand Ag building .30/thousand Fire fighting .60/thousand	<sup>3</sup> ⁄4 majority of electorate (school district majority)	SDCL 10-12-21 et seq

	Railroad authority \$2.40/thousand Airport authority \$2.40/thousand Ambulance district .60/thousand Water project district \$1/thousand Sanitary district .27/thousand Hospital fund .60/thousand		
Tennessee	None		
Texas	County/Municipality 8 mills School districts 13.3 mills	majority vote of electorate	TX Const. Art VII, Art VIII
Utah	County .0032 Library .001 Health .0004 Tort liability .0001 State A&C .0003	under limited circumstances	Utah Code 59-2-908
	School capital outlay .0002 School capital outlay .0024		Utah Code 53A-17a-135
	City/town .007 Water/light/power .0008 City library .001 City Tort liability .0001		Utah Code 10-6-133
	Special cemetery .0004 Special Mosquito .0004 Special fire .0008 County water .0008 Flood control .0008 Special County service .0014		Utah Code 17A-2-222
Vermont	None		
Virginia	None		

Washington	Tax rates limited to 1%	3/5 majority of electorate	WA Const. Art VII, Sect 2.
West Virginia	Class one property .50/100 Class two property \$1/100 Class three property \$1.50/100 Class four property \$2.00/100	majority vote of electorate	WVC 11-8-6
Wisconsin	Counties: 1 mill or rate in effect in 1992 whichever is greater	majority vote of electorate	WI statutes sec 59.685.
Wyoming	Counties: 1.2% of assessed value Cities and towns: 0.8% of assessed value School districts: 2.5% of assessed value	none	Wyoming Statutes Sec. 39-13-104

Idaho has numerous rate limitations for its county governments' functions.

Function limit	cite
Airport.0004	21-404
Ambulance.0002	31-3901
Armory Construction.0002	46-722
Building Funds.0006	31-1008
Charities & Indigent.0010	31-863
Medical Bldg. & Equip.0006	31-3503
Current Exp. Fund.0026	63-805
County Justice Fund.0020	63-805
Dist. Court Fund.0004	31-867
Fair Exhibits.0002	31-823
Fair Buildings.0001	31-822
Fair Operation.0001	22-206
Fish Hatchery .00005	36-1702
Health Prevention .0004	31-862
Herd .0002	25-2401
Historical Societies .00012	31-864
Hospital-operation .0006	31-3613
Revaluation Program .0004	63-314
Sinking Fund .0002	39-1334
Jr. College Tuition .0006	33-2110a
Museums .0003	31-4706
Noxious Weeds .0006	22-2406
Parks & Recreation .0001	63-805
Pest Fund .0002	25-2602
Road & Bridge .002	40-801 (1)(a)
Special Tax .00084	40-801 (1) (b)
Jt. County Bridges.000024	40-807
Seeding Burned Areas.0002	38-509
Solid Waste Disposal.0004	31-4404
Veteran's Memorial .00001	65-103

Veteran's Memorial Const .00005	65-104
Warrant Redemption .002	63-806
LID Guarantee .0002	50-1762
Tort Insurance Premiums 6-927 No limit	
Claims or Judgments 6-928 No limit	

# TABLE A3: REVENUE/EXPENDITURE LIMITS

State	Limit	Override	Citation
Alabama	None		
Alaska	No municipality may collect more than \$1,500 per resident	none	AS 29.49.090
Arizona	Property taxes levied by any local government cannot increase more than 2%	popular vote	AZ Const. Article9 sect.19
Arkansas	Property tax revenue cannot increase more than than 10% from previous year	none	Arkansas Const. Art.16 section 14
California	Annual appropriations growth linked to population growth and per capita personal income growth.	majority vote of electorate	Cal. Const. Art 13
Colorado	Increases cannot exceed the lesser of local growth/inflation or 5.5% or the previous year's revenue (suspended through 2010)	majority vote of electorate	Col. Const. Art. IX
Connecticut	None		
Delaware	County property tax revenue cannot increase more than 15% annually	none	Del. St. Title 9, ch. 80
Florida	None		
Georgia	None		
Hawaii	None		

Idaho	Revenue growth factor capped at 3%	additional amts. to be approved by $60\%$ Of voters in cities. In other taxing districts, must be approved by $66\ 2/3\%$	Idaho Statutes Title 63 chapter 8
Illinois	Tax cap limits levy increases of taxing bodies to lower of 5% or rate of inflation	majority vote of governing body	35 ILCS 200/18-55
Indiana	Property tax revenue increases are limited to not more than the 6-year annual growth of non-farm personal income	local gov can appeal through state admin agency	IC 6-1.1-18.5-3
Iowa	School district expenditure cannot exceed annual allowable growth	none	IA code 257.7
Kansas	Property tax revenue is limited to amounts from previous yes	ar majority vote of governing body after notice and publication	SB45, sec 21.
Kentucky	4% annual increase limit for school districts	vote by school board after public notice	KRS 160.470
Louisiana	Property tax revenue cannot exceed previous year	2/3 vote of governing body	LA Const. Art 7, sec 23
Maine	Municipal property tax levy increases limited to formula based on inflation, assessment growth and income	can be overridden by local government majority vote, but 10 percent of electorate can call referendum	MRSA 5721 (LD 1)
Maryland	No state limit, but Anne Arundel- rev. limit of 4.5% or CPI growth; Montgomery County rev limit of CPI; Talbot & Wicomico Counties		

rev increase limit of 2% or CPI

Massachusetts	Municipal property tax levies cannot increase by more than 2.5 percent annually	majority vote of electorate	Mass.Const. Chapter 59: Section 21C (Prop 2 <sup>1</sup> / <sub>2</sub> )
Michigan	No net tax increases without voter approval	majority vote of electorate	Mich Const Article IX, Sec. 31 (Headlee Amendment)
Minnesota	Local option/property tax revenue cannot exceed previous year	referendum	MNSA sec. 275.70
Mississippi	10% cap on increase in all tax collections	majority vote of electorate	MS Code Section 27-39-320
Missouri	No net revenue increases	majority of voters within jurisdiction	Const. Article 10 sect. 22
Montana	Nonschool property tax revenue cannot increase more than 1/2 avg rate of inflation for prior 3 years	majority vote of electorate	Montana Codes Annotated 15-10-420.
Nebraska	School district expenditure increase limits vary by sign of district from 2.5-5.5% annually	ze School boards can vote in an addit 1%. Requires a <sup>3</sup> / <sub>4</sub> majority vote	ional LB 989
Nevada	Property taxes, except for school districts, cannot be	raised majority of popular vote	NRS 354.59811

# more than 6% annually

# NRS 354.5982

New Hampshire	None		
New Jersey	County property tax revenue cannot increase more than 2.5 percent over previous year plus cost of living adjustment	referendum	NJSA 40A sec4.45.4
New Mexico	Property tax revenue cannot increase more than 5% annually	none	NM SA sec 7-37-7.1
New York	None		
North Carolina	None		
North Dakota	School district property tax revenue limited to previous year plus 18%.	majority of electorate	NDCC sec. 57-14-14.
Ohio	Statute freezes amount of revenue from real property until the property is reappraised		ORC 319.301
Oklahoma	None		
Oregon	None		
Pennsylvania	New law limits property tax revenue increases to inflation rate	by vote of electorate	HB 39 signed June 27,2006
Rhode Island	New law lowers the cap on local property tax increases from the current 5.5 percent to 4 percent in fiscal 2013 and reduces the amount school budgets can rise over the previous year from 5.25 percent in fiscal 2008 to 4 percent in fiscal 2012. The percentage limit by which school budgets	4/5 majority of local legislature	S 3050, signed July 13, 2006

	can increase will drop by 0.25 percentage point per year until reaching 4 percent.		
South Carolina	None		
South Dakota	Nonschool property tax revenue may not increase more than the lesser of 3 percent or rate of inflation	maj of elect after 2/3 governing body vote	SD statutes: Title 10 Ch. 13. Sect. 35
Tennessee	None		
Texas	Property tax revenue limited to previous year	vote of governing body after notice and hearing	TX Const. Art. 8 section 2
Utah	Property tax revenue limited to previous year	vote of governing body after notice and hearing	UT Code sec 59-2.
Vermont	None		
Virginia	County and municipality property tax revenue capped at 101% of previous year's revenue	by local gov vote after holding a public hearing	Code of Virginia sect. 58.1-3321
Washington	Property tax revenue limited by formula based on population and inflation	majority vote of electorate	RCW 84.55
West Virginia	Property tax revenue limited to previous year	by local gov vote after notice and hearing	WVC 11-8-6
Wisconsin	Levy increase limited to either 2% or percentage change in municipality's equalized value due to net new construction, whichever is greater	referendum	Sec. 66.0602 of Wis. Statutes (Act 25, 2005-2007)
Wyoming	None		