Restraining The Leviathan:

Property Tax Limitation in Massachusetts

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August 1997

Abstract

Proposition 2½, a ballot initiative approved by Massachusetts voters in 1980, sharply reduced local property taxes and restricted their future growth. We examine the effects of Proposition 2½ on municipal finances and assess voter satisfaction with these effects. We find that Proposition 2½ had a smaller impact on local revenues and spending than expected; amendments to the law and a strong economy combined to boost both property tax revenue and state aid above forecasted amounts. Proposition 2½ did reduce local revenues substantially during the recession of the early 1990s. There were two reasons for voter discontent with the pre-Proposition 2½ financing system: agency losses from inability to monitor government were perceived to be high, and individuals viewed government as inefficient because their own tax burden was high. Through override votes, voters approved substantial amounts of taxes above the limits imposed by the Proposition.

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In 1980, Massachusetts voters approved Proposition 2½, a ballot initiative that sharply reduced local property taxes and restricted their future growth. This Proposition and its older sibling, Proposition 13 in California, highlighted the era of tax revolt. Proposition 2½ was supported overwhelmingly by voters, passing 59 percent to 41 percent, and reduced property taxes by over $500 million within three years. With some modifications, the Proposition remains in force today.

Shortly after Proposition 2½ was passed, a number of analyses explored voters' reasons for approval (for example, Ladd and Wilson, 1982, 1985) and examined its likely effects (for example, Bradbury and Ladd, 1982a, 1982b). Voters believed that the Proposition would reduce taxes without cutting services. By contrast, many economists and elected officials focused on the potential for severe service cutbacks.[1] There has been little research on the Proposition's consequences since the mid-1980s, which is unfortunate because there is much more experience to draw upon now than a decade ago.[2] We can now measure the actual financial effects of the law instead of just predicting what might happen. We can also assess whether voters approve of these effects, not merely report their speculative preferences on what was likely to result. This paper addresses these two issues.

We find that Proposition 2½ had a significant impact on local finances in Massachusetts,

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[1] In the days before the Proposition passed, there were dire predictions of greatly reduced public services. For example, Cambridge city manager James Sullivan asserted that "the basic costs of required payments [pensions, debt service, insurance costs, and state-mandated assessments for various regional activities] exceed the amount of taxes that would be available by over $1.5 million, without the source of revenue for one municipal employee" (*Boston Globe*, 10/30/80, p. 20).

[2] Notable recent papers include Bradbury (1991), who examines voters' response to the Proposition 2½ constraints, and Lang and Jian (1996) and Bradbury, Case and Mayer (1997), who study the effect of the Proposition on property values.

but a smaller impact than either its supporters had hoped for or its detractors had feared. Specifically, the Proposition reduced local revenue when it first took effect and again during the economic downturn of the early 1990s, but had little effect during the boom years of the late 1980s. When the Massachusetts economy was strong, much of the intended reduction in local revenue was offset by new construction and increased state aid to municipalities, but when the economy slumped, new construction slowed and state aid was curtailed. Spending on education and public works proved most sensitive to the fiscal constraints imposed by the Proposition.

We examine voter satisfaction with Proposition 2½ as gauged by voter-approved exceptions to the limits imposed by the Proposition. Communities are allowed to increase property tax revenues above their regular limits by direct majority vote, providing an unusual opportunity to learn about voters' preferences. By fiscal year 1995, voters in three-quarters of Massachusetts towns and cities had approved such ballot resolutions, even though the unexcepted limits rose more quickly than initially expected. Almost all of the communities that did not pass such resolutions collected taxes between 99 and 100 percent of the allotted amount, indicating that local officials raised taxes to the limit. Together, these observations suggest that voters did not want local spending to be cut very sharply, but were legitimately concerned about a disparity in objectives between elected officials and their constituents.

Why did voters feel so strongly that local government was too big? Were they pleased with the effects of the Proposition? We posit four, possibly complementary, explanations of voter behavior: voters felt government was wasteful because government cannot be closely monitored; voters initially believed there was a lot of waste but came to regret the severity of the constraints they imposed; voters thought their own taxes were too high, independent of the value

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of public spending; and voters cared little for the recipients of public spending. Using data on the amount of overrides and exclusions approved in each municipality, we find support for the first three of these theories.

Before turning to analysis of Proposition 2½, we might remark on the time-honored tussle for control between citizens and their sovereign. Thomas Hobbes, in The Leviathan, has government emerge when a group of men cede authority to a single body. Thus, he sees the government as "the representative or authoritative person [agent] of the 'body politic'" (in Schneider, 1958). Indeed, Hobbes' frontispiece to his Leviathan shows a sovereign who is physically composed of the multitudes of people who have ceded power to him. Hobbes' focus was on power; he worried that the sovereign might have too little. By contrast, the supporters of Proposition 2½ focused on money; their concern was that local sovereigns took too much. We might think of the Proposition as an effort by the tiny people in Hobbes' depiction to limit the actions the Leviathan can take, purportedly on their behalf. For both power and money, the concern is to design a government that meets the goals of the citizenry, as challenging as that task may be. As Edmund Burke (1774) noted, "To tax and to please, no more than to love and be wise, is not given to men." We examine how close municipalities in Massachusetts came to this goal.

The first section of this paper describes Proposition 2½. The second section reviews changes in municipal finances in Massachusetts since the passage of the Proposition. The third and fourth sections examine why voters believed that the Proposition was needed and to what extent it accomplished what they wanted. The last section summarizes.

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1.   Proposition 2½

Since at least the 1960s, Massachusetts residents have expressed concern about the level of their property taxes compared with taxes paid in other states. Table 1 shows Census of Governments data on state and local government revenue in Massachusetts and the rest of the United States between 1967 and 1992. In 1967, per capita property taxes in Massachusetts were nearly 50 percent above the national average, and they grew 2 percentage points per year faster than the national average over the ten years that followed. By 1977, Massachusetts property taxes were the highest in the nation, nearly twice the national average.

This high level of property taxation reflected differences both in the overall fiscal burden in Massachusetts and in the composition of state and local revenue. In 1977, total local revenue per capita and total state and local revenue per capita were about 10 to 20 percent higher in Massachusetts than in the nation on average.[3] Moreover, municipalities in Massachusetts raised two-thirds of their revenue through local sources, compared with the 40 percent average for municipalities elsewhere. The high level of property taxation caught public attention, and in 1980 voters approved Proposition 2½ by nearly a 3-to-2 margin.

Proposition 2½ restricted property taxes in several ways.[4] First, the Proposition established a *levy limit* for each community equal (in fiscal year 1982) to the lesser of current

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[3] Total local revenue is the sum of property taxes, intergovernmental transfers, other taxes, and charges and other miscellaneous revenue.

[4] The Proposition also reduced the motor vehicle excise tax, which has a common rate statewide although the revenue accrues to local governments. We do not examine the effect of this reduction or of other non-revenue provisions of the Proposition.

property taxes and 2.5 percent of total property values. Communities were prohibited from imposing property taxes in excess of the levy limit, and communities that were initially taxing above the limit were forced to reduce their tax burden by 15 percent annually until they reached the limit. Since county governments and special districts play a small role in local fiscal matters in Massachusetts compared with some other states, and most school districts are coterminous with the cities and towns, these constraints on the fiscal behavior of municipalities could substantially affect local taxes and services.

The second restriction imposed by the Proposition was to cap the growth of the levy limit at 2.5 percent annually in nominal terms. The third restriction was to establish a *levy ceiling* for each community equal to 2.5 percent of property values. Aggregate property tax collections are not allowed to exceed the levy ceiling even if that implies less than 2.5 percent annual growth in tax revenue. Because property values in Massachusetts grew quite rapidly after 1982, the levy ceilings have not been binding, so we do not focus on this constraint.

Proposition 2½ applies to all local governments in Massachusetts, not just governments in the communities that voted for the Proposition. This structure is not unique--Proposition 13 in California works the same way--but it is puzzling. Most externality arguments imply that citizens of one community should want other communities to spend more on public goods, not less. For example, people often enjoy the roads and parks provided by nearby communities without paying the tab; greater provision of these "free" services should be welcomed. Moreover, because state aid generally varies inversely with local tax revenue, as it did in Massachusetts, higher taxes and spending in other communities decreases their demand for state aid. Business climate concerns might promote a desire to limit the taxes of fellow communities: if a state is

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generally perceived as a bad place to do business, growth might be low throughout the state. This effect was prominently cited by supporters of Proposition 2½ (such as high-tech firms in the state), but we know of no evidence that it is significant. Possibly the universal applicability of the Proposition was simply a way for voters to "send a message" to local governments that individualized measures would not have conveyed as forcefully.

2.   Effect of Proposition 2½ on Municipal Finances

We now turn to the effects of Proposition 2½ on local revenue and spending. We calculate the initial impact of Proposition 2½ using data from the Municipal Data Bank of the Massachusetts Department of Revenue's Division of Local Services.[5] For each community, we determine if its tax rate in fiscal year 1982--when the Proposition was first binding--was above or below 2.5 percent. If the latter, the municipality was already in compliance with the law and the initial impact is zero. If the tax rate was above 2.5 percent, we reduce tax revenue by the lesser of 15 percent and the amount required to reach a 2.5 percent tax rate. If this reduction leaves the tax rate above 2.5 percent, we repeat the process in subsequent years until the 2.5 percent tax limit is reached, which occurred in the last communities in 1985. We define initial impact as the difference between the taxes a community would have been able to collect had revenue grown at 2.5 percent each year, and the taxes a community could actually collect when

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[5] Cutler, Elmendorf, and Zeckhauser (1997) describe the construction of this variable in more detail and give examples for particular cities.

it first came into compliance with the law.[6]

Table 2 summarizes the initial impact of Proposition 2½ on property taxes in Massachusetts. Almost half of all communities, containing nearly three-quarters of the state's population, faced immediate tax reductions. These reductions amounted to 16 percent of 1981 taxes for the average affected community. Because larger communities faced bigger reductions on average, the aggregate decline in property tax revenue for local governments across Massachusetts was a substantial 18 percent.

The first column of Table 3 shows the growth of property tax revenue between 1976 and 1995. Figure 1 and the second column of Table 3 show the growth of total local revenue attributable to changes in property tax revenue. In all cases, we present nominal growth rates, since the Proposition was written in nominal terms.

We divide the 20-year interval into four sub-periods. During the first period--from 1975 to 1981, before the Proposition took effect--property tax revenue grew about 6 percent per year on average, and property tax revenue raised total local revenue by 4 percent per year. Since the inflation rate averaged about 6 percent, property taxes were little changed, on balance, in real terms. But growth in property taxes was uneven, with weak growth in 1980 followed by strong growth in 1981.

The second period covers the initial implementation years for Proposition 2½, from 1981 to 1984. The Proposition had a dramatic impact, as property tax revenue fell by 9 percent in

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[6] Some municipalities would have increased revenue more than 2.5 percent per year in the absence of the Proposition, but the extra potential increase is likely uncorrelated with the measured impact. Some municipalities reduced taxes faster than the Proposition required, but we ignore any extra voluntary reductions because we want the measure of impact to be exogenous to communities' chosen behavior after the passage of the Proposition.

1982 and 3 percent in 1983, before rising by a mere 1 percent in 1984. The substantial net decline in property taxes reduced total local revenue by 2.2 percent annually during this period. Since inflation averaged about 6 percent per year, the decline in real revenue was substantially larger.

The third period is the economic expansion from 1984 to 1990, the so-called "Massachusetts Miracle." Property tax revenue grew nearly 7 percent annually over this period, well above the rate of inflation, and added 3.5 percent annually to total local revenue. In the final period, which begins with the onset of the recession in 1990 and ends after recovery in 1995, the last year for which we have data, growth in property tax revenue slowed to 5 percent per year. This growth rate exceeded the contemporaneous inflation rate but by a smaller margin than in the prior period.

The next largest source of local revenue in Massachusetts after property taxes is state aid to local governments. Figure 1 and Table 3 show that state aid raised local revenue at a moderate pace during most of the past 20 years and most rapidly in the early 1980s when property tax revenue was declining. As a result, the growth rate of total local revenue varied less over time than the growth rate of property tax revenue.

Explaining Rapid Local Revenue Growth

Proposition 2½ supposedly capped the annual growth of property tax revenue at 2.5 percent, but as Table 3 shows, property taxes grew more rapidly than 2.5 percent in every year since 1985. Local revenues also grew more rapidly. How could this happen? Two factors allowed local revenue in Massachusetts to grow much faster than many people had expected

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when Proposition 2½ was passed: legislative amendments to the Proposition, and the state's favorable economic performance.

Legislative Amendments to Proposition 2½ Proposition 2½ was a law, not a constitutional amendment, so it could be amended or repealed by a majority of the legislature. While the Proposition was too popular to repeal, the legislature did approve several amendments in December 1980 (a month after the Proposition was passed) that quietly permitted much higher revenue growth than the initial measure allowed.

The most important amendment set the annual increase in the levy limit at the original 2.5 percent *plus* an allowance for property taxes on new construction. New construction, it was argued, increases the demand for public services, and the additional revenue needed to pay for these services should not be counted against the limit. Moreover, since the new buildings' owners would pay taxes, the increased spending could be accommodated without raising the taxes of others. As the Massachusetts economy boomed in the mid-1980s, new growth became a substantial revenue source. Figure 1 and Table 3 show that new growth increased total local revenue by 1.8 percent per year in the 1984-1990 period (not including future increases in revenue from the fact that new growth adds to the property tax base in future years and thus increases revenues by 2.5 percent annually). As the Massachusetts economy slowed in the late 1980s, revenue from new construction slowed as well, and despite the strong economic recovery in the state by the mid-1990s, new growth contributed much less to local revenue from 1990 to 1995 than in the preceding years.

A second important amendment allowed voters to increase their community's property tax revenue above the constrained amount. Voters can raise taxes above the basic levy limit if a

majority of them approve such a move in a direct election.[7] The levy limit can be increased in

two ways: "overrides" are permanent increases that can be enacted for any purpose and that, like

the basic limit, increase by 2.5 percent per year. "Exclusions" are temporary increases of a

constant size that can be used only for debt or capital expenditures.[8] As Table 3 shows, new

overrides and exclusions raised growth in local revenue by about 0.1 percentage points per year

in the late 1980s and 0.3 percentage points per year in the 1990s (again not including additional

growth in future years from the fact that overrides become a permanent part of the tax base and

thus grow at 2.5 percent per year).

    Economic Conditions Favorable economic conditions were the second factor fostering

rapid local revenue growth. The strong Massachusetts economy generated a boom in tax revenue

from new construction, as noted above. In addition, inflation fell sharply, so the nominal limits

in the Proposition became much less binding in real terms than they otherwise would have been.

Finally, the economic boom left the state government flush with revenue, and the state responded

by substantially increasing its aid to municipalities.[9] Figure 1 and Table 3 show that growth in

state aid added almost 3 percentage points to the annual growth of total local revenue during the

1980s, many times the effect of overrides and exclusions. When more difficult economic times

reduced the flow of revenue to the state government in the late 1980s, and the state elected a

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[7] The original Proposition required a two-thirds favorable vote with the participation of at least 30 percent of a municipality's eligible voters. The amendment also allowed voting to occur at any time, while the original Proposition restricted these votes to once every two years.

[8] Overrides cannot raise a community's levy limit above its levy ceiling. As mentioned earlier, the levy ceiling is not very important because Massachusetts property values grew rapidly.

[9] When Proposition 2½ was passed, the state budget in Massachusetts was approximately in balance, in contrast with the surplus in the California state budget before Proposition 13 was approved.

fiscally conservative governor (Republican William Weld), the growth of state aid fell substantially in the early 1990s and has remained low. One significant consequence of Proposition 2½ is that state aid has become a very controversial item in the Massachusetts state budget.

In sum, economic and political changes worked together to enable municipalities to increase revenues more than many observers expected after the passage of Proposition 2½. As the Proposition was being implemented in the 1982-1984 period, state aid increased. The boom in new growth followed, bringing substantial additional tax revenue to municipalities. Indeed, Figure 2 shows that by the late 1980s, "excess capacity" of local governments--the amount by which property taxes were below the Proposition 2½ limits--was about 3 percent of possible tax revenue. But the situation changed dramatically after that, when economic growth in Massachusetts slowed. State aid ultimately declined in nominal terms, and increases due to new growth fell as well. Local governments first responded by "drawing down their excess capacity"--that is, raising taxes to the Proposition 2½ limits. But this approach to raising revenue was quickly exhausted; by 1991, excess capacity averaged only about one-half of one percent of possible revenue (see Figure 2). Local governments then turned to voter overrides. Yet, this source of financing was short-lived as well; the dollar value of new overrides peaked in 1991. It was not until 1992, when the Massachusetts economy picked up, that local revenues rebounded.

Cross-Community Evidence on the Effect of Proposition 2½

We examine the effects of Proposition 2½ on local revenue and spending. To isolate these effects from other forces affecting local budgets, we exploit the differential initial impact

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of the Proposition across communities.

Revenue Effects For each year t after 1981, we estimate equations of the form:

$$R_i^t - R_i^{1981} = \alpha + \beta Impact_i + \sum_j \delta_j C_j + \sum_k \delta_k P_k + \epsilon_i \ ,$$

where the dependent variable is the change in revenue per capita in community i between 1981

and year t; $Impact_i$ is our measure of initial impact per capita; the C_j's are dummy variables for

each county; and the P_k's are dummy variables for community population.[10] We use the revenue

change from 1981 because it is the year before the Proposition took effect. We control for

population because it is correlated with impact, and for county because the economy may grow

at different rates in different parts of the state. Finally, we restrict our sample to the 316 cities

and towns with more than 1,000 people in 1980, because the smallest towns have more variable

revenue streams than larger towns and a much higher incidence of missing data.[11]

The β coefficient for each year has a natural interpretation as the share of the initial

impact that shows up in that year's revenue. For example, an estimated coefficient of -1 in 1995

would imply that a community whose initial impact from the Proposition was $100 per capita

larger than another community's would collect $100 less revenue in 1995. An estimated

coefficient of 0 in 1995 would imply that the initial impact of the Proposition had dissipated

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[10] For the county dummies, we combine several counties that have only a few municipalities: the counties encompassing Cape Cod and Nantucket, and the counties encompassing Boston and its suburbs. For the population dummies, we assign each community to one of four size groups: 1,000-2,500 people, 2,500-10,000 people, 10,000-50,000 people, and more than 50,000 people.

[11] We also omit a few towns that did not report information for every revenue category in all years. This exclusion does not substantively affect the coefficients for the other revenue categories.

entirely by 1995.

Table 4 reports the estimated β coefficients by year. The first three columns show the impact of the Proposition on property taxes, state aid, and "other" local revenue (the sum of fees, charges, and other miscellaneous revenue). The last column shows the impact on total local revenue.

Proposition 2½ significantly reduced property taxes, as would be expected. For each dollar that communities were forced to cut annual property taxes in order to comply with the Proposition, taxes remained about one dollar lower through the 1980s and fell to $1.30 lower in the 1990s. As the sponsors of the Proposition intended, its effect on property taxes was persistent and actually increased somewhat over time. The second column shows that Proposition 2½ indirectly had a dramatic effect on state aid received by a community. For each dollar that taxes were cut in a community in order to comply with the Proposition, state aid rose about 50 cents by 1985 and almost a full dollar by 1989.[12] This effect diminished significantly in the economic slowdown of the early 1990s, but rebounded to more than $1.20 by 1995. The third column of the table shows that other local revenue was little affected by the Proposition.

The last column of Table 4, displayed graphically in Figure 3, shows that Proposition 2½ significantly reduced local revenue in the initially affected communities when it was first imposed and again when the economy slumped in the early 1990s. But the Proposition had little effect on local revenue in those communities in the late 1980s and the mid-1990s. The crucial

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[12] State aid was not explicitly related to the impact of Proposition 2½. Presumably, this compensation effect arose because state aid did relate to need, and poorer communities initially had higher tax rates. There is no evidence that highly impacted communities, which voted strongly for Proposition 2½, had any expectation of receiving increased state aid.

difference between these periods is the state of the economy: when the economy was booming, the state fully offset the impact of the Proposition with additional aid, but when the economy was weak, state aid declined and the Proposition had more bite.

The finding that the Proposition had little effect on total local revenue in the boom of the late 1980s, but considerable effect in the slump of the early 1990s, is consistent with the results in Cutler, Elmendorf, and Zeckhauser (1997). That paper uses Census of Governments data from 1967 through 1992 to compare changes in municipal finances in Massachusetts to changes in other states. The paper finds only mixed evidence that local revenue in Massachusetts declined relative to local revenue in other states in the 1980s, but clear evidence that local revenue had declined in Massachusetts by the early 1990s.

<u>Spending Effects</u> If local revenue changes, then local spending must change as well (in the absence of sustained budget deficits). We can learn about public decision-making by examining which local services were cut the most during the periods when the Proposition had significant effects on revenue. We examine the early 1990s rather than the early 1980s because spending data are more readily available for the later years.

For each major category of public spending h, we estimate equations similar to those employed for total revenue:

$$G_{ih}^{1992} - G_{ih}^{1989} = \alpha + \beta Impact_i + \sum_j \delta_j C_j + \sum_k \delta_k P_k + \epsilon_i \, ,$$

where the dependent variable is the change in type-h government spending per capita between 1989 and 1992. The β coefficient gives the change in spending per dollar of initial impact. We use the same sample of municipalities as before.

Table 5 presents the results. The first column shows how local governments spent their budgets in 1989.[13] About half of total local spending went to education. The remainder was split nearly evenly between public safety (primarily police and fire), public works (primarily highways), fixed costs and debt service, and other functional areas (largely "general government" expenses).

The second column shows the estimated β coefficients. Between 1989 and 1992, total local revenue fell about 50 cents per dollar of initial impact; the coefficient is equal to the difference between the 1992 and 1989 coefficients for total revenue in Table 4.[14] Total local spending also fell about 50 cents per dollar of initial impact. Education bore about half of the reduction in spending, which matches its initial share. Spending on public safety was virtually unscathed, however, while public works spending suffered a disproportionate reduction. Infrastructure spending seems easy to delay since roads are durable. Spending on debt and fixed costs, and on general government, was relatively unaffected.

Once spending is cut, or postponed, the important issue is what impact this will have on citizen well-being. Cutting physical investment during economic downturns may have little long-term effect if spending in boom years compensates, but reducing education outlays might prove to have long-term consequences. In future work, we intend to examine these effects.

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[13] Our data include spending from the "general fund" only. Some towns also have "special fund" accounts, trust funds, or other mechanisms for providing particular services. One category of general fund spending is intergovernmental transfers; transfers whose purpose can be identified, such as those to a multi-town school district, are included in the appropriate spending category.

[14] The coefficient in Table 5 does not exactly equal the difference between the relevant coefficients in Table 4 only because a few communities have missing data for "other spending."

Summary

Proposition 2½ had a major impact on municipal finances, but less of an impact than its supporters had hoped for or its detractors had feared. Property tax revenue fell, as the Proposition required, but it did not fall as much as the Proposition originally required. Moreover, state aid compensated for some of the tax revenue loss. As a result, Proposition 2½ had no significant effect on total local revenue at the peak of the Massachusetts boom. But the Proposition did affect the ability of local governments to maintain spending during the economic downturn, when new growth slowed and state aid was reduced. Thus, Proposition 2½ pinched more tightly when economic conditions were bad than when they were good.[15]

3. Voter Attitudes Toward Local Government

Having examined the financial impact of Proposition 2½, we now turn to the question of why voters believed that the Proposition was needed and whether the Proposition accomplished what they wanted.

We start with a basic observation: Proposition 2½ has endured for a long time. There has been no determined effort to repeal it, and there is no significant evidence of resentment toward the constraints imposed by the Proposition. Of course, people might not have been satisfied with the effects of Proposition 2½ in the form initially approved by voters; the amendments to the measure and the surge in state aid to localities considerably loosened the constraints imposed on

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[15] The same concern is frequently raised about balanced-budget rules at the state and federal levels.

local finances. Still, the lasting popularity of the Proposition suggests that it touches some fundamental chord in peoples' views about government.

What is this fundamental chord? Surveys at the time that Proposition 2½ was passed found that voters believed that local budgets contained a lot of waste and that Proposition 2½ would curtail that waste. For example, Ladd and Wilson (1985) reported that 82 percent of the Proposition's supporters thought the Proposition would cut taxes without reducing service quality, compared with 35 percent of the opponents. Only 10 percent of supporters listed service cutbacks as the single most important change to be caused by the Proposition, compared with about half of opponents.[16]

This rationale for supporting Proposition 2½ contrasts with two other explanations considered by academics at the time. One alternative explanation is that voters wanted local governments to provide fewer services--presumably because they valued these services below equivalent monies spent privately--and to reduce taxes accordingly. But only 20 percent of all surveyed voters, and only 30 percent of Proposition supporters, wanted local services reduced. Indeed, the only specific category of spending that a majority of Proposition supporters hoped to see cut was "welfare or other public assistance." Similarly, there is no evidence that voters wanted the Proposition to shift the financing of local services toward the state and away from local tax bases without changing the total tax burden. Ladd and Wilson (1985) conclude that "supporters and opponents ... held similar views about the extent to which property taxes should

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[16] Similarly, Courant, Gramlich and Rubinfeld (1980) surveyed Michigan voters regarding their opinions on that state's tax limitation proposals, and Sears and Citrin (1985) analyze the basis of the 1978-80 tax limitation movement in California. In both states, few supporters of tax limits favored large cuts in public services, but many believed that these services could be provided much more efficiently.

be used to finance traditional municipal services and local education services."

Since 81 percent of communities voted in favor of Proposition 2½, it is clear that concern about waste in local government was widespread in Massachusetts. Moreover, Massachusetts residents clearly hoped that the Proposition would have a real impact. If voting for the Proposition had been merely symbolic--a way to express concern about municipal government without making immediate changes--the Proposition would have garnered more support in municipalities where the impact would be smallest. Table 6 shows that the opposite is true: A larger share of voters supported Proposition 2½ in communities that suffered an immediate revenue loss than in communities that did not.[17]

Thus, a majority of voters in most Massachusetts communities in 1980 believed that their local governments were wasting money and that Proposition 2½ would reduce this waste. But why did they believe this?

Theories of Voter Behavior

We propose four (possibly overlapping) theories for why Massachusetts voters felt as they did about municipal government. We describe the theories here and evaluate them in the next section.

Agency Loss Theory The most straightforward explanation of voters' belief that government is wasteful is the loss from a principal-agent problem. The public elects government officials as its agents but cannot monitor or penalize their actions easily. Thus, officials spend

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[17] The same conclusion can be drawn from regressions (similar to those in Table 8) that control for other factors that might affect voters' support for the Proposition.

more of the people's money than the people would spend if given the choice themselves. Of course, there are some constraints on what elected officials may do: Voters can elect new officials or recall old ones if they are sufficiently dissatisfied, or voters can move to other jurisdictions, as in the Tiebout (1956) model. But these actions are costly, and there is no guarantee that new officials will act any better. As a result, general tax limitations may be the best option: Capping government revenue encourages politicians to eliminate waste and keep only the services that people really want.

The agency loss theory is consistent with the decision to pursue Proposition 2½ as a statewide referendum rather than as a bill to be passed by the state legislature. Both approaches would have had the same effect on state law. But elected officials who cannot be trusted to spend money well might not be trusted to pass tax limitations or keep them in effect.[18] Laws created by citizens' ballot initiatives presumably have more staying power than laws created through normal legislative means.

Analysts typically think that agency loss occurs at least partly because governments are too large for individuals to feel that they have much influence over them. Indeed, Table 6 shows that the support for Proposition 2½ generally increased with community size. Yet, even in towns with populations under 1000, most voters favored the Proposition. Whatever causes people to feel that government does not represent their interest occurs even in the smallest of government units.

Regret or Mission-Accomplished Theory A modification of the agency loss theory is the

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[18] Matsusaka (1995) shows that states in which citizens can initiate and approve laws by popular vote have lower state and local spending and raise proportionately more revenue through charges on services than through broad-based taxes.

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regret, or mission-accomplished, theory. The term "regret" implies that voters perceived substantial waste in 1980, but after seeing the Proposition's impact decided that there was less waste than they had originally thought. For example, voters might not have studied local budgets very carefully in 1980, just reasoning instead that government was big and thus wasteful. The term "mission accomplished" implies that voters perceived substantial waste in 1980, and later believed that the Proposition had significantly reduced this waste. For example, voters might have pursued a deliberate strategy of imposing substantial cuts in spending, observing whether and where those cuts were binding, and then overriding those cuts where desired.

The alternative versions of this theory are somewhat different in principle but probably observationally equivalent. The theory is consistent with the rapid growth of state aid after the Proposition took effect and with the large value of overrides and exclusions approved by voters in the early 1990s.

Personal Finance Theory The third theory is that people judge the value of government by their personal tax burden. If a person's taxes are high, she presumes that government must be inefficient, while if her taxes are low, she presumes that government is fairly well run. In this theory, Proposition 2½ would be successful if it kept the taxes of each individual fairly low, independent of how much money the municipality raised overall.

This theory is consistent with the observation that Massachusetts had the highest property tax rates in the country in the late 1970s. Indeed, California, home of Proposition 13, had the 4th highest property taxes per capita of any state in 1977.

Demographic Differences Theory The fourth theory is that people believed government spending was not desirable because they place a low value on the beneficiaries of government

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largesse. In particular, people may dislike transfer recipients if they differ in racial or ethnic origin from themselves.[19] Some anecdotal evidence supports this view. The *Wall Street Journal* (November 25, 1991, p. A1) reported that in Holyoke, Massachusetts, "the town's mostly white, working-class voters, mainly aged and childless, are alienated from its mainly Puerto Rican public-school children. ... Services for older people get funded. Those for children, such as parks and recreation programs, the library and the schools, don't." More formally, Poterba (1996b) finds that states with more elderly residents spend less on education per child, especially if older people and children belong to different racial groups.

The demographic differences theory is related to the agency loss theory but is somewhat different. The latter theory stresses that programs are wasteful or inefficient in general. The demographic differences theory says the programs are undesirable if they benefit certain groups of recipients, regardless of how well the programs are run.

4. Testing Alternative Theories of Voter Behavior

We now turn to testing these theories of voter behavior. We take advantage of a feature of Proposition 2½ that allows communities to impose higher taxes if a majority of voters approves an override or exclusion. By examining people's votes on these resolutions, we can learn about what factors make people more or less inclined towards larger government. We begin by describing the process of raising the Proposition 2½ limits, and then analyze the results

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[19] For example, see Cutler, Elmendorf, and Zeckhauser's (1993) model of "discriminatory community preference."

of that process.

The Override and Exclusion Process

Most of the municipalities in Massachusetts are run by a group of selectmen (or city councilors for larger entities), with a town manager or mayor in charge of day-to-day operations. Overrides and exclusions are generally proposed by a community's selectmen, or town or city council, with the mayor's approval in some cases. If a majority of voters approves, the resolution is implemented.

Overrides must have declared purposes. Some of these purposes are highly specific--for example, to purchase a new fire truck--while others designate spending categories like education, and still others broadly raise funds for "general government" or the equivalent. Although an override creates a permanent increase in a levy limit (in contrast to an exclusion, which increases a levy limit temporarily), its declared purpose applies to the extra revenue in the first year only. Indeed, the declared purpose is not constraining even in the first year if the government can shift funds that otherwise would have been spent for that purpose to other areas. Because override voting often occurs before the rest of the local budget is determined, there is no precise way to know the extent to which a successful override actually raises spending of the designated type, as opposed to serving as a fungible source of additional revenue.

Table 7 presents summary data on override voting from 1990 to 1995, the years when overrides were used most extensively. Once again, we exclude towns with fewer than 1000 residents from the analysis. The first row of the table shows the average composition of local spending in 1989, from Table 5. The second row shows the percent of overrides proposed for

each category of spending. Surprisingly, education represents a much smaller share of override attempts than of municipal spending, and the "other" category a larger share. People who are unhappy about government inefficiency would presumably be averse to supporting the government "bureaucracy" and more likely to approve an expenditure for a specific desirable item; elected officials who recognize this penchant should be more likely to propose overrides for fire trucks or teachers than for general operating expenses. Elected officials appear to have read the voters reasonably well here: as the third row shows, the success rates for override propositions are fairly constant across all of the categories.[20] The last two rows show that a similar pattern emerges when overrides are weighted by their dollar amounts. This finding supports the regret or mission-accomplished theory, in which people did not view local spending as negatively in the early 1990s as in 1980, when the Proposition was approved.

We also examined the pattern of overrides by year, to see whether there are significant trends in the types of overrides proposed or passed. The success rate of all overrides changes sharply across the years, with lows in 1991 and 1992 and highs in 1993 and 1995.[21] But the success rates of overrides for different purposes move roughly with the overall rate.

The cumulative amount of overrides and exclusions represents a large increase in municipal revenues. Figure 4 shows the distribution of communities by the ratios of their 1989

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[20] Note that overrides are not a one-time process: If an ambitious override attempt fails, officials can try again with a more modest proposal. Indeed, municipalities that tried an override in 1990 and failed were more likely than other municipalities to pass an override for that purpose in 1991. But this sequential strategy does not represent a very large share of override attempts, as only one-quarter of the municipalities that voted down an override in 1990 approved a similar one in 1991.

[21] We noted earlier that the aggregate amount of approved overrides peaked in 1991 and 1992. The low success rate in those years reflects a surge in the overrides proposed.

and 1995 tax levies to their "basic levy limits"--what levies would have been in the absence of any overrides or exclusions under Proposition 2½.[22] In both years, there is a cluster of communities just below the limit, but the cluster is much smaller in 1995 than in 1989, and the fraction of the distribution above the limit is much greater. In 1989, more than half of cities and towns were taxing below their basic levy limits, by an average of 3 percent. By 1995, only one-quarter of the cities and towns were below their limits, and nearly four-fifths of this group was taxing within 1 percent of those limits; only 6 percent of municipalities were taxing more than 1 percent below the basic levy limit. The mean excess of tax revenue over the basic levy limit was 14 percent in 1995, and in one-quarter of communities, the excess exceeded 20 percent.[23] Roughly two-thirds of the amount raised over the basic levy limit derives from overrides, and one-third from exclusions. Clearly, local revenue did not grow sufficiently rapidly under the basic constraints of Proposition 2½ to satisfy many people. This result provides some evidence in support of the regret or mission-accomplished theory.

But Figure 4 also supports the agency loss theory. Almost without exception, municipal governments in 1995 used all of their taxing authority, and in many cases wanted even more.[24]

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[22] We calculate each community's basic levy limit by subtracting from its actual levy the compounded value of all past and present overrides and the value of all exclusions then in force.

[23] This effect is significantly larger than one might expect given the small increments to annual growth attributed to overrides and exclusions in Table 3. Table 3 shows the effect of these resolutions on total local revenue; the discussion here is about property tax revenue, which is about half as large. Moreover, Table 3 showed aggregate effects on local revenue in Massachusetts, while the statement here refers to the average effect by community. Because large communities have approved much smaller amounts of overrides and exclusions per capita, these resolutions matter much less in the aggregate than in the average community.

[24] Over sixty percent of the municipalities at or below the basic levy limit attempted an override or exclusion between 1990 and 1995.

Certainly, by 1995, the Proposition imposed a real constraint on local revenue.

The clustering of communities at their levy limits belies a simple median-voter model. In such a model, Proposition 2½ would have symbolic, but not substantive, value. Yet, the substantive effect of Proposition 2½ is clear. Indeed, while there is much literature showing that "institutions matter" for fiscal outcomes, our evidence is among the first that controls for the correlation between tastes for limited government and designing institutions under which governments operate (see Poterba, 1997).[25]

Determinants of Overrides and Exclusions

To better understand which of our theories help to explain voters' attitudes toward municipal government, we estimate equations of the form:

$$\frac{OE_i}{B_i} = \alpha + X_i \beta + \epsilon_i \, ,$$

where OE_i is the cumulative value of all overrides passed in community i from fiscal years 1990 to 1995 plus the change from 1989 to 1995 in the value of exclusions in force, B_i is the community's basic levy limit in 1995, and X_i is a set of community characteristics designed to test the different theories. We exclude overrides and exclusions passed before 1989 because there

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[25] On the effect of state balanced-budget rules on fiscal outcomes, see Alt and Lowry (1994), Poterba (1994), and Bohn and Inman (1995). On state tax limits, see Rueben (1996) and Shadbegian (1996). On local tax limits, see Preston and Ichniowski (1991) and Dye and McGuire (1995). On the effect of alternative school budget institutions, see Romer and Rosenthal (1982), Romer, Rosenthal and Munley (1992), Olmsted, Denzau and Roberts (1993), and Rothstein (1994).

were many fewer of them, and because some elements of the X_i's are based on the fiscal situation entering 1990. We estimate the equation using ordinary least squares, an approximation given that many observations for OE_i are zero. As before, we include only those communities with more than 1000 residents in 1980.[26]

This equation combines two steps of the override and exclusion process: the decision of public officials to propose such a resolution; and the decision of voters to approve or disapprove. Some prior research (e.g., Rubinfeld, 1977) estimates only the second stage, while other efforts (e.g., Romer, Rosenthal and Munley, 1992) focus on the first stage, assuming implicitly that the probability of passage is constant. Without separate instruments for the two stages of decision-making, however, we could not identify the separate effects of each stage without imposing functional form restrictions. Because persuasive restrictions of this sort do not exist, we combine the two stages into one equation.

We choose X variables that help distinguish among the alternative theories of voter behavior outlined in the previous section. The variables that we use and their mean values are reported in the first column of Table 8.

To test the agency loss theory, we include measures of antipathy toward government in general, as well as measures of local government finances. The first variable in the former category is the share of voters who are Republican; Republicans presumably feel that government

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[26] New overrides and exclusions between 1989 and 1995 raised the levy of the average community in the sample by 9 percent; the standard deviation of this increase was 10 percent. This mean increase is smaller than the average excess of taxes over the basic levy limit reported earlier because of override and exclusion resolutions approved before 1989 and because the smallest communities excluded from our sample passed a proportionately greater amount of these resolutions.

is more wasteful than do Democrats.   We also include the share of voters who approved
Proposition 9, a much-debated successful 1995 ballot initiative that eliminated rent control in
Massachusetts.   Like Proposition 2½, Proposition 9 raised important issues regarding the
appropriate role of local governments.   The final variable in the taste category is the share of
voters who approved Proposition 2½.   Because this variable may just pick up the effect of more
fundamental economic or demographic characteristics, we first present a model excluding this
variable.   In addition to these proxies for voter attitudes, we include several measures of
municipal finances: per capita state aid in 1989, per capita local revenue aside from property
taxes and state aid in 1989, and the changes in these variables between 1981 and 1989.   The
remaining category of local revenue--property taxes--is included separately in the regression in
order to test the personal finance theory, which we describe shortly.

To test the regret theory, we include the initial impact of the Proposition on per capita
property taxes.   If voters originally believed that spending was wasteful but then reversed their
view later, overrides and exclusions should be a positive function of initial impact.

To test the personal finance theory, we include per capita property taxes in 1989 and the
change in per capita taxes from 1981 to 1989.   If people look only at their personal finances in
deciding whether to support higher taxes, then the change in the personal tax burden should
negatively affect approvals of overrides and exclusions.[27]

To test the demographic differences theory, we include the share of the population that
is young, the share that is old, and the share that is non-white.   Because these variables affect
the demand for public spending directly as well as affecting people's views about who receives

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[27] We include the level and change in income as controls, as described below.

the benefits of spending, it is difficult to interpret the estimated coefficients on these variables. As a proxy for demographic diversity, we follow Poterba (1996b) and include the difference between the share of the young who are non-white and the share of the old who are non-white.

Finally, we include a number of control variables: the size of the community, per captia income and its change, the average house value and its change, the share of the population living in owner-occupied housing, and the community's excess capacity as a share of the levy limit in 1989.

Empirical Results

The last two columns of Table 8 present our empirical results. Column (2) includes the share of voters supporting Proposition 2½ as an explanatory variable, while column (1) does not. The first rows present the results for the agency loss theory. Neither of our two basic measures of tastes--the share Republican and the share in favor of Proposition 9--is significantly related to overrides and exclusions, although their coefficients have the expected signs. State aid and the change in state aid have a negative effect, but the estimated coefficients are not statistically distinguishable from zero. Other local revenue and its change appear to matter not at all.

The one variable that is significantly--and negatively--related to overrides and exclusions is votes for Proposition 2½. The absolute value of the coefficient is extremely large, with each additional percentage point of support for the Proposition reducing the value of successful resolutions by 18 percent of the basic levy limit. The important role of this variable substantially supports the agency loss theory, but it is interesting that we do not see this effect with conventional indicators of attitudes toward government.

The next row of the table tests the regret or mission accomplished theory. The initial impact of Proposition 2½ is significantly positively related to support for overrides and exclusions. The estimated effect is fairly small, however. *Ceteris paribus*, a community that was initially forced to reduce its property taxes by 16 percent (the average among communities with a non-zero impact, shown in Table 2) later raised its taxes about 2 percent more than a community with no initial constraint.[28] This result is consistent with the regret theory, although the amount of regret is modest.

The following rows show that personal finances affect voters' support for overrides and exclusions. The coefficient on property taxes is negative and statistically significantly different from zero; the higher are taxes to begin with, the less are people willing to raise property taxes, even after controlling for other resources available to the local government and their income. The standard deviation of per capita property taxes is about $300, so that a one standard deviation increase in property taxes reduces the amount of overrides by about 4 percent. This effect is moderately large, although not as large as the effect of voting against Proposition 2½.

The coefficients on the demographic variables do not suggest especially strong effects of demographic differences on overrides and exclusions. The share of the population that is young has a significant positive coefficient, while the shares that are old and non-white have coefficients that are statistically indistinguishable from zero.[29] And the difference between the shares of the

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[28] The simple correlation between the dependent variable and impact is negative, because larger communities experienced larger impacts and later passed fewer overrides and exclusions. The regressions control for population size.

[29] Cutler, Elmendorf and Zeckhauser (1993) report that previous researchers generally have found that states with more old people have less public spending, but localities with more old people do not. See Bogart (1991) and Romer, Rosenthal and Munley (1992) for analyses of local

young and old who are non-white plays little role in the override and exclusion process. Despite many anecdotes about the importance of demographic differences for public attitudes, such differences appear unrelated to the desire to raise property taxes in our sample.

The coefficients on the control variables are generally in line with what we would expect. Communities with larger populations undertake appreciably fewer overrides and exclusions, perhaps because people living in larger towns and cities may feel less shared purpose than people living in smaller municipalities. We tried adding the change in population between 1980 and 1989, but the variable does not enter the equation significantly; this result is unsurprising since new construction is added to the basic levy limits automatically. Communities with more low-income households pass a greater dollar amount of overrides and exclusions per capita, although this effect is only statistically significant for the $15,000-$30,000 group. We cannot distinguish between the hypothesis that people in a certain group are more likely to favor overrides and exclusions, and the hypothesis that the presence of people in this group makes others in a community more likely to favor these resolutions. The change in income during the 1980s has no detectable effect on overrides and exclusions.

Average house value has a significant positive effect on overrides and exclusions, while the change in house price has a negative effect. The positive effect might arise because communities with more expensive houses (controlling for income) have residents who value residential amenities highly, so they want good schools and nice parks. If so, then higher spending would be capitalized in the price of houses, reinforcing the correlation. The share of owner-occupiers is significantly positively related to overrides and exclusions. Because property

governments, and Case, Hines and Rosen (1993) and Poterba (1996b) for analyses of states.

taxes are paid more directly by owner-occupiers, one might expect that the demand for overrides would fall as their share increased. However, owner-occupiers may also have greater commitment to their communities, which could increase the desire for enhanced public services. Finally, communities with more excess capacity in 1989 have significantly fewer overrides and exclusions over the next 6 years, as we would expect.

In sum, our evidence is most consistent with three theories. We find substantial evidence that agency losses remain high: towns that voted against Proposition 2½ are less likely to support overrides a decade later. But the agency cost of local government is not related to obvious characteristics of the municipality, including its revenue streams, political composition, or demographic composition. We also find evidence that when individual taxes are higher, people are less likely to support overrides for additional money. Finally, we find support for the regret, or mission accomplished, theory. In towns where the initial impact of Proposition 2½ was greater, voters were more likely to support the Proposition in 1980 but more likely to approve overrides and exclusions in the 1990s.

8.   Conclusion

Citizens have increasingly resorted to referenda when they do not trust their elected officials to serve their interests. Therefore, observing the effects of such direct citizen initiatives is important. We examine the experience with Proposition 2½ in Massachusetts a decade and a half after its provisions became law, and with data on subsequent direct votes to override its constraints.

As expected, Proposition 2½ significantly reduced property taxes, especially during its early years. Yet, the Proposition's effect on total local revenue were much smaller than most people had anticipated. Property tax revenue was boosted by the new construction that accompanied the booming Massachusetts economy in the mid 1980s. And the strong economy supported a surge in state aid to localities that further reduced the net effect of the Proposition. The fact that even a seemingly tightly-worded Proposition can have smaller effects than expected suggests looking carefully at the restraints imposed in other parts of the country.

Did Massachusetts citizens get what they wanted? When voters approved Proposition 2½ in 1980, they believed there was significant waste in local government, and they expected the Proposition to reduce it. Communities that were to experience larger tax cuts voted disproportionately in favor of the Proposition. It is clear from our results that voters felt there were substantial agency costs to government -- that government spent more than they would have spent if they controlled the budget. There is some empirical basis for this view; officials in essentially all towns spent all of the funds available to them under the Proposition and most asked their voters for more. But we found no good proxies for voter attitudes on this issue: Political party affiliation, voting for other smaller-government measures, and local revenue aside from property taxes have no significant effect on voter approval of overrides and exclusions. Nor could we find evidence that people's views of local spending are affected by the demographic heterogeneity of their communities.

Our results do support the theory that voters' views of local government are strongly influenced by their individual property tax burden. Massachusetts had the highest property taxes in the country before Proposition 2½ was passed, and support for overrides and exclusions in the

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1990s is negatively related to a community's property taxes in 1989.

There is some evidence that people changed their view about municipal waste over time. Even with more rapid than expected growth in municipal revenue in the 1980s, voters approved substantial amounts of additional taxes in the early 1990s through overrides and exclusions. Moreover, such voting is related to initial support for the Proposition; municipalities that experienced a greater initial impact of the Proposition approved more additional taxes. This is evidence either that voters regretted some of their support for Proposition 2½, or that people felt the Proposition had accomplished what they wanted it to do and thus believed that additional revenues would be well spent. Yet attitudes towards government size persist. Communities that voted more heavily in favor of Proposition 2½ in 1980 approved many fewer dollars in overrides and exclusions in the 1990s.

Through Proposition 2½, direct citizen action reined in the local leviathans of Massachusetts when their expenditures seemed out of hand. Yet, legislative amendments eased the constraints, the booming economy made them looser still, and subsequent direct votes for overrides at the municipality level relaxed them further. From these votes and municipal expenditure patterns, we infer that although Proposition 2½ did curb agency loss due to overspending local officials, it initially went too far.

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Figure 1: Growth of Local Revenue in Massachusetts 1976-1995
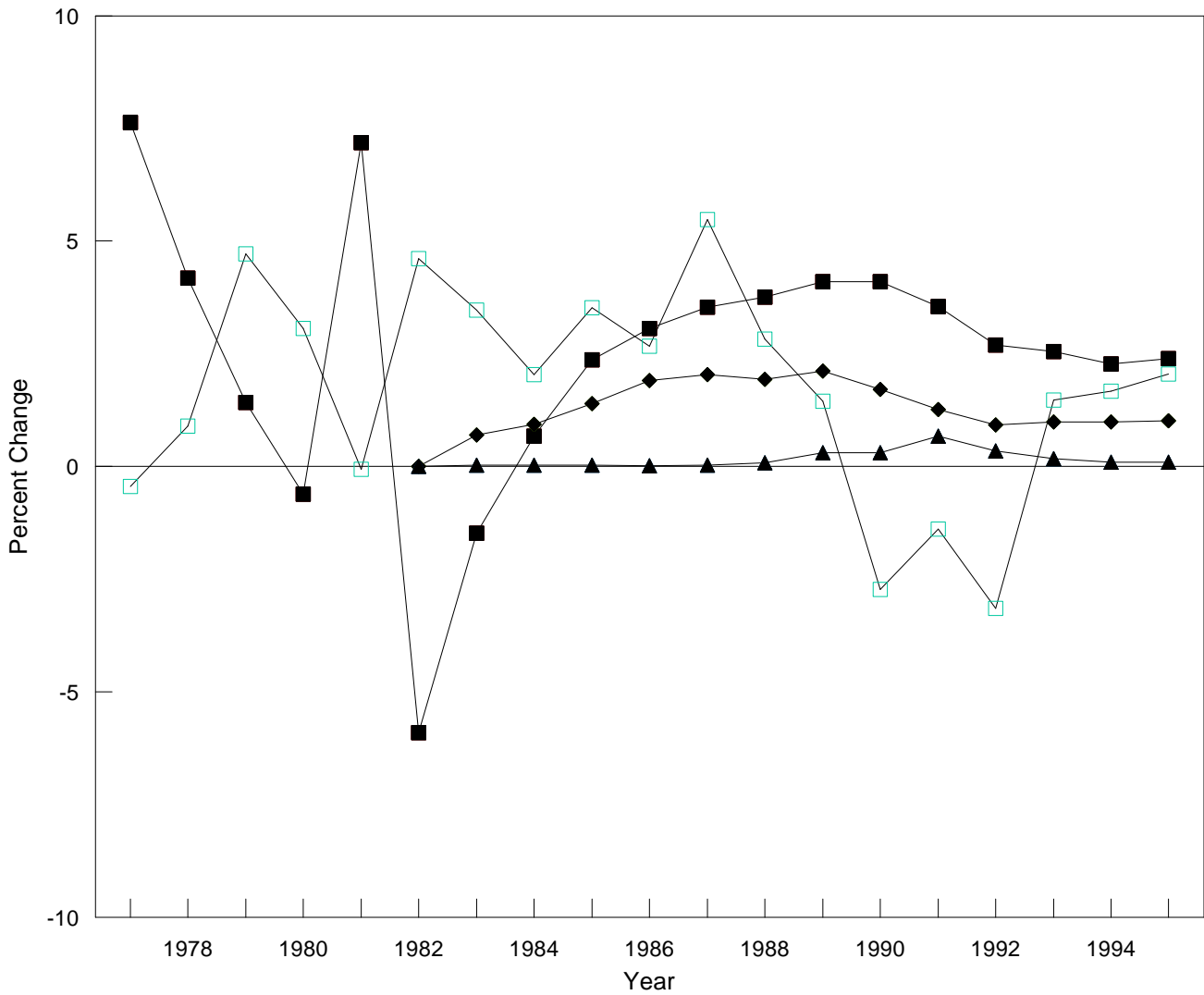
Figure 2: Excess Capacity as a Share of the Levy Limit

Figure 3: Net Impact of Proposition 2 1/2 on Municipal Revenues

Figure 4: Tax Revenues Relative to the Levy Limit
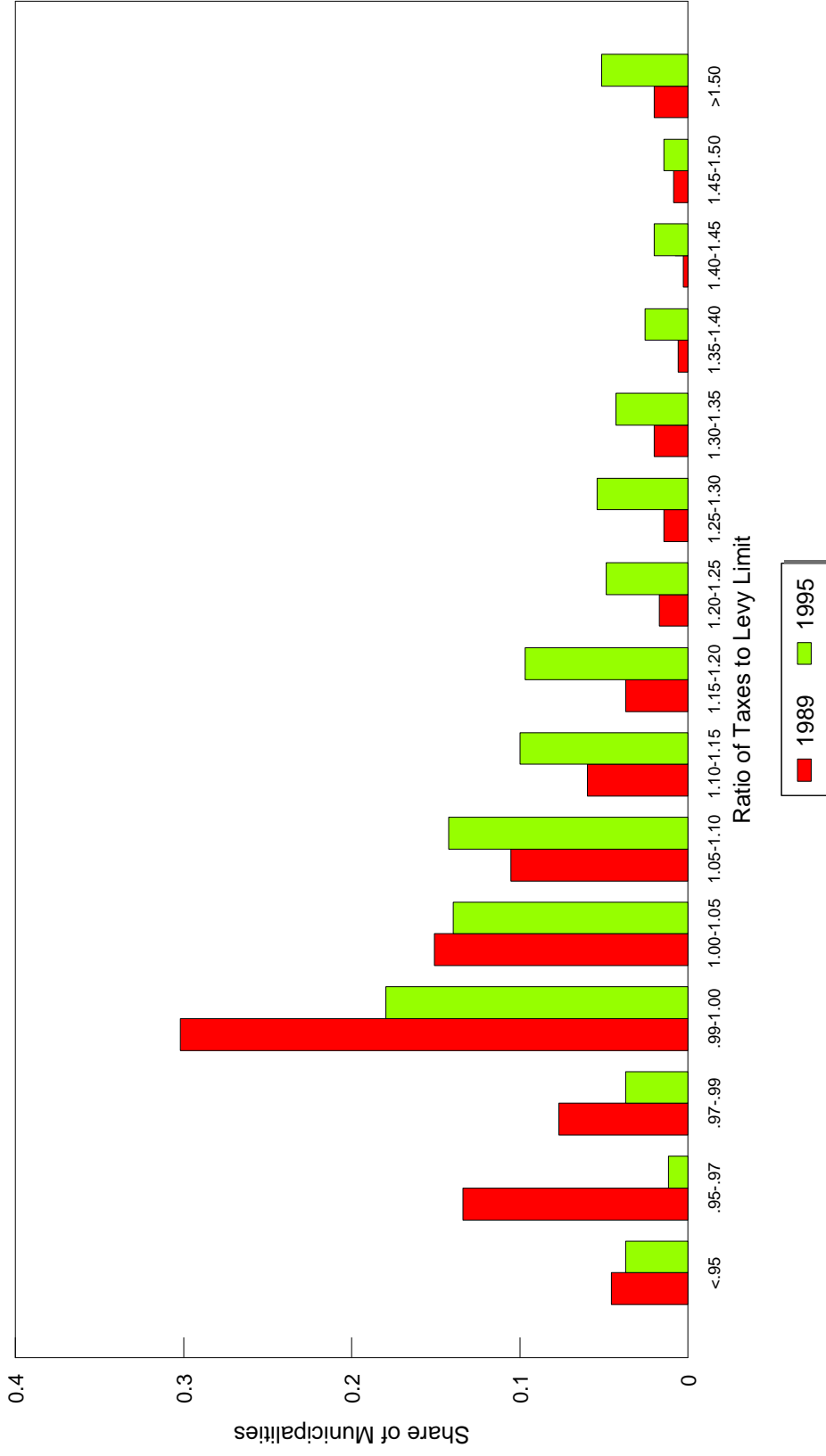
Table 1
State and Local Government Property Taxes and Revenue
Massachusetts and the United States, 1967-1992

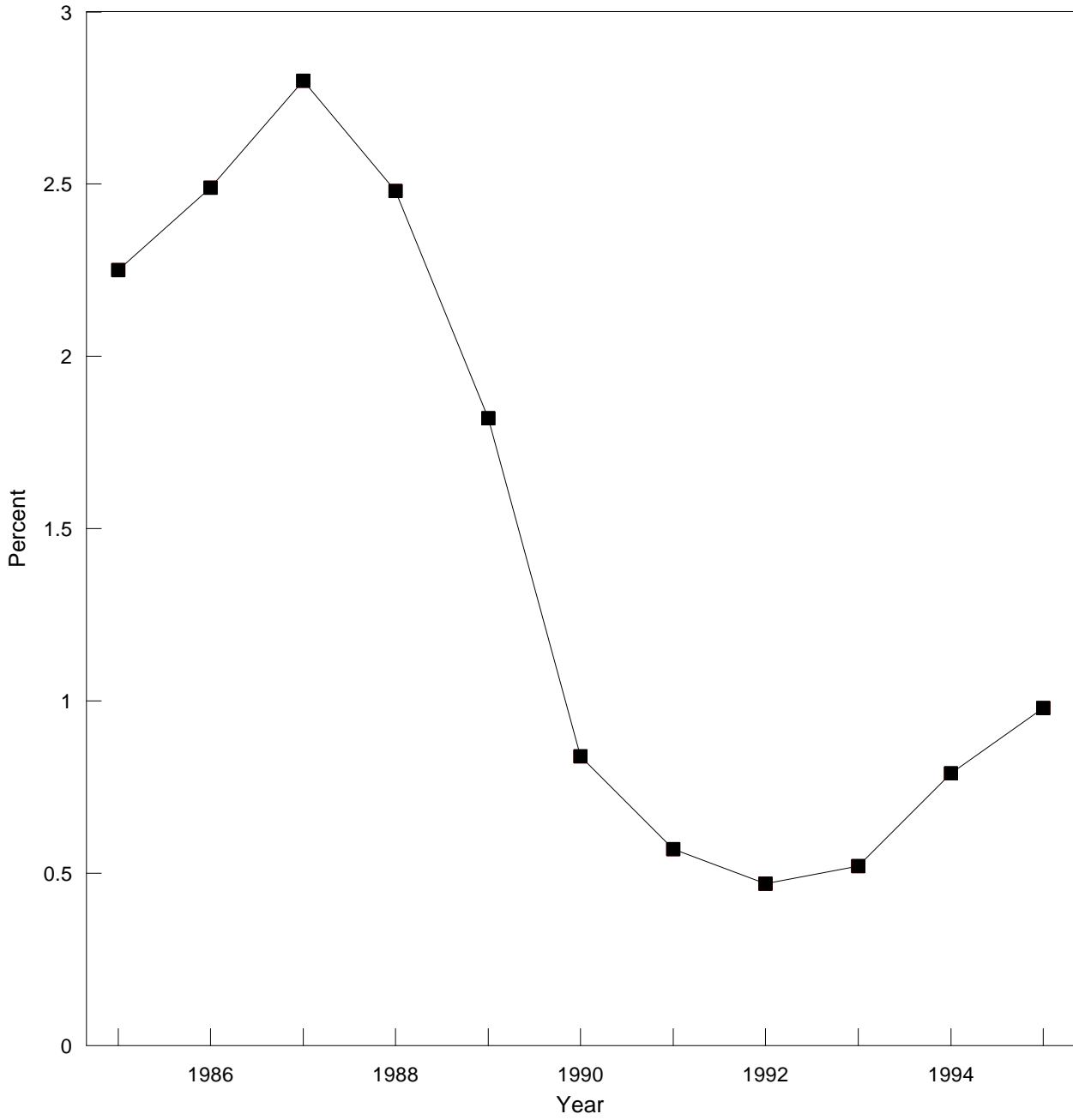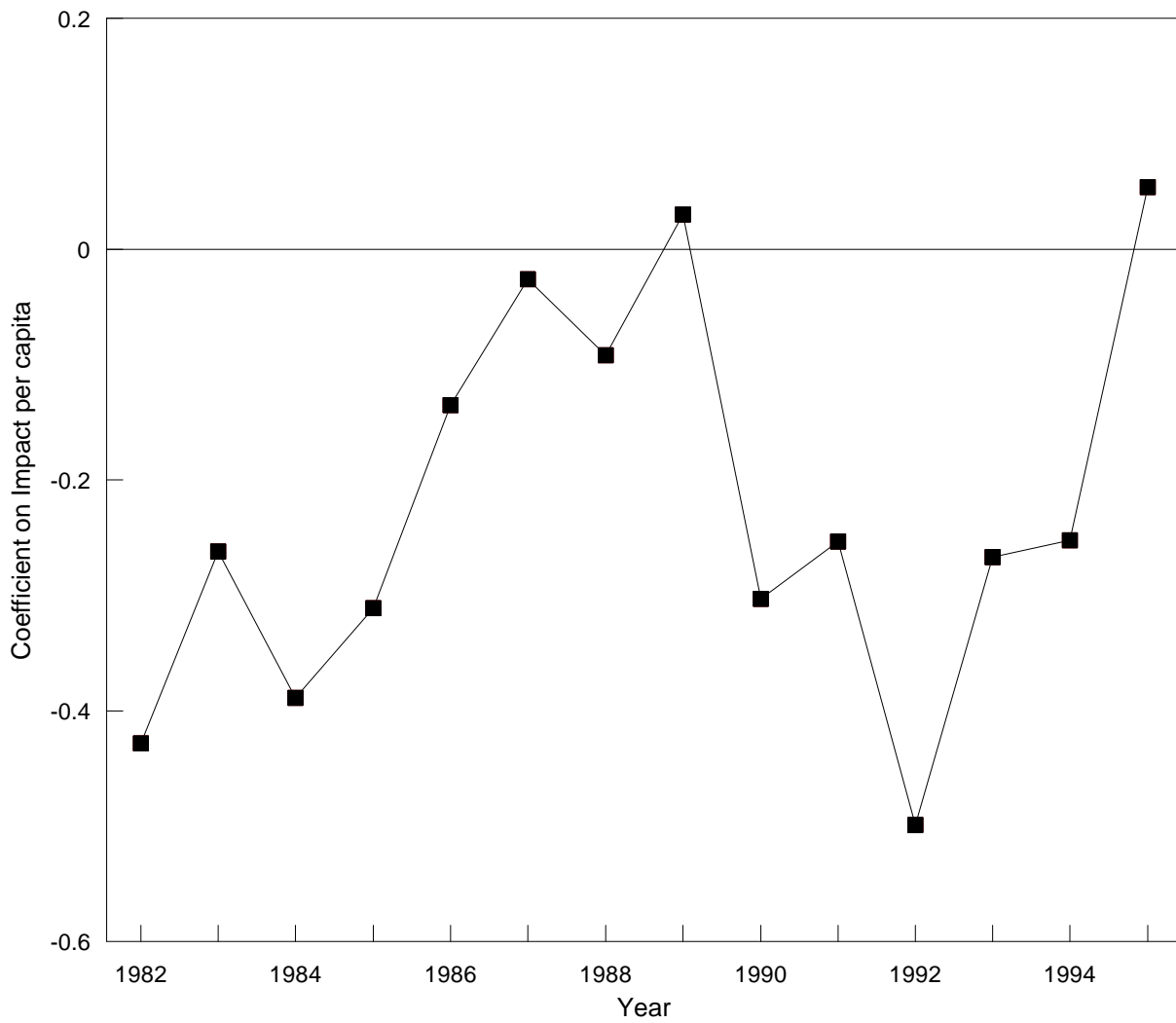| Location	Year					
	1967	1972	1977	1982	1987	1992

Property Taxes per Capita

	1967	1972	1977	1982	1987	1992
Massachusetts	$738	$1,016	$1,073	$733	$775	$876
United States	508	599	581	486	537	668
Ratio: Mass./U.S.	1.45	1.70	1.85	1.51	1.35	1.31

Local Revenue per Capita

	1967	1972	1977	1982	1987	1992
Massachusetts	$1,270	$1,530	$1,892	$1,703	$1,994	$1,963
United States	1,187	1,543	1,759	1,748	2,043	2,251
Ratio: Mass./U.S.	1.07	0.99	1.08	0.97	0.98	0.87

State and Local Revenue
per Capita

	1967	1972	1977	1982	1987	1992
Massachusetts	$1,898	$2,787	$3,274	$3,107	$3,884	$4,281
United States	1,851	2,468	2,795	2,812	3,387	3,786
Ratio: Mass./U.S.	1.03	1.13	1.17	1.10	1.15	1.13

Note: Local revenue includes property taxes, intergovernmental transfers, other taxes, and charges, and other miscellaneous revenue. Utility revenue, liquor store revenue, and insurance trust revenue are excluded. Data are expressed in 1992 dollars per capita and are drawn from the Census of Governments.

Table 2
Initial Impact of Proposition 2½

Measure	Communities Reducing Taxes	Communities Not Reducing Taxes
Number of communities	146	205
Share of communities	42%	58%
Average population	28,671	7,605
Share of Massachusetts population	73%	27%
Property taxes per capita in 1981	$524	$554
Average reduction	$84	$0
Average reduction as share of 1981 taxes	16%	0%
Total reduction	$624 million	$0
Total reduction as share of initial taxes	25%	0%

Note: Data are drawn from the Municipal Data Bank of the Division of Local Services, Massachusetts Department of Revenue.

Table 3
Sources of Local Revenue Growth in Massachusetts:
Annual Increase from 1975 to 1995

Years	Growth of Property Tax Revenue	Growth of Total Revenue Attributable to Property Taxes				Growth of Total Revenue
			Effect Due To:			
		From All Sources	New Growth in Year	New Overrides/ Exclusions in Year	Growth of Total Revenue Attributable to State Aid	
1976-81	6.2%	4.0%	--	--	1.6%	4.6%
1981-84	-3.7	-2.2	0.5%	0.0%	3.4	1.7
1984-90	6.7	3.5	1.8	0.1	2.2	7.9
1990-95	4.9	2.7	1.0	0.3	0.1	3.6

Note: The values for new growth and for overrides and exclusions represent new amounts each year and do not include the 2.5 percent increments to these amounts in subsequent years. Growth of total revenue does not equal the sum of growth attributable to property taxes and to state aid because total revenue also includes fees and other miscellaneous local sources of revenue.

Table 4
Effect of Proposition 2½ on Local Revenue, 1982-1995

| Year | Component of Local Revenue | | | Total Local Revenue |
	Property Taxes	State Aid	Other	
1982	-.542	.078	.036	-.428
	(.044)	(.044)	(.059)	(.065)
1983	-.752	.290	.201	-.262
	(.050)	(.050)	(.094)	(.088)
1984	-.859	.389	.081	-.389
	(.058)	(.058)	(.081)	(.090)
1985	-.876	.486	.079	-.311
	(.066)	(.066)	(.093)	(.117)
1986	-.881	.609	.137	-.135
	(.085)	(.045)	(.103)	(.140)
1987	-.931	.804	.101	-.026
	(.108)	(.065)	(.108)	(.178)
1988	-.986	.893	.001	-.092
	(.128)	(.079)	(.175)	(.250)
1989	-1.009	.954	.085	.030
	(.151)	(.090)	(.131)	(.230)
1990	-1.218	.921	-.006	-.303
	(.174)	(.091)	(.144)	(.270)
1991	-1.305	.895	.156	-.253
	(.197)	(.092)	(.148)	(.286)
1992	-1.311	.759	.053	-.499
	(.213)	(.088)	(.181)	(.322)
1993	-1.319	.871	.181	-.267
	(.230)	(.103)	(.194)	(.347)
1994	-1.330	1.052	.025	-.252
	(.240)	(.130)	(.216)	(.387)
1995	-1.367	1.240	.133	.054
	(.256)	(.161)	(.214)	(.406)

Note: All regressions are for a set of 316 municipalities, although for some years the "other" revenue column is sometimes missing a few observations. Regressions include county and population-size dummies; standard errors are shown in parentheses. "Other" local revenue is the sum of fees, charges, and other miscellaneous revenue.

Table 5
Effect of Proposition 2½ on Local Spending, 1989-1992

Category	1989 Share of Spending	Regression for Change in Spending		
		Coefficient on Impact	R^2	Share of Total Change
Total Revenue	---	-.525 (.201)	.298	---
Total Spending	100%	-.459 (.177)	.290	100%
Education	49	-.247 (.077)	.365	54
Public Safety	12	-.029 (.027)	.068	6
Public Works	12	-.135 (.080)	.039	29
Fixed Costs and Debt Service	14	.006 (.083)	.193	-1
Other	13	-.054 (.090)	.046	12

Note: There are 316 observations in each regression, except for the first row, where there are 312 observations. All regressions include a constant term. Standard errors are in parentheses.

Table 6

Municipalities' Votes for Proposition 2½ by Impact and Population

	Population in 1980				
Impact	<1,000	1,000-2,500	2,500-10,000	10,000-50,000	>50,000
Zero	51% [34]	52% [42]	59% [77]	59% [51]	50% [1]
Positive	47 [1]	54 [7]	64 [39]	62 [79]	57 [20]
All	51% [35]	52% [49]	61% [116]	61% [130]	57% [21]

Note: The table shows the average share of votes in favor of Proposition 2½. The values in square brackets show the number of communities in each cell.

Table 7
Summary Data on Override Voting, 1990-95

Variable	Education	Public Safety	Public Works	Other	Total
Share of spending, 1989	49%	12%	12%	27%	100%
Number of Overrides:					
Percent of attempts	22	17	17	44	100
Success rate	37	36	35	32	34
Dollar Amount of Overrides:					
Percent of attempts	28	8	10	55	100
Success rate	31	35	47	31	33

Note: This table includes overrides in 316 communities with 1980 population greater than 1,000. The "Other" category includes overrides designated for "health and welfare," "culture and recreation," "general operating," "general government," "employee benefits," and "funds." In total over six years, these communities attempted 2,443 overrides and passed 833.

Table 8
Determinants of Dollar Value of Approved Overrides and Exclusions

Independent Variable	Mean	1	2
Agency Loss			
share Republican	.16	-.066 (.117)	-.062 (.115)
share in favor of Prop 9	.51	-.115 (.080)	-.109 (.079)
share in favor of Prop 2½	.59		-.177 (.062)
state aid in 1989	$.304	-.114 (.112)	-.117 (.110)
change in state aid, 1981-89	$.156	-.098 (.159)	-.070 (.157)
other local revenue in 1989	$.300	.017 (.057)	.025 (.056)
change in other local revenue, 1981-89	$.121	.005 (.085)	.007 (.084)
Regret			
initial impact of Prop 2½ as share of 1980 taxes	.08	.134 (.070)	.140 (.070)
Personal Finance			
property taxes per capita in 1989	$.707	-.141 (.077)	-.145 (.076)
change in per capita property taxes, 1981-89	$.177	.079 (.111)	.043 (.111)
Demographic Characteristics, 1989-90			
share young	.24	.610 (.219)	.686 (.218)
share old	.13	.211 (.203)	.270 (.202)
share non-white	.04	.177 (.277)	.147 (.274)
share young non-white less share old non-white	3.92	.001 (.002)	.000 (.002)

Table 8 (continued)

Independent Variable	Mean	1	2
Controls, 1990			
dummy variables for population			
5,000-10,000	.22	-.046 (.015)	-.041 (.015)
10,000-20,000	.25	-.079 (.016)	-.075 (.016)
20,000-50,000	.19	-.111 (.019)	-.106 (.018)
50,000 and above	.07	-.125 (.031)	-.126 (.031)
dummy variables for shares of households with income in different ranges			
$0 to $15,000	.17	.284 (.217)	.277 (.214)
$15,000 to $30,000	.20	.502 (.242)	.455 (.239)
$45,000 to $60,000	.18	.013 (.262)	.029 (.259)
$60,000 and above	.24	-.008 (.190)	.056 (.189)
change in median family income, 1979 to 1989	$25.90	.002 (.002)	.003 (.002)
log(house value)	12.00	.278 (.049)	.274 (.048)
change in log(house value), 1980-90	.07	-1.90 (.795)	-1.51 (.797)
share owner-occupied	.73	.154 (.076)	.159 (.075)
excess capacity in 1989 as share of 1989 levy limit	.02	-.547 (.120)	-.533 (.120)
R^2		.44	.45

Note: The sample includes 316 communities with 1980 population greater than 1000. The dependent variable is the dollar value of overrides and net new exclusions passed between 1990 and 1995 as a share of the basic levy limit in 1989. Fiscal variables are in thousands of dollars per capita. A constant is included in each regression. Standard errors are in parentheses.