Property Tax Limitations In Retrospect: The Example of Massachusetts
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**CONCURRENT
SESSION**

**STATE AND LOCAL FISCAL POLICY BY
REFERENDUM AND INITIATIVE**

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Property Tax Limitations In Retrospect:
The Example of Massachusetts

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In 1980, Massachusetts voters approved Proposition $2^1/_2$, a ballot initiative that sharply reduced local property taxes and restricted their future growth. Along with its older sibling, Proposition 13 in California, Proposition $2^1/_2$ highlighted the era of tax revolt. Proposition $2^1/_2$ was supported overwhelmingly by voters, passing 59 percent to 41 percent. It marked a turning point in fiscal relations in Massachusetts.

Shortly after Proposition $2^1/_2$ was approved, a number of analysts explored why voters supported the proposition (in particular, see Ladd and Wilson, 1983, 1985). The consensus was that voters favored the Proposition predominantly because they believed that it would help achieve a more efficient local government.[1] Other plausible explanations—that voters wanted fewer services or a shift from local financing to state financing of public services—were not supported by the evidence.

In contrast to this belief, others feared that the Proposition would adversely affect the quality of municipal services. Cambridge City Manager James Sullivan, for example, asserted that "the basic costs of required payments [pensions, debt service, insurance costs, and state-mandated assessments for the MBTA, Metropolitan District Commission, and Middlesex County] exceeds the amount of taxes that would be available by over $1.5 million, without the source of revenue for one municipal employee" (*Boston Globe*, October 30, 1980). Similarly, Bradbury and Ladd (1982a, 1982b) stressed the considerable budget cuts Proposition $2^1/_2$ would require.

A decade and a half later, what effect has Proposition $2^1/_2$ had on municipal finances? Did

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the Proposition help or hurt Massachusetts citizens? Surprisingly, since the mid-1980s, there has been little research on the ultimate effects of property tax limitation measures.[2] This paper examines some of the consequences of Proposition 2½ during the 15 years since it was implemented.
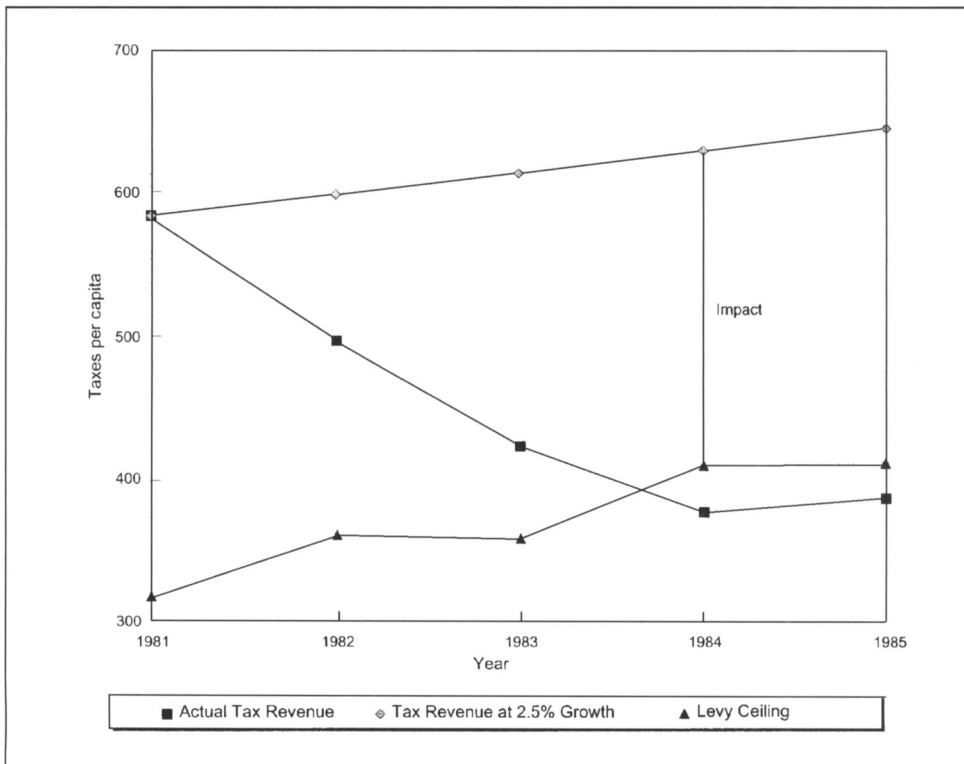
THE MECHANICS OF PROPOSITION 2½

Proposition 2½ established a *levy limit* for each town equal (in fiscal year 1982) to the lesser of current property taxes or 2.5 percent of property values. Municipalities were prohibited from imposing property taxes in excess of this amount, and those that were initially taxing above the levy limit were forced to reduce their tax burden by 15 percent annually until they reached the limit. About half of the communities in the state faced these initial reductions, with large cities hit particularly hard. Beyond this restraint, Proposition 2½ capped the growth of the levy limit at 2.5 percent annually (in nominal terms). After the initial reductions were completed, the 2.5 percent growth limit became the most binding part of the legislation.

Finally, the Proposition established a *levy ceiling* for each town equal to 2.5 percent of property values. Property tax collections were not allowed to exceed the levy ceiling even if that implied less than 2.5 percent annual growth in tax revenues. Property values in Massachusetts grew quite rapidly after 1982, however, so the levy ceilings did not bind. We thus do not focus on this constraint.

Figure 1 presents a concrete example of the initial impact of the Proposition: revenues in the city of Pittsfield, a community of about 50,000 people in the western part of Massachusetts. In

Figure 1
The Effect of Proposition 21/2 on Pittsfield, Massachusetts

1981, Pittsfield was taxing about $580 per capita, nearly 5 percent of property values. The initial levy limit (2.5 percent of property values) was only $320 per capita, 45 percent below the previous levy. To comply with the legislation, Pittsfield had to reduce taxes in 1982 and in 1983 by 15 percent nominally each year. By 1984, a reduction in tax revenues of less than 15 percent, combined with increases in property values, brought tax rates in Pittsfield to slightly below the required 2.5 percent. Tax revenue increased by a small amount in 1985. We measure the initial impact of Proposition 2½ on Pittsfield as the amount by which the town was forced to reduce taxes. We define this as the difference between the taxes the city could raise had tax revenue grown by 2.5 percent annually, and the amount the city was allowed to raise in the first year that it met the restrictions in the law (1984 for Pittsfield). In the case of Pittsfield, this initial impact is $218 per capita. For a town that was initially taxing at or below 2.5 percent of property values, the impact would be zero.

Table 1 shows some summary statistics on the initial property tax reductions required by Proposition 2½.[3] The data are drawn from the Municipal Data Bank of the Division of Local Services in the Massachusetts Department of Revenue. About half of municipalities faced immediate reductions in property taxes, and these cities and towns contained nearly three-quarters of the Massachusetts population. For the affected towns, these reductions amounted to 16 percent of initial taxes on average. Because larger communities faced bigger reductions, the aggregate decline in property tax revenue for local governments across Massachusetts was about 18 percent, a substantial impact.

PROPOSITION 2½ AND LOCAL REVENUE

The language of Proposition 2½ suggests that property tax revenues in Massachusetts should have declined significantly in the early 1980s and risen very slowly since then. In this section, we examine what actually happened to local revenue.

We begin with changes in tax revenue. Figure 2 shows the growth of nominal property tax revenue in Massachusetts between 1975 and 1995, and the first column of Table 2 shows mean growth rates for several sub-periods. We present nominal data because the Proposition specified nominal growth rates for tax revenue. We divide the 20-year interval into four periods. The first period is *pre-Proposition 2½, from 1975 to 1981*. Property tax revenue grew at an average rate of 6 percent per year (somewhat below the rate of inflation then), although annual growth was uneven. Growth was low in 1980, for example, as a result of a 1979 state law that limited tax

Table 1
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 initial 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 Massachusetts Department of Revenue, Division of Local Services.

growth in 1979 and 1980, but growth was high again in 1981, partly because of other features of that same legislation.

The second period covers the *initial implementation period for Proposition 2¹/₂, from 1981 to 1984*. The impact was dramatic. In nominal terms, property tax revenues fell by over 9 percent in 1982 and by over 2 percent in 1983 before rising by a mere 1 percent in 1984. Table 2 shows that nominal growth averaged -3.5 percent per year during this period. Because inflation averaged about 6 percent, this represented a very sharp decline in real property tax revenue.

The third period was the *era of economic expansion from 1984 to 1990*. Average growth of property tax revenue was nearly 7 percent annually, well above the rate of inflation. Finally, there is the *post-1990 period, beginning with the onset of the recession and ending with our data in 1995*. Despite the sustained recovery of the mid-1990s, tax revenue growth slowed to 5 percent per year. This still exceeds the rate of inflation, but by a lesser amount.

Total local revenue in Massachusetts recovered strongly from the early post-Proposition 2¹/₂ years. As the last column of Table 2 shows, total local revenue rose by only 1.7 percent in nominal terms between 1981 and 1984, and nearly 8 percent between 1984 and 1990. In the 1990s, total revenue has continued to grow, albeit less rapidly.

Revenue growth in Massachusetts has been greater than what supporters of the legislation initially intended. Since the growth of property tax revenue was supposedly capped at 2.5 percent annually, how could it have actually grown at a faster pace every year since 1985? Three factors explain why the impact of Proposition 2¹/₂ has proven substantially less than initially projected.

Changes in the Legislation

Proposition 2¹/₂ was a law, not a constitutional amendment. Hence, it could be amended or repealed by a majority of the legislature. The popularity of the Proposition precluded repeal, but the legislature did pass several amendments in December 1980 that permitted much higher revenue growth than the initial legislation allowed.

Perhaps the most important amendment allowed the levy limit to rise each year by the original 2.5 percent *plus* an allowance for new growth. 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. Thus, any increase in property tax revenue caused by new construction or by the substantial modification of existing structures, came in addition to the

Table 2
Growth Rates of Local Revenue in Massachusetts between 1975 and 1995

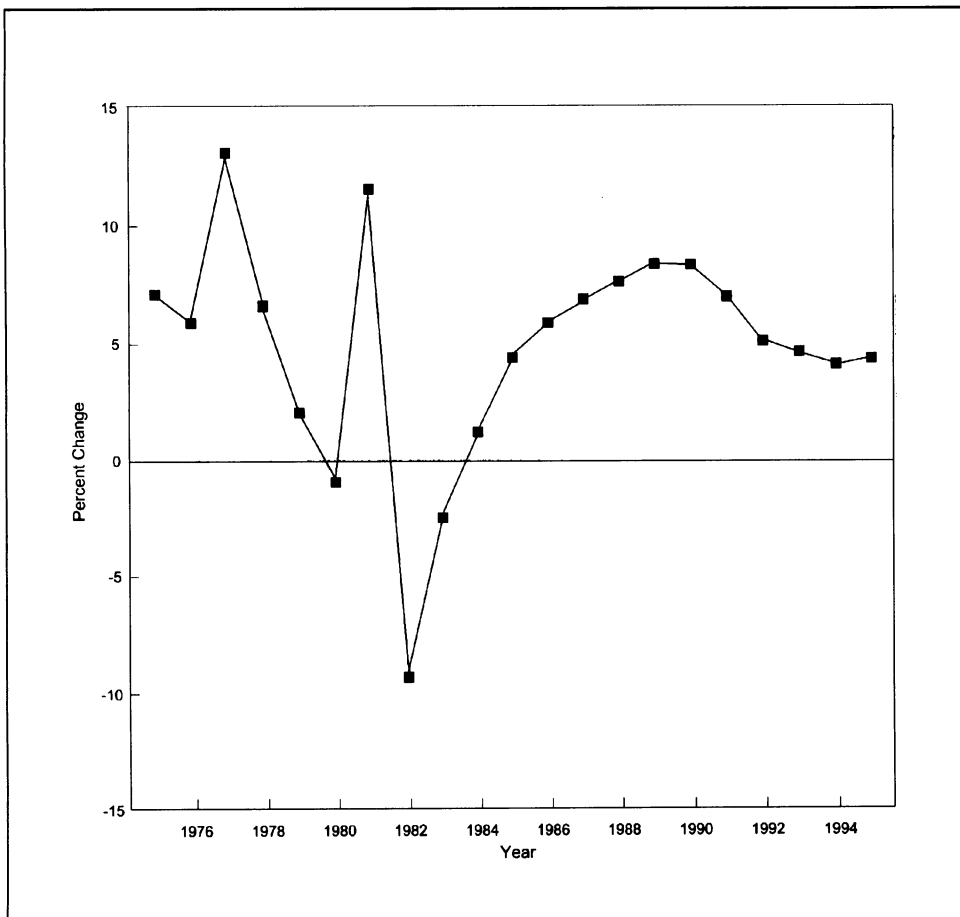| | Property Taxes | | | | |
| | | Effect Due To: | | | |
Years	Total	New Growth	Overrides/ Exclusions	State Aid	Total Revenue
1975-81	6.4%	—	—	2.6%	6.5%
1981-84	-3.5	0.9%	0.0%	3.4	1.7
1984-90	6.9	3.6	0.3	2.2	7.9
1990-95	5.0	1.9	0.5	0.1	3.6

Note: The values for new growth and for overrides and exclusions represent new amounts each year and do not include the 2.5 percent compounding of those amounts in following years. For state aid and total revenue, we show the 1978-81 average instead of 1975-81.

statutory 2.5 percent increase.

The Massachusetts economy boomed in the mid-1980s (the "Massachusetts Miracle"), so new growth contributed significantly to local revenue. Table 2 shows that new growth increased total property tax collections by 3.6 percent annually in the 1984-90 period (not including the 2.5 percent compounding of that growth each year). Growth in the state slowed sharply at the end of the 1980s and has not fully recovered. Tax revenue increases attributable to new growth have slowed as well, but they still account for revenue increases of nearly 2 percent annually.

The second important change in the law allowed a town's voters to increase property tax revenue above its levy limit by direct majority vote. This can occur in two ways. The first, called an "override," is a permanent increase in the levy limit, and can be enacted for any purpose.[4] The second, called an "exclusion," is a temporary increase in the levy limit for debt or capital expenditures. As Table 2 shows, overrides and exclusions raised annual growth in tax revenue by about 0.5 percent since the mid-1980s (again, not including the compounding of the override and exclusion amounts over time).

Figure 2
Growth of Property Tax Revenue in Massachusetts
1975-1995

Economic Conditions

Economic conditions were the second factor boosting real tax revenue in Massachusetts. Economic growth helped municipalities in two ways. First, the dramatic increase in economic activity in the state led to substantial new growth, and thus new tax revenue, for the reason noted above. Second, inflation fell sharply, and, as a result, the legislation became less binding in real terms than it otherwise would have been.

State Aid

Aid to localities, principally from the state government, was the third factor reducing the impact of Proposition $2^1/_2$. Before the Proposition, Massachusetts had one of the most decentralized municipal financing systems of any state. In 1977, Massachusetts localities raised 57 percent of their total revenue themselves, compared to a national average of 34 percent.[5] Proposition $2^1/_2$ put significant pressure on this system. Most legislators wanted to increase state aid to localities, but the appropriate amount of the increase and the distribution of the additional aid were contentious issues.[6] Indeed, state aid to localities has remained controversial throughout the 1980s and 1990s in large part because of Proposition $2^1/_2$.

Table 2 shows that growth in state aid added almost 3 percent annually to the growth of total local revenue during the 1980s. Increasing aid was partly a response to the passage of the Proposition, and partly a response to the boom in the Massachusetts economy that substantially increased state revenue. The economic slowdown in the state and the election of a Republican governor—fiscal conservative William Weld—brought more fiscal austerity to state finances in the 1990s. The result was that state aid fell in real terms from 1989 through 1992, and has increased only moderately since then.

THE IMPACT OF PROPOSITION $2^1/_2$ ON MUNICIPAL FINANCES

The previous section showed that local revenue in Massachusetts has grown significantly faster since the passage of Proposition $2^1/_2$ than had been foreseen. Yet, these aggregate numbers do not reveal whether local revenue growth would have been even faster in the absence of the Proposition. To determine the impact of Proposition $2^1/_2$ on local revenue, we compare changes in municipal finances in Massachusetts to changes in other states.

We use cross-state data from the Census of Governments to estimate models of the form:

$$R_{it} = \alpha + \beta_1 D_{MA} D_{82} + \beta_2 D_{MA} D_{87} + \beta_3 D_{MA} D_{92} + \gamma Y_{it}$$

$$+ \sum_i \delta_i D_i + \sum_t \delta_t D_t + \varepsilon_{it} ,$$

where R_{it} is real revenue per capita, Y_{it} is real income per capita, D_{MA} is a dummy variable for Massachusetts, the D_i's are dummy variables for each state, and the D_t's are time dummy variables. We include state and year dummy variables to capture cross-section and time-series differences in revenue, and we include income as a rough proxy for economic conditions.[7]

Rather than including a single dummy variable for years after the passage of Proposition $2^1/_2$, we trace the effects of the legislation over time. Thus, the ß coefficients show the effect on real revenue per capita in Massachusetts, compared to other states, in 1982, 1987, and 1992. Our data include one observation for each state for every five years from 1967 through 1992.

The first set of columns in Table 3 shows estimates of the ß coefficients using all states, and the second set of columns shows results based on a sample of only the New England states. Because a number of states (but no others in New England) passed local or statewide tax limitation measures, and because Massachusetts is probably more like its New England neighbors in other respects (such as general economic conditions), the New England sample may provide a better indication of what would otherwise have happened to Massachusetts revenue in the absence of Proposition $2^1/_2$.

The first column in each set shows the effect of Proposition $2^1/_2$ on real property taxes. The estimates from both samples imply that the Proposition reduced property tax revenue by $300 to

$500 per capita, which is roughly one-third their 1977 level. The full drop was felt within a short period of time (by 1987) and persisted through 1992.

The second column in each set shows the effect of Proposition 2½ on total local revenues—the sum of property taxes, intergovernmental transfers, and other revenue. For both samples, we estimate that the Proposition reduced local revenues, but the timing of this decline differs between the samples. Relative to the national average, total local revenues fell in Massachusetts by 1987 and remained low through 1992. Compared to the New England states, however, revenues remained about average through the 1980s, but then fell by 1992. Further work (not reported) shows that the difference in timing derives from a difference in the relative behavior of "other" local revenue. Compared to the nation as a whole, other revenue fell in Massachusetts in 1987, but compared to other New England states, it was essentially unchanged.

The third column in each set shows the effect of Proposition 2½ on total state and local revenues. The Proposition reduced state and local revenues by 1992, but it is not clear whether it had done so by 1987. Moreover, the standard errors on these estimates are large enough that we cannot reject the hypothesis that Proposition 2½ had no effect on total revenues in Massachusetts.

DISCUSSION

The results in the previous two sections lead to a clear conclusion: *Proposition 2½ had a significant impact on local revenue in Massachusetts, but a smaller impact than its supporters hoped for and its detractors feared.* Annual data for Massachusetts show that after a few years of falling real revenue, local revenue growth was relatively high despite seemingly draconian limits.

Table 3
Cross-State Evidence on the Impact of Proposition 2½

Variable	All States			New England States		
	Property Taxes	**Total Local Revenue**	**Total S/L Revenue**	**Property Taxes**	**Total Local Revenue**	**Total S/L Revenue**
Massachusetts effect						
1982	-197	-214	-129	-264	-30	-43
	(110)	(327)	(334)	(98)	(98)	(190)
1987	-396	-511	-351	-418	-38	-99
	(113)	(336)	(342)	(104)	(103)	(201)
1992	-316	-588	-201	-461	-314	-231
	(111)	(332)	(338)	(100)	(99)	(193)
Income	.045	.103	.150	.021	.036	.084
per capita	(.008)	(.020)	(.021)	(.021)	(.021)	(.040)
N	300	300	300	36	36	36
R²	.884	.910	.926	.913	.972	.980

Note: All regressions include state and year dummy variables. Revenue is expressed in real 1987 dollars. Standard errors are shown in parentheses. In Massachusetts in 1977, property taxes were $1,073 per capita, total local revenue was $1,893 per capita, and total state and local revenue was $3,274 per capita (all in 1987 dollars).

Cross-state data show that local revenue had declined in relative terms by 1992, and may or may not have fallen relatively by 1987. Thus, the effects of Proposition 2½ became most apparent after the economic slowdown in Massachusetts beginning at the end of the 1980s, and were much smaller during the earlier economic expansion.

What does the experience of Proposition 2½ tell us about municipal finances? One lesson of the Proposition is that partial controls on finances are likely to be less binding than they seem. Because the Proposition constrained local tax revenue but not state aid to localities, it allowed the state to replace much of the local revenue that would otherwise have been lost. Because legislative action exempted new growth from the limits, a rapidly growing economy brought in substantial additional revenue. Because towns had an "escape hatch" in the form of overrides and exclusions, revenue growth could exceed the limits imposed.

One might wonder why Proposition 2½ was not written in a way that prohibited such substitution. We suspect that two factors were at work. First, it is not easy to draft laws that close all possible loopholes. Second, many voters who support gentle restraint on local finances might not support draconian limits. Indeed, by fiscal year 1995, voters in three-quarters of Massachusetts communities had approved override or exclusion propositions that raised property taxes above what the tax limit would otherwise have been; in one-quarter of the communities, that increase exceeded 20 percent of the original limit.[8]

Even though Proposition 2½ had a smaller impact on local finances than was initially expected, it clearly had a restraining effect. The median-voter model predicts that the Proposition should not constrain local revenue at all; voters will just approve overrides and exclusions until revenues are at their desired levels. This does not seem true empirically, however: in 1995, 50 communities in the state were taxing between 99 and 100 percent of the levy limit, with only 13 communities below the 99 percent mark. The bunching of tax revenues near the Proposition's limits suggests that it is having a real effect on municipal finances. Indeed, the conclusion that fiscal rules matter is consistent with Poterba's (1996) review of the evidence on the effect of state budget institutions, and with the analysis of school budget referenda by Romer and Rosenthal (1982) and Romer, Rosenthal, and Munley (1992). We examine what sort of model explains the Massachusetts experience in a separate paper (Cutler, Elmendorf, and Zeckhauser, 1997).

A second lesson of Proposition 2½ is that fiscal restraint rules matter much more when economic conditions are bad than when they are good. As we noted above, after the Proposition's initial impact, it had a rather small effect during Massachusetts' boom years, but a significant effect when the economy deteriorated. Of course, the same concern is frequently raised about balanced-budget rules at both the state and federal levels. It may be that voters actually want tight constraints in bad times, and looser constraints when times are good.

NOTES

1. An inefficient government could be one that spends tax dollars on goods with no value to people or one that spends tax dollars on goods whose value is positive but less than their cost.

2. Notable recent exceptions include Bradbury, Case, and Mayer (1995) and Lang and Jian (1996), both of which study the effect of Proposition 2½ on property values, and Rueben (1996), who examines the impact of state and local tax limitation measures more generally.

3. 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.

4. An override cannot raise the levy limit above the levy ceiling. As mentioned earlier, this constraint is not very important because of rapid growth in property values in the state.

5. County governments and special districts play a rather small role in local fiscal matters in Massachusetts, unlike in some other states. Moreover, most school districts in the state are coterminous with the cities and towns.

6. California had a substantial surplus in its state budget before local property taxes were restricted, but Massachusetts did not.

7. We estimate the model in levels, but results are similar if we use logarithms. We omit Alaska because of the extraordinary changes in its local revenue due to oil revenues.

8. Following the passage of Proposition 13 in California, its leading advocates attempted to preclude state substitution by limiting state spending (Proposition 4, which was approved by voters) and by reducing state taxes (Proposition 9, which was not approved). For further discussion of the events in California, see Sears and Citrin (1985).

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