ADDICTED TO GROWTH?

AN ANALYSIS OF CAMBRIDGE'S RELIANCE ON DEVELOPMENT REVENUE AND THE IMPLICATIONS FOR REZONING

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April 7, 1998
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NOTE

This report is one of five prepared for Cambridge Residents for Growth Management by graduate students at Harvard University's John F. Kennedy School of Government. The reports examine the impacts of growth on traffic congestion (Jiyoung Chang) and city budgets (Elizabeth Kelly), the potential effects of downzoning on housing affordability (Phuc Tran), the enforcement of the zoning code (Peter Owen), and procedures for design review (Johanna Wohlin). These reports were completed as part of the Policy Analysis Exercise (PAE) requirement for the Master of Public Policy (MPP) degree. Each MPP student must complete a PAE for a real client; students are not allowed to receive compensation from their clients (beyond reimbursement of out-of-pocket expenses) and the determination of academic credit and grades rests with the faculty. The opinions expressed in these reports are those of the authors and are not necessarily shared by Cambridge Residents for Growth Management, Harvard University, the City of Cambridge, or any other person.

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I. EXECUTIVE SUMMARY

PROBLEM

This Policy Analysis Exercise (PAE) examines the effects of property development and growth on the municipal budget of the City of Cambridge. It is one of a series of five studies requested by Cambridge Residents for Growth Management (CRGM), a community-based grassroots organization that is advocating rezoning the city to control congestion and preserve diversity and the quality of life.

One of CRGM's basic concerns is that fiscal pressures may be encouraging the City to allow much more growth than would otherwise be desirable. New development and the added property taxes it brings have long been seen as a method of relieving the pressure on municipal budgets, particularly if the development is commercial or high income residential. Moreover, new growth is more important in Massachusetts since the passage of Proposition 2 ½.

METHODOLOGY OF ANALYSIS

The methodology used by this PAE is to examine the impacts growth has made on the city budget during the past twelve years, and to speculate what this experience implies for the effects of rezoning on Cambridge in the future. The analysis compares the experiences of Cambridge with three other Massachusetts municipalities, Brookline, Peabody, and Somerville.

Specifically, this PAE will assess the incentives that lead communities to choose fiscal strategies that involve growth. In addition, to assessing this analytical context, the PAE will analyze and compare historical trends to ascertain what they imply for the fiscal impact of growth on budget flexibility. The PAE examines trends in the following fiscal

factors: levy limit, actual tax levy, new growth as a proportion of the levy limit, non-residential growth as a proportion of total growth, total expenditures per capita and education expenditures per school pupil.

The three communities to which Cambridge will be compared, Brookline, Peabody and Somerville, were chosen to provide helpful comparison and contrasts to Cambridge. Brookline resembles Cambridge in several political and socioeconomic factors, but also offers the contrast of an affluent suburb with a high proportion of residential development. Peabody offers the comparison of a smaller city, similar in experience with commercial growth, but with different demographics. Somerville provides an example of a city that differs from Cambridge economically, but resembles Cambridge as an urban, densely developed community.

FINDINGS

The analysis shows that Cambridge's property tax revenues have increased faster than the comparison municipalities primarily because of Cambridge's greater growth. As a result, Cambridge's spending per capita has grown faster than the other communities and its education spending has maintained its high level compared to the other communities.

- **Levy Limit Growth:** Cambridge's levy limit grew by far the fastest among the communities analyzed. Property development has contributed a greater proportion to Cambridge's levy limit growth than the comparison communities.
- **Non-Residential % of New Growth**: Most of Cambridge's new growth has been non-residential. Its proportion of non-residential growth of total new growth is higher than the comparison communities.
- **Levy Limit and Tax Levy**: Cambridge's tax levy followed its levy limit growth increase. Its actual levy grew the fastest because it had the room to grow.
- **Total Spending**: Cambridge's per capita spending grew much faster than the comparison communities in real (adjusted for inflation) dollars.

- **Education Spending**: Cambridge's education spending per school pupil has been able to maintain its high level, though Peabody, with the second highest levy limit growth, grew slightly faster. On the other hand, Brookline, which has experienced a larger growth in school child population and the highest residential proportion of new growth, actually experienced a ***decrease*** in real terms in per pupil expenditures.

IMPLICATIONS & CONCLUSIONS

The analysis implies that if Cambridge were downzoned to discourage intense commercial development, Cambridge's expenditures could not grow as much in the future as they have in the past, and they might even be forced to decline slowly in real terms. Given that Cambridge expenditures are already relatively high, however, it may be less important to sustain the expenditure growth of the past and more important to preserve the quality of life in the future.

II. INTRODUCTION

THE PROBLEM

The size and scale of property development – whether residential or commercial – has long been controversial in Cambridge. Some residents associate increased growth with negative changes in the city, such as increased traffic congestion, heightened density, decreased diversity, and rising housing prices. Others view growth and property development as a natural result of the characteristics of the city which make it very attractive to commercial development and an affluent population.

Recently, this controversy has received increasing attention due to the local economic upturn. Concern about increased property development stimulated a number of Cambridge residents to form **Cambridge Residents for Growth Management (CRGM)**. CRGM succeeded in mounting a petition drive to change the zoning ordinance in Cambridge, in order to reduce and manage growth in the City. The petition proposed several changes including reducing the allowable floor area ratios (FAR) and the height and density of buildings. In September 1997, the City Council accepted a few aspects of the petition, but referred most to the Cambridge Community Development Department for further research and analysis.

One of the major concerns about the CRGM petition is that the changes proposed will place a major fiscal burden on the city. Because of Proposition 2 ½, the city is limited in the amount of property taxes it can levy to meet spending needs. New property development has allowed the city to increase its levy limit above the 2.5% yearly increase constraint mandated by Proposition 2 ½. With downzoning, it is argued, some developments would become so uneconomical that they would not be built, causing the city to forego major sources of potential property tax revenue. This would cause the city

budget to lose the flexibility that new property development creates. **Because of this concern, the question this Policy Analysis Exercise (PAE) will address is: Will reduced growth adversely impact the city budget?**[1]

THE CLIENT

Cambridge Residents for Growth Management (CRGM) is a city-wide grassroots organization that formed to mobilize community support for a ballot petition to promote growth management in Cambridge. Prior to the petition, members of the group had worked together informally to promote growth controls in Cambridge. The group is run by a steering committee comprised of local activists many of whom work professionally in planning and architecture. One member of the steering committee also holds an elected position on the Cambridge Planning Board, which makes zoning decisions for the city.

The petition was the result of a massive mobilization campaign, which educated city residents while it encouraged them to vote for the proposal. While much of the petition has been referred to the Cambridge Community Development Department for further research and study (scheduled for approximately two years), CRGM continues to advocate and organize around specific growth control controversies within the city. In addition, it works to ensure that the city government follows through with its requirement to analyze the petition and to implement what the City Council has already passed.

[1] These criticisms are outlined in a fiscal impact analysis conducted by the City's Treasurer's Office to assess the effects of the CRGM petition. The study shows historically how the proposed changes, if they had been in place, would have resulted in decreased development and therefore decreased tax revenue for the city. The City also made projections of similar trends in the future. While some assumptions, such as the actual change in the amount of development or the costs of the development to the City, could be questioned, there will be less revenue for the city if downzoning results in less development. This PAE's analysis of downzoning's potential impact on the city budget will have a different focus.

While the petition was being debated, CRGM attempted to assuage concerns about the fiscal impact by arguing that the petition would not increase taxes since the petition does not add to nor subtract from what the city already raises through taxes. As quoted in one of the group's publications, "Cambridge has an excellent tax base. By helping to maintain the city's livability, the petition will maintain Cambridge as a desirable location, and thus maintain the tax base. If we overdevelop it, it will cease being desirable and businesses and residents will leave."[2]

The results of this PAE will assist CRGM as it pushes for growth controls now and in the future. It will help the members understand how to balance growth controls with fiscal and economic considerations. In addition, the analysis should help city officials in Cambridge and other communities in Massachusetts to understand the connection between growth controls and fiscal policy.

METHODOLOGY

In order to answer the question that is the focus of this PAE, **Will reduced growth adversely impact the city budget?**, the methodology used is to examine what impacts growth has had on city budgets in the past twelve years, and to speculate what this experience implies for the effects of rezoning on the City. The experience of Cambridge will be compared with three surrounding communities, Brookline, Peabody, and Somerville.

These comparison communities were chosen because each offers an informative comparison to Cambridge for different reasons. Brookline, located across the Charles

[2] Cambridge Residents' Reporter (Cambridge: Cambridge Residents for Growth Management, September 1997), Volume 1, Number 4.

River from Cambridge, resembles Cambridge in several political and social factors, but also differs as a densely populated town with probably more residential than commercial property development. Peabody, located further away from Cambridge than the other comparison communities, offers the comparison of a suburb with similar commercial growth potential, but the contrast of different demographics and less density. Somerville, abutting Cambridge to the north, provides an example of a city unlike Cambridge in commercial growth trends, but similar to Cambridge as an urban, densely developed community.

Table 1 below shows some demographic statistics that reveal the comparisons and contrasts between the communities.

TABLE 1: DEMOGRAPHIC AND ECONOMIC COMPARISONS [3]

	CAMBRIDGE	BROOKLINE	PEABODY	SOMERVILLE
Demographic Fact				
Kind of Community	Urbanized Center	Econ Dev. Suburb	Econ. Dev. Suburb	Urbanized Center
1996 Population	93,707	54,137	48,365	74,356
Population Breakdown				
< 19 years old	20%	18%	23%	19%
20 – 59 years old	67%	63%	57%	65%
> 60 years old	14%	19%	19%	17%
1996 Labor Force	57,840	30,552	26,298	40,893
Economic Fact				
1996 Avg Unemp Rate (%)	2.5	2.1	3.7	4.3
Per Capita Income ($)	19,879	29,044	17,002	17,224
Median Household Income	33,140	45,598	39,800	32,455

Demographically, while the communities have different population sizes, they have similar population distributions among age groups. Labor force size is approximately the same as a percentage of total population across the communities. Somerville offers the comparison of an urbanized center, while the other communities offer the contrast of

[3] Statistics are from 1990, unless specifically indicated as 1996. The State Median Household Income in 1990 was $36,952. All data in this report is from the Division of Local Services database, unless otherwise noted.

suburbs. Economically, Brookline is more affluent with lower unemployment than Cambridge. Somerville is less affluent with higher unemployment, and Peabody, depending on the income measure, is more or less affluent with higher unemployment.

STRUCTURE AND ORGANIZATION

This report will be organized into four main sections. The first section, "Incentives for Growth: Why Do Municipalities Want to Grow?" will describe in general how development yields net revenues for communities, and which type of development (residential or non-residential) yields the most. This section will then proceed to analyze the legal reasons, under Proposition 2 ½, why cities in Massachusetts might want to grow. This will set the context for the comparative analysis of the importance of growth among the communities. The next section, "Importance of Growth in Cambridge's Past Fiscal Strategy" provides an historical and comparative analysis of how growth might have created budget flexibility by focusing on the trends in levy limit growth and the property tax levy. The third section, "Effects of Growth on Spending" analyzes the relationship between growth and spending per capita and school spending per school child, in the context of the trends in property tax and net state aid as a proportion of revenue. Finally, the report will conclude with "Implications for the Future." With the understanding gained through the analysis of the fiscal variables, the report will speculate what this experience implies for the future effects of rezoning on Cambridge.

II. INCENTIVES FOR GROWTH – WHY MUNICIPALITIES WANT GROWTH?

In order to determine whether reduced growth will adversely impact the city budget, we must understand how growth relates to budget flexibility. This section will examine how property development affects municipal expenditures and how the law, Proposition 2 ½, encourages municipalities to desire growth in order to meet their spending needs.

PROPERTY GROWTH AND MUNICIPAL EXPENDITURES & REVENUE

Because of the differences in demands placed on municipal budgets by various types of development, some yields more net revenue than others. The conventional wisdom that municipalities find commercial development more attractive than residential development is due to the assumption that commercial development generates low costs but high property tax revenues.[4] Incremental costs of commercial development, such as public safety, water and sewage, and other infrastructure, are minor compared to the fiscal benefits of increased tax levies. In addition, residential development generally implies higher costs to pay for the services for the new residents.

To determine whether this general knowledge applies to Cambridge and the comparison communities in this study, it is informative to look at the local expenditures of a typical budget year among the communities. In Table 2, I have divided the budget items into three categories: "Mainly Residential," "Mixed," and "Overhead." The "Mainly Residential" category includes spending items that can only relate to the residential population. The "Mixed" category includes types of spending that could apply

to both residential and non-residential development. The "Overhead" category is for spending that the government has to incur for operations and therefore covers both residential and non-residential development. From this simple methodology, it is apparent that most local spending funds the results of residential development.

TABLE 2: WHAT DO MUNICIPALITIES SPEND MONEY ON?
Expenditure Breakdown – Percent of Total Expenditures (FY96)

	BROOKLINE	CAMBRIDGE	PEABODY	SOMERVILLE
Mostly Residential				
Culture & Recreation	4%	3%	2%	2%
Health & Welfare	1%	2%	1%	1%
Education	33%	33%	41%	30%
Sub-Total	***37%***	***38%***	***44%***	***33%***
Mixed				
Debt Service	6%	6%	2%	4%
Intergovernmental	13%	10%	3%	14%
Public Safety	17%	15%	13%	16%
Public Works	7%	7%	18%	6%
Sub-Total	***43%***	***38%***	***36%***	***40%***
Overhead				
Fixed Costs	11%	18%	15%	18%
General Government	7%	6%	4%	9%
Other	0%	1%	1%	0%
Sub-Total	***18%***	***25%***	***20%***	***27%***
RESIDENTIAL*	**65%**	**69%**	**72%**	**66%**
NON-RESIDENTIAL	**35%**	**31%**	**28%**	**34%**

*To determine the portion of the budget that pays for residential expenses in a typical fiscal year, I summed the total percentage of "Mainly Residential" with half of "Mixed" and "Overhead."

Clearly, one of the reasons that residential development is more expensive for municipalities is the cost of education, which ranges from 30% to 41% of the total expenditures of each community. Education is more expensive for communities, depending on the property value of the residential development that yields school children. The same principle applies: the higher the property value, the higher the tax base and tax revenues (and possibly the fewer the children), the lower the net costs.

[4] Alan A. Altshuler and Jose A. Gomez-Ibanez, Regulation for Revenue: The Political Economy of Land Use Exactions (Washington, DC: The Brookings Institution, 1993), p. 78.

In addition to the higher costs that residential development incurs, it generally raises less revenue. Through classification, implemented in the early 1980s, municipalities in Massachusetts can charge different property tax rates on residential and non-residential property. Prior to official classification, a de facto system existed in Cambridge, through which residential property was not assessed at full value for the purpose of assessing taxes.[5] Under classification, residential property must be taxed at least 65% of full valuation, while non-residential property must not be taxed more than 150% of full valuation. As an example of the different rates, residential property is being taxed at rate of 13.43, while commercial, industrial and personal property is being taxed at 35.98 in the current fiscal year in Cambridge. Since property taxes are one of the most important sources of revenue for municipalities, the differential revenue generation potential of non-residential property is a critical factor in understanding how property development impacts budget flexibility.

The next critical incentive for growth to analyze is Proposition 2 ½. Without this law, the costs of residential development or the system of classification that makes non-residential development more profitable would not be such important incentives for growth.

PROPOSITION 2 ½: THE HISTORICAL CONTEXT

Massachusetts, which had earned the sobriquet "Taxachusetts" by the late 1970s, passed the Proposition 2 ½ ballot initiative in November 1980 by a 3:2 vote. The

[5] Ann Cook and John Ruston, The Property Classification Process in Cambridge, Massachusetts, Occasional Paper Series #88-05 (Cambridge, MA: Lincoln Institute of Land Policy, 1987), p. 13, 15.

initiative took effect in FY82 (July 1981 to July 1982).[6] This overwhelming support was a manifestation of the voters' concern that the level of property taxes, which had grown from 50% above the national average in 1967 to twice the national average in 1977, was too high.[7]

Proposition 2 ½ established two forms of control on property taxes. First, it established a "levy ceiling", which is the absolute maximum level of property taxes that can be levied. This ceiling was set at 2.5% of the "full and fair cash value" of all taxable real and personal property. The second control it established is a "levy limit", which is the maximum amount a community can levy in a given year: 102.5% of the previous year's levy limit plus certain allowable increases.

When the law was originally passed, there were no allowances for inflation, population growth, or additions to the tax base. The allowable increases for new growth or specific votes by the residents were added as amendments a few months after the law passed.[8] For most municipalities, the levy limit has been the binding factor for property taxes, rather than the levy ceiling, because of the general increases in property values in the state. However, if property values deflate, the levy ceiling could become the binding constraint.

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[6] Sherry Tvedt Davis, "A Brief History of Proposition 2 1/2" in Proposition 2 ½ : Its Impact on Massachusetts – A Report from the Impact 2 ½ Project at the Massachusetts Institute of Technology, Lawrence E. Susskind, ed. (Cambridge, MA: Oelgeschlager, Gunn & Hain, 1983), p.3, hereafter referred to as Davis.

[7] David M. Cutler, Douglas W. Elmendorf, and Richard J. Zeckhauser, Restraining the Leviathan: Property Tax Limitation in Massachusetts, NBER Working Paper No. 6196 (Cambridge: National Bureau of Economic Research , 1997), p. 4, hereafter referred to as Cutler et al.

[8] Division of Local Services, Levy Limits: A Primer on Proposition 2 ½ (Boston, MA: Massachusetts Department of Revenue), p. 14, hereafter referred to DLS. See Appendix III for additional detail on Proposition 2 ½.

New Growth Allowances

The allowance for new growth is calculated by "multiplying the increase in the assessed valuation of qualifying property by the prior year's tax rate for the appropriate class of property". The new growth becomes part of the levy limit base that is then increased by two-and-a-half percent in subsequent years leading to budget flexibility in the future. This amendment to allow for growth was passed because it was reasoned that new development brings new costs that could strain local budgets. Without allowances for new growth, other taxpayers could suffer tax increases to pay for the costs of new development.[9] Alternatively, if taxes could not be raised because of Proposition 2 ½ limitations or other revenue constraints, the new development could lead to the reduction in the quality of municipal services.

Other Allowances: Exclusions and Overrides

In addition to the new growth allowance, the amendments permitted the electorates of municipalities to pass overrides and exclusions to escape the constraints of Proposition 2 ½. An override is a vote to increase the levy limit, resulting in a permanent increase for any purpose, which then, as part of the base, increases by 2.5% per year. An override cannot increase a community's levy limit above the threshold of the levy ceiling. Finally, voters can also pass exclusions, which are amounts above the levy limit *or the levy ceiling* that a municipality can levy only for certain purposes. Exclusions are not permanent increases in the levy base and are often passed for the purpose of raising funds for debt service costs.

[9] DLS, p. 14.

It is important to understand (and emphasize) that Proposition 2 ½ directly restricts the levy limit and indirectly constrains the amount of taxes actually levied.[10] For example, assume that in the last fiscal year, a municipality's levy limit was $100,000, but the community only levied $90,000. In the current year, the levy limit without allowances would be $102,500. The town could levy up to that limit, meaning that the tax levy could increase fourteen percent (from $90,000 to $102,500). However, in the next year, taxes could only increase 2.5% since the tax levy would be at the level of the levy limit, unless the community grows or passes and an override or exclusion.

IMPACTS OF PROPOSITION 2 ½ -- CAMBRIDGE

During its initial implementation, Proposition 2 ½ dramatically affected most communities in Massachusetts. According to Cutler et al., almost half of all municipalities faced immediate reductions (about 16% of 1981 taxes on average). The aggregate decline in property tax revenue was 18%. Furthermore, the law reduced property taxes by a total of $500 million across the state within three years.[11]

When Proposition 2 ½ was implemented, Cambridge had 96,000 residents within six square miles -- it was the fifth largest municipality in Massachusetts and the fourth most densely populated city in the United States. Since the 1950s, it had experienced a decline of its manufacturing base, which contributed to the changing demographics of the

[10] Cutler et al. states that the ceiling has been unimportant because property values grew so rapidly, so it was unlikely that the levy limit would grow to the point where it would meet the levy ceiling. One official at the Division of Local Services stated that now the ceiling is becoming more of a constraint for some localities .
[11] Cutler et al., pp. 7, 3.

city.[12] While industrial development was declining during this time period, office and commercial development were on the rise[13]

Because Cambridge's local property tax levy was more than 2.5% of the full and fair cash value of all property, the city had to reduce taxes. In fiscal year 1982, Cambridge levied $67.96 million, a 15 percent (for a total of $12 million) reduction from the previous year. In the following fiscal year, its tax levy had to be reduced to $56 million. Given the large amount that needed to be cut, Cambridge initially faced tremendous fiscal challenges and therefore engaged in several strategies, ranging from trying to repeal the measure, to instituting property revaluation to seeking alternative revenue sources such as new taxes.[14]

Opponents of the proposals for new taxes were successful in arguing that such a fiscal strategy would be bad for business climate. Instead, they proposed spending cuts through elimination of waste and unnecessary services, *encouragement of new development*, analysis and modification of the city's policies on condominium conversions and vacancy decontrol; and especially *promotion of business expansion.* (Emphasis added) In the end, Cambridge turned to across the board budget cuts, new revenue through user fees, and state aid.[15] The table below shows that Cambridge was the fourth highest loser of revenues per capita in Massachusetts.

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[12] Jan Lawrence, "Cambridge: A Search for New Revenues" in Proposition 2 ½ : Its Impact on Massachusetts – A Report from the Impact 2 ½ Project at the Massachusetts Institute of Technology, Lawrence E. Susskind, ed. (Cambridge, MA: Oelgeschlager, Gunn & Hain, 1983), p.150, hereafter referred to as Lawrence.

[13] Lawrence, p. 149.

[14] Lawrence, pp. 153-155. These alternative revenue sources included tax increases (1% payroll tax, 1% tax on professional services; 50% tax on assessed value of currently tax-exempt institutions (Harvard and MIT); and a head tax on dorm residents). Also, the City Council created a "Citizen's Task Force," representative of diverse viewpoints on Proposition 2 ½, in order to investigate strategies for coping with the measure.

[15] Lawrence, p. 155, 165. The departments that were most affected by the cuts were education, police, fire, public works; least affected were community development, traffic, hospital and human services. The user

TABLE 3: PER CAPITA REVENUE LOSSES DURING FIRST YEAR OF IMPLEMENTATION OF PROPOSITION 2 ½[16]			
MUNICIPALITY	POPULATION (1981)	FY82 TOTAL REVENUE LOSS ($)	FY82 PER CAPITA REVENUE LOSS ($)
Comparison Communities			
Cambridge	**95,322**	**13,483.855**	**142**
Brookline	55,072	8,376,611	152
Peabody	45,976	5,414,068	118
Somerville	77,372	7,116,526	92
Top Revenue Losers			
Newton	83,622	13,635,435	163
Burlington	3,813,412	23,486	162
Boston	562,994	88,017,787	156
Cambridge	**95,322**	**13,483.855**	**142**
Quincy	84,743	11,932,706	141

IMPACTS OF PROPOSITION 2 ½ -- STATE-WIDE

Originally, the voters who passed Proposition 2 ½ thought that it would reduce taxes without cutting services, while economists thought it would reduce services. According to Cutler et al., neither was correct. Because of the strong economy in Massachusetts in the late 1980s, the reduction imposed by the proposition was offset by a combination of state aid and new growth. A decrease in inflation also played a role. During the economic downturn in the 1990s, most Massachusetts municipalities felt more of a squeeze, experienced mostly in education and public works budgets.[17]

The role that new growth played in allowing for levy limit growth, and therefore spending flexibility, was very clear in the late 1980s. This changed dramatically in the

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fees included raising or adding water fees, rent control fee, garbage collection fee. Even though state aid helped Cambridge, it was not enough. In fact, a predicted $2.3 million loss in state aid, along with the property tax rollback mandated by 2 ½ resulted in the suspension of Cambridge's AA bond rate from March to July 1981 by Moody's Investment Service.

[16] Alan Tosti, "Proposition 2 ½ Amended: What Communities Can and Cannot Do" in Proposition 2 ½ : Its Impact on Massachusetts – A Report from the Impact 2 ½ Project at the Massachusetts Institute of Technology, Lawrence E. Susskind, ed. (Cambridge, MA: Oelgeschlager, Gunn & Hain, 1983), pp. 16-20, hereafter referred to as Tosti. Cambridge lost the fourth most out of multi-million dollar losers.

[17] Cutler et al., pp. 1-3.

1990s, when municipalities as a whole experienced reduced construction and reduced state aid (in nominal terms). Therefore, they drew down their excess capacity and raised taxes to the levy limits. However, this approach was quickly exhausted, because, by 1991, excess capacity averaged only about one-half of one percent. Municipalities then turned to overrides, which was also a short-lived strategy. The economy needed to pick up again in 1991 to meet revenue demands.[18] These state-wide trends will be informative for the comparison of the role that growth played in budget flexibility in Cambridge and the other municipalities.

In summary, incentives for growth, and non-residential growth in particular, are critical to understand in assessing the potential impact of reduced growth on the Cambridge city budget. Municipal expenditures incurred by non-residential growth are lower than residential expenditures. Non-residential property development yields higher tax revenues through classification. Both of these facts are intensified through Proposition 2 ½. If a community wants to increase taxes, it virtually has to grow, or has to have grown in the past and not levied up to the limit. If inflation grows at a rate higher than 2.5% and no growth occurs, the municipality could actually experience a real *decrease* in expenditure capability.

[18] Cutler et al., p.11.

III. IMPORTANCE OF GROWTH IN CAMBRIDGE'S PAST FISCAL STRATEGY

Based on these incentives for growth, the analysis now turns to comparing levy limit trends and the role of growth among the communities. This section will address the following questions: Does growth get Cambridge out of the levy limit bind created by Proposition 2½? If so, what type of growth (residential or non-residential)? These questions will be answered by analyzing and comparing the following trends from 1985 to 1997: the overall changes in the levy limit; the overall changes in the new growth component of the levy limit; the proportion of new growth attributable to residential growth; and the relationship between the levy limit and the actual tax levy.

GROWTH OF LEVY LIMIT

In order to understand the relative importance of growth to each community, the first necessary comparison is the overall increase in the levy limit and the contribution of growth to this increase. Because the communities under Proposition 2 ½ had to cut their levy limits before they could increase them at 2.5%, an accurate comparison can only be made from the point at which the levy limits started to grow automatically at 2.5%.[19] Table 4 below shows the growth of each municipality's levy limit from FY85 to FY97, breaking down how much new growth contributed to the overall change.

[19] Brookline and Peabody started to grow at 2.5% in FY83; Cambridge started to grow at 2.5% in FY84; I do not have data for Somerville prior to FY85, so have chosen this as the base year to make accurate comparisons.

TABLE 4: GROWTH OF LEVY LIMIT (FY85-FY97)

Overall Growth of Levy Limit

	Cambridge	Peabody	Brookline	Somerville
Original FY85 Levy Base	**69,666,391**	25,207,575	43,709,423	29,744,406
Estimated FY97 Levy Limit	**93,693,551**	33,901,386	58,784,315	40,002,919
Actual FY97 Levy Limit	**158,823,735**	49,890,946	84,097,133	49,288,368
Estimated % Change*	**34%**	34%	34%	34%
Actual % Change**	**128%**	98%	92%	66%
Breakdown of Increase				
	Cambridge	Peabody	Brookline	Somerville
FY85 Levy Base	**69,666,391**	25,207,575	43,709,423	29,744,406
Automatic 2.5%***	**24,027,160**	8,693,811	15,074,892	10,258,513
New Growth	**65,130,184**	15,989,560	22,202,968	9,285,449
Overrides	**-**	-	3,109,850	-
FY97 Levy Limit	**158,823,735**	49,890,946	84,097,133	49,288,368
FY97 Levy Limit Percentage Breakdown				
	Cambridge	Peabody	Brookline	Somerville
FY85 Levy Base	**44%**	51%	52%	60%
Automatic 2.5%	**15%**	17%	18%	21%
New Growth	**41%**	32%	26%	19%
Overrides	**0%**	0%	4%	0%

*Percentage increase of the estimated levy limit over the base. This is the amount by which all communities levy limits will grow.

**Percentage increase of the actual levy limit over the base.

***This figure includes only the automatic 2.5% growth guaranteed to each community.

"Original FY85" is the levy base from fiscal year 1985. "Estimated FY97" is what the levy limit would have been if it had only grown at the automatic 2.5% allowed by Proposition 2½. "Actual FY97" is the actual levy limit in fiscal year 1997. The "Estimated % Change" is 34% for all of the communities because this the amount that the levy limit would have increased over the base in FY85 just from the automatic 2.5% increase during the period from FY85 to FY97. The "Actual % Change" is the percentage increase of the actual FY97 levy limit over the FY85 levy base. **The levy limit increased the most in Cambridge at 128%, followed by Peabody at 98%, then by Brookline at 92%, and the least in Somerville at 66%.**

To figure out the true percentage of the levy limit in FY97 that is attributable to new growth, additional calculations have to be made. As discussed above in the section on Proposition 2 ½, not only does new growth add to the levy limit each year, but it also increases the levy limit base that goes up automatically at 2.5% per year. (Please see the footnote below for more details on calculations).[20] **Of the four communities, new growth accounted for the most of the levy limit increase in Cambridge at 41%, followed by Peabody at 32%, then by Brookline at 27% and least in Somerville at 19%.** From such a summation, new growth overall appears relatively more important for levy limit increases in Cambridge than in the other communities.

RELATIONSHIP BETWEEN LEVY LIMIT AND NEW GROWTH

Based on the previous incentives for growth discussion, it is important to look at the type of growth that occurs because the type of growth determines how much the levy limit will increase. Table 5 shows the overall totals and percentages in the breakdown of the new growth (residential versus non-residential) from FY88 to FY97.[21] From this summation, it is clear that during the past ten years, Cambridge's new growth, along with

[20] In order to separate out the gross impact of growth and its contribution to the levy base (that increases 2.5% per year), I have determined what the levy limit would have been if no growth had occurred. To do this, I have calculated a 2.5% annual growth factor for the years between 1985 and 1997 (1.025 to the 12th power – for the 12 years). I then multiplied this by the original base in FY85 to get the amount that the levy limit would have been without growth or overrides. "Automatic 2.5%" then equals the "Estimated FY97 Levy Limit" figure minus the "Original FY85 Levy Base" figure. "New Growth" equals the "Actual FY97 Levy Limit" minus the "Automatic 2.5%" growth amount minus "Overrides" (including 2.5% to the nth power -- in this case n=3 for Brookline -- of the override that automatically increases as it becomes part of the base). To determine the percentage breakdown, these figures are divided by the actual FY97 levy limit and multiplied by 100.

[21] The Division of Local Services provided yearly data from 1988 to 1997 with the breakdown of growth between residential and nonresidential. Non-residential includes commercial, industrial, and personal property. I calculated the percentages by summing the yearly numbers of both residential and non-residential and then divided by the sum of the total growth. Brookline is missing FY88 data.

Peabody's and Somerville's, has been dominated by non-residential property development. Most of Brookline's growth has been residential.

TABLE 5: NEW GROWTH COMPONENTS: RESIDENTIAL AND NON-RESIDENTIAL (FY88 TO FY97)

	Cambridge	Brookline	Peabody	Somerville
Total Residential	**7,142,197**	5,993,663	2,922,057	1,348,444
Total Non-Residential	**28,027,151**	2,636,511	7,019,512	3,174,681
Total New Growth	**35,169,348**	8,630,174	9,941,569	4,523,125
% Residential	**20%**	69%	29%	30%
% Non-Residential	**80%**	31%	71%	70%

These overall trends are echoed in the year-to-year analysis, as the percentage breakdown in Table 6 shows. Residential development is a much lower percentage in Cambridge than in Brookline, Peabody and Somerville in most years for which data is available. In FY90, FY91, and FY94, Somerville has slightly lower new residential growth than Cambridge, but its new growth proportion of the levy limit is generally smaller than Cambridge's, so this difference is not that important. In FY95, Peabody has less residential than Cambridge as a proportion of new growth. This is a dramatic change from the previous years when Peabody had more residential than commercial. In FY97, Cambridge experienced a dramatic increase in its residential proportion of new growth, which is probably attributable to the end of rent control.

TABLE 6: RESIDENTIAL AS % OF NEW GROWTH: YEAR-TO-YEAR (FY88-FY97)

	fy88	fy89	fy90	fy91	fy92	fy93	fy94	fy95	fy96	fy97
Cambridge	**3%**	**15%**	**20%**	**19%**	**6%**	**11%**	**17%**	**14%**	**15%**	**60%**
Brookline*		61	55	49	72	79	49	90	83	72
Peabody	39	45	41	39	60	66	53	7	17	32
Somerville	15	53	17	17	24	27	16	5	60	35

*Data missing for FY88.

Along with looking at the increase in the proportion of new property growth as a percentage of the levy limit, it is also critical to look at the proportion of exclusions and overrides. Cambridge, Peabody and Somerville have passed neither overrides nor exclusions during the years under examination. Brookline, on the other hand, used the override in FY95 and exclusions in each of the fiscal years from 1993 to 1997. (See Appendix IV for the individual data tables, which break down yearly information for each of the communities). It will be interesting to see if this type of action in the more recent years of the implementation of Proposition 2 ½ provided Brookline with more budgetary flexibility than the other two municipalities.

RELATIONSHIP BETWEEN LEVY LIMIT AND TAX LEVY

To understand the possible flexibility that levy limit growth might offer, we must also examine the relationship between levy limit growth and increases in the actual tax levy. The table below shows the comparison between the levy limits and tax levies in FY85 and FY97 and the relative percentage increases.

TABLE 7: LEVY LIMIT COMPARED TO ACTUAL TAX LEVY (FY85-FY97)

	Cambridge	Peabody	Brookline	Somerville
Original Tax Levy fy85	**72,370,023**	25,504,571	48,243,761	29,411,849
Original Levy Limit fy85	**69,666,391**	25,207,575	43,709,423	29,744,406
New Tax Levy fy97	**148,070,000**	39,538,603	84,086,278	46,489,329
New Levy Limit fy97	**158,823,735**	49,890,946	84,097,133	49,288,368
Difference - Tax Levy	**75,699,977**	14,034,032	35,842,517	17,077,480
Difference - Levy Limit	**89,157,344**	24,683,371	40,387,710	19,543,962
% Change - Tax Levy	**105%**	55%	74%	58%
% Change - Levy Limit	**128%**	98%	92%	66%

The tax levy trends generally follow the levy limit growth trends, except for Peabody. These numbers show that Somerville was constrained somewhat by its limit, while Peabody kept its taxes much lower than it was forced to its levy limit. The growth in the levy limit in Brookline is quite high, given the little amount of available space for development. This increase in the limit could be attributable to the end of rent control, which has led to an increase in residential property valuation.[22]

Peabody's levy limit grew 43% more than its actual tax levy. This tremendous difference is part of a concerted effort by the local government of Peabody. As part of its economic development strategy, Peabody has tried to increase commercial development in order to prevent the need to increase the tax levy by 2.5 percent. The city has tried to balance the desires of the residents for a liveable community, with parks and neighborhoods, while capitalizing on its prime location for business. Business has located in Peabody because of its low tax rate and the aim of the city is to maintain this trend.[23]

In addition to the overall change in the tax levy, it is also helpful to compare year-to-year trends. By looking at the proportion of the tax levy to the levy limit year-to-year, we can see the trends in how closely the communities were to taxing at their full capacity.

TABLE 8: ACTUAL LEVY AS % OF LEVY LIMIT (FY85-FY97)

	fy85	fy86	fy87	fy88	fy89	fy90	fy91	fy92	fy93	fy94	Fy95	fy96	fy97
Cambridge	**97**	**92**	**89**	**88**	**88**	**93**	**94**	**98**	**99**	**100**	**100**	**96**	**93**
Brookline	100	100	99	100	100	100	100	100	100	100	100	100	100
Peabody	97	95	94	92	88	89	86	86	84	78	76	76	79
Somerville	97	100	90	89	89	90	100	100	100	97	97	95	94

[22] Interview with local official from Brookline, MA, March 11, 1998. According to this interviewee, the growth in Brookline in the '90s is clearly attributable to the end of rent control. Brookline is a built out

This analysis reveals that Cambridge was able to levy lower taxes as a proportion of its levy limit in the late 1980s as it experienced the property development spurt. This changed in the 1990s, as its proportion of the tax levy to the levy limit grew to 100% by 1995. In the last two years, the proportion is again decreasing, indicating a growing distance between taxes levied and the levy limit. Somerville's trend is the most similar to Cambridge. Alternatively, Brookline almost always levied taxes to the levy limit, while Peabody had the most room between its tax levy and levy limit. Through the whole period, except for the last fiscal year, Peabody experienced a downward trend in its proportion – less and less taxes were levied as a proportion of its limit.

Table 9 provides a more detailed comparison. It compares the percentage change between fiscal years in the levy limit and the actual levy between FY85 and FY97.

TABLE 9: LEVY LIMIT VS. ACTUAL LEVY
-- Year to Year Analysis (FY85-FY97)

Rate of Growth of Levy Limit

	fy85	fy86	fy87	fy88	fy89	fy90	fy91	fy92	fy93	fy94	fy95	fy96	fy97
Cambridge	**7%**	**8%**	**15%**	**7%**	**8%**	**9%**	**7%**	**4%**	**4%**	**3%**	**4%**	**4%**	**5%**
Brookline	10%	6%	5%	6%	4%	4%	4%	4%	5%	5%	7%	4%	4%
Peabody	5%	7%	7%	7%	7%	5%	4%	3%	3%	3%	10%	4%	4%
Somerville	2%	3%	11%	4%	5%	3%	4%	3%	3%	3%	4%	4%	4%

Rate of Growth of Actual Levy

	fy85	fy86	fy87	fy88	fy89	fy90	fy91	fy92	fy93	fy94	fy95	fy96	fy97
Cambridge	**4%**	**3%**	**11%**	**5%**	**9%**	**16%**	**8%**	**9%**	**4%**	**4%**	**4%**	**0%**	**3%**
Brookline	10%	6%	4%	6%	5%	4%	4%	4%	5%	5%	7%	4%	4%
Peabody	1%	5%	6%	4%	4%	5%	1%	3%	1%	-5%	9%	3%	9%
Somerville	1%	5%	0%	2%	5%	4%	16%	3%	3%	1%	3%	2%	3%

In Brookline, these percentage changes are almost exactly the same. In Cambridge, the rates of change differ more significantly than Brookline, with the levy

community without much room to grow, so most recent increases are attributable increased residential valuations and conversions caused by the end of rent control.

[23] Interview with local official from Peabody, MA, March 18, 1998.

limit growing more strongly in the late 1980s than the levy limit. In the early 1990s, the actual levy grew more strongly, while the two became virtually identical from FY93 to FY96. In the last two fiscal years, the levy limit has again taken off and grown more than the actual levy. In Peabody, the story is different again. The levy limit grew more strongly in this community than the actual levy throughout most of the period. A year-to-year trend is not as clearly discernible in Somerville, though the rates of growth of the levy limit and actual levy were quite close in the 1990s. The major outlier for Somerville occurred in FY91, when the actual levy grew 16% and the levy limit grew only 4%.[24]

Comparing the year-to-year percentage growth in the levy limit between the communities reveals which community's levy limit grew the fastest. Between FY86 and FY92 (inclusive), Cambridge's levy limit grew the fastest between fiscal years. Somerville's levy limit growth was always the lowest during the entire period, with only one exception. From FY93 to FY97, the rates of growth were quite similar among the communities, though Peabody's levy limit grew much more in FY95 than the other communities, with Brookline in second. Similar comparisons can be drawn between the communities' percentage increases of the actual levy. Between FY86 and FY92, Cambridge's levy grew much more quickly than the other three communities with only one exception. After FY92, it grew the same or slightly lower.

In conclusion, the overall pattern of the relationship between levy limit growth, new property development and actual tax levies is that tax levies generally went up with the levy limit increases (except in Peabody) and overrides were rare (one time in Brookline) The new growth helped expand the levy limits in the communities that

[24] In this year, total revenue declined, and net state aid decline significantly in Somerville. (See Somerville's individual data table in Appendix IV).

experienced the property development growth spurt from 1985 – 1990 (and after 1996) along with the property revaluation and conversion with the end of rent control.

FINDINGS:
IMPORTANCE OF GROWTH IN CAMBRIDGE'S PAST FISCAL STRATEGY

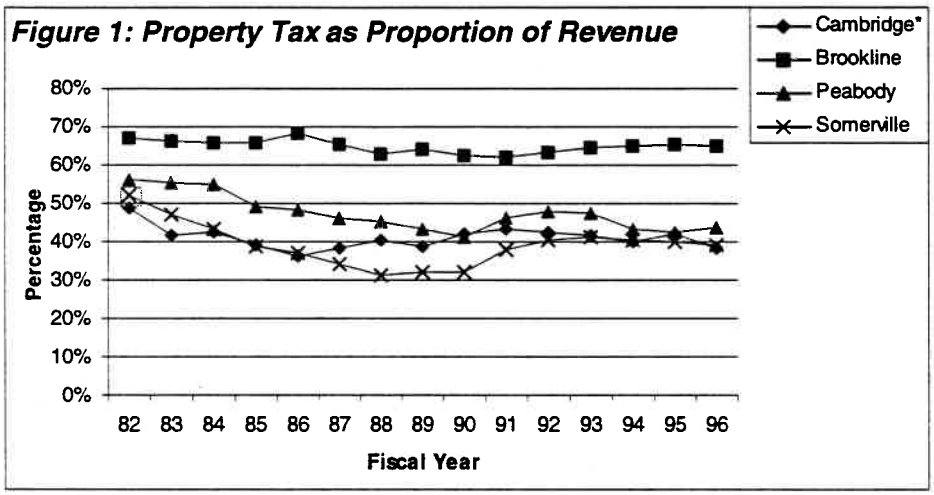
- ***LEVY LIMIT & NEW GROWTH:*** The levy limit went up by the most in Cambridge and by the least in Somerville. The new growth % of the levy limit mimicked this pattern. These trends indicate that, while all communities benefited from growth, Cambridge was able to increase its levy limit the most because of property development and Somerville the least.
- ***TYPE OF GROWTH***: Cambridge had the most non-residential growth, and Brookline had the most residential growth. Peabody and Somerville had the same non-residential proportions of new growth (only 10% behind Cambridge). Since Brookline was able to increase its levy limit, and it had the highest residential proportion of new growth, it probably experienced some high-income residential development. In addition, Brookline turned to overrides and exclusions in recent years, tools the other communities did not employ.
- ***LEVY LIMIT VS. TAX LEVY***: Cambridge and Somerville resembled each other: when they experienced growth, they had a greater difference between their tax levy and levy limit. Brookline taxed at 100% of its levy limit, and Peabody taxed at the lowest proportion of its levy limit. Cambridge's levy limit and actual tax levy grew the fastest among the communities between FY86 – FY92, while same as or slightly lower than others in FY93 – FY97.

IV. EFFECTS OF GROWTH ON SPENDING

With an improved understanding of each municipality's trends in levy limit growth and the relationship to the actual tax levy, we need to determine whether these trends had any sort of bearing on the communities' spending patterns. By analyzing the trends of total spending per capita for the population as a whole and education spending per school pupil, the impact of growth on the communities' budgets can be assessed.

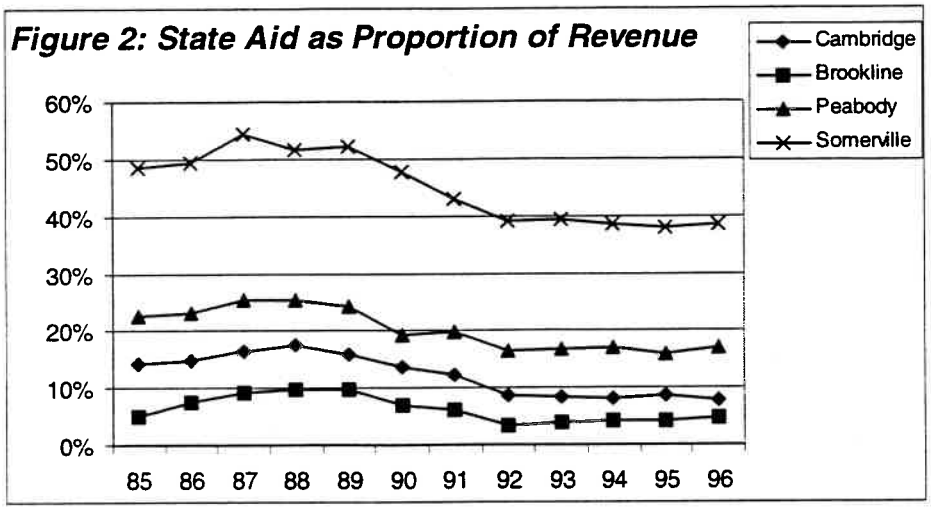
TAX LEVY AND TOTAL REVENUE

First, it is important to recognize that the tax levy as a proportion of total revenue is relatively constant for each of the communities. The graph below shows the tax levy as a proportion of total revenue.



While the graph also shows that the property tax is a very important part of each community's total revenue, it is the greatest proportion of Brookline's total revenue. Therefore, changes in the property tax would probably affect the spending of all of the communities, but it would affect Brookline the most.

Since municipalities in Massachusetts must operate under a balanced budget amendment, revenue determines spending. A way to gauge the degree to which changes in the amount of property tax revenue might effect local spending is to look at the trends in other sources of revenue. While the property tax is the most important local revenue source, other major sources include state aid and local receipts. The graphs below show the trends in net state aid for the municipalities.



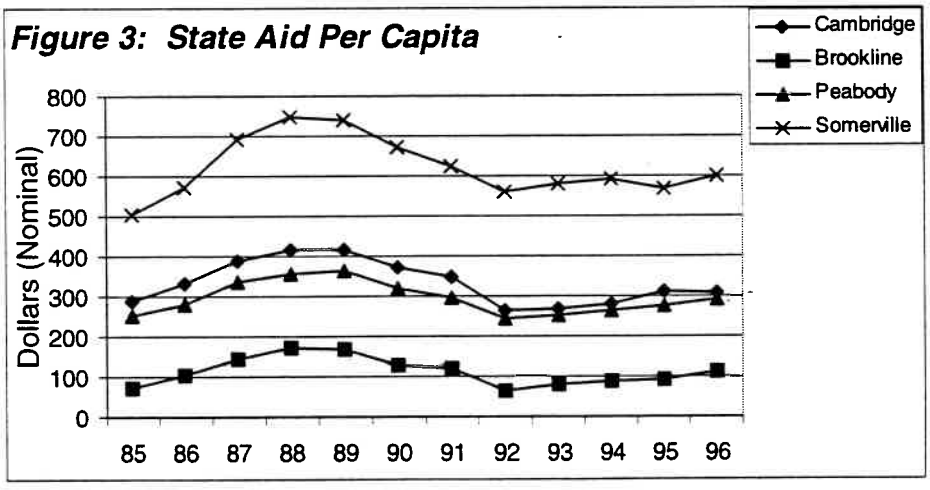


Figure 2 shows the state aid proportion of total revenues. Somerville has by far the highest proportion of state aid as part of its revenues, while Brookline has the least. Figure 3 shows state aid per capita, which follows the same trends as the state aid proportion of total revenue, with Somerville receiving the highest per capita and Brookline the least. Cambridge and Peabody switch positions, with Peabody having a higher proportion of net state aid as a proportion of revenue, but lower state aid per capita than Cambridge. Together, these graphs demonstrate that net state aid funding trends mimic each other for all four communities: when state aid increases in one place, it increases in another. Keeping these state aid and property tax revenue trends in mind, we turn to our analysis of spending trends, which could show that state aid actually fills the budget gap that left by decreased growth.

OVERALL EXPENDITURES PER CAPITA

The first spending trend to analyze is the amount by which spending per capita changed during the period for the four communities. When examining spending per capita, it will be important to isolate the influence of population changes.[25] If population dramatically changes, per capita figures could be biased. Appendix IV, which includes the tables with the detailed yearly information for each community, shows the population trends. Between 1985 and 1996, the populations grew by 1.9% in Cambridge, 2.5% in Brookline; 4.6% in Peabody, and 1.7% in Somerville. Of the four, Peabody's population growth could possibly bias the expenditures per capita downward compared to

[25] For intervening years with missing population figures (fy81 - fy85, fy87, & fy89), I averaged changes between the years for which I had actual estimates from the Division of Local Services.

Cambridge. The population trends for the other three communities were relatively stable and comparable.

With these population trends in mind, we turn towards assessing the changes in expenditure per capita. Table 10[26] summarizes the changes in expenditures per capita from FY85 to FY96 for the four communities.

TABLE 10 : CHANGES IN EXPENDITURES PER CAPITA (FY85-FY96)[27]

	FY85	FY96	Average	%Change
In Current Dollars				
Cambridge	**2,020**	**4,015**	**2,888**	**99%**
Brookline	1,384	2,303	1,845	66%
Peabody	1,118	1,718	1,470	54%
Somerville	1,041	1,558	1,393	50%
In Constant (1990) Dollars				
Cambridge	**2,434**	**3,426**	**2,843**	**41%**
Brookline	1,667	1,965	1,825	18%
Peabody	1,347	1,466	1,462	9%
Somerville	1,255	1,330	1,388	6%
As Percent of Cambridge				
Cambridge	100%	100%		
Brookline	68%	57%		
Peabody	55%	43%		
Somerville	52%	39%		

Cambridge's nominal expenditures increased dramatically compared to the other communities. In constant 1990 dollars, the difference is even more dramatic. Inflation cut significantly into all of the communities expenditures per capita, but Cambridge's increase was still relatively large.

[26] Due to data limitations, expenditures per capita are calculated through FY96. See Appendix II for more information on the expenditure data.

[27] To convert nominal into real terms, I used the GDP deflator from the International Financial Statistics Yearbook. Real figures are in 1990 dollars. Source: International Monetary Fund Statistics Department, International Financial Statistics Yearbook, Volume L (Washington, DC: International Monetary Fund, 1997), pp. 722, 853, 857.

Another way to see how much more Cambridge's expenditures grew than the other communities is to examine the ratios of the other communities' expenditures per capita to Cambridge's. For example, as shown in the "As Percent of Cambridge" section in the table above, Brookline's expenditures in FY85 were 76% of Cambridge's, while in FY96 they were only 57%. Since Cambridge grew so much more than the other communities, the differences in population growth do not make a significant difference.

From these overall expenditure per capita trends, it is clear that Cambridge's expenditures closely followed its growth in the levy limit. It is plausible that Brookline spent more than Peabody, even though its levy limit grew less, since Peabody used less of its levy limit capacity to raise taxes. Also, Brookline needed to spend more as seen in the trends previously on state aid. (The state aid proportion of revenues is the lowest in Brookline compared to the other communities). Somerville's expenditures grew the least relative to Cambridge, which could be attributed to its lower levy limit and lower tax levy and higher proportion of state aid.

EDUCATION EXPENDITURES PER SCHOOL PUPIL

As demonstrated earlier in the analysis of municipal budgets, education is the biggest ticket item for all communities. The trend analysis has demonstrated that spending overall has increased relative to levy limit growth (except for Peabody). Now, we need to understand what kind of spending by examining the following questions: While controlling for population changes, how did expenditures per pupil change during this same period? Do per pupil expenditures increase in proportion to the growth of the levy limit? Do the expenditures relate to the type of new growth in the levy limit: residential or non-residential?

As with general expenditures per capita, school pupil population trends must be measured. The table below shows the relevant changes in population from 1987 to 1995.

TABLE 11: PERCENTAGE CHANGE IN TOTAL POPULATION AND SCHOOL CHILD POPULATION (1987 to 1995)[28]

MUNICIPALITY	*CAMBRIDGE*	*BROOKLINE*	*PEABODY*	*SOMERVILLE*
Total Population	3.3%	3.9%	3.3%	4.5%
School Population	1.6%	10.3%	2.5%	-2.2%
Average SchoolPop as % of Total Population	8%	10%	13%	9%

The table shows that the total populations grew at approximately the same rate (slightly differently than between FY85 and FY96), with Somerville growing the most and Cambridge and Peabody tied for the least. However, the school child population figures show that Brookline grew dramatically, while Somerville actually shrank. Cambridge's school child population grew half as slowly as its overall population. On average, Peabody had the highest school child population as a percent of total population and Cambridge had the lowest.

Per pupil spending figures generally correspond with the population changes. These spending figures also generally follow trends in levy limit growth. Table 12 below demonstrates the spending trends.

TABLE 12: EDUCATION EXPENDITURES PER PUPIL (FY87 – FY95)				
In Current Dollars	FY87	FY95	Average	%Change
Cambridge	**5,805**	**8,455**	**7,666**	**46%**
Brookline	4,825	6,076	5,773	26%
Peabody	3,172	4,785	4,038	51%
Somerville	3,704	5,281	4,725	43%
In Constant (1990) Dollars				
Cambridge	**6,611**	**7,352**	**7,355**	**11%**
Brookline	5,495	5,283	5,564	-4%
Peabody	3,613	4,161	3,874	15%
Somerville	4,219	4,592	4,544	9%
As Percent of Cambridge				
Cambridge	100%	100%		
Brookline	83%	72%		
Peabody	55%	57%		
Somerville	64%	62%		

Cambridge's and Peabody's spending grew the most, while Brookline grew the least. Somerville's expenditures grew almost as much as Cambridge's, probably due to its decreasing school child population. Comparing the per pupil school expenditures as a proportion of Cambridge's, Brookline is still the highest of the three towns in both years, but its proportion is declining. Peabody, on the other hand is gaining slightly on Cambridge, while Somerville's proportion is shrinking. These trends appear to indicate that Brookline has not been able to keep up with its increasing school child population, which has grown as a result of the increasing residential population. The other communities have been able to grow relative to their increased property development.

[28] School population figures were only available from 1987 to 1995. Therefore, the figures presented show

FINDINGS: EFFECTS ON SPENDING

Expenditures per Capita

- Corresponding with the trends in levy limit growth, Cambridge's spending increased the most and Somerville's increased the least. As a proportion of Cambridge's expenditures per capita, the other three communities decrease.
- In real terms (adjusted for inflation), Cambridge's spending per capita grew 41%, Brookline grew 18%, Peabody grew 9% and Somerville grew only 6%.

School Expenditures

- Brookline experienced the greatest growth in school pupil population, and had to spend less per child as shown by the decrease in education expenditures per pupil. Peabody, followed closely by Cambridge, was able to spend the most.
- In real terms, (adjusted for inflation), per pupil education spending ***decreased*** in Brookline by 4%, compared to Cambridge's increase of 11%, Peabody's increase of 15%, and Somerville's increase of 9%.

the change in between these two years.

V. CONCLUSIONS AND IMPLICATIONS

This Policy Analysis Exercise began with the question: **Will reduced growth adversely impact the city budget?** By looking at the incentives for growth, we saw how non-residential development is the most beneficial in terms of net revenues for communities. We also saw how Proposition 2 ½ places municipalities in a bind. Therefore, we expected to see that levy limits would grow where there was the greatest amount of new property development, particularly commercial and high income residential. This holds true in all of the communities. The amount of property tax revenue related directly to the amount of growth the community experienced. The only exception was Peabody, a community which followed Cambridge with the most amount of growth, but which also had the lowest and decreasing proportion of tax levy to the levy limit. This was due to the community's priority policy goal of low taxes.

When these levy limit growth trends are compared to spending trends, we see that greater growth suggests higher expenditures per capita for Cambridge and that lesser growth indicates lower expenditures per capita for Somerville. Brookline and Peabody do not directly follow this trend, as Peabody experienced more growth than Brookline, but spent less. This could be attributable to the policy of lower taxes in Peabody, or higher taxes and use of an override and exclusions in Brookline. When we turn to an additional spending trend, education expenditures per pupil, the trends are slightly different. Peabody's spending increased faster and became a greater proportion of Cambridge's spending during the period studied. In addition, Brookline actually had a negative real change in education expenditures per pupil, which could be due to its large increase in school child population. Somerville ranked on this factor where expected relative to Cambridge, at a lower growth rate and decreasing proportion. In real terms

(constant 1990 dollars), Cambridge spent much more than the comparison communities in per pupil expenditures, throughout the period.

This study, by comparing the trends in levy limits and spending and role of new growth, indicates that reduced growth could have a negative impact on the budget. However, it could also imply that Cambridge does not need to grow so much in the future. As the trend analysis has shown, Cambridge has already enjoyed a decade and a half of higher growth than surrounding communities, so that it now has higher expenditures per capita than the comparison communities. Since Cambridge has already enjoyed the fiscal benefits of growth, perhaps Cambridge does not need to grow at such a great rate in the future, which could relieve the negative impacts of over-development.

Given that this analysis is suggestive, rather than conclusive, it is important to mention the other possible implications that one might interpret from the data. Since this analysis showed that growth clearly keeps Cambridge out of the bind created by Proposition 2 ½, one could argue that growth should continue to maintain spending flexibility. It is possible that Cambridge residents have enjoyed the increase in expenditures and want this trend to continue. The trade-off that might have to be made is increased expenditures or more growth. It could be very difficult to get consensus on this trade-off in a community as diverse as Cambridge.

The second concern that could be raised relative to the role of Proposition 2 ½ is that the levy limit could become binding on Cambridge in the event of a major economic downturn. During the downturn in the early 1990s, Cambridge had enough excess capacity to raise taxes to meet spending demands. Also, one of the treasurers expressed the concern that Proposition 2 ½ has caused municipalities to delay infrastructure

spending. This causes greater fiscal burdens on localities as completely renovating or replacing infrastructure is generally much more expensive than maintaining it. However, maintenance expenditures are at times difficult to justify when there are spending limits, and other priority budget items.

However, if Cambridge experienced the fiscal binds caused by reduced growth or economic downturns, there are potential strategies Cambridge could consider. It is unclear whether increased growth actually reduces state and other intergovernmental aid. This relationship must be ascertained to decide whether Cambridge could count on more state aid if it grew less. In addition, as a last resort strategy, Cambridge could use overrides or exclusions. If the residents of Cambridge decide that the negative impacts of growth are so significant, then these alternative fiscal strategies to cope with reduced growth must be assessed.

APPENDICES

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Interviews:

I conducted several interviews with local officials from the communities, staff from the Division of Local Services of the Massachusetts Department of Revenue, and other area experts on Proposition 2 ½ and municipal finance.

II. NOTES ON DATA AND RESEARCH METHODOLOGY

A. GENERAL OVERVIEW

All data used in this report was obtained from the Division of Local Services (DLS) of the Massachusetts Department of Revenue (except occasionally where otherwise noted). DLS maintains extensive records on municipal spending and revenue generation for all 351 Massachusetts cities and towns. I calculated the numbers included in this analysis using the Microsoft Excel spreadsheet package. While most of my calculations were percentage increases or proportions, any other special calculations have been specifically noted and explained.

By comparing several trends, the analysis provides a sketch of what is happening fiscally in these communities. However, there are some limitations to general trend analysis. Since I am comparing percentage changes between years, there could be discrepancies (a huge increase or decrease in a particular year). I tried to control for this by looking at trends in the prior years to make sure they were consistent. Given this limitation, this study can imply but not conclude causal relationships. To do so would require an analysis that is beyond the scope of this study. It is hoped, though, that this general trend analysis can help pinpoint the important variables and issues for further research.

In order to keep comparisons consistent, I examined trends between years for which I had data for all four communities from the same source. Unfortunately, I did not have FY98 data for all of the variables or FY97 data for some of the variables in this report.

B. A NOTE ON EXPENDITURE DATA

In order to assess the changes in per capita expenditures, I used the "All Expenditure" measure provided to me by the DLS. Part of this total expenditure measure is General Fund expenditures, which include only own-source revenue (property tax, user fees, local aid etc.) In addition to General Fund expenditures, "All Expenditures" includes Special Revenue, Capital Projects, Enterprise and Trust Funds expenditures. The staff at the DLS suggested that this would be a more complete measure to use than simply the General Fund expenditures because of the municipal uses of these expenditures. Special Revenue Fund expenditures include Community Development Block Grants (CDBG), school grants, fuel assistance, and other federal and state grants. Enterprise Funds provide hospital, nursing home and water services. The Trust Funds are grouped into four categories (schools, nursing homes, library and other) and only the accumulated interest income of the funds is spent.[29] According to DLS, since the General Fund expenditure figures do not include these expenditures, an analysis based on the General Fund could bias the results in the actual expenditures occurring in the community, particularly in the public works category of spending. The analysis of the municipal budgets in the "Incentives for Growth" section of this PAE shows that public works can be a large proportion of local spending.

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[29] City of Cambridge, Comprehensive Annual Financial Report (for the year ending June 30, 1995) (Cambridge, MA: City of Cambridge, 1995), p. 33,55,62.

III. PROPOSITION 2 ½: *DEFINITIONS, ORIGINAL PROVISIONS AND AMENDMENTS*[30]

A. DEFINITIONS

capital outlay expenditure exclusion: an exclusion for the purpose of raising funds for capital project costs

debt exclusion: an exclusion for the purpose of raising funds for debt service costs

excess levy capacity: the difference between the levy and the levy limit

exclusion: an amount above the levy limit or ceiling that a municipality can levy for certain purposes - not a permanent increase in levy base

levy base: previous year's levy limit

levy ceiling: first constraint on local tax levying capacity: 2.5% of the total full and fair cash value of all taxable real and personal property in the community.

levy limit: second constraint on local tax levying capacity: the maximum amount a community can levy in a given year

override: cannot increase a community's levy limit above the level of the community's levy ceiling -- results in permanent increase in levy limit, which as part of the base increases by 2.5% per year

override capacity: the difference between the levy limit and the levy ceiling.

special exclusion: does not require voter approval, but is also only temporary, i.e. water and sewer project debt service (replace faulty septic systems, remove underground fuel storage tanks, remove dangerous level of lead paint to meet health standards)

underride: a mechanism by which voters can reduce their levy limit -- results in a permanent decrease in the levy limit

B. MAJOR PROVISIONS OF PROPOSITION 2 ½: ORIGINAL LAW AS IMPLEMENTED IN FY82[31]

- Limits the amount communities may tax to no more than 2.5 percent of the total fair cash value of all property.

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[30] Division of Local Services, Levy Limits: A Primer on Proposition 2 ½, Boston, MA, Massachusetts Department of Revenue.
[31] Davis, pp. 3-4, 10.

- Requires communities exceeding that limit to 'roll back' the tax levy 15 percent a year until they meet the limit.
- Limits increases in the property tax levy to 2.5 percent a year.
- Limits motor vehicle excise taxes to $25 per thousand dollars of valuation.
- Allows renters to itemize one-half of annual rent as a state income tax deduction.
- Repeals school committee fiscal autonomy and compulsory and binding arbitration for public employees.
- Prohibits unfunded state mandates.
- Provides for local override of the levy limit by 2/3 of the voters in biennial general elections.
- Limits outside agency assessments to the community to no more than 4 percent a year.

C. MAJOR AMENDMENTS[32]

Override
A two-thirds vote of town or city council can put an override question on the local ballot at a general or special election (originally only state legislature could do this for biennial elections). A simple majority is required to change the percentage that a municipality must decrease taxes (change from 15% to 7.5%) or to change the percentage that a municipality wants to increase taxes (change from 2.5% to 5%).

The Base
Municipalities may use either FY79 or FY81 tax levy percentages as base for calculating limit. (Originally, municipalities below limit were required to use FY79).

Economic Growth
Municipalities may expand levies in proportion to growth in the tax base brought about by new construction or substantial renovations, but not simply from revaluation. (substantial renovation = 50% increase in valuation) (Originally, the levy could grow only at 2.5% per year, regardless of tax base expansion).

Debt Exclusion
Municipalities may vote by simple majority to exclude from its levy cap either pre-2 1/2 debt and interest or new debt and interest. (This was not allowed initially).

Assessments
The original cap of 4% growth on state, district, and regional assessments to municipalities was decreased to 2.5%, excepting optional services.

Fiscal Autonomy
While the fiscal autonomy of school committees was still restricted, the amendment allowed for line item autonomy.

[32] Tosti, pp. 11-20.

State Mandates
The amendment limited the original unfunded mandates prohibition to laws adopted after January 1, 1981. It also limited prohibitions against state laws that expanded property tax exemptions and state rules and regulations that impose local costs. Municipalities can adopt state laws even if they are not funded.

Bonding
The state treasurer gained the authority to pay bondholders if the municipality cannot pay. This payment would be advanced against state aid. Also, the amendment eliminated the provision of savings bank law prohibiting investments in municipal bonds when there is an expenditure limit in place.

Rental Deduction
The rental deduction was limited to $2,500 for FY82 and beyond and it would apply only to Massachusetts' residences.

Other Provisions
The amendment authorized the Commissioner of Revenue to correct errors in the calculation of the local tax rate and make adjustments. The State Auditor replaced a governor appointee on the Emergency Finance Board. The amendment also revised statutes regarding rescission of locally accepted laws.

IV. DATA TABLES ON EACH MUNICIPALITY

INDIVIDUAL DATA TABLE: *CAMBRIDGE*

	fy82	fy83	fy84	fy85	fy86	fy87	fy88	fy89	fy90	fy91
POPULATION*										
total	93,968	93,291	92,614	91,937	91,260	90,775	90,290	93,046	95,802	96,514
school child						7,860		7,667		7,640
LEVY LIMIT										
levy ceiling	36,427,975	50,450,000	72,540,775		90,405,275	149,375,800	153,698,600	183,196,175	213,219,229	216,572,671
levy base	79,961,426	67,967,212	67,967,211	69,666,391	74,473,088	80,519,671	92,533,554	99,007,989	107,413,166	117,178,052
annual 2.5% increase	(11,994,214)	-	1,699,180	1,741,660	1,861,827	2,012,992	2,313,339	2,475,200	2,685,329	2,929,451
certified new growth**	-	-	-	3,065,037	4,184,756	10,000,891	4,161,096	5,929,977	7,079,557	5,256,238
override	-	-	-	-	-	-				
levy limit before exclusion	67,967,212	67,967,212	69,666,391	74,473,088	80,519,671	92,533,554	99,007,989	107,413,166	117,178,052	125,363,741
exclusion	-		-	-	-	-	-	-	-	-
actual levy limit	67,967,212	67,967,212	69,666,391	74,473,088	80,519,671	92,533,554	99,007,989	107,413,166	117,178,052	125,363,741
Calculations										
rate of growth of levy limit		0.0%	2.5%	6.9%	8.1%	14.9%	7.0%	8.5%	9.1%	7.0%
override capacity	(31,539,237)	(17,517,212)	2,874,384		9,885,604	56,842,246	54,690,611	75,783,009	96,041,177	91,208,930
override capa as % of limit	-46.4%	-25.8%	4.1%	0.0%	12.3%	61.4%	55.2%	70.6%	82.0%	72.8%
new growth as % of limit				4.1%	5.2%	10.8%	4.2%	5.5%	6.0%	4.2%
new growth per capita				33	46	110	46	64	74	54
REVENUE & EXPENDITURES										
all expenditures	139,387,338	162,934,444	163,070,197	185,747,858	205,784,719	215,625,081	215,805,516	244,981,595	259,360,343	272,613,552
net state aid	7,303,223	17,716,120	21,539,296	26,328,288	30,437,362	35,391,632	37,707,636	38,640,621	35,451,980	33,463,238
actual tax levy	67,967,212	67,967,211	69,617,211	72,370,023	74,326,924	82,682,769	86,979,067	94,490,784	109,510,683	117,995,525
education				40,936,078	48,415,891	45,625,499	50,380,488	56,299,050	59,637,241	62,861,058
residential tax rate	199.8	98	17	15.26	14.29		9.81	9.79	9.23	9.51
other tax rate	199.8	98	33.12	34.69	30.83		20.76	21.15	20.06	18.16
Calculations										
expenditures per capita	1,483	1,747	1,761	2,020	2,255	2,375	2,390	2,633	2,707	2,825
education exp per capita				445	531	503	558	605	623	651
education exp per pupil						5,805		7,343		8,228
state aid per capita	78	190	233	286	334	390	418	415	370	347
state aid as % of total rev	5%	11%	13%	14%	15%	16%	17%	16%	14%	12%
excess levy capacity	-	1	49,180	2,103,065	6,192,747	9,850,785	12,028,922	12,922,382	7,667,369	7,368,216
excess capa as % of limit	0.0%	0.0%	0.1%	2.8%	7.7%	10.6%	12.1%	12.0%	6.5%	5.9%
actual levy as % of limit	100.0%	100.0%	99.9%	97.2%	92.3%	89.4%	87.9%	88.0%	93.5%	94.1%
rate of growth of actual levy		0.0%	2.4%	4.0%	2.7%	11.2%	5.2%	8.6%	15.9%	7.7%
GROWTH COMPONENTS	***fy88***	***fy89***	***fy90***	***fy91***	***fy92***	***fy93***	***fy94***	***fy95***	***fy96***	***fy97***
residential	127,740	885,343	1,415,379	1,013,548	120,619	164,073	174,934	246,976	324,635	2,668,950
non-residential	4,033,356	5,044,634	5,664,178	4,242,690	1,781,408	1,294,035	874,291	1,549,889	1,792,545	1,750,125
residential as % of total	3%	15%	20%	19%	6%	11%	17%	14%	15%	60%

INDIVIDUAL DATA TABLE: CAMBRIDGE

INDIVIDUAL DATA TABLE: *CAMBRIDGE*

	fy92	fy93	fy94	fy95	fy96	fy97
POPULATION*						
total	97,526	98,933	99,890	93,793	93,707	
school child		7,747	8,023	7,988		
LEVY LIMIT						
levy ceiling	195,349,357	176,314,381	169,749,840	168,873,656	175,250,758	181,053,111
levy base	125,363,741	130,442,819	135,170,994	139,599,494	144,899,036	150,638,693
annual 2.5% increase	3,134,094	3,261,290	3,379,275	3,490,297	3,622,476	3,765,967
certified new growth**	1,944,984	1,466,885	1,049,225	1,809,245	2,117,181	4,419,075
override						
levy limit before exclusion	130,442,819	135,170,994	139,599,494	144,899,036	150,638,693	158,823,735
exclusion	-	-	-	-	-	-
actual levy limit	130,442,819	135,170,994	139,599,494	144,899,036	150,638,693	158,823,735
Calculations						
rate of growth of levy limit	4.1%	3.6%	3.3%	3.8%	4.0%	5.4%
override capacity	64,906,538	41,143,387	30,150,346	23,974,620	24,612,065	22,229,376
override capa as % of limit	49.8%	30.4%	21.6%	16.5%	16.3%	14.0%
new growth as % of limit	1.5%	1.1%	0.8%	1.2%	1.4%	2.8%
new growth per capita	20	15	11	19	23	
REVENUE & EXPENDITURES						
all expenditures	300,080,999	319,829,895	347,340,356	342,207,530	376,207,756	
net state aid	25,918,156	26,333,596	27,848,587	29,156,657	28,998,543	
actual tax levy	128,050;000	133,580,000	139,414,020	144,445,748	144,441,844	148,070,000
education	60,057,288	62,064,651	65,402,147	67,539,832	71,548,355	
residential tax rate	10.13	12.21	13.33	13.79	14.17	
other tax rate	19.15	22.90	28.40	32.78	34.86	
Calculations						
expenditures per capita	3,077	3,233	3,477	3,649	4,015	
education exp per capita	616	627	655	720	764	
education exp per pupil		8,011	8,152	8,455		
state aid per capita	266	266	279	311	309	
state aid as % of total rev	9%	8%	8%	9%	8%	
excess levy capacity	2,392,819	1,590,994	185,474	453,288	6,196,849	10,753,735
excess capa as % of limit	1.8%	1.2%	0.1%	0.3%	4.1%	6.8%
actual levy as % of limit	98.2%	98.8%	99.9%	99.7%	95.9%	93.2%
rate of growth of actual levy	8.5%	4.3%	4.4%	3.6%	0.0%	2.5%
GROWTH COMPONENTS	***TOTAL***					
residential	7,142,197					
non-residential	28,027,151					
residential as % of total	20%					

INDIVIDUAL DATA TABLE: *BROOKLINE*

	fy82	fy83	fy84	fy85	fy86	fy87	fy88	fy89	fy90	fy91
POPULATION*										
total	54,162	53,712	53,262	52,810	52,360	52,020	51,680	53,199	54,718	53,424
school child						5,151		4,974		5,142
LEVY LIMIT										
levy ceiling	43,342,975	43,516,850	44,060,350		54,875,625	55,841,400	111,536,800	112,299,557	113,362,375	115,874,625
levy base	45,835,639	40,746,200	41,972,000	43,709,423	48,250,587	50,984,193	53,358,411	56,601,162	59,096,538	61,242,370
annual 2.5% increase	(2,492,664)	1,486,964	1,737,423	1,092,736	1,206,265	1,274,605	1,333,960	1,415,029	1,477,413	1,531,059
certified new growth**	-	-	-	3,448,428	1,527,341	1,099,613	1,908,791	1,080,347	668,419	782,464
override	-	-	-	-	-	-	-	-	-	-
levy limit before exclusion	43,342,975	42,233,164	43,709,423	48,250,587	50,984,193	53,358,411	56,601,162	59,096,538	61,242,370	63,555,893
exclusion	-	-	-	-	-	-	-	-	-	-
actual levy limit	43,342,975	42,233,164	43,709,423	48,250,587	50,984,193	53,358,411	56,601,162	59,096,538	61,242,370	63,555,893
Calculations										
rate of growth of levy limit		-2.6%	3.5%	10.4%	5.7%	4.7%	6.1%	4.4%	3.6%	3.8%
override capacity	-	1,283,686	350,927		3,891,432	2,482,989	54,935,638	53,203,019	52,120,005	52,318,732
override capa as % of limit	0.0%	3.0%	0.8%	0.0%	7.6%	4.7%	97.1%	90.0%	85.1%	82.3%
new growth as % of limit	0.0%	0.0%	0.0%	7.1%	3.0%	2.1%	3.4%	1.8%	1.1%	1.2%
new growth per capita	(46)	28	33	21	23	25	26	27	27	29
REVENUE & EXPENDITURES										
all expenditures	60,576,248	63,369,887	66,327,779	73,085,348	74,594,522	80,767,744	89,629,810	92,260,376	98,088,950	102,150,220
net state aid	727,900	2,828,415	2,940,343	3,730,417	5,533,285	7,491,994	8,822,418	9,032,367	6,923,190	6,325,672
actual tax levy	40,746,200	41,972,000	43,709,423	48,243,761	50,978,462	52,968,753	56,407,888	59,095,387	61,235,065	63,517,527
education				21,527,582	23,013,114	24,852,519	26,710,427	28,380,867	30,527,146	32,002,432
residential tax rate	24.96	25.06	25.71	22.88	23.52	no report	no report	13.31	13.87	14.29
other tax rate	30.54	31.34	32.24	31.52	32.52			21.87	22.78	23.22
Calculations										
expenditures per capita				1,384	1,425	1,553	1,734	1,734	1,793	1,912
education exp per capita				408	440	478	517	533	558	599
education exp per pupil						4,825		5,706		6,224
state aid per capita	13	53	55	71	106	144	171	170	127	118
state aid as % of total rev	1.20%	4%	4%	5%	7%	9%	10%	10%	7%	6%
excess levy capacity	2,596,775	261,164	-	6,826	5,731	389,658	193,274	1,151	7,305	38,366
excess capa as % of limit	6.0%	0.6%	0.0%	0.0%	0.0%	0.7%	0.3%	0.0%	0.0%	0.1%
actual levy as % of limit	94.0%	99.4%	100.0%	100.0%	100.0%	99.3%	99.7%	100.0%	100.0%	99.9%
rate of growth of actual levy		3.0%	4.1%	10.4%	5.7%	3.9%	6.5%	4.8%	3.6%	3.7%
GROWTH COMPONENTS	fy89	fy90	fy91	fy92	fy93	fy94	fy95	fy96	fy97	**CHANGE**
residential	661,713	369,549	386,019	457,531	671,905	420,809	617,066	1,549,228	859,843	5,993,663
non-residential	418,634	298,870	396,445	180,734	177,533	446,223	71,863	319,498	326,711	2,636,511
residential as % of total	61%	55%	49%	72%	79%	49%	90%	83%	72%	69%

INDIVIDUAL DATA TABLE: BROOKLINE

INDIVIDUAL DATA TABLE: *BROOKLINE*

	fy92	fy93	fy94	fy95	fy96	fy97
POPULATION*						
total	52,886	52,791	52,716	54,063	54,137	54,137
school child		5,483	5,579	5,680		
LEVY LIMIT						
levy ceiling	108,444,136	109,335,903	109,243,778	109,086,625	117,520,455	123,680,825
levy base	63,555,893	65,783,055	68,390,936	70,987,734	76,412,462	80,191,500
annual 2.5% increase	1,588,897	1,647,354	1,710,261	1,774,720	1,910,312	2,004,788
certified new growth**	638,265	960,527	886,537	690,008	1,868,726	1,190,778
override	-	-	-	2,960,000	-	-
levy limit before exclusion	65,783,055	68,390,936	70,987,734	76,412,462	80,191,500	83,387,066
exclusion	-	434,483	1,329,425	1,288,300	631,133	710,067
actual levy limit	65,783,055	68,825,419	72,317,159	77,700,762	80,822,633	84,097,133
Calculations						
rate of growth of levy limit	3.5%	4.6%	5.1%	7.4%	4.0%	4.1%
override capacity	42,661,081	40,944,967	38,256,044	32,674,163	37,328,955	40,293,759
override capa as % of limit	64.9%	59.9%	53.9%	42.8%	46.5%	48.3%
new growth as % of limit	1.0%	1.4%	1.2%	0.9%	2.3%	1.4%
new growth per capita	30	31	32	33	35	
REVENUE & EXPENDITURES						
all expenditures	103,486,395	106,895,838	111,458,901	118,989,520	124,677,017	
net state aid	3,451,778	4,128,722	4,633,657	4,887,878	5,962,092	
actual tax levy	65,749,086	68,821,895	72,293,772	77,700,332	80,820,098	84,086,278
education	32,854,556	32,657,056	32,659,536	34,511,767	36,709,846	
residential tax rate	14.63	16.37	16.90	17.82	19.20	
other tax rate	20.57	22.76	23.92	24.80	26.69	
Calculations						
expenditures per capita	1,957	2,025	2,114	2,201	2,303	
education exp per capita	621	619	620	638	678	
education exp per pupil		5,956	5,854	6,076		
state aid per capita	65	78	88	90	110	
state aid as % of total rev	3%	4%	4%	4%	5%	
excess levy capacity	33,969	3,524	23,387	430	2,535	10,855
excess capa as % of limit	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
actual levy as % of limit	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%
rate of growth of actual levy	3.5%	4.7%	5.0%	7.5%	4.0%	4.0%
GROWTH COMPONENTS						
residential						
non-residential						
residential as % of total						

INDIVIDUAL DATA TABLE: BROOKLINE

INDIVIDUAL DATA TABLE: *PEABODY*

	fy82	fy83	fy84	fy85	fy86	fy87	fy88	fy89	fy90	fy91	fy92
POPULATION*											
total	46,084	46,138	46,192	46,246	46,300	46,575	46,850	47,057	47,264	47,464	47,696
school child						6,055		5,729		5,816	
LEVY LIMIT											
levy ceiling	19,660,200	24,616,300	25,207,575		43,615,100	45,701,675	47,588,500	78,178,550	79,846,179	80,878,335	70,537,015
levy base	27,438,603	23,322,813	23,905,883	25,207,575	26,393,809	28,251,359	30,244,271	32,335,637	34,727,563	36,481,953	37,997,547
annual 2.5% increase	(4,115,790)	583,071	1,301,692	630,189	659,845	706,284	756,107	808,391	868,189	912,049	949,939
certified new growth**	-	-	-	556,045	1,197,705	1,286,628	1,335,259	1,583,535	886,201	603,545	318,856
override	-	-	-	-	-	-	-	-	-	-	-
levy limit before exclusion	23,322,813	23,905,884	25,207,575	26,393,809	28,251,359	30,244,271	32,335,637	34,727,563	36,481,953	37,997,547	39,266,342
exclusion	-	-	-	-	-	-	-	-	-	-	-
actual levy limit	23,322,813	23,905,884	25,207,575	26,393,809	28,251,359	30,244,271	32,335,637	34,727,563	36,481,953	37,997,547	39,266,342
Calculations											
rate of growth of levy limit		2.5%	5.4%	4.7%	7.0%	7.1%	6.9%	7.4%	5.1%	4.2%	3.3%
override capacity	(3,662,613)	710,416	-		15,363,741	15,457,404	15,252,863	43,450,987	43,364,226	42,880,788	31,270,673
override capa as % of limit	-15.7%	3.0%	0.0%	0.0%	54.4%	51.1%	47.2%	125.1%	118.9%	112.9%	79.6%
new growth as % of limit	0.0%	0.0%	0.0%	2.1%	4.2%	4.3%	4.1%	4.6%	2.4%	1.6%	0.8%
new growth per capita	-	-	-	12	26	28	29	34	19	13	7
REVENUE & EXPENDITURES											
all expenditures	41,434,380	43,190,435	45,721,960	51,711,177	55,440,501	61,225,084	65,359,890	70,462,963	78,001,700	70,586,973	70,434,989
net state aid	6,893,868	9,208,891	10,325,727	11,731,915	12,897,999	15,568,382	16,673,446	17,134,439	15,122,414	14,073,121	11,637,062
actual tax levy	23,322,813	23,905,883	25,207,571	25,504,571	26,699,678	28,399,645	29,619,975	30,673,248	32,296,886	32,701,324	33,705,387
education				17,992,558	18,941,732	19,207,015	20,789,378	22,207,832	24,243,622	23,660,419	24,359,470
residential tax rate	65.2	24.28	24.28	21.91	14.57		14.57	14.57	8.71	8.71	8.71
other tax rate	65.2	24.28	26.85	24.41	17.21		17.95	17.95	12.74	13.78	13.78
Calculations											
expenditures per capita	899	936	990	1,118	1,197	1,315	1,395	1,497	1,650	1,487	1,477
education exp per capita				389	409	412	444	472	513	498	511
education exp per pupil						3,172		3,876		4,068	
state aid per capita	150	200	224	254	279	334	356	364	320	297	244
state aid as % of total rev	17%	21%	23%	23%	23%	25%	26%	24%	19%	20%	17%
excess levy capacity	-	1	4	889,238	1,551,681	1,844,626	2,715,662	4,054,315	4,185,067	5,296,223	5,560,955
excess capa as % of limit	0.0%	0.0%	0.0%	3.4%	5.5%	6.1%	8.4%	11.7%	11.5%	13.9%	14.2%
actual levy as % of limit	100.0%	100.0%	100.0%	96.6%	94.5%	93.9%	91.6%	88.3%	88.5%	86.1%	85.8%
rate of growth of actual levy		2.5%	5.4%	1.2%	4.7%	6.4%	4.3%	3.6%	5.3%	1.3%	3.1%
GROWTH COMPONENTS	**fy88**	**fy89**	**fy90**	**fy91**	**fy92**	**fy93**	**fy94**	**fy95**	**fy96**	**fy97**	**TOTAL**
residential	517,299	720,469	364,481	233,380	191,540	187,550	163,001	231,834	115,996	196,507	2,922,057
non-residential	817,960	863,066	521,720	370,165	127,325	97,996	142,561	3,102,331	552,670	423,718	7,019,512
residential as % of total	39%	45%	41%	39%	60%	66%	53%	7%	17%	32%	29%

INDIVIDUAL DATA TABLE: *PEABODY*

	fy93	fy94	fy95	fy96	fy97
POPULATION*					
total	47,882	47,993	48,097	48,365	48,365
school child	6,170	6,137	6,208		
LEVY LIMIT					
levy ceiling	70,334,337	69,856,623	75,999,266	75,720,163	75,957,986
levy base	39,266,342	40,538,604	41,860,554	46,241,233	48,065,930
annual 2.5% increase	981,782	1,013,536	1,046,514	1,156,031	1,201,648
certified new growth**	290,480	308,414	3,334,165	668,666	623,368
override	-	-	-	-	-
levy limit before exclusion	40,538,604	41,860,554	46,241,233	48,065,930	49,890,946
exclusion					
actual levy limit	40,538,604	41,860,554	46,241,233	48,065,930	49,890,946
Calculations					
rate of growth of levy limit	3.2%	3.3%	10.5%	3.9%	3.8%
override capacity	29,795,733	27,996,069	29,758,033	27,654,233	26,067,040
override capa as % of limit	73.5%	66.9%	64.4%	57.5%	52.2%
new growth as % of limit	0.7%	0.7%	7.2%	1.4%	1.2%
new growth per capita	6	6	69	14	
REVENUE & EXPENDITURES					
all expenditures	72,046,736	74,719,738	83,116,192	83,113,562	
net state aid	12,132,684	12,758,124	13,179,801	14,038,479	
actual tax levy	34,159,081	32,510,627	35,358,563	36,440,711	39,538,603
education	25,091,238.	26,126,866	29,704,318	31,884,648	
residential tax rate	10.24	10.24	9.65	9.32	
other tax rate	16.35	17.23	17.23	16.69	
Calculations					
expenditures per capita	1,505	1,557	1,728	1,718	
education exp per capita	524	544	618	659	
education exp per pupil	4,067	4,257	4,785		
state aid per capita	253	266	274	290	
state aid as % of total rev	17%	17%	16%	17%	
excess levy capacity	6,379,523	9,349,927	10,882,670	11,625,219	10,352,343
excess capa as % of limit	15.7%	22.3%	23.5%	24.2%	20.7%
actual levy as % of limit	84.3%	77.7%	76.5%	75.8%	79.3%
rate of growth of actual levy	1.3%	-4.8%	8.8%	3.1%	8.5%
GROWTH COMPONENTS					
residential					
non-residential					
residential as % of total					

INDIVIDUAL DATA TABLE: PEABODY

INDIVIDUAL DATA TABLE: *SOMERVILLE*

	fy84	fy85	fy86	fy87*	fy88	fy89	fy90	fy91	fy92	fy93	fy94
POPULATION*											
total	73,977	73,129	72,280	71,175	70,070	73,140	76,210	73,296	70,994	69,958	68,940
school child				6,557		6,228		6,156		6,367	6,669
LEVY LIMIT											
levy ceiling		30,255,200	49,178,900	49,414,250	49,377,100	92,970,086	91,877,908	91,959,675	74,724,176	70,841,024	70,683,435
levy base		29,744,406	30,255,200	31,011,580	34,568,293	35,802,325	37,424,148	38,686,833	40,205,209	41,377,001	42,528,224
annual 2.5% increase		743,610	756,380	775,290	864,207	895,058	935,604	967,171	1,005,130	1,034,425	1,063,206
certified new growth**		-	-	269,923	369,825	726,765	327,081	551,205	166,662	116,798	404,145
override		-	-		-	-	-	-	-	-	-
levy limit before exclusion	29,744,406	30,488,016	31,011,580	34,568,293	35,802,325	37,424,148	38,686,833	40,205,209	41,377,001	42,528,224	43,995,575
exclusion	-	-	-	-	-	-	-	-	-	-	-
actual levy limit	29,744,406	30,255,200	31,011,580	34,568,293	35,802,325	37,424,148	38,686,833	40,205,209	41,377,001	42,528,224	43,995,575
Calculations	*The numbers provided for the fy87 levy limit do not add up. There might have been more new growth in this year, or possibly an override to get to the levy limit.										
rate of growth of levy limit		1.7%	2.5%	11.5%	3.6%	4.5%	3.4%	3.9%	2.9%	4.6%	5.1%
override capacity		(232,816)	18,167,320	14,845,957	13,574,775	55,545,938	53,191,075	51,754,466	33,347,175	28,312,800	26,687,860
override capa as % of limit		-0.8%	58.6%	42.9%	37.9%	148.4%	137.5%	128.7%	80.6%	59.9%	53.9%
new growth as % of limit		0.0%	0.0%	0.8%	1.0%	1.9%	0.8%	1.4%	0.4%	0.3%	0.9%
new growth per capita					12	12	12	13	14	15	15
REVENUE & EXPENDITURES											
all expenditures	66,684,416	76,161,172	84,061,827	90,844,827	101,563,046	103,935,098	107,826,514	106,438,910	101,963,433	102,914,028	106,275,797
net state aid	29,363,790	36,917,267	41,448,467	49,355,618	52,501,796	54,218,934	51,315,866	45,685,581	39,747,427	40,498,663	40,836,238
actual tax levy	29,017,926	29,411,849	31,006,938	31,088,745	31,859,893	33,470,024	34,751,100	40,184,476	41,364,258	42,506,810	42,875,855
education		20,565,773	22,346,692	24,286,442	26,629,288	29,773,437	32,751,633	30,943,464	29,292,558	29,948,424	32,368,535
residential tax rate					13.27	13.63	7.32	7.64	8.84	11.76	13.00
other tax rate					23.59	24.20	15.33	16.51	19.12	24.21	26.25
Calculations											
expenditures per capita	901	1,041	1,163	1,276	1,449	1,421	1,415	1,452	1,436	1,471	1,542
education exp per capita		281	309	341	380	407	430	422	413	428	470
education exp per pupil				3,704		4,781		5,027		4,704	4,854
state aid per capita	397	505	573	693	749	741	673	623	560	579	592
state aid as % of total rev	44%	48%	49%	54%	52%	52%	48%	43%	39%	39%	38%
excess levy capacity	726,480	843,351	4,642	3,479,548	3,942,432	3,954,124	3,935,733	20,733	12,743	21,414	1,119,720
excess capa as % of limit	2.4%	2.8%	0.0%	10.1%	11.0%	10.6%	10.2%	0.1%	0.0%	0.0%	0.0%
actual levy as % of limit	97.6%	97.2%	100.0%	89.9%	89.0%	89.4%	89.8%	99.9%	100.0%	100.0%	100.0%
rate of growth of actual levy		1.4%	5.4%	0.3%	2.5%	5.1%	3.8%	15.6%	2.9%	4.7%	5.0%
GROWTH COMPONENTS	fy88	fy89	fy90	fy91	fy92	fy93	fy94	fy95	fy96	fy97	fy98
residential	53,792	385,547	56,045	92,963	39,356	31,063	63,779	32,830	405,905	187,164	147,356
non-residential	316,033	341,218	271,036	458,242	127,306	85,735	340,366	605,083	274,420	355,242	441,052
residential as % of total	14.5%	53.0%	17.1%	16.9%	23.6%	26.6%	15.8%	5.1%	59.7%	34.5%	25.0%

INDIVIDUAL DATA TABLE: SOMERVILLE

INDIVIDUAL DATA TABLE: *SOMERVILLE*

	fy95	fy96	fy97
POPULATION*			
total	74,388	74,356	74,356
school child	6,410		
LEVY LIMIT			
levy ceiling	67,022,673	67,126,205	70,320,829
levy base	43,995,575	45,733,377	47,557,036
annual 2.5% increase	1,099,889	1,143,334	1,188,926
certified new growth**	637,913	680,325	542,406
override	-	-	-
levy limit before exclusion	45,733,377	47,557,036	49,288,368
exclusion	-	-	-
actual levy limit	45,733,377	47,557,036	49,288,368
Calculations			
rate of growth of levy limit	7.4%	4.0%	4.1%
override capacity	21,289,296	19,569,169	21,032,461
override capa as % of limit	42.8%	46.5%	48.3%
new growth as % of limit	1.4%	1.4%	1.1%
new growth per capita	15	15	16
REVENUE & EXPENDITURES			
all expenditures	110,953,651	115,873,921	
net state aid	42,253,585	44,610,782	
actual tax levy	44,363,388	45,349,223	46,489,329
education	33,851,054	33,238,809	
residential tax rate	13.29	14.81	
other tax rate	26.54	27.71	
Calculations			
expenditures per capita	1,492	1,558	
education exp per capita	455	447	
education exp per pupil	5,281		
state aid per capita	568	600	
state aid as % of total rev	38%	38%	
excess levy capacity	1,369,989	2,207,813	2,799,039
excess capa as % of limit	0.0%	0.0%	0.0%
actual levy as % of limit	100.0%	100.0%	100.0%
rate of growth of actual levy	7.5%	4.0%	4.0%
GROWTH COMPONENTS	TOTAL		
residential	1,348,444		
non-residential	3,174,681		
residential as % of total	29.8%		

INDIVIDUAL DATA TABLE: SOMERVILLE