The Potential for Uneven Economic Development across Massachusetts Municipalities: An Analysis of the Role of Property Taxation and State Local Aid

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Introduction and Overview

Massachusetts enjoyed a buoyant economy during the second half of the 1990s, but since then business investment and job creation have lagged far behind the rest of the nation. In part because of its high cost of living, both firms and workers are now leaving the state. Globalization, allowing firms to consider a broader range of alternative locations when deciding either to expand their operations or invest in new ones, exacerbates this trend. As a consequence, economic development, which not long ago came easily to the Bay State, has become the number one challenge for state government and civic leaders.

There is much the state government can do to improve the Commonwealth’s economic prospects. More aggressive marketing of the state may help. Expanding the
state’s housing supply, especially for young workers, would almost surely moderate the cost of living. Increasing public investment in research and development in the biosciences and in nanotechnology may be part of the solution as well. Investing more resources in our schools and in our universities will no doubt contribute to maintaining a trained labor force, currently considered second to none in the nation.

All of these notwithstanding, research carried out by the Center for Urban and Regional Policy (CURP) at Northeastern University with the assistance of the state chapter of the National Association of Industrial and Office Properties (NAIOP) and published by the Massachusetts Municipal Association (MMA) has revealed the critical role that local government plays in economic development. As a recent CURP report notes:

When looking where to settle in the United States, the newest research on business location decisions reveals that entrepreneurs and corporate executives seek out a town or city that meets their needs in terms of a combination of workforce, infrastructure, public services, and cultural and recreational amenities. State government can help turn “deal breakers” into “deal makers,” but ultimately local communities close the deal.²

The report goes on to stress that “unless cities and towns have the resources to offer attractive locations for investment, and for where working families can live, virtually everything the state does in the way of economic development incentives will prove inadequate or futile.”³

While the state as a whole has suffered from sluggish employment growth at least since 2001, the older industrial cities in the Commonwealth have trailed others in obtaining new investment and jobs and many have suffered weak economies for at least two decades. That these older industrial cities have had trouble reviving their economies can be traced to a long list of factors. Boarded up downtown establishments, higher
crime rates, poorer schools, and a lack of local amenities have been cited in countless reports as reasons why businesses do not set up operations in these communities. New survey results derived from questionnaires administered to developers and location specialists who help firms site new plants, warehouses, research facilities, and retail establishments suggest that the most important location factors firms consider are an appropriate labor pool, the timeliness of municipal building code approvals and zoning appeals, the quality and capacity of the local infrastructure, ready access to roads and airports, minimal traffic congestion, reasonable property taxes, and low crime rates. Older industrial cities in the state, particularly those with a limited supply of high-skilled labor, burdensome municipal zoning and code enforcement practices, distant access to airport facilities, high property tax rates, and unsafe neighborhoods are at a disadvantage relative to communities that excel along these dimensions.

The purpose of the current report is to investigate whether the heavy reliance on the local property tax for funding municipal services puts older industrial cities and towns in Massachusetts at a competitive disadvantage in paying for the public services needed to successfully attract private investment and jobs. If these communities cannot attract new businesses and new residents, and if the level of local municipal services depends on the local property tax, and if the amount of revenue generated from this tax depends on rising assessments plus the addition of new residential, commercial, and industrial property to the tax rolls, any original disadvantage may be compounded by the dynamic of tax base induced “uneven development”. Booming municipalities may be advantaged by rising assessments while declining cities and towns are increasingly disadvantaged by stagnant or declining property values. Over-reliance on the property tax as the basis for
funding municipal services may widen already existing differences in economic
development leading to a growing gap in employment, income, and well-being across the
state.

**The Methodological Approach**

To investigate this possibility, we begin by reviewing the employment situation in
Massachusetts and proceed to investigate how twelve older industrial cities in the state
have fared relative to a set of municipalities that have experienced rapid employment
growth. Our goal is to find the extent to which assessed values have diverged over time
between these two sets of municipalities and the extent to which this has contributed to a
differential in municipal spending that disadvantages older industrial communities. We
then study the redistributive effect of local aid provided by the state to individual
municipalities to see whether state revenue sharing fills the gap in local spending that
ensues from differences in property tax revenues. We also investigate Proposition 2 1/2,
which places legal limits on the ability of municipalities to raise their property taxes, in
order to consider whether this form of tax limitation increases or reduces the local
property tax revenue differential between older industrial cities and rapidly growing
municipalities.

If we find that provision for local public services differs substantially between the
older industrial cities and growth communities in the state, after the allocation of state aid
and after the effect of Prop 2 1/2, then it would seem obvious that the older industrial cities
are at a serious and growing disadvantage relative to their more affluent counterparts.
Finally, we conclude this report by considering the impact of cuts in local aid when the
state experiences reduced revenue during economic recessions.
An Overview of Findings

Our findings are, in many ways, quite startling -- not because we find enormous differences in the ability of the two sets of communities to take advantage of the local property tax, but because Massachusetts has done so much since the passage of Proposition 2 ½ to limit the uneven development that would otherwise occur as a result of the heavy reliance on property taxes as a source of municipal revenue. With nearly three quarters (74.7%) of own-source local revenue coming from property taxes, Massachusetts cities and towns trail those in only five states -- mostly in New England -- in their dependence on this single source of local revenue. Local governments in other states rely more heavily on income and sales taxes so that nationwide local property taxes are responsible for only 46 percent of locally generated funds. Indeed, seven states -- Alabama, Arkansas, California, Kentucky, Louisiana, New Mexico, and Oklahoma -- obtain more than two thirds of their locally-generated revenue from sources other than property taxes.

Reliance on the property tax essentially means reliance on assessed property values and this poses a problem for older industrial cities. Because of diverging economic fortunes in the past, there is an extraordinary gap in the current value of assessed real property between the older industrial cities and their fast-growing counterparts in Massachusetts. Not only is existing property in most of the older industrial cities appreciating at a much slower rate than existing property in the more affluent municipalities, but most new construction of housing and commercial and industrial buildings in the Commonwealth is going on outside older industrial communities.
Between 1987 and 2004, the value of total assessed property in the affluent communities in our study grew between 2.5 and 3.5 times faster than the value in the older industrial cities. If local services were funded strictly out of local revenue, the older cities would over time see the level of services fall further and further behind the level in the more affluent communities, reinforcing already existing uneven development.

Two key factors, however, have mitigated this potential dynamic almost completely eliminating the differential in per-capita municipal spending between the two sets of communities. The first is the powerful redistributive impact of state-supplied aid to local communities. By providing significantly more aid to the communities with the least ability to raise municipal revenue from the local property tax, the state has systematically offset much of the per-capita differential in municipal spending on schools and other local services.

The second factor leading to more equal municipal spending has been Proposition 2 ½. The key provision in Prop 2 ½ bars municipalities from increasing their total tax revenue on existing property by more than 2.5 percent each year regardless of its appreciation. This has little impact on older industrial cities where assessed values are hardly increasing, but affects more affluent communities where assessments are rising rapidly. Consequently, the actual gap in revenue generation between rich and poor cities is much smaller than it otherwise would be.

As an example of how these two factors -- state aid and Prop 2 ½ -- limit the disparity in total per capita local spending, we can consider the case of Andover and Lawrence, two communities bordering each other in the northeastern region of the state. Andover had over $180,000 of total assessed property per capita in 2004 compared with
less than $30,000 in Lawrence. If there were no state aid and no property tax limitation, Andover could theoretically spend six times as much as Lawrence on local services per capita without having a tax rate any higher than its older industrial neighbor directly across the town line. In fact, from local revenues alone, Andover spent about $2,700 per capita while Lawrence spent just under $1,000. But with virtually all of its public school budget provided by the state, and with a generous allocation of state aid for the provision of other critical local services, Lawrence was able to spend $2,600 per capita for local services in 2004. Meanwhile, with only $500 of state aid and constrained by the Proposition 2 ½ levy limit, Andover spent a total of $3,200 per capita, just $600 more than the total spent by Lawrence. Of course, even this diminished gap in spending can contribute to uneven development between the two adjacent communities, but the impact is muted by the state’s generous redistribution policy and Prop 2 ½.

This certainly represents a major improvement in distributional equity across communities. Nonetheless, one must recognize that equalizing per-capita spending may not be the answer to the problems of the older industrial cities, given their need to spend more on the schooling of disadvantaged children, more on fighting crime, and perhaps more on other city services to have a fair chance of attracting business investment and jobs. Moreover, reductions in local aid forced by periodic state budget crises -- even when the governor and the legislature try to assure that the economically disadvantaged municipalities are least affected by aid cuts -- end up hurting older industrial cities the most because of their heavy reliance on state assistance. As such, every state budget crisis has the potential for exacerbating uneven development within the state. To keep this from happening, the Commonwealth needs to insulate municipalities from cuts in
local aid as much as possible and local communities need to be able to generate their own revenue from a broader array of local sources.

**Economic Development and Employment Trends in Massachusetts**

To provide the details of this of local property tax dependence and state aid redistribution, we begin with employment trends in the Commonwealth. Between January 1995 and February 2001, (non-farm) public and private employers added over 430,000 jobs in Massachusetts, an average of nearly 70,000 per year. The state experienced an overall job growth rate somewhat higher than the nation (14.5 vs. 13.8 percent) -- in large measure fueled by the dot-com revolution, a booming financial services sector, and big gains in construction.

But the 2000-2001 national recession took a heavy toll on the state and Massachusetts has still not completely recovered. Between February 2001 and December 2003, the state experienced a net loss of 205,000 jobs -- 6 percent of its workforce. Nationally, the recession also took its toll. Over 2.25 million jobs were wiped out, but this represented only a 1.6 percent net loss or one-quarter the Massachusetts rate.

The post-recession recovery has also been much kinder to the nation as a whole than to Massachusetts. Between December 2003 and April 2007, the Commonwealth regained 92,000 jobs -- less than half (45%) of the previous loss. At the beginning of the second quarter of 2007, the state had 113,000 fewer jobs than it had had six years earlier. Even at the current rate of job growth between December 2006 and April 2007, Massachusetts will not recover all of its employment loss until February 2010.8

As such, economic development has become a major priority for the Commonwealth following a period when development seemed to come so easily.
Making sure that every community has an opportunity to attract new jobs is part of the strategy to reinvigorate the state’s economy.

**Older Industrial Cities vs. Rapid Employment Growth Municipalities**

The overall picture of anemic growth masks a great deal of variance in employment conditions across the Commonwealth. For the past three years, CURP has been working with the municipal leaders in twelve of the Commonwealth’s older industrial cities -- cities that at one time were centers of manufacturing in the state but over the past several decades have experienced slow growth or absolute loss in employment over several decades. These cities include: Attleboro, Brockton, Chelsea, Fitchburg, Haverhill, Holyoke, Lawrence, New Bedford, Pittsfield, Revere, Springfield, and Worcester. Each of these cities has participated in a “self-assessment process” based on an economic development software tool designed by CURP. This process helps each community determine its own strengths and weaknesses relative to an array of factors that our research has demonstrated as important in the commercial and industrial site selection decision.

To develop a set of higher-growth communities for comparison purposes, we have selected fourteen communities that experienced rapid employment growth between 1987 and 2004. Many of these communities border our older industrial cities; others are similar in population size. These municipalities include Agawam, Andover, Billerica, Chelmsford, Dartmouth, Franklin, Mansfield, Marlborough, Milford, North Attleborough, Plymouth, Shrewsbury, Westborough, and Westford. **Figure 1** lists all twenty-six cities with their 2004 populations along with a map showing their locations. The fiscal conditions of these 26 comprise the focus of this report.
Employment growth between 1987 and 2004 for these twenty-six municipalities has varied dramatically as demonstrated in Figure 2. Nine of the 12 older industrial cities have seen their employment levels decline over this 18-year period. Fitchburg experienced the most severe job loss, losing more than a quarter of its workforce during this period. Seven of the twelve cities lost 10 percent or more of their employment base while Haverhill and Revere each experienced job growth of less than five percent. Only tiny Chelsea, across the river from Boston, had substantial employment growth, with the number of jobs expanding by nearly 40 percent.

In contrast, the comparison communities experienced job growth rates of at least 20 percent (Andover and Billerica) and as much as 200 percent (Franklin). Six of the 14 saw their workforce levels increase by 50 percent or more. While some of the older industrial cities are in the western part of the state, distant from Greater Boston and from the most rapidly growing towns and cities, some share a border with fast-growing communities. Attleboro is next door to North Attleborough and Andover abuts Lawrence. Worcester is adjacent to Shrewsbury and near Westborough. Despite their proximity to rapidly growing municipalities, the older industrial cities generally trail badly in terms of overall economic development and employment growth.
The Dependence of Local Revenue on the Local Property Tax

As Gerald Frug and David Barron of the Harvard Law School note in their recent report *Boston Bound*, Massachusetts municipalities are highly dependent on property taxes and state aid and are unable under Massachusetts law to access such revenue sources as local income and sales taxes. They are also often frustrated by the state in their effort to levy targeted user fees, inclusionary zoning fees, and environmental impact fees.¹⁰

Compared to other major cities across the United States, Boston is unusually dependent on property taxes. Fifty-eight percent of Boston’s total revenue comes from property taxes, compared to 12 percent in Chicago and 27 percent in Seattle, both of which obtain the remainder of their local revenue from retail sales taxes, business and occupation taxes, and utility taxes. Boston also has far fewer targeted taxes than the other cities in Frug and Barron’s study. For example, Boston has the right to place a tax on hotels and motels, but these taxes can only be implemented with the approval of the state legislature, which often refuses to grant such authority.

All municipalities in Massachusetts suffer from these same restrictions. As a result, at least half and as much as 80 percent of locally-generated revenue in the older industrial cities comes from taxes on residential, commercial, and industrial property. In general, the proportion is even higher in the growth communities, with at least four-fifths of the locally generated revenue coming from the local property tax in Andover, Westford, Plymouth, Milford, Billerica, and Chelmsford. Across all 351 towns and cities in the Commonwealth, the property tax is responsible for nearly 75 percent of all locally-generated revenue. Only five states (Connecticut, Rhode Island, New Hampshire, Maine,
and New Jersey) are more dependent on this source of revenue while the average across all U.S. municipalities is only 46 percent.\textsuperscript{11}

In general, Massachusetts’ older industrial cities are somewhat less dependent on taxes on real property, but only because their local property assessments are so much lower and therefore small user fees comprise a slightly larger proportion of total revenues. The over-reliance on a single source of revenue, the property tax, leads to a limited ability across all communities to raise the funds needed for local spending on schools, police, fire, parks, sanitation, and general government. Given the huge gap in the value of local property assessments per capita, however, the older industrial cities are the ones that are most severely affected by this fiscal constraint.

[INSERT FIGURE 3 ABOUT HERE]

**Taxing Residential, Commercial, and Industrial Property**

Real property tax revenue in Massachusetts is derived from taxes on the assessed value of three classes of property: residential, commercial, and industrial. Property is divided this way so that individual communities have the option of allocating the property tax burden to residents and business owners in a variety of ways. Of the 26 communities we track in this study, 18 use a “split rate,” taxing commercial and industrial property at a higher rate than residential. In the remaining eight communities, all property regardless of its use is taxed at the same rate.

The Massachusetts Department of Revenue classifies property as residential if it contains a housing unit -- a single family home, condominium, or apartment building.
Commercial property includes retail stores, office buildings, and distribution warehouses. Finally, property used for manufacturing, production, or extraction is classified as industrial. The full and fair market value of each parcel of property is assessed each year to determine residential, industrial and commercial tax rates. To determine the value of the property, city and town assessors use sales of similar properties in the previous year, the amount of income produced by that property, or the cost of replicating the building minus depreciation plus the value of the land it occupies.

Local real property tax revenue equals the amount of locally assessed property value multiplied by the property tax rate. Hence, the value of assessed property exercises a powerful constraint on the total amount of revenue generated. As a result of a now famous 1980 referendum, Massachusetts imposed an added constraint on the ability of local governments to raise revenue from the one major tax they are permitted to impose.

Proposition 2 ½, in full effect since 1982, hampers the size of the property tax levy in two ways. It limits both the maximum tax rate a local community can charge on the total fair market value of property in their jurisdiction (the so-called “levy ceiling”) and limits the annual increase in the total amount of revenue that can be generated from existing property (the so-called “levy limit”). The levy ceiling forces communities to limit their tax levy to no more than 2.5 percent of the total assessed value of property, reducing their capability to raise revenue. The levy ceiling changes each year based on new assessments as the market value of property in a given town goes up or down. The dollar value of the ceiling will also increase or decrease as new buildings are built or old ones demolished.
Under the *levy limit*, municipalities cannot increase the total property tax levy from year to year by more than 2.5 percent. The Massachusetts Department of Revenue determines the levy limit by taking the previous year’s total levy and increasing it by 2.5 percent and then adding to it the revenue that could be generated at the current tax rate from any new property that has been added to the community by reason of new construction. The original proponents of Prop 2 ½ recognized that servicing new residential, commercial, and industrial buildings imposes additional costs (for the provision of schools, sewers, and police and fire coverage, for example) on a municipality and therefore requires the infusion of additional tax revenue.

Some authority, however, is granted to cities and towns to increase property taxes over and above the property tax levy ceiling and limit. This can occur as the result of a local plebiscite on an override or exclusion. An override allows a town to permanently increase tax rates by an amount exceeding the levy limit as long as the total remains below the overall 2.5 percent levy ceiling. For an override to come into effect, a majority of community voters must approve the measure placed on a ballot by a majority of the city or town’s council or selectmen.

Only through exclusions for debt service or capital projects can a community levy taxes at rates above the 2.5 percent levy ceiling, and these exclusions, approved in a manner similar to that for overrides, apply only for the fiscal year in which they are approved. Except for water or sewer systems and a few other capital spending exceptions exempt from Prop 2 ½, voters must also approve tax increases to fund capital projects or for the payment of debt service. Some cities, like Boston, have never proposed an
override to voters. Others have done it repeatedly in order to obtain the revenue they need for their schools and other services.

The combination of a high reliance on the local property tax and the political hurdles placed in the way of raising local property tax rates by Prop 2 ½ suggests why Frug and Barron gave the title *Boston Bound* to their 2007 report. The constraints on local municipal leaders to raise the revenue they deem necessary for offering appropriate public services -- including all those tied to their efforts to attract business investment and jobs -- are more severe in Massachusetts than almost anywhere else in the United States.

**The Value of Real Property in Massachusetts**

Given that the property tax is the overwhelmingly predominant source of locally-generated revenue at the municipal level in Massachusetts, the fiscal health of the state’s cities and towns relies heavily on the value of assessed property. It is precisely here where the older industrial cities are at a distinct disadvantage -- and the disadvantage appears to be getting worse over time.

*Figure 4a* provides data on the total (residential + commercial + industrial) assessed real property value per capita in 1987 for the 26 municipalities we have tracked in this research. We use per-capita figures throughout this report because of the difference in the size of the populations in the communities we are tracking. Back in 1987, the per-capita assessment values ranged from a low of just $12,950 in New Bedford to over $61,000 in Plymouth -- a differential of nearly five to one. While all of the older industrial cities had total per capita assessed values of less than $40,000, nine of the 14 comparison municipalities had assessed values that equaled or exceeded this level.
Of the 10 municipalities with the lowest per-capita assessments, nine of them were older industrial cities.

Clearly, in 1987 these cities were already at a disadvantage in terms of the value of their property. To obtain the same amount of tax revenue per capita as the comparison communities, they would have had to apply significantly higher property tax rates. Indeed, New Bedford would have had to charge rates nearly five times higher than Plymouth to yield the same tax revenue per capita. Even if Prop 2 ½ were not in effect, such a high tax rate would have been difficult to enact politically and would have discouraged both business investment and residential location in the older industrial city.

Between 1987 and 2004, the increase in total per capita assessments generally favored the comparison municipalities (see Figure 4b). Over this 17-year period, Pittsfield’s total per-capita assessed value (in nominal terms) increased by just 45 percent; in Revere, the increase was only 60 percent. By contrast, all of the rapidly growing cities enjoyed nominal assessment increases of more than 150 percent, including nine above 250 percent. Of all of the 26 cities and towns in this study, the nine experiencing the slowest increase in total assessed values were all older industrial cities.¹²

Not surprisingly, then, by 2004 the 12 older industrial cities were among the 13 communities with the lowest per-capita property values (see Figure 4c). With the exception of Agawam, the bifurcation of these two types of communities was nearly perfect, as all but this small town enjoyed higher per-capita assessments than all of the older industrial cities. This is a near perfect case of “uneven development” with the richer communities becoming richer and the poorer falling further behind -- at least in terms of real property values. To gain the same per capita revenue from their property,
Lawrence would have had to charge a tax rate nearly seven times that of Andover.

Springfield, Holyoke, Pittsfield, Fitchburg, and New Bedford would all require a tax rate more than three times that of Westford and Westborough.

[INSERT FIGURE 4a ABOUT HERE]

[INSERT FIGURE 4b ABOUT HERE]

[INSERT FIGURE 4c ABOUT HERE]

**Residential, Commercial, and Industrial Property Assessments**

Across the Commonwealth in 2004, residential property accounted for almost 83 percent of total assessed value. Commercial property accounted for another 11 percent while industrial property contributed less than 4 percent. The proportions vary substantially across municipalities based on such factors as the number of commercial and industrial ventures in a town or city, the value of land zoned for housing, and the value of residential structures.

In 1987, across our twenty-six municipalities, the share of residential assessments as a percentage of total assessments varied from a low of 48 percent in Westborough -- with its heavy concentration of retail establishments along Route 9 and Interstate 495 and its new industrial base including EMC -- to over 80 percent in Westford, Milford, Agawam, Shrewsbury, North Attleborough, Franklin, and Dartmouth -- all “bedroom” communities. The highest residential share was actually found among one of our older industrial cities -- Revere -- with 84.4 percent of its assessments tied to residential property. This small city north of Boston has practically no commercial or industrial
property and serves as a dense bedroom suburb of Boston. Back in 1987, only 14.8 percent of Revere’s property tax base was commercial and less than 1 percent (0.8%) was industrial (see Figure 5a).

Between 1987 and 2004, the residential share of total assessments increased for all but three of our twenty-six municipalities, as Figure 5b reveals. There does not appear to be a strong pattern across communities in the trend toward a rising residential share of total assessed value. By 2004, Holyoke and Westborough were least dependent on residential assessments, but even there two-thirds of the total assessed real property was residential (see Figure 5c). Billerica and Mansfield had the highest shares of industrial property, but in neither case did the share exceed twenty percent. For most communities, then, homeowners had to shoulder a larger and larger share of the local property tax burden.

[INSERT FIGURE 5a ABOUT HERE]

[INSERT FIGURE 5b ABOUT HERE]

[INSERT FIGURE 5c ABOUT HERE]

**Variation in Local Property Tax Rates**

Over the past two decades, most of the older industrial cities in the Commonwealth have asked the families and the companies that have remained in them to pay higher property tax rates in order to fund municipal services. In the same period, the state’s rapidly expanding municipalities have tended to relax the tax burden on residents and on commercial and industrial enterprises. We can observe a noticeable trend in the
overall tax burden within each locale by constructing a “total tax rate” calculated by dividing the total tax revenue obtained from residential, commercial, and industrial property into the total assessed value of these three types of real property.

**Constructed Total Tax Rates**

*Figure 6a* and *Figure 6b* present these constructed total rates for each community in 1987 and 2004, respectively. While the constructed total tax rate in 1987 tended to be higher in the older industrial cities, the difference in tax rates between this group of cities and the comparison group of municipalities was not very large. By 2004, though, taxpayers in several of the older industrial centers faced noticeably higher rates than those in the set of rapidly growing cities and towns. In keeping with Proposition 2 ½, none of the communities charged tax rates higher than $25.00 per $1,000 of real property (2.5%), but Pittsfield, Springfield, and Holyoke each had rates around 2.2%. By contrast, the highest rate found among the comparison communities was Agawam’s 1.69%.

*Figure 6c* shows the diverging paths of these two groups’ tax rates. The majority of the older industrial cities saw their rates increase between 1987 and 2004, a phenomenon which occurred in only one of the rapidly growth communities.

The competitive disadvantage of the older industrial cities in terms of economic development is made worse by the fact that their higher property tax rates are very likely “capitalized” into their assessed values. When pricing two identical assets in a competitive market, a higher tax rate will reduce the value of the higher-taxed asset since the stream of income flowing from this asset will have a lower after-tax return.¹³ This is true of housing values as well as the value of commercial and industrial property.
Hence, the higher property tax rates in the older industrial cities drive down assessed values, leading to the need for these municipalities to raise tax rates even higher to compensate for lower assessed values. Diverging assessed values between rich and poor communities leads to diverging tax rates which, in turn, lead to an even larger gap in assessed values. This is the essence of uneven development.

Residential Tax Rates

This divergence is clearly in evidence in the pattern of residential tax rates. Between 1987 and 2004, residential tax rates rose for many of the residents of the older industrial cities, while they fell in every one of the comparison communities save Mansfield. In 1987, the comparison communities tended to tax their residents at higher rates than the industrial cities, with Agawam charging the highest rate at just under $21.00 per $1,000 of property (see Figure 7a). By 2004, however, residential rates had fallen in nearly all of the rapidly growing communities. Billerica, which in 1987 subjected its residents to the second highest tax burden among these municipalities, cut its rate nearly in half by 2004, to less than $11.00. During this same period, many older industrial cities increased the burden on their residents, so that by 2004, of the 13 communities in the top half of residential tax rates, eight belonged to the group of older industrial cities (see Figure 7b). Pittsfield, in particular, saw an enormous tax increase,
as its rate increased by more than 50 percent, to more than $20.00 per $1,000 of assessed value (see Figure 7c) – more than double the tax rate in the growth communities of Dartmouth and Shrewsbury.

[INSERT FIGURE 7a ABOUT HERE]

[INSERT FIGURE 7b ABOUT HERE]

[INSERT FIGURE 7c ABOUT HERE]

Commercial and Industrial Tax Rates

Tax rates on commercial and industrial (CI) property followed a similar trajectory to residential taxes, increasing in most of the older cities and declining in the rapid growers. In 1987, New Bedford’s CI rate, the highest of all, exceeded the second highest rate, in Springfield, by several dollars, and was actually more than three times higher than the rate charged by its next-door neighbor, Dartmouth. Nine of the comparison communities taxed their businesses at a rate lower than $17.00 per $1,000; none of the older cities had a rate this low (see Figure 8a).

As stunning as those tax rate gaps were in 1987, the disparities grew larger over the following decade and a half. By 2004, seven older industrial cities charged CI tax rates above $26.00, with Holyoke leading the way at more than $36.00. By comparison, the highest rate among the rapidly growing towns and cities was the $24.42 rate found in Billerica (see Figure 8b). Only two of the comparison communities, Agawam and Mansfield, experienced CI rate increases between 1987 and 2004. During this same
period, the CI rate increased in two thirds of the older industrial cities, with Holyoke’s 
rate rising more than 70 percent (see Figure 8c).

This disproportionate increase in the CI tax burden poses an enormous barrier to 
economic development for the older industrial cities. Presumably less attractive because 
of their boarded up factories, low-income neighborhoods, and poorer municipal services, 
these communities also suffer from having to charge higher property tax rates per dollar 
of assessed value to provide the local services they struggle to fund. Such conditions are 
conducive to “uneven development” -- less investment over time in the older industrial 
cities and more in the already growing communities.

[TINSERT FIGURE 8a ABOUT HERE]
[TINSERT FIGURE 8b ABOUT HERE]
[TINSERT FIGURE 8c ABOUT HERE]

**Trends in Locally Generated Revenue**

Even with increasing tax rates on all types of property, low property values have 
prevented older industrial cities from realizing substantial amounts of revenue from their 
local property taxes. In a clear display of the potential cumulative effects of uneven 
development, many of the rapidly growing comparison communities have seen 
substantial increases in the revenue they receive each year from property taxes, while the 
change in revenue for the older industrial cities has been modest. This revenue gap has 
expanded in spite of the stricture of Prop 2 ½, since it allows revenues to be raised on 
new property added to the tax rolls. **Figure 9a** clearly shows the growing revenue chasm.
In 2004, Westford and Andover each received about $1,400 more (in nominal dollars) per capita in property tax revenue than they had received in 1987. Meanwhile, none of the older industrial cities increased their revenue by more than $600 in nominal dollars.

In inflation adjusted dollars, the impact of the local revenue disparity becomes even clearer. Lawrence, for example, whose per-capita property tax revenue rose by a mere $123 in nominal dollars, had the inauspicious distinction of seeing its inflation-adjusted locally generated purchasing power actually fall over this near two-decade period. Revenue generated by residential, commercial, and industrial property taxes in 1987 put about $280 into Lawrence’s coffers for every resident in the city. In 2004, with a larger population, but stagnating property values, that number had climbed to just over $400 and that $400 in 2004 represented only $268 in 1987 purchasing power, $12 less (-4%) than its 1987 real value. Westford, meanwhile, more than tripled its intake of property tax revenue, going from $682 per capita in 1987 to $2,079 in 2004. In real dollars, this amounted to $1,392 in 2004 and thus a $710 increase (104%) in real per-capita revenue.

The 1987-2004 change in real dollar local revenue values for each of our communities is shown in Figure 9b. Eight of the twelve older industrial cities experienced an increase of $150 or less in inflation-adjusted per-capita local revenue between 1987 and 2004. Ten of the 14 comparison municipalities enjoyed a real per-capita increase of $275 or more. Given these continually widening disparities in locally generated revenue, older industrial cities needed a supplemental source of revenue to meet residents’ and businesses’ demands for municipal services. External funding,
primarily in the form of local aid provided by the state, would need to take up the slack to achieve some form of equity in public service provision in these less prosperous cities.

[INSERT FIGURE 9a ABOUT HERE]

[INSERT FIGURE 9b ABOUT HERE]

Spending from Local Revenue

Because of these revenue trends, it is not surprising that if Massachusetts cities and towns relied solely on local revenue to fund their municipal services, the older industrial cities would today have nowhere near the revenue available to the communities experiencing rapid employment growth. Figure 10a through Figure 10d demonstrate just how unequal total municipal spending from locally-generated revenues was in 1987 and how this inequality increased over the ensuing period. Figure 10a shows a spending pattern from local revenue in 1987 in which the older industrial cities generally spent less per capita than the comparison cities. Andover, for example, spent $1,312 of locally generated revenue per capita (in nominal terms) on local public services in 1987, over three and one half times as much as New Bedford ($357). Back then, however, some of the growing cities -- including Agawam, North Attleborough, Milford, and Dartmouth -- had less local revenue per capita to spend on local public services than many of the older cities.

In the intervening period, as demonstrated in Figure 10b, virtually all of the growth communities save Dartmouth had a larger dollar increase in local spending from local sources than all of the older industrial cities. Indeed, as Figure 10c reveals,
Worcester actually spent $12 less per capita out of locally generated revenue in 2004 than it had in 1987 and Haverhill spent only $12 more. As a result, by 2004, the gap between the comparison municipalities and the older industrial cities becomes clearly evident (see Figure 10d). In 2004, Westborough spent the most local revenue, $2,983 per resident, over four times as much as the city that spent the least, Lawrence ($709).

Spending from State Local Aid

Given these large differences in local spending from locally-generated revenue, one would expect that both businesses and residents would attempt to move from those communities too poor to provide adequate services to those that were wealthy enough to supply public services of the first order. This problem of uneven development would presumably be compounded if older industrial cities tried to raise additional revenue, within the restrictions of Prop 2 ½, by boosting the tax rates applied to their less valuable property over the rates charged by their more affluent neighbors. Faced with both poorer public services and higher property taxes, even more businesses and residents would choose to move to other locations and few new businesses would come to town to set up shop.

What has kept this worst-case scenario from developing more quickly has been the supply of revenue sharing from the state -- local aid. In FY 2004, the Commonwealth
distributed over $4.2 billion to its 351 cities and towns. This was equivalent to nearly one quarter (24.6%) of the total amount of revenue available to cities and towns from all sources. If this local aid were distributed on a pure matching basis -- the equivalent of 33 cents on each dollar of locally-generated tax revenue -- the provision of state aid would have actually magnified uneven development significantly. Indeed, the same inequality would result if the state distributed aid on a simple per-capita basis.

To counteract the potential for catastrophic inter-municipality spending gaps, the state has created 19 different forms of revenue sharing and distributes these funds in such a way as to provide substantially more resources to poorer communities than to richer ones. The redistribution ends up being quite powerful and falls into two major categories: education aid (which in 2004 represented nearly three-fourths (73%) of the total) and general government aid. Both are distributed on the basis of various, often complicated, funding formulas that result in the “Cherry Sheet” -- named for the color of the paper on which they are printed (see Table 3). The Cherry Sheet specifies the revenues in each category of aid and how much each community receives.

[INSERT TABLE 3 ABOUT HERE]

Education Aid

The primary categories for the various forms of local aid for K-12 education are assistance provided under Chapter 70 of the Massachusetts General Laws (“Chapter 70”) and school construction assistance. In 1993, the Commonwealth passed the Education Reform Act, which laid the foundation for major changes in the aid distribution. The
legislation provided new definitions of “equitable” and “adequate” funding for public education, setting “foundation” budgets for each community and guaranteeing that no community, regardless of its local revenue capacity, would spend less than the mandated foundation budget per student. Municipalities were required to increase their own spending on education with exemptions for some distressed communities which, in turn, could actually decrease their local support.

The concept of the minimum “foundation” budget was established in the 1993 legislation to assure that children in poorer districts would receive the same basic level of financial support as those in wealthier communities. Chapter 70 monies, which represent 85 percent of the total state school assistance budget, must be used solely for K-12 education. In addition to these operating funds, the state supplies school construction assistance to local communities for new school buildings and renovation. Legislation passed in 2004 dedicates one cent from the 5 cent state sales tax to fund this program.

Beyond these two large school aid programs, which represent all but 3.5 percent of total state aid to primary and secondary education, there are six smaller assistance programs. They help cover regional school transportation, augment funds for retired teachers’ pensions, provide special funding to help assure racial equity in school finance, subsidize school lunch programs, and provide monies for charter schools. While Chapter 70 and the school construction funds must be used by communities exclusively for their K-12 school systems, the remaining aid funds are expected to be used for this purpose but are not legislatively limited to it.

**General Government Aid**
Two principal sources of revenue are provided for general government expenses: the Lottery and Additional Assistance. Together, these two forms of local aid represent over 90 percent of non-education local aid. The lottery distribution is not appropriated through the normal legislative process, but is doled out by transferring funds to the State Comptroller. A separate formula is used to distribute proceeds from the lottery so that poorer communities receive more aid than richer ones.

In 2004, Additional Assistance provided a supplemental distribution to 159 of the 351 communities in the Commonwealth. According to Table 3, nearly three-fifths (57.9%) of non-educational General Government state aid comes from the distribution of lottery funds while another third (33.1%) comes in the form of Additional Assistance. Together, these two forms of general aid provide over $1 billion of revenue to local communities.

**Share of Total Spending due to Local Aid**

Cities and towns across Massachusetts now depend on state aid to help meet the needs of their communities, particularly as Proposition 2 ½ (and state restrictions on other types of taxes available to local communities) limit the ability of municipalities to raise funds. Still, the reliance and dependence on state funds varies dramatically across communities. As Figure 11a demonstrates for 2004, state aid for schools plus general government assistance ranged from just 7.4 percent of total municipal spending in Westborough to over 73 percent of total spending in Lawrence. That is, nearly three-quarters of local municipal spending in Lawrence was funded by the state government while less than one twelfth of Westborough’s spending came from state sources. Clearly, the legislature has used state aid to redistribute state-generated revenues so as to
compensate for the differential ability of local communities to raise funds from their own sources. The older industrial cities and the economically healthy cities are perfectly split along the lines of reliance on state aid. All of the older industrial cities are more dependent on state aid than all of the comparison municipalities. The older industrial cities are, on average, more than twice as dependent on state aid for their local municipal spending as the typical comparison city.

[INSERT FIGURE 11a ABOUT HERE]

Because of the growing gap in total assessed values and, by extension, the growing gap in locally generated revenue, the distribution of state aid has, of necessity, become even more concentrated in the older industrial cities in order to keep in check what otherwise would be a rapidly growing gap in local services, in local tax rates, or both. In 2004, all twelve older industrial cities received more state aid per capita than any of the fourteen comparison municipalities. Back in 1987, as Figure 11b shows, reliance on state spending was somewhat less polarized. The share of total municipal spending underwritten by the state government ranged from 13 percent in the least subsidized community (Plymouth) to 65 percent in the most subsidized older industrial city (Springfield). Thus, the state aid subsidy differential increased from 52 percentage points in 1987 to 64 percentage points in 2004.

[INSERT FIGURE 11b ABOUT HERE]
State Funding of K-12 Education

To better understand just how critical state aid is to the older industrial cities, it is useful to drill down further to investigate the distribution of Chapter 70 aid. As noted above, funds for education account for nearly three-quarters of the total state aid that cities and towns receive. In a few cases, cities and town now receive sufficient money through Chapter 70 that they do not have to spend any of their own locally-generated revenue on education to meet the requirements of the state mandated foundation budget for each school-aged child. The state is effectively redistributing money so that the cities with the greatest ability to put local money into education receive much less state aid than the older industrial cities.

Comparing the charts in Figure 12a and Figure 12b reveals the redistributive impact of Chapter 70. The first of these figures illustrates how in 1987, before the advent of Chapter 70, the older industrial cities were clustered toward the bottom in terms of per capita total education spending. Ten of the 13 lowest school spending municipalities in our study were older industrial cities, spending $463 per capita on education or less. By 2004, though, because of large increases in Chapter 70 aid distributed to the older industrial cities, many of these cities were spending at least as much per capita on their students as were the richer comparison municipalities. Continuing to rely heavily on state aid, Chelsea, Lawrence and Springfield moved to the top half of communities in terms of total spending per capita on education.

The older industrial cities spent $1,191 per capita, on average, on education in 2004, while the cities and towns in our comparison group spent an average of $1,258. Thus, with state aid, the older industrial cities were able to provide over 95 percent as
much K-12 education spending per capita as the growing communities. Back in 1987, before Chapter 70, when the difference was $423 vs. $538, the older industrial cities provided on average only about 80 percent as much school spending per capita as the comparison communities. Hence, much of the gap in per-capita K-12 spending was closed by 2004. Without state aid for education, the older industrial cities would struggle to meet school budgets, since their capacity to raise funds out of local property taxes is nowhere near that of the cities experiencing more rapid economic growth.

State Funding for Non-School Expenditures

Spending for municipal services beyond education is crucial for attracting economic development, as the recent research carried out by CURP has shown.\(^{18}\) Low crime rates, good transportation options, and an overall higher quality of local services become possible when municipalities have the funds to maintain and improve their infrastructure, services, and amenities.\(^{19}\) Non-school spending makes up a much smaller percentage of state aid, but this money too helps boost the capacity of the older industrial cities to provide for their residents. Like school aid, the state has distributed Additional Assistance in a way that most benefits the older industrial cities. For example, in 2004, Springfield received, on a per-capita basis, nearly seven times the state aid for non-education purposes than Westborough received. Of the twelve older industrial cities in this study, ten received more state aid than any of the comparison cities.
While this is helpful, the actual amounts of aid are quite modest. Figure 13a reveals that in 2004, New Bedford spent $1,226 per capita out of local revenue on non-school expenditures, while receiving only $242 per capita from the state in the form of non-school related general government aid. Westford spent $1,475 per capita on non-school expenditures out of local revenue, with the state adding only $107 to the total. Figure 13b demonstrates that non-school aid was distributed similarly in 1987. Moreover, once we control for inflation, the amount of non-school aid offered by the state has actually declined in nearly every municipality. According to Figure 13c, the state supplied Revere and Lawrence with at least $100 less in 2004 than in 1987 (in 1987 dollars). Only Agawam ended up with more per capita non-school aid. To the extent that communities compete for business investment on the basis of offering safer streets, better infrastructure, and more effective management of zoning and building inspections -- all funded from non-school resources -- the reduction in the real value of non-school aid compromises the ability of older industrial cities to compete successfully.
Finally, we can look at the total revenue our 26 communities have to spend on all municipal services from all sources. **Figure 14a and Figure 14b** illustrate the roles that local tax levies, state aid, and other sources of funding (e.g. federal funds) played in municipal revenue in 1987 and 2004 respectively. As we have shown repeatedly, it is clear that state aid has been distributed in such a way as to limit dramatically the inequality in local spending that would exist if cities and towns were dependent on their own locally generated funds. *The amount of state aid provided in both 1987 and 2004 was so well distributed that there appears to be no definitive pattern in the final distribution of available total revenue across older industrial and high-growth communities.*

A comparison of Mansfield and Lawrence provides a good example. In 2004, wealthy Mansfield and poorer Lawrence had nearly the same level of revenue per capita for local services ($2,850 vs. $2,885). What made this possible was state aid. Mansfield generated $1,502 per capita in local property taxes from its rich supply of highly valued property while Lawrence generated less than a third of this amount ($442) from their much more limited supply of assessed property values. By contrast, Mansfield received only $626 in total state aid per capita and another $721 per capita in the form of federal funds, license and permit fees, and other miscellaneous sources while Lawrence enjoyed more than 3 times as much state aid per capita ($1,908) and $536 per capita from other sources.

Despite the redistribution of revenue in the form of state aid, there remains considerable disparity in spending across cities -- but this does not always favor the state’s wealthier municipalities. The city with the most revenue to spend per capita in
2004, Westford, had almost 1.5 times the revenue that Haverhill had to spend. Revere could, however, spend as much as the more wealthy towns of Dartmouth while Brockton, Holyoke, and Chelsea could spend more than Marlborough, Franklin, and Chelmsford. Towns and cities continue to differ in their local spending, but reliance on the local property tax has turned out to be less of a liability than one might initially gather because of the state’s willingness to play Robin Hood in distributing state-generated revenues.

[INSERT FIGURE 14a ABOUT HERE]

[INSERT FIGURE 14b ABOUT HERE]

**Proposition 2 ½ and the Leveling of Municipal Revenues**

As it turns out, the distribution of state local aid is not the only reason that older industrial cities have been able to spend nearly as much per capita as the comparison municipalities on local public services. Proposition 2 ½, first proposed by conservative anti-tax forces in Massachusetts, has had the surprisingly powerful, but presumably unintended, effect of also limiting the gap in municipal finance.

Proposition 2 ½ has had profound ramifications for municipal revenue in all Massachusetts cities and towns, but the impact has been qualitatively different for poor and wealthy communities. The older industrial cities, with their lower assessed property values and small increases in property value, must deal with a much smaller financial base upon which to levy taxes. Constrained both by their smaller tax base and often by the need to provide more municipal services for their economically disadvantaged residents, these cities under normal circumstances might try to raise additional revenue.
through higher tax rates to squeeze every dollar possible out of their property base. Prop 2 ½ makes it illegal for a municipality to raise the levy ceiling above 2.5 percent of fair assessed value even if the community’s residents desire it. In contrast, with growing property values, wealthier communities need not resort to higher tax rates to boost their revenue. Thus the levy ceiling imposes a much greater burden on older industrial cities than other municipalities.

Wealthier communities, on the other hand, are more heavily affected by Proposition 2½’s second provision, limiting yearly increases in the tax levy – the “levy limit.” Given the rapidly expanding tax base in the high-growth cities and towns, revenues could rise dramatically with no change whatsoever in the property tax rate. By limiting the growth of tax revenue to 2.5 percent per year on existing property, Proposition 2 ½ tempers what could otherwise be a large revenue windfall. The faster a municipality’s assessed value base grows, the more Prop 2 ½’s levy limit constrains tax revenue. With assessed values growing only slightly in the older industrial cities, the levy limit has less of an impact in these communities.

As an illustration, the following figures examine the fiscal situation of Andover, one of the Commonwealth’s towns experiencing rapid growth in assessed values and Springfield, one of the older industrial cities where assessed values have risen slowly. As a result of the fixed levy ceiling, neither Andover nor Springfield collected levies higher than 2.5 percent at any time between 1987 and 2004. Figure 15a shows, however, that Springfield’s combined tax rate has never been below Andover’s and has at times been a full percentage point higher. Even more noteworthy is the period between 1996 and
2000, when Springfield, obviously chafing under the restrictions of the law, levied the full 2.5 percent permitted by Proposition 2 ½.

The difference between what a community may collect under Proposition 2 ½ and what it actually does collect is called the “excess levy capacity,” and it serves as a safety cushion for wealthier communities. In difficult economic periods, wealthier towns like Andover may choose to raise their tax rates to supplement flagging budgets as long as they do not exceed the levy limit of 2.5 percent per year. By contrast, cities like Springfield, which already tend to levy taxes at rates near the levy ceiling and the levy limit, do not enjoy this cushion. Figure 15b illustrates this situation. During times of economic boom, Andover has chosen to collect less tax than it legally can, opting only to tax at its levy limit in times of recession, especially in the early 1990s. Meanwhile, except in 1988, Springfield has never possessed any substantial excess levy capacity; rather, it has, in general, taken every cent it could legally get under the 2.5 percent levy ceiling and 2.5 percent levy limit.

Although the first provision of Proposition 2 ½ allows levies up to 2.5 percent of all property value, the second provision often makes the collection of this much money impossible except through the passage by referendum of a permanent override or a temporary exclusion. By limiting the yearly increases through the “levy limit” to 2.5 percent, the law makes it difficult to realize large revenue increases in a single year even if assessed values on existing property have soared. This keeps municipalities like Andover from easily increasing their revenues and, by extension, their spending from local sources. In the absence of Prop 2 ½, and its restriction on raising the levy limit, wealthy communities like Andover, which have experienced enormous property
appreciation and vast new construction, would have had access to ever-increasing sums of tax dollars without having to raise their property tax rates at all. Less prosperous cities like Springfield would have had the opportunity to raise their tax rate above the 2.5 percent ceiling, but with low, and sometimes declining, property values and little new construction, the pool of taxable property would soon dry up and the higher tax rates would make any new investment by the private sector unlikely.

A hypothetical projection will be illustrative here. If all communities actually collected a flat rate of 2.5 percent of the value of property in taxes every year, a huge revenue gap, such as that displayed in Figure 15c, would emerge between rich and poor communities. This figure shows how such an adjustment would change the fortunes of Andover and Springfield. Andover, which enjoys the luxury of vast excess levy capacity, would see its revenues leap if it raised its tax rate to this level. Springfield, by contrast, would experience little change. It is, in large part, because of Proposition 2 ½’s annual levy limit that the lines depicting the actual levy each year in Andover and Springfield in this figure have remained parallel, even though Andover has consistently been much higher. Without the Prop 2 ½ levy limit, the gulf would spread wider every year.

While Proposition 2 ½ has tempered the growing inequality in revenue, a large revenue and spending gap would have remained if it were not for local aid from the state. As shown in Figure 15d since 1987, total per-capita revenues in Andover and Springfield -- from the combination of locally generated funds plus local aid -- have remained nearly identical, thanks to the equalizing effect of state aid plus the moderating impact of the levy limit. Andover’s revenue has still stood above Springfield’s, even considering the added state aid, but in most years the gap has been less than $100 per capita, not
hundreds or even thousands of dollars, as it would have been if municipal revenue came solely from the property tax and there was no levy limit. Proposition 2 ½ is, and has always been, a conservative measure that has hindered the ability of individual cities and towns to provide high-quality municipal services, but in conjunction with generous local aid, it has leveled the spending gap between rich and poor communities, preventing an uneven development spiral.

Equality is Not Necessarily Equal

As evidenced by the data on municipal spending from local revenue sources and from state-funded local aid, the Commonwealth has generally succeeded in its effort to mitigate the impact of unequal property tax revenue between richer and poorer communities. Through the provision of targeted assistance, the state government has closed what would otherwise have been an enormous gap in municipal spending on essential services like schools, police and fire protection, public works, and infrastructure. Were it not for the leveling effect of this aid, cities like Lawrence and Chelsea would struggle just to keep schools open. As Figure 16 shows, these and other older industrial cities tend to spend on their public school students as much, if not more than, many of the rapidly growing comparison communities. In FY 2004, of the 26
sample municipalities, Holyoke allocated the most money for the education of each of its students, spending about $9,900 per student. Chelsea and Brockton, cities with relatively high poverty rates, spent nearly $9,000 per pupil, while Worcester, New Bedford, Springfield, and New Bedford, Fitchburg, and Pittsfield all spent at least $7,800. Without the generosity of the state government, these cities would be forced to balance their budgets by cutting funds for teachers, textbooks, and school supplies, thereby placing more hurdles in the path to success for their school-aged children.

[INSERT FIGURE 16 ABOUT HERE]

As progressive as this attempt at equity has been, it applies mainly to K-12 education and not many other municipal services that prove critical to maintaining a community that is attractive to business investment and new residents. As older industrial cities struggle to provide services to poor, elderly, and foreign-born populations at rates far higher than those found in more prosperous cities and towns, and as they deal with the legacy of historical inequalities, leveling the playing field in other areas besides K-12 schooling requires a disproportionate response from the Commonwealth in the neediest communities. Data on expenditures on police protection provide an illustrative example. It is true, as Figure 17a indicates, that the older industrial cities spend more per capita on police services, on average, than the rapidly growing municipalities. In 2004, for instance, Holyoke spent about 2.5 times as much on police protection as Shrewsbury, a town with a population just slightly smaller than Holyoke’s. However, this fact obscures the reality of public safety in these two communities: Holyoke
experienced 81 crimes per 1,000 residents in 2004, while Shrewsbury had to deal with 14. Per-capita municipal spending appears equitable, but the true disparities in the provision of police protection emerge when we consider the crime rates that cities like Holyoke must combat. Figure 17b does just this. In 2004, Westford, with just 129 reported crimes, spent an average of $25,000 for each incident reported to the police. By comparison, Springfield, with nearly 14,000 reported crimes, spent the equivalent of $2,200 on each. Clearly, even with state aid to equalize per-capita spending on police protection, there remains a huge disparity in funding for crime prevention and criminal investigation. To the extent that businesses consider crime rates as one factor in their location decisions, equal spending on police by Springfield and Westford does not equate to equal community safety. Therefore, on this measure Springfield is at a competitive disadvantage in attracting investment and jobs.

[INSERT FIGURE 17a ABOUT HERE]

[INSERT FIGURE 17b ABOUT HERE]

Municipal budgets in cities with depressed property assessments can only achieve so much. Recognizing the need to prioritize, these cities have stretched their locally generated revenue and the aid donated by the state in order to give their residents the services they cannot live without -- public schools, police and fire protection, water, sewer, and infrastructure. Yet in struggling to meet these basic needs for their residents, they have been unable to fully invest in the amenities that appeal to commercial and industrial enterprises, thus impeding the process of economic development. Each
municipality is obligated, under the requirements of Chapter 70 of the Massachusetts General Laws, to meet a given “foundation” threshold of per-pupil school funding. Such obligations are not in place, though, for other important municipal amenities. As a result, poorer communities do not and cannot devote the same level of support to such community amenities as parks, recreation, and the arts, or to general government, which covers the cost of planning, zoning, building inspections, and other services business enterprises demand if they are to settle in these communities. Figure 18 portrays the gap in funding for culture and recreation. Of the 12 older industrial cities, nine are found in the bottom half of support for culture and recreation, which includes money for such services as libraries, parks, and community celebrations, components that are essential for creating and sustaining an attractive place to work and live.

[INSERT FIGURE 18 ABOUT HERE]

Impact of Cuts in Local Aid on Older Industrial Cities

The Commonwealth has gone to substantial lengths to distribute local aid in such a way as to offset a large share of the inequality in municipal assessed values. Even then, as we have just noted, for cities and towns to have an equal chance at attracting business investment and jobs, it is not nearly enough that the state has worked to equalize per-capita total spending. Older industrial cities require a large influx of funds to deal with many of the problems they face, including higher crime rates and a more dilapidated infrastructure.
As a result, these older industrial cities are at higher risk of backsliding whenever the state cuts local aid as a response to declining state revenues during economic recessions. We can gauge the impact of reductions in local aid by investigating how our older industrial cities fared relative to the high-growth communities during two periods in which local aid was reduced as state revenue shrank because of slowdowns in the state economy: 1989-1992 and 2002-2004.

**Chapter 70 School Aid**

State support for K-12 public schools, as we have noted earlier, is the largest component of local aid in the Commonwealth and Chapter 70 is by far the largest of the school aid revenue sharing programs offered cities and towns. When the Massachusetts economy went into recession in 1990, the state cut local aid budgets in order to try to balance its budget. Nonetheless, it is clear from **Figure 19a** that instead of cutting across the board between 1989 and 1992, the state attempted to protect older industrial communities from the severest reductions in local aid. On a percentage basis, 11 of the 14 growth communities experienced a reduction in Chapter 70 funds of at least 30 percent. In contrast, all twelve of the older industrial cities faced cuts of less than 30 percent, with most below 20 percent. While wealthier communities like Andover and Marlborough experienced Chapter 70 cuts of 50 percent, Springfield, Holyoke, and Chelsea were cut less than 15 percent.

Yet given the enormous dependence on Chapter 70 among the older industrial cities, the dollar per-capita reductions were often much larger than those experienced by the comparison communities. As **Figure 19b** reveals, New Bedford and Lawrence each lost more than $120 of Chapter 70 aid per capita while Chelmsford, Billerica, and
Marlborough each suffered per-capita dollar losses only one-third as large -- less than $40. Eight of the twelve older industrial cities experienced dollar cuts greater than nine of the fourteen wealthier communities.

In the second recession period (2002-2004) the Commonwealth was even more careful to protect the older industrial cities from the most severe cuts, both percentage-wise and dollar-wise. As Figure 19c demonstrates, the Chapter 70 formula even permitted increases for some municipalities because of increasing enrollments while other communities suffered 20 percent cuts. The older industrial cities suffered no more than 8 percent reductions in Chapter 70 aid while six of these communities (and five of the comparison municipalities) actually received increases in aid. The result in terms of dollar cuts was much more balanced between the two sets of cities and towns than during the previous recession, as Figure 19d demonstrates. Dollar-wise, Holyoke and Brockton suffered no worse than Milford, Plymouth, and Agawam. Springfield, Revere, Worcester, Attleboro, New Bedford, and Lawrence all received additional aid during this business cycle downturn.

Lottery Aid and Additional Assistance
While the burden of Chapter 70 school assistance cuts on the older industrial cities has been limited, the same cannot be said of the two largest forms of state aid used to underwrite the other costs of local government -- lottery revenues and Additional Assistance. The percentage cuts in both the 1989-1992 and 2002-2004 recessions have been more or less borne across the board regardless of the condition of each municipality’s local finances. This trend is evident in Figure 20a and Figure 20b for the 1989-1992 period. On a percentage basis, the older industrial cities were just as likely to take a large cut in lottery funds and Additional Assistance as the rapidly growing communities. Translated into per-capita changes in aid dollars, the nine municipalities suffering the largest cuts were all older industrial cities. Chelsea, Holyoke, Worcester, and Springfield were all hit with aid cuts of at least $90 per capita while none of the high-growth communities lost more than $60 per capita.

A similar phenomenon took place in the 2002-2004 recession (see Figure 20c and Figure 20d). On a percentage basis, there was no cross-municipal pattern in terms of the cuts in lottery and Additional Assistance revenue. But given the heavier dependence on local aid to start with, the same percentage reductions amounted to larger per-capita dollar cuts. Ten of the 11 municipalities suffering the largest dollar reductions in aid were older industrial communities.
Given the critical nature of *non-school* local aid for the funding of municipal activities related to maintaining local police services, traffic safety, cultural attractions, and other local amenities, the cutbacks in lottery revenue and Additional Assistance are particularly damaging to the older industrial cities. These communities benefit greatly from the expansion of non-school local aid and therefore suffer disproportionately every time the state budget is cut. The ability to maintain high-quality local services in the face of this kind of local aid “yo-yo” is sorely compromised and the older industrial cities are the ones most disadvantaged by this practice.

**Conclusions**

This detailed examination of local fiscal capacity in a sample of older industrial cities in Massachusetts paired with a set of municipalities that experienced rapid employment growth from the late 1980s through the middle of this decade provides a powerful picture of the constraints the state’s older industrial cities face in providing the range of municipal services that are important today in attracting business investment and jobs. In the absence of state revenue sharing and Prop 2 ½’s levy limit, reliance on the local property tax as the basis for a community’s fiscal health would have led to a degree of uneven development among communities many times worse than actually experienced.

To the extent that assessed values rise much more slowly as businesses leave a community and residents relocate, the older industrial cities have found their local fiscal base compromised. To the extent that the assessed values in communities with rapidly expanding business tend to increase, these already advantaged communities gain the
added leverage of greater local tax revenue, which in turn permits them to spend more on the local services that businesses and families seek when putting down roots. The result is that reliance on local property-based taxation, *other things equal*, leads to continued uneven development, as the older cities face continued economic decline while the faster growing municipalities improve their advantage when it comes to attracting new and expanded business ventures.

Fortunately, for the older industrial cities, the existence of local aid supplied by the state makes other things not equal. The Commonwealth has allocated its local aid, particularly for public K-12 schools, in such a way as to compensate for much of the lack of fiscal capacity in the older industrial cities. With older cities often getting six to eight times the dollar value in school aid per capita and three to six times the value in lottery funds and Additional Assistance, the gap in total spending across the older industrial cities and our comparison group of fast-growing cities is substantially reduced. Redistribution of state aid in such a progressive manner has reduced, but not totally eliminated, the tendency toward uneven development stemming from property tax reliance.

Nonetheless, there are two reasons why the use of state aid to equalize fiscal capacity across the Commonwealth’s municipalities falls short of offsetting the threat of uneven development. The first is that equal spending does not produce equal results. Municipalities with higher crime rates, decaying infrastructure, and children from disadvantaged backgrounds need to spend more per capita -- often much more -- on such things as police, local road repair, and public schools in order to make up for their
community deficits. Hence, the state would have to redistribute a great deal more funds
to the older industrial cities to offset such disadvantages.

The other reason why uneven development is not offset by state spending has to
do with the impact of cuts in aid when the state faces economic recession. Even with its
intent of favoring the older industrial cities when aid cuts prove necessary, the
Commonwealth continues to allocate lottery revenue and Additional Assistance in a way
that results in larger dollar cuts per capita for most of the older industrial cities. Since
this aid is most important to providing funds for such local responsibilities as police
protection, road repair, and general government, these deeper dollar cuts are especially
damaging to older industrial cities.

Whether additional aid to the disadvantaged municipalities during good economic
times and limiting local aid cuts to these communities during bad times would help these
communities find a new lease on life is open to question. Many factors besides fiscal
capacity contribute to the ability of local communities to attract investment and jobs. But
fiscal capacity is important as well and those desiring to level the playing field in terms of
economic development should pay heed to the role of the local property tax and state aid
in providing the fiscal wherewithal local communities require in the competition for a
share of future economic prosperity.
ENDNOTES


3 Bluestone, Clayton-Matthews, and Soule, p. 4.


7 U.S. Census Bureau, “State Tax Collections by State and Local Governments” in www.census.gov/govs/www/qtax.html. The five states that rely even more heavily on the property tax for local revenue are Connecticut (83.6%), Rhode Island (81.8%), New Hampshire (81.0%), Maine (77.6%), and New Jersey (76.2%).

8 Massachusetts Department of Labor, Current Employment Statistics (CES-790) http://lni2.detma.org/Lmi/lni_ces_a.asp.

9 Information about The Economic Development Self-Assessment Tool and the Economic Development Partnership is available on the Center for Urban and Regional Policy (CURP) website on the CURP Ongoing Projects tab at www.curb.neu.edu.


12 Only Chelsea and New Bedford had percentage increases that placed them in the ranks of the fast growing comparison communities, but this was mainly because both started with such low assessments back in 1987 that small dollar increases in assessed values yielded large percentage changes.

13 The original empirical work on “tax capitalization” was conducted by the economist Wallace Oates in his study of how property taxes affect residential property values. See Wallace E. Oates, “The Effects of Property Taxes and Local Public Services on Property Values: An Empirical Study of Tax Capitalization and the Tiebout Hypothesis” Journal of Political Economy Vol. 77. 1969. Yinger, et. al., corroborated Oates’ original work in their 1988 book on this subject. See John Yinger, Howard S. Bloom, Axel


15 In 2004, the state distributed $4.2 billion to the cities and towns which themselves raised $12.9 billion in locally generated revenue. Thus for every dollar of locally generated revenue there was 33 cents of state aid ($4.2 billion/$12.9 billion).

16 There are a number of assessments that are netted out from the gross local aid distribution (e.g. for contributions to county governments, transit authorities, regional planning agencies, etc.) Hence, the actual local aid distribution to each community is the net of total local aid minus such assessments imposed on municipalities.

17 Municipal Data Management and Technical Assistance Bureau, Massachusetts Department of Revenue, Division of Local Services, “Cherry Sheet Manual” at http://www.dls.state.ma.us.

18 See Bluestone, Clayton-Matthews, and Soule, op. cit, Table II.1, p. 16.

19 This is not to say that the relative quality of services depends exclusively on the relative level of available revenue. Differences in the efficiency and effectiveness of spending across communities can mean that one well-managed municipality can get more “bang for the buck” than another. Obviously, such factors as local corruption can have a corrosive effect on the business environment of a town or city, almost regardless of the amount of revenue available for local services.

20 Massachusetts Department of Revenue, Division of Local Services, *Levy Limits: A Primer on Proposition 2 ½*.

21 This projection ignores the endogenous feedback processes that would result from such a scenario. Since the unequal tax rates likely exacerbate uneven development, the reverse is probably true. If Andover and Springfield actually had the same tax rates, potential residents and businesses would have one less reason to avoid Springfield, and the pace of uneven development might slow.

Figure 1. 

Older Industrial Cities Rapid Growth Municipalities

<table>
<thead>
<tr>
<th>2004 Population:</th>
<th>2004 Population:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTLEBORO</td>
<td>AGAWAM</td>
</tr>
<tr>
<td>BROCKTON</td>
<td>ANDOVER</td>
</tr>
<tr>
<td>CHELSEA</td>
<td>BILLERICA</td>
</tr>
<tr>
<td>FITCHBURG</td>
<td>CHELMSFORD</td>
</tr>
<tr>
<td>HAVERHILL</td>
<td>DARTMOUTH</td>
</tr>
<tr>
<td>HOLYOKE</td>
<td>FRANKLIN</td>
</tr>
<tr>
<td>LAWRENCE</td>
<td>MANSFIELD</td>
</tr>
<tr>
<td>NEW BEDFORD</td>
<td>MARLBOROUGH</td>
</tr>
<tr>
<td>PITTSSFIELD</td>
<td>MILFORD</td>
</tr>
<tr>
<td>REVERE</td>
<td>NORTH ATTLEBORO</td>
</tr>
<tr>
<td>SPRINGFIELD</td>
<td>PLYMOUTH</td>
</tr>
<tr>
<td>WORCESTER</td>
<td>SHREWSBURY</td>
</tr>
<tr>
<td></td>
<td>WESTBOROUGH</td>
</tr>
<tr>
<td></td>
<td>WESTFORD</td>
</tr>
</tbody>
</table>
Figure 2.

Percent Change in Employment, 1987-2004

Figure 3.

Residential, Commercial, and Industrial Property Tax Revenue as a Percentage of Total Locally Generated Revenue, 2004

Source: Massachusetts Department of Revenue Division of Local Services Municipal Databank/Local Aid Section (Mass. DOR Municipal Databank), “Revenues by Source – Revenue Component Breakdown 2000-2007.”
Figure 4a.

Total Real Property Assessments per Capita, 1987

Figure 4b.

Percent Change in Total Real Property Assessments, 1987-2004  
(Nominal Terms)

![Bar chart showing percent change in total real property assessments for various cities from 1987 to 2004. The chart compares the percent change for each city, with the cities listed on the x-axis and the percent change on the y-axis. The cities with the highest percent change are Chelsea and Shrewsbury, while Pittsfield has the lowest percent change.]

Total Real Property Assessments per Capita, 2004

Figure 5a.

Composition of Total Real Property Assessed Value, 1987

Source: Mass. DOR Municipal Database, "Fiscal Year 1981-1989 Assessed Values by Class"; "Fiscal Year 2000-2006 Assessed Values by Class".
Figure 5b.

Percent Change in the Residential Share of Total Assessments, 1987-2004

Figure 5c.

Composition of Total Real Property Assessed Value, 2004
Figure 6a.

Composite Total Real Property Tax Rate, 1987

Figure 6b.

Composite Total Real Property Tax Rate, 2004

Figure 6c. 2004/1987 Ratio of Composite Total Real Property Tax Rate

Figure 7a.

Residential Property Tax Rates, 1987

Figure 7b.

Residential Property Tax Rate, 2004

Source: Mass. DOR Municipal Database, "Fiscal Year 2000-2006 Tax Rates by Class."
Figure 7c. 2004/1987 Residential Property Tax Rate Ratio

Figure 8a.

Commercial and Industrial Property Tax Rate, 1987

Figure 8b.

Commercial and Industrial Property Tax Rate, 2004

Source: Mass. DOR Municipal Debakey, "Fiscal Year 2000-2006 Tax Rates by Class."
Figure 8c.

Figure 9a.

Change in Per Capita Revenue Generated Through Residential, Commercial, and Industrial Property Taxes, 1987-2004 (Nominal Terms)

Figure 9b.

Change in Dollar Revenue Generated Through Residential, Commercial, and Industrial Property Taxes, 1987-2004 ($1987 Real Terms)

Figure 10a.

Total Per Capita Local Spending from Local Revenue, 1987

“Fiscal Year 1987 Cherry Sheet Receipts.”
Figure 10b.

Change in Dollar Value of Total Local Spending from Local Revenues, 1987-2004 (Nominal Terms)

Change in Dollar Value of Total Local Spending from Local Revenues, 1987-2004
($1987 Real Terms)

Source: Mass. DOR Municipal Database; "Fiscal Year 1988-1999 School Versus Total Expenditures;" "Fiscal Year 2000-2005 School Versus Total Expenditures;"
"Fiscal Year 1987 Cherry Sheet Receipts." "Fiscal Year 2000 thru 2007 Cherry Sheet Estimated Receipts by Program."
Figure 10d.

Total Per Capita Local Spending from Local Revenue, 2004

Source: Mass. DOR Municipal Database "Fiscal Year 2000-2005 School Versus Total Expenditures;" "Fiscal Year 2000 thru 2007 Cherry Sheet Estimated Receipts by Program."
Table 3.

Cherry Sheet Receipts, 2004 (Net of Regional School Assessments)

<table>
<thead>
<tr>
<th>Education Aid</th>
<th>FY 2004</th>
<th>% Education Aid</th>
<th>% General Government</th>
<th>% Local Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 70</td>
<td>$2,614,942,964</td>
<td>85.20%</td>
<td></td>
<td>62.08%</td>
</tr>
<tr>
<td>School Construction</td>
<td>$345,151,048</td>
<td>11.25%</td>
<td></td>
<td>8.19%</td>
</tr>
<tr>
<td>Regional School Transportation</td>
<td>$72,040</td>
<td>0.00%</td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Retired Teachers Pensions</td>
<td>$53,683,909</td>
<td>1.75%</td>
<td></td>
<td>1.27%</td>
</tr>
<tr>
<td>Racial Equity</td>
<td>$11,443,570</td>
<td>0.37%</td>
<td></td>
<td>0.27%</td>
</tr>
<tr>
<td>School Lunch</td>
<td>$4,420,716</td>
<td>0.14%</td>
<td></td>
<td>0.14%</td>
</tr>
<tr>
<td>School Choice receiving Tuition</td>
<td>$27,163,707</td>
<td>0.89%</td>
<td></td>
<td>0.89%</td>
</tr>
<tr>
<td>Charter Tuition Assessment</td>
<td>$12,219,941</td>
<td>0.40%</td>
<td></td>
<td>0.40%</td>
</tr>
<tr>
<td><strong>Sub Total Education Aid</strong></td>
<td>$3,069,097,895</td>
<td>100%</td>
<td></td>
<td>72.87%</td>
</tr>
</tbody>
</table>

**General Government**

<table>
<thead>
<tr>
<th>General Government</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lottery</td>
<td>$661,378,162</td>
<td></td>
<td>57.87%</td>
<td>15.70%</td>
</tr>
<tr>
<td>Additional Assistance</td>
<td>$378,517,988</td>
<td>33.12%</td>
<td></td>
<td>8.99%</td>
</tr>
<tr>
<td>Local Share of Racing Taxes</td>
<td>$2,418,500</td>
<td>0.21%</td>
<td></td>
<td>0.06%</td>
</tr>
<tr>
<td>Regional Public Libraries</td>
<td>$9,082,685</td>
<td>0.79%</td>
<td></td>
<td>0.22%</td>
</tr>
<tr>
<td>Police Career Incentive</td>
<td>$45,616,219</td>
<td>3.99%</td>
<td></td>
<td>1.08%</td>
</tr>
<tr>
<td>Urban Renewal Projects</td>
<td>$4,339,806</td>
<td>0.38%</td>
<td></td>
<td>0.10%</td>
</tr>
<tr>
<td>Veteran's Benefits</td>
<td>$8,034,961</td>
<td>0.70%</td>
<td></td>
<td>0.19%</td>
</tr>
<tr>
<td>Exempt: Vets, Blins, Svng Sp</td>
<td>$8,234,011</td>
<td>0.72%</td>
<td></td>
<td>0.20%</td>
</tr>
<tr>
<td>Exemptions: Elderly</td>
<td>$9,890,345</td>
<td>0.87%</td>
<td></td>
<td>0.23%</td>
</tr>
<tr>
<td>State Owned Land</td>
<td>$8,000,000</td>
<td>0.70%</td>
<td></td>
<td>0.19%</td>
</tr>
<tr>
<td>Public Libraries</td>
<td>$7,339,844</td>
<td>0.64%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total General Government</strong></td>
<td>$1,142,852,521</td>
<td>100.00%</td>
<td></td>
<td>27.13%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$4,211,950,416</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Mass DOR Municipal Databank, "Fiscal Year 1981-2007 State Total Cherry Sheet Receipts and Assessments by Program."
Figure 11a.

Percent of Spending from State Aid, 2004

Figure 11b.

Percent of Spending from State Aid, 1987

Figure 12a.

School Spending per Capita, 1987

Figure 12b.

School Spending per Capita, 2004

Figure 13a.

Non-School Local Spending & Non-School State Aid per Capita, 2004


[Graph showing non-school local spending and non-school state aid per capita for various cities in 2004]
Figure 13b.

Non-School Local Spending and Non-School State Aid, 1987

Figure 13c.

Change in Per-Capita Non-School State Aid, 1987-2004
($1987 Real Terms)

Figure 14a.

Total Municipal Revenue by Source per Capita, 1987

Figure 14b.

Total Municipal Revenue by Source per Capita, 2004

Source: Mass. DOR, "Fiscal Year 2000-2006 Revenue Components."
Figure 15b

Excess Levy Capacity, 1987-2007

Potential Disparate Effect of Hypothetical 2.5 Percent Tax Levy, 1987-2007

Figure 15d

Revenue from Actual Tax Levy and State Aid Per Capita

School Spending per Pupil (FY 2004)

Figure 17a.

Municipal Spending on Police per Capita, 2004

Figure 17b.

Municipal Spending on Police per Crime, 2004

(http://www.mass.gov/eea/data/forensic/forensic_services/forensic_services_crime_reporting_unit/mass_hate_crimes_report_2006.pdf);
Mass DOR Municipal Databank, "Fiscal Year 2000-2005 General Fund Expenditures."
Municipal Spending on
Culture and Recreation Per Capita, 2004

Figure 19a.

Figure 19b.  

Dollar Change per Capita in Chapter 70 Local Aid, 1989-1992 (Nominal Terms)

Source: Mass. DOR Municipal Debdenk, "Fiscal Year 1989 Cherry Sheet Receipts;" "Fiscal Year 1992 Cherry Sheet Receipts."
Figure 19c.

Percent Change in Chapter 70 Local Aid, 2002-2004
(Nominal Terms)

[Bar chart showing the percent change in Chapter 70 local aid for various towns and cities, with some experiences significant increases and decreases.]

Figure 19d.

**Dollar Change per Capita in Chapter 70 Aid, 2002-2004**
*(Nominal Terms)*

- **Source:** Mass. DOR Municipal Databank, "Fiscal Year 2002 Cherry Sheet Receipts;" "Fiscal Year 2004 Cherry Sheet Receipts."
Figure 20a.

Percent Change in Lottery and Additional Assistance, 1989-1992 (Nominal Terms)

Source: Mass. DOR Municipal Database, "Fiscal Year 1989 Cherry Sheet Receipts;" "Fiscal Year 1992 Cherry Sheet Receipts."
Figure 20b. Dollar Change per Capita in Lottery and Additional Assistance, 1989-1992 (Nominal Terms)

Source: Mass. DOR Municipal Database, "Fiscal Year 1989 Cherry Sheet Receipts;" "Fiscal Year 1992 Cherry Sheet Receipts."
Figure 20c. Percent Change in Lottery and Additional Assistance, 2002-2004 (Nominal Terms)

Source: Mass. DOR Municipal Database, "Fiscal Year 2002 Cherry Sheet Receipts;" "Fiscal Year 2004 Cherry Sheet Receipts."
Figure 20d. Dollar Change per Capita in Lottery and Additional Assistance, 2002-2004 (Nominal Terms)

Source: Mass. DOR Municipal Database, "Fiscal Year 2002 Cherry Sheet Receipts;" "Fiscal Year 2004 Cherry Sheet Receipts."