Follow the Money

Charter School and District Funding in Massachusetts

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A Pioneer Institute White Paper

by Ken Ardon

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Contents

Introduction

Charter public schools operate under five-year charters from the Massachusetts Board of Elementary and Secondary Education (BESE) and are not part of traditional local school districts. Charters often organize around a core mission, curriculum, or teaching method. They are free from district management and local collective bargaining agreements, and they control their own budget and hire teachers and staff separately from the local school district.

State law recognizes two types of charter schools: Commonwealth charter schools and Horace Mann charter schools. Commonwealth charters require approval only from the Board of Education, while Horace Mann schools must also have their charters approved by the local school committee and the local teachers' union. Horace Mann employees also remain members of the local unions and receive at least the salary and benefits established by the collective bargaining agreements, while employees of Commonwealth charter schools are not members of the local unions or governed by their collective bargaining agreements.

While charter schools – and particularly Commonwealth charters – enjoy more freedom than traditional public schools, they also face additional accountability in two ways. First, schools must attract and retain students, and second, charter schools must demonstrate good results within five years or risk losing their charters. Since 1995, four charter schools have had their charters revoked or the renewal of their charter denied.

Commonwealth charter schools have generated significant controversy. Debates over their merits, procedures, and results continue, despite mounting evidence that charters are more effective than traditional public schools. For example, a recent report commissioned by the Department of Elementary and Secondary Education (DESE) found that charter schools in Boston improve student achievement significantly more than the city's traditional or Pilot schools in both reading and math across both middle schools and high schools.[1]

The most vocal argument against charter schools centers on the funding mechanism and the financial impact of charters on other local public schools. Opponents of charter schools often argue that charter schools drain resources from local district schools, and by implication hurt the students in those schools. For example, in September 2009 the teachers' union in Massachusetts asked its members to write to state representatives and senators to complain that lifting the cap on charter schools would be "taking scarce resources away" from students.[2]

The dispute over charter school funding centers around a fundamental question – should spending follow students? Opponents of the finance formula believe that it is not fair to reduce funding to a district that loses students to charter schools while others argue that a district should not receive funding for students it no longer educates.

Every year, many students move from one district to another, but this movement of students draws much less attention than the students who switch from district schools to charter schools. In theory, students moving to another school district should cause similar financial objections, but these students do not generate the same hue and cry. It is difficult to imagine schemes to limit students' ability to move from one district to another or to require the state to pay for a student's education at both the new and old districts, yet those are precisely the proposals that reappear in the debate over charter schools.

The debate over charter school funding is often filled with misinformation or anecdotal evidence. The actual impact of charter schools on local districts is complex and is determined by the interaction of several formulas. Arguments over reimbursement rates and the state's share of the cost of charter schools often leave out important factors. This paper explains the charter funding system and analyzes data on charter school

funding to compare charter schools to the districts that send students to charters. Accurate data and a better understanding of the funding mechanism may clarify the debate over charter school funding and allow policymakers to better evaluate the arguments about the impact of charter schools.

I. Charter Schools and Their Students

During the 2007 – 2008 school year, 25,064 students attended 61 Commonwealth and Horace Mann charter schools in Massachusetts.[3] At the same time, roughly 24,000 students were on waiting lists to attend charters – clearly there is unmet demand from parents. To put these numbers in perspective, there were approximately 935,000 students enrolled in almost 1,800 non-charter public schools around the state, along with 127,000 students at 947 private schools.[4] As Figure 1 shows, students at charter schools make up only about 2% of total school enrollment in Massachusetts, or 2.5% of public school enrollment.[5]

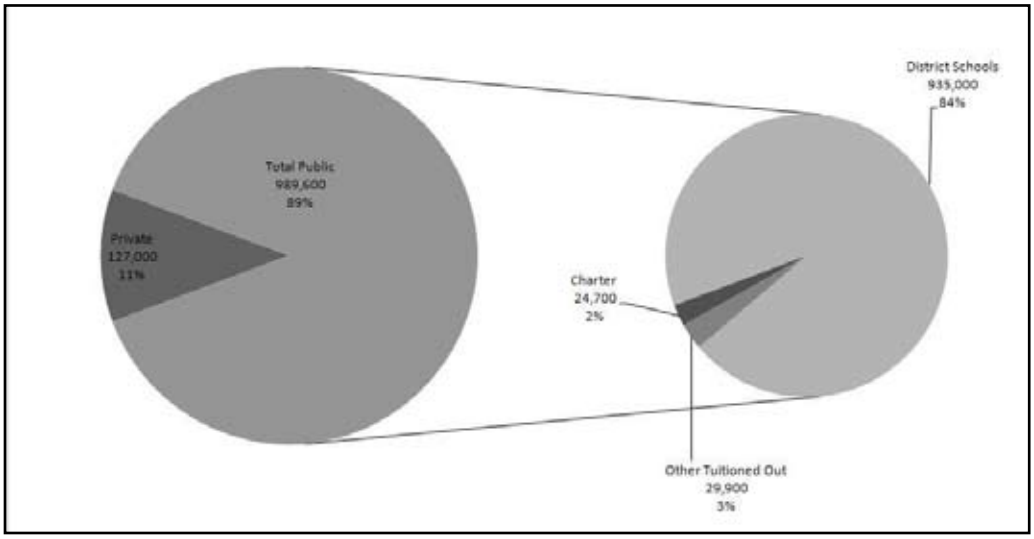
Charter schools exist throughout the state, but they are concentrated in urban areas. According to the DESE Fact Sheet, 42 charter schools are in urban settings while there are only 5 rural charters. Between them, Boston, Springfield, and Worcester are home to Commonwealth charter schools that enroll roughly 9,000 students, or approximately 40% of the all charter students, while the local districts in these three cities enroll only 12% of the state's students. Boston alone sent more than 4,700 students to 22 charter schools.

While state law recognizes two types of charter schools, the majority of charters are Commonwealth charters, and almost 90% of students at charter schools attend Commonwealth charters. Many charter schools are also relatively small; maximum enrollment is less than 300 at 19 charter schools and it is greater than 1,000 at only five charters.

Figure 2 shows the number of charter schools and enrollment at charters, along with the growth in enrollment. Both the number of schools and total enrollment have grown significantly since 2000. Over the past nine years, 22 new charters opened to bring the total to 61, while FTE enrollment more than doubled from 12,400 to over 25,000.[6] Since 2005 enrollment growth has declined each year, but during the decade, charter school enrollment grew by 8.7% per year while total enrollment in all non-charter public schools in Massachusetts declined 0.4% per year.

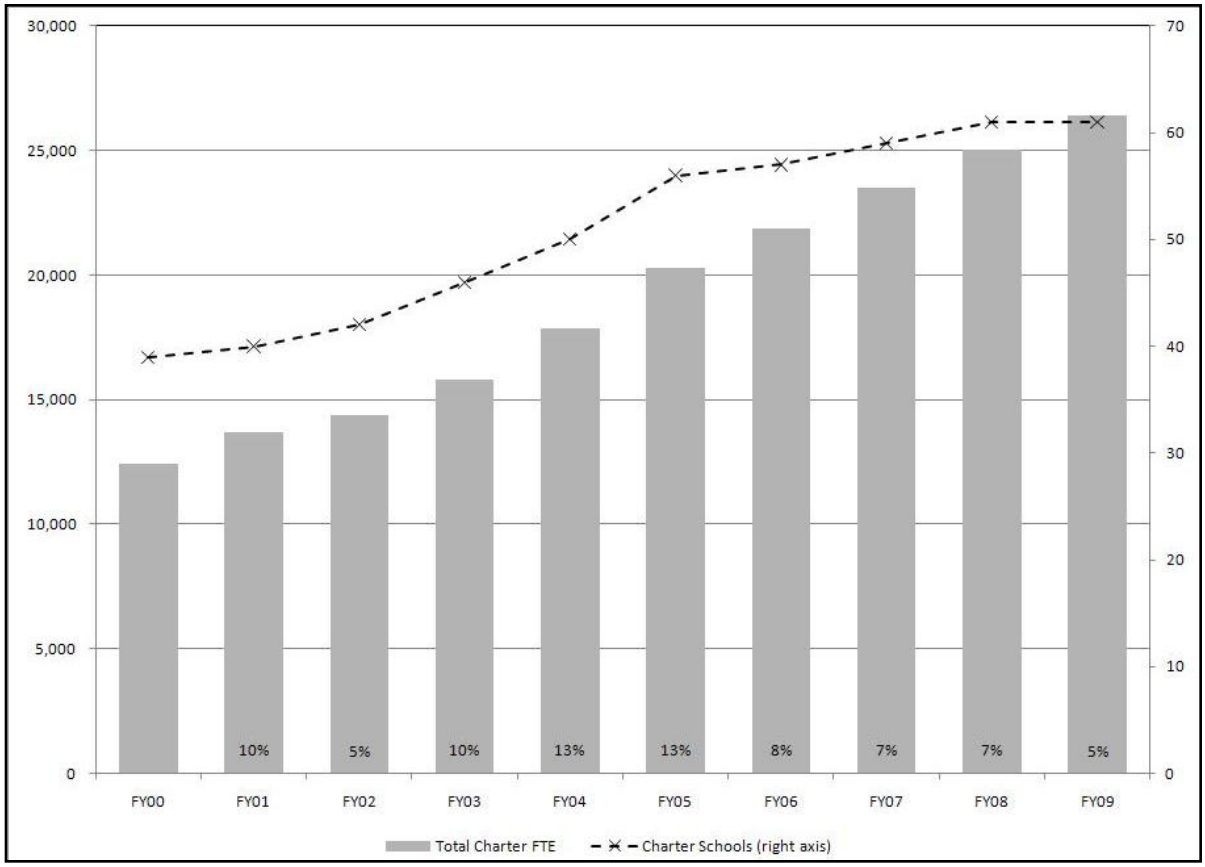
The growth in enrollment at charter schools has contributed to the dispute about their funding mechanism; as more students attended charters, more money flowed into them.

Figure 1: Approximate Enrollment in Massachusetts Schools, 2007-08



Source: Private School Universe Survey, National Center for Education Statistics (http://nces.ed.gov/surveys/pss/)

Figure 2: Charter Schools, Enrollment, and Enrollment Growth Rates, FY00 – FY09



Source: Department of Elementary and Secondary Education

From FY2000 to FY2009, total tuition payments increased by more than 220%, or 12% per year. This increase was caused by both the increase in enrollment and an increase in tuition per student of more than 4% per year.

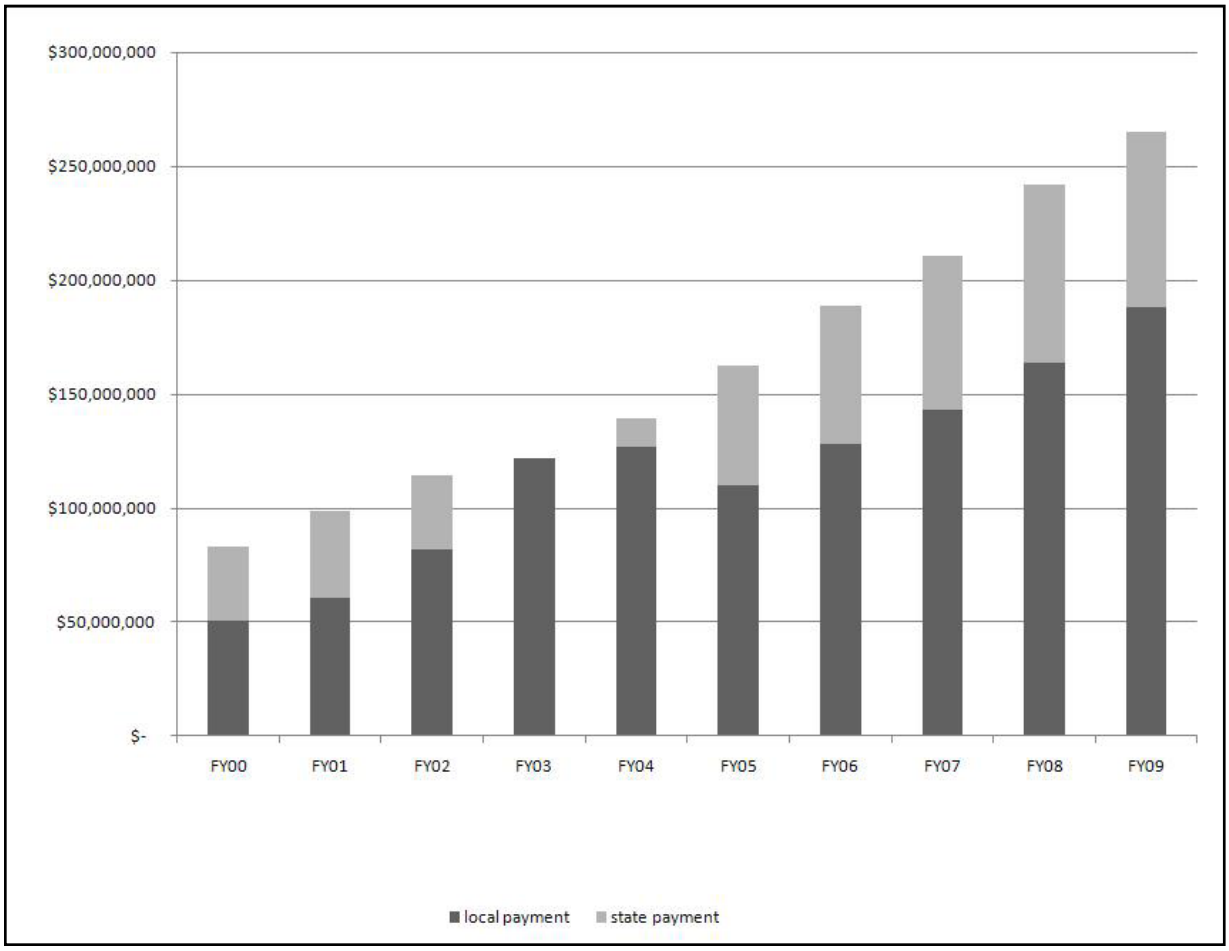
The tuition payments to charter schools are paid in part by the state and in part by local districts. Figure 3 shows that while total tuition payments to Commonwealth charters grew by about $180 million, state payments increased only $43 million.[7] Because the increase in enrollment and tuition outpaced the growth in state payments, the state's share of the total tuition bill fell from 39% to 29%.

II. Charter School Funding

Charter schools are not funded in the same way as "regular" public schools. Charter school funding is governed primarily by two laws: Chapters 70 and 71 of the General Laws. Chapter 70 contains the formula for calculating state aid and required local spending in all school districts, while Chapter 71 sets out the formula for calculating charter school tuition and how the tuition is shared between the local district and the state.

The funding mechanism is simple in theory – Chapter 71 states that "Tuition amounts for each sending district shall be calculated…to reflect, as much as practicable, the actual per pupil spending amount that would be expended in the district if the students attended the district schools."[8] In other words, when a student attends a charter, the student's home district pays tuition that is

Figure 3: State and Local Share of Tuition Payments to Commonwealth Charter Schools, FY2000 - FY2009



Source: Department of Elementary and Secondary Education, "Commonwealth Charter School Profile," (http://finance1.doe.mass.edu/charter/school_profile.xls)

approximately equal to the average amount the district spends per pupil. In practice the calculation is complex, as will be discussed below.

Local districts are responsible for the bulk of tuition, while the state also pays for a portion. The state share has two central components: a fixed amount per pupil for facilities expenses and a full but temporary subsidy for growth in tuition or tuition for certain types of students such as those coming from a private school or home school.

Unfortunately, the complexities of school finance formulas cloud any analysis of the financial impact of charter schools on sending districts. To evaluate charter school funding, we must begin with Chapter 70. Chapter 70 calculates three important figures: the foundation budget, required net school spending (NSS), and state aid.

A. Chapter 70: Foundation Budget

The foundation budget is the minimum adequate spending for every district. It is calculated based on per pupil amounts in 11 functional areas such as administration, teaching, guidance, etc., along with adjustments for a student's grade level and low-income status, and whether the student has limited English skills or is in a vocational school. Finally, the figure is adjusted for annual inflation and local wages.[9] The foundation budget in FY2009 averaged $9,332 per student, and it ranged from a low of $7,700 to a high of $15,700.

B. Chapter 70: Net School Spending

Net school spending is the total amount that districts must spend each year. It includes state aid, local appropriations, and special education circuit breaker funds, but does not include grants or revolving funds.

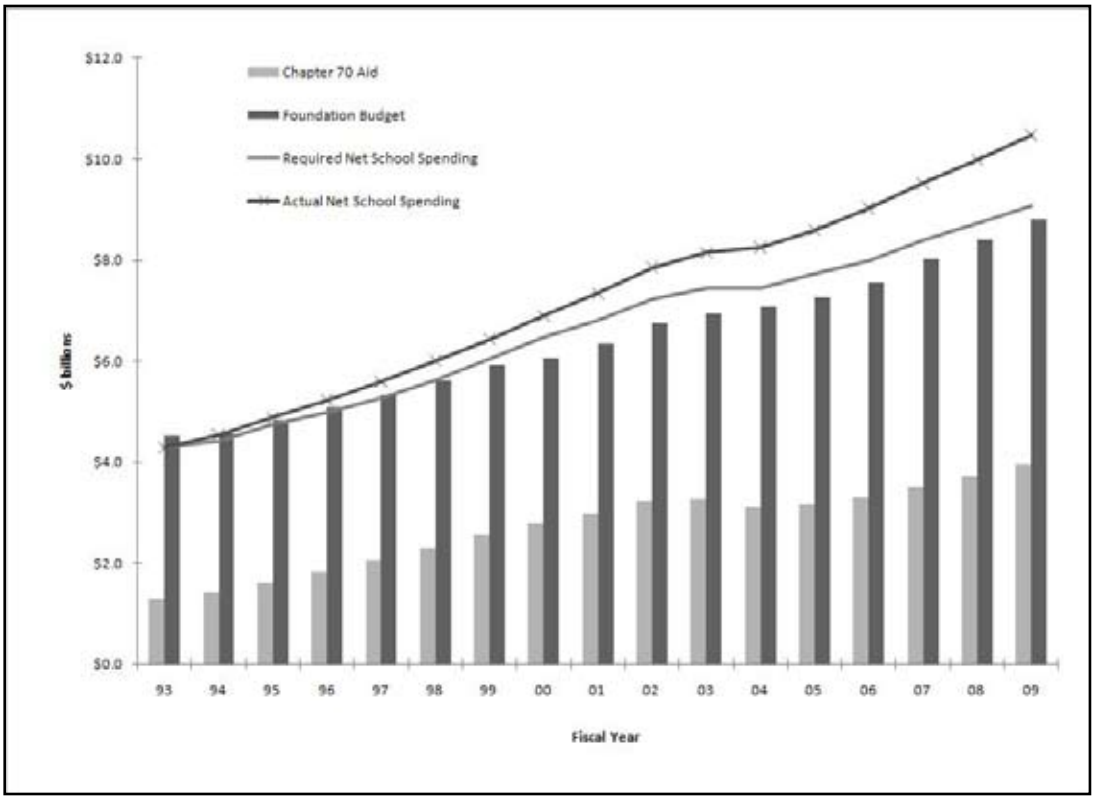
Net school spending and the foundation budget might seem redundant, as both deal with minimum allowable spending. However, the foundation budget was initially a goal and not a requirement. In the early 1990s many districts had required net school spending that was less than the foundation budget, but over time state aid and spending requirements were increased so that every district eventually reached foundation.

The calculation of required net school spending depends on the foundation budget and also on previous spending – historically districts have been required to increase spending even if they were already above foundation. More recently, the formula reduced net school spending if it was deemed unfairly high given the local municipalities' wealth and income.

While net school spending sets a spending floor, many districts spend more for two reasons. First, some municipalities choose to contribute more to districts than the state requires, so that actual net school spending is greater than required net school spending. Figure 4 shows required net school spending statewide of $9.1 billion, or roughly $9,600 per student in FY2009. The budgeted actual net school spending was 15% higher, at $10.5 billion or $11,100 per student.

The second reason that actual spending may be higher than net school spending is that, as mentioned above, net school spending does not include spending from grants, tuition, school lunch revenue, athletic funds, and other sources. In FY08, total spending was approximately 25% higher than net school spending.

Figure 4: State Aid and Local Spending, 1993 to 2009



Source: Massachusetts Department of Elementary and Secondary Education, "Chapter 70 Trends, FY93 through FY09" (http://finance1.doe.mass.edu/schfin/Chapter70/profile.xls)

C. Chapter 70: State Aid

State aid depends on a complex formula that incorporates many factors, and the formula often changes from year to year. The FY09 formula calculated several categories of state aid:[10]

- Foundation aid is the difference between a district's foundation budget and its required contribution – it ensures that every district will have funding at least equal to its foundation budget.
- Foundation down payment aid provides additional aid to districts if the local contributions from member municipalities are higher than is considered fair given their wealth and income
- Growth aid provides an increase in state aid to any district whose foundation budget has increased
- Minimum aid guaranteed that every district would receive at least a $50 per pupil increase over FY08 Chapter 70 aid

Of the four categories of aid, foundation aid is by far the largest component; it accounted for $3.7 billion out of $3.9 billion in total aid in FY09. It is also the most important type of aid to keep in mind when evaluating the financial impact of charter schools on sending districts. However, the other types of aid also affect the interaction between charter schools and sending districts.

Foundation down payment aid and growth aid both depend on the percentage of a district's foundation budget that the state will cover for above foundation districts. The formula calculates a target aid percentage based on municipalities' wealth and income to provide additional aid to communities with greater need. These target aid percentages range from 17.5% in wealthier districts to 85% in those with lower property wealth and income.

D. Charter School Tuition

When a student attends a charter school, the student's home district must pay tuition to the charter. As stated above, tuition is supposed to represent the amount that would have been spent on the student had he or she stayed in the sending district. The per-pupil tuition is based primarily on the district's net school spending per pupil, with some adjustments.[11] The adjustments include:

1) Removing spending on out-of-district special education placements
2) Removing retired teachers' health insurance (in districts where NSS includes this amount)
3) An adjustment for whether students are in elementary, middle, or high school
4) An increase for students categorized as English language learners or low-income
5) Adding in a facilities payment ($893 per pupil in FY09)

The rationale for the first two adjustments (removing out-of-district special education costs and retired teachers' health insurance costs) is that charter schools do not face these expenses. These two modifications exclude $709 million from net school spending that is not counted towards charter school tuition.

The next two adjustments (grade level and English proficiency) reflect differences in the foundation budget for different groups of students that are meant to account for the higher costs of educating some students. For example, the foundation budget is approximately 5% higher for elementary students than it is for middle school students, and an additional 15% higher for high school students.

The last factor, the facilities payment, is included because districts' net school spending does not include the cost of building schools. In regular school districts, the local municipalities pay for

school construction and the state covers a portion of the cost through the School Building Authority. Charter schools are ineligible for School Building Authority financing, and for the most part they lease space. The state pays the facilities portion of tuition, although in most cases this payment is not large enough to cover the amount that charter schools spend on facilities.

In FY2008, charter school tuition averaged $10,560 per student, but there was huge variation among sending districts. Among districts sending more than 10 students to charter schools, tuition ranged from $6,400 in Middleborough to more than $21,000 in Cambridge. The primary reason tuition varies so much is that spending in the sending districts varies tremendously. Middleborough's actual net school spending per pupil in FY08 was approximately $8,800, while Cambridge's NSS was more than $21,000 per student. A smaller factor contributing to the differences in tuition is the adjustment for different populations by grade, income, and English language proficiency.

E. Charter School Tuition Reimbursement

Tuition per pupil roughly corresponds with per-pupil net school spending in the district. The tuition calculation ensures that money follows the students – if students leave a district, more funds flow from the district to the charter schools. However, the state reimburses districts for a portion of the tuition payment for several reasons.

Districts have long argued that many of their costs are fixed or quasi-fixed, meaning that they do not decrease when students leave. For example, if a student leaves a district, the district may not be able to reduce the number of teachers, principals, administrators, or staff, and maintenance and capital costs are unlikely to change.

The contention that districts face large fixed costs appears reasonable on the surface and could hold in the short run, but those who make this argument often ignore its implications. If a decrease in enrollment does not reduce costs at all, then an increase in enrollment should not increase costs. In other words, if costs for staff levels and capital spending do not decrease when students leave a district, this implies that the same costs should not increase when new students join a district and the district may not need additional state aid.

To the extent that costs are fixed it means that districts could be financially squeezed by rising tuition payments. Chapter 71 addresses the issue by providing temporary reimbursement from the state when a sending district's tuition payments increase. The reimbursement is sometimes referred to as "Chapter 46 reimbursement" because it was originally introduced in Chapter 46 of the acts of 1997. It is also sometimes referred to as "100-60-40" because when tuition increases the formula reimburses districts for 100% of the increase the first year, 60% of the increase in the following year, and 40% in the third year.[12]

The reimbursement is based on the increase in tuition, not on the entire amount of tuition. Total tuition payments increase if enrollment increases or if a sending district increases spending per pupil (because tuition is based on the district's net school spending). Even if a district sends the same number of students to a charter school, tuition payments generally increase slightly each year.

The reimbursement formula is slightly different for students who enroll at a charter after being home schooled or attending a private school the prior year. In these cases, the state pays 100% of tuition the first year (not just the increase in tuition) and 0% after that. The formula is also different for students who enroll in a charter school to join a sibling, if their enrollment pushes charter tuition above the legally mandated cap of 9% of net school spending. In this case, the state assumes the full cost of tuition.

The reimbursement can be illustrated with a numerical example.[13] Table 1 below contains a 10-year simulation of how reimbursement changes as tuition changes over the decade following a charter school opening. Initially tuition is $10,000

Table 1: Example of Tuition Reimbursement Formula

				Reimbursement					
Year	Charter Students	Tuition per student	Tuition	100%	60%	40%	Total	Net Tuition	% of Tuition Offset
1	0	N/A	0	0	0	0	0	0	0
2	10	10,000	100,000	100,000	0	0	100,000	0	100
3	12	10,000	120,000	20,000	60000	0	80,000	40,000	66.7
4	12	10,417	125,000	5,000	12000	40000	57,000	68,000	45.6
5	12	10,833	130,000	5,000	3000	8000	16,000	114,000	12.3
6	12	11,250	135,000	5,000	3000	2000	10,000	125,000	7.4
7	12	11,667	140,000	5,000	3000	2000	10,000	130,000	7.1
8	10	12,000	120,000	0	3000	2000	5,000	115,000	4.2

per student, and then it increases slightly in the following years. When the district first sends students to the charter school, in year 2, the 100% reimbursement formula shifts the burden away from the district – initially the district serves fewer students in local schools but there is no net cost to the district.

The following year the district receives 100% of any additional increase in tuition as well as 60% of the prior year's increase. As enrollment stabilizes and the annual increase in tuition levels off, reimbursements drop and the district assumes a larger share of the cost. In year 8 the number of students and tuition both drop, but the district still receives reimbursement based on the increases in prior years.

Because the reimbursement is temporary and provides a declining share of the tuition, costs shift towards the district as enrollment and tuition payments stabilize. This explains the pattern of state reimbursements seen initially in Figure 3, which showed the state share of total tuition falling from 39% to 29% since 2000. Charter enrollment grew by 30% per year in the late 1990s before slowing to 10% from 2000 to 2005, and the growth rate has declined every year since 2005. Slower growth in enrollment generates slower growth in tuition and lower reimbursements.

III. Theoretical Impact on Sending District of Charter Schools

Calculating the precise financial impact of charter schools on sending districts is difficult. As everyone understands, the reimbursement formula temporarily reduces the burden on the district. Most of the arguments over charter school funding focus on whether the reimbursement is large enough or lasts long enough, with some opponents of the funding mechanism going as far as to suggest that the state should pay the entire tuition at charter schools. What few people consider is that state aid under Chapter 70 can also reduce the net cost to sending districts.

To understand the potential financial impact of a student attending a charter school, it is useful to assume at first that a student attending the charter school is newly arrived in the district and had not been attending school in the district. This could happen if a student switched from home-schooling or a private school to a charter school, or if a student moved to the district and immediately enrolled in a charter, or if a young child began kindergarten at a charter school. In all of these cases, the student counts as coming from the sending district even though he or she never attended school in the district, and the district must pay the tuition to the charter school. The explanation below begins with the assumption

that the student had never attended any school in the district (public or private) and was not home schooled.

A. Newly Arrived Students

When students who have not attended a district school choose to attend a charter school, the students' home district is responsible for tuition. To some this may seem unreasonable – after all, the students never attended school in the district so why should the district pay for them? However, the district would be financially responsible for students who enroll in a non-charter public school, and the district retains that responsibility if students attend a charter school.

This scenario suggests that a district takes a financial hit when students show up at the charter school, but that would only be true if we ignore the reimbursement and the effects of Chapter 70 aid. The reimbursement is relatively simple to analyze, but unfortunately the impact of Chapter 70 aid (and therefore the loss to the district) is not straightforward – it depends on what type of aid the district received.

If a district is a foundation aid district, meaning that it receives aid to ensure it reaches foundation, the state already pays a large share of the cost of the student by providing aid to the district. If the state paid tuition it would effectively be paying for the student twice.

Table 2 below uses a simplified example to illustrate how foundation aid can change the financial calculus of charter school tuition. It assumes a hypothetical district begins with 1,000 students, none of whom attend charter schools, and then one student moves to the district and immediately enrolls at a charter school. It also assumes a foundation budget of $10,000 per pupil or $1 million in total, Chapter 70 aid of $600,000, net school spending equal to the foundation budget at $1 million, and that the district initially spends 10% more than required NSS. The higher than necessary net school spending leads to charter tuition of $11,000 per student.

In year 0 the student is in another district (or is too young to attend school) and does not show up in the district's enrollment. In year 1 the student enrolls in the charter school and the district must pay $11,000 tuition, but the reimbursement covers the entire cost. The district's foundation budget and state aid do not increase during year 1 because the foundation budget is based on enrollment during the prior year.[14]

During the 2nd and 3rd years, the reimbursement declines. However, because the district is a foundation aid district, state aid increases by $10,000, meaning that the net cost to the district in those two years is negative – i.e. the sending district receives more of an increase in state aid than it pays in tuition.

After the third year, the reimbursement ends. From that point on, the additional state aid covers most but not all of the tuition payments. However,

Table 2: Illustration of Impact of Foundation Aid on District Costs

Year	Enroll.	Foundation Budget	C70 Aid	Charter Students	Tuition	Ch 46 Reimburse.	Net Cost of Tuition
0	1,000	$1,000,000	$600,000	0	$0	$0	$0
1	1,001	$1,000,000	$600,000	1	$11,000	$11,000	$0
2	1,001	$1,010,000	$610,000	1	$11,000	$6,600	($5,600)
3	1,001	$1,010,000	$610,000	1	$11,000	$4,400	($3,400)
4 to X	1,001	$1,010,000	$610,000	1	$11,000	$0	$1,000
X+1	1,000	$1,010,000	$610,000	0	$0		($10,000)

the net cost to the sending district during these years is only $1,000. Of course if tuition were higher than $11,000 the net cost each year would be higher; if the district had been spending at 25% above foundation instead of 10%, tuition would increase by $1,500 per year and the gap between the increase in state aid and the tuition cost would grow.

The extra Chapter 70 aid remains for as long as the student attends the charter school. In fact, it would actually continue for one year after the student left because of the use of old enrollment figures in the foundation budget, so the district would receive the $10,000 even when tuition falls back to $0 (as illustrated in year X+1 in the table).

The net cost to the district during every year after the reimbursement ends is only the above-foundation portion of tuition, and even this cost is partially offset by the extra aid the district receives the year after the student leaves school. In total, this student has very little financial impact on the district.

It is useful to compare the impact of a student attending a charter with the impact had the student decided to enroll in a non-charter school in the district. On the revenue side the comparison is simple; state aid would be the same in both cases but if the student attended a non-charter school the district would not get reimbursement. This means the district gains $22,000 in revenue when the student enrolls in the charter school (from the 100-60-40 reimbursement of $11,000 increase in tuition).

The impact on costs is more difficult to determine: if the student enrolls at a local school the district would not have to pay tuition, but it would face some additional but uncertain annual cost to educate the student. If most of the district's costs are fixed or quasi-fixed, the marginal cost of the student would be low and might be more than offset by state aid. If the marginal cost is high, the additional cost to educate the student in district would draw nearer to the cost of tuition.

This example simplifies the calculation and ignores several issues such as inflation, changes in enrollment, tuition, and the foundation budget, and growth in the required local contribution. However, it demonstrates an important point: the Chapter 70 formula has a large impact on who bears the burden of charter school tuition. In this specific example, foundation aid districts receive additional aid that may cover much of the cost of tuition.

If the district had not been a foundation aid district, state aid would offset a smaller but potentially still substantial portion of the tuition. The current Chapter 70 formula assumes that the state's fair share of the statewide foundation budget is 41% while local municipalities should be responsible for 59%. As explained above, each district's target aid percentage represents what the formula determines is the fair share of the foundation budget that the state should cover for that district, based on local wealth and income.

As the new student appears in the district, an above foundation district would generally receive growth aid to cover the target aid percentage of the increase in foundation budget. In other words, if the district had a target aid percentage of 45% it would receive an increase in aid equal to 45% of the increase in the foundation budget, which in this example would be $4,500 (leaving $6,500 of the cost to the district.) Above foundation districts must absorb a larger portion of the cost of tuition.

The net cost to the district also depends on whether total tuition grows and generates reimbursement. If enrollment at the charter school had been falling before the new student showed up, he or she would essentially replace a departing student. In this case, tuition would not increase and the state would not provide reimbursement.

As mentioned earlier, the reimbursement formula differs for private/home schooled children who choose to attend a charter school. Chapter 71 reimburses the district for the entire tuition payment during the first year the student attends

Table 3: Illustration of Impact of Foundation Aid on District Costs

Year	Enroll.	Foundation Budget	C70 Aid	Charter Students	Tuition	Ch 46 Reimburse.	Net Cost of Tuition
0	1,000	$1,000,000	$600,000	0	$0	$0	$0
1	1,001	$1,000,000	$600,000	1	$11,000	$11,000	$0
2	1,001	$1,010,000	$610,000	1	$11,000	$6,600	($5,600)
3	1,001	$1,010,000	$610,000	1	$11,000	$4,400	($3,400)
4 to X	1,001	$1,010,000	$610,000	1	$11,000	$0	$1,000
X+1	1,000	$1,010,000	$610,000	0	$0		($10,000)

a charter – even if total tuition did not increase – and 0% after that (i.e. it does not provide 100-60-40 reimbursement). Returning to the example in Table 2, the only change would be that the reimbursement drops from $22,000 over three years to $11,000 in one year.

B. Students Already Living in the District

The example above started with a student that had just arrived in the district. The financial results are similar if the student had already been enrolled in a district school, but the interpretation may be different.

Table 3 illustrates the impact of a transfer from a district school to a charter school for a foundation aid district. It is virtually identical to Table 2 - the only difference is that this district begins with the student already counted in the foundation budget, meaning that the student generates the $10,000 in foundation aid before he or she attends the charter. When the student transfers, the district must pay the tuition while state aid remains level.

The meaning of these figures is open to question. The interpretation that many district officials and charter school opponents would take is that when the student enrolls at the charter, the district loses funds. However, an alternative reading of the data is that the state is already providing aid to cover costs for the student, and the aid should follow the student. Essentially the difference between this scenario and the one discussed above is that in this case the district had become accustomed to the extra $10,000.

It may be helpful to compare the impact of the student enrolling at a charter school with the impact if a student transfers from a foundation aid district to another district or graduates from school. Suppose a student's family moves from district A to district B. District A would not have to pay tuition to district B, but it would lose state aid equal to the foundation budget.[15] The tuition payment and the loss in foundation aid would probably not be the same amount – the tuition would likely be greater. But the more significant difference is that the tuition payment is visible and directly attributable to the student while the loss in foundation aid when a student transfers or graduates is not.

Students moving between districts generate little objection, but a transfer to a charter school spawns louder complaints. When a student graduates or moves from one district to another, districts generally do not protest the loss in funding and few people explicitly argue that the state should continue to provide aid to the district that lost the student.[16] However, opponents of the charter school funding formula make an equivalent argument.

As with the previous example, the impact on the sending district is magnified if it is not a foundation aid district. In that case, the district's target aid share determines the net local cost.

These examples illustrate several important points:

- Chapter 70 aid covers a large portion of tuition, particularly for foundation aid districts

- The burden on the local district depends on two factors: whether the district is a foundation aid district, and how much more than foundation the district spends – higher spending districts will face a larger burden
- The impact of a student who enrolls at a charter school may be only slightly larger than that of a student who moves out of the district, but the cost is much more visible

The remainder of this paper presents data on tuition, revenue (including state aid), and spending in charter schools and sending districts to evaluate the financial impact of charter schools.

IV. Data Analysis

The Department of Elementary and Secondary Education collects and publishes data on charter school enrollment and tuition, district revenue and spending, and the state aid calculations. This section of the paper will analyze DESE data to answer several questions:

1) How do tuition payments compare to expenditures per pupil in sending districts? What explains the differences?
2) How does total spending per pupil in charter schools compare to spending per pupil in sending districts?
3) How does spending by function vary in charters and sending districts?
4) What types of Chapter 70 aid do sending districts receive?
5) How do state aid and above foundation spending affect the net cost of tuition payments to sending districts?

Some spending or revenue data is available through FY2009 or even FY2010, while other measures are only available through FY2008. To maintain consistency, most of the analysis uses data through FY2008.

Differences in total spending across districts or from districts to charter schools may be difficult to interpret for several reasons. One problem involves how to treat special education costs. Charter schools generally have fewer special education students, especially those with more severe disabilities. Thus if a charter school spends less, part or all of the reason may be that it has lower special education costs. Looked at differently, the higher special education costs in a regular district may mean that the district has less money to spend on non-special education students than a charter school that spends a similar amount, or even one that spends less than the regular district.

Some districts "tuition-out" students with more severe special education needs, and DESE collects data on the out-of-district spending. Excluding out-of-district special education costs from a district's spending would seem to allow a better comparison between charter schools and district schools, but this adjustment does not solve the problem. Districts vary in how they offer special education services; some offer more services within the district, while others tuition out more students. This variation means that excluding the out-of-district costs would still leave significant special education expenses in the total spending figures for some districts.

A. Tuition vs. Spending Per Pupil in Sending Districts

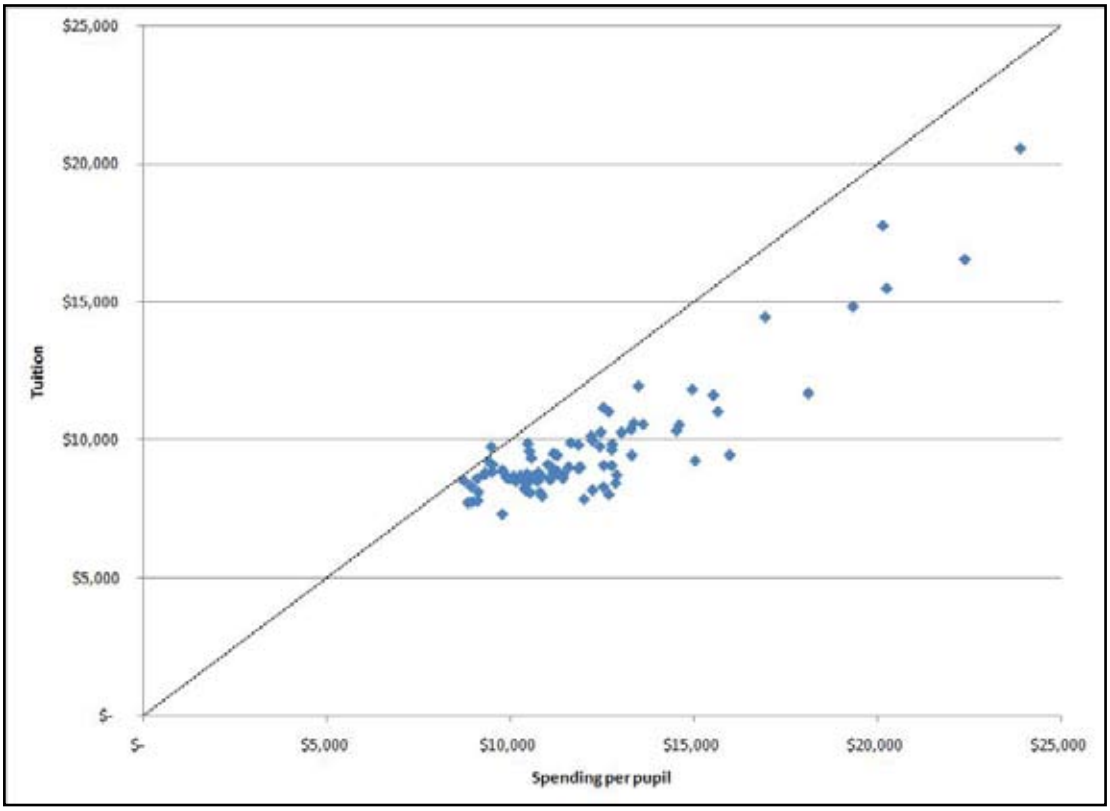
As stated earlier, Chapter 71 states that tuition "shall be calculated…to reflect, as much as practicable, the actual per pupil spending amount that would be expended in the district if the students attended the district schools." However, a comparison of tuition with spending per pupil in sending districts reveals that tuition is usually significantly lower than spending per pupil.

Because charter schools often draw students from several districts, both the tuition and spending figures have to be averaged. The concept of average is not as simple as it seems – there are several ways to calculate the average. Suppose two districts, A and B, send students to a charter school, and that district A spends $10,000 per student and district B spends $20,000. The simplest measure would be to average the two figures – i.e. $15,000. However, if 90% of the students at charter come from district A, it would probably be more accurate to say that the weighted average spending in the sending districts is $11,000. All of the averages discussed below are weighted averages, with the weights based on enrollment.

The average tuition for charter schools in FY2008 (excluding the facilities component) was $9,731 per pupil, while sending districts spent an average of $13,531 on in-district students, a difference of $3,800. Figure 5 contains in-district spending per pupil and average tuition at charter schools for districts that sent more than 25 FTE students to charter schools.[17] The dotted line shows the combinations where spending would be equal to tuition – any charter school above the dotted line has tuition greater than average spending per pupil in its sending districts; only one charter is above the line.

There are several reasons that tuition is usually less than spending in the sending districts. First, the tuition formula is based on an adjusted net school spending. The adjustments exclude spending on expenses that the charter does not face, such as out-of-district special education placements. The graph excludes spending on out-of-district special education students, although as discussed above the spending data for many districts still include significant amounts of spending on in-district special education programs.

Figure 5: Spending Per Pupil vs. Average Tuition, FY08



Source: Author's calculations based on DESE data from "Charter School Tuition and Reimbursement" (http://finance1.doe.mass.edu/charter/charter09_rates_jun.html) and "FY08 Expenditures Per Pupil" (http://finance1.doe.mass.edu/statistics/function08_note.html)

Table 4: FY08 Spending from Grants and Revolving Funds

	Expenditures	Exp. per In-District FTE Pupil	% of total
Total In-District Spending	$11,206,132,445	$11,984	100%
From Grants and Revolving Funds	$1,287,131,585	$1,377	11%

Another reason for the difference is that net school spending itself excludes spending from grants and revolving funds. In FY2008 this amounted to $1.3 billion after excluding payments to out-of-district schools. This is almost $1,400 per in-district pupil, which is 11% of the overall total.

The tuition calculation excludes the $1,400 per pupil. However, this does not imply that charter schools automatically have less funding than district schools, because charter schools also receive grants. During FY2008, they received a total of $27.7 million in federal, state, and private grants, or $1,100 per pupil – slightly less than the average district. Contributions and fundraising at charter schools contributes another $250 per pupil at charter schools, bringing the total of extra funding close to the statewide average.

Charter school tuition payments may also be less than average spending due to characteristics of the student population at charter schools – i.e. if charters educate fewer high school students, or fewer students classified as low-income or English language learners, the formula would calculate a lower tuition payment. As Table 5 shows, the 50 charter schools for which data was available serve lower percentages of all of these groups than are present in sending districts.

We can use the foundation budget formula to estimate how much each of these demographic differences contributes to the gap between tuition and spending in the sending districts. As stated previously, in FY08 the foundation budget increases the per-pupil allotment by roughly 15%, or $1,100 for high school students compared to elementary students. It also provides $8,000 for each student with limited English proficiency, and $2,500 for each low-income elementary student and $3,000 for each low-income secondary student. If the charter schools served students with the same characteristics as their sending districts, average tuition payments would have been about $900 higher.

To reiterate, several factors can account for the large difference between tuition and total expenditures: (1) the tuition calculation does not include spending on items such as out-of-district special education costs or revenue from grants and other sources, and (2) the tuition payment is adjusted downwards because the population that attends charter schools has fewer low-income, special education, and non-English speaking students than the sending districts. Of course, while tuition is less than total spending in sending districts, a more interesting comparison might be between total spending in charters and sending districts.

B. Total Expenditures Per Pupil, Charter Schools and Sending Districts

Total spending in charters and sending districts may be closer than the large gap between tuition

Table 5: Demographics of Students at Charter Schools and Sending Districts, FY08

	% High School	% LEP	% Low Income
Charter Schools	17%	4%	45%
Sending Districts	26%	11%	49%
Charters with lower % than sending district (out of 50)	36	45	24

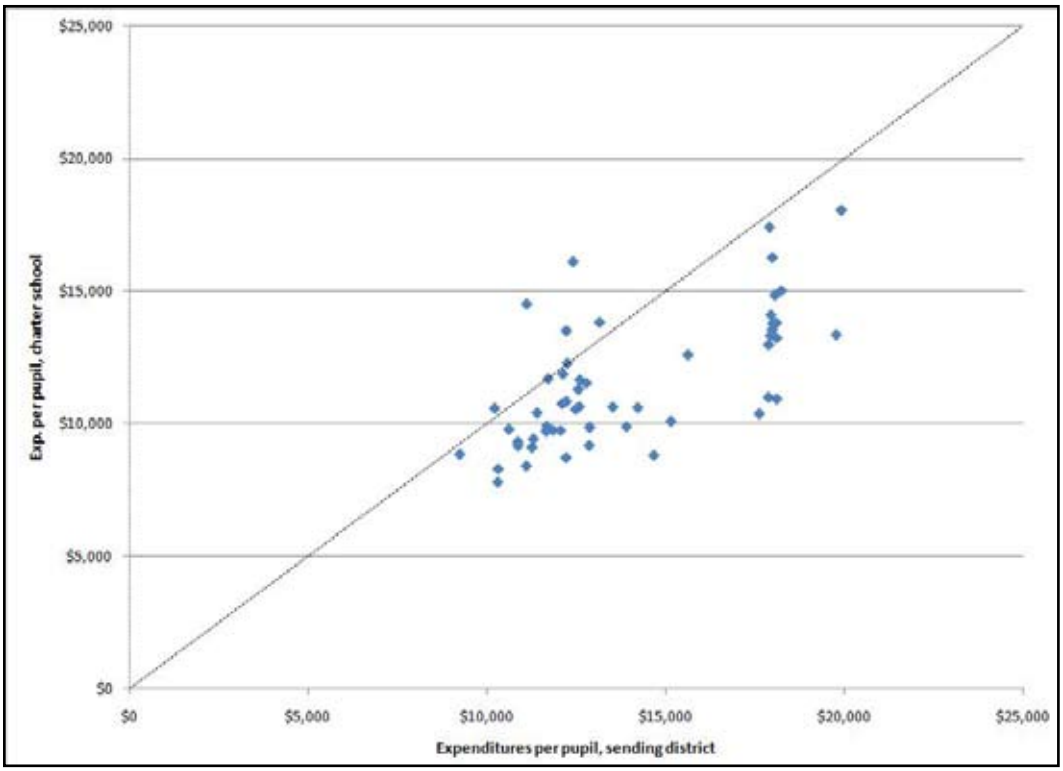
and expenditures. Total spending in charters includes revenue from several sources that is not included in the tuition data above: facilities, tuition, grants, donations, etc.

Although facilities tuition provides an additional revenue source, the expenditure data below excludes spending on rents, leases, and capital facility improvements (maintenance spending has not been removed). The reason for this adjustment is that non-charter districts do not pay for their facilities, meaning that total charter school spending overstates the amount of funding available for instruction and management. Commonwealth charter schools spend an average of $1,420 per student on capital facilities expenses. These expenses are about $500 per pupil higher than the facilities tuition payments from the state, leaving fewer resources available for other operating expenses. Horace Mann charters spent only $668 per pupil, most likely because they often use district facilities, often at no charge, rather than renting from a third party.

In total, charter schools spent an average of $10,628 per student, or $9,277 after subtracting facilities expenses. For comparison, the sending districts spent a weighted average of $13,530 per student. The gap between these figures is explained in part by the higher revenue that sending districts have, both because they receive more grants and because tuition is generally less than average spending. It may also be contributed to by budgeting decisions – according to DESE data, charter school spending was roughly 7% less than revenue in FY2008.

Figure 6 illustrates the relationship between spending per pupil at charter schools and each charter's sending districts. Only six charters in the state spent more per pupil than the average in their sending districts. Several of these charter schools received large grants or contributions that increased available revenue (in one case as

Figure 6: Expenditures Per Pupil, Sending District vs. Charter Schools



Source: Author's calculations based on DESE data from "Charter School Revenue and Expenditure Data" (http://finance1.doe.mass.edu/charter/1_RevExp.html) and "FY08 Expenditures Per Pupil" (http://finance1.doe.mass.edu/statistics/function08_note.html)

much as 40% of total tuition), and two spent a very small portion of their revenue on facilities (less than $500 per student), leaving more funds for non-capital operating expenses.

The charter schools that are farthest below the 45 degree line are those that spend much less than their sending districts. This gap comes about if tuition is significantly less than expenditures per pupil in the sending districts, which can be caused by large adjustment to the tuition formula or large sources of revenue that are excluded from tuition. For example, the Holyoke Community Charter School gets 86% of its students from Holyoke. The tuition for Holyoke excludes more than $8 million spent on tuition for special education students and payments for retired teachers' health insurance. Holyoke also received $3,000 per student from grants and revolving funds that is not counted in the tuition calculation, well above the state average.

In total, charter schools spend significantly less than their sending districts. However, it is difficult to draw broad conclusions from these differences. In some cases, the difference can be explained by district expenses that charters do not face, such as health insurance for retired teachers, or more costly special education services. In other cases, the differences are driven by differences in revenue, whether because the sending districts received grants or other funding that is not used when calculating tuition, or because the charters educate fewer low-income or non-English speaking students. Interpreting differences in spending requires a case-by-case look at charter schools and their sending districts.

C. Spending by Function

Table 6 contains DESE data on spending per pupil by function.[18] Despite lower overall spending, charter schools spent significantly more on administration. Whether this administrative spending was by choice or necessity (e.g. if administrative costs are fixed and larger regular districts are able to spend less per pupil) is impossible to tell.

Charters also spent significantly less on classroom specialists and teachers. One of the reasons that charter schools spend less on teachers and specialists is that teacher salaries are lower in charter schools: the average teacher in the state earned $64,166 in FY2008, while teachers at charter schools earned an average of $51,740.

D. Chapter 70 Aid to Charter Schools

As the tuition reimbursement example illustrated, the net impact of charter tuition on local districts depends on whether the district receives foundation aid and the district's target aid percentage (the share of increases in the foundation budget that are generally covered by Chapter 70 aid).

In FY2008, 18% of all charter students came from foundation aid districts. These districts would receive state aid equal to the foundation budget for the student going to the charter, meaning that they face a much lower net cost.

In non-foundation aid districts, the average target share was 42.4%, roughly equal to the state average. This means that in those districts a student going to a charter school will generate state aid equal to approximately 42% of the foundation budget.

Table 6: Spending by Function, State Total vs. Charter Schools, FY08

Function	State Totals	Charter School	Difference
Administration	$421	$1,177	$756
Instructional Leadership	$800	$909	$109
Classroom & Specialist Teachers	$4,700	$4,066	($633)

E. Net Local Cost

The combination of state aid and reimbursement reduce the net cost to districts of charter school tuition. The discussion below focuses on the net marginal cost to a district in FY2008 from one additional student enrolling in a charter school.

It is important to keep in mind that the net cost measures the amount of the tuition that is not paid by the state. Local districts would probably feel that this is not an accurate measure of the financial impact of a student enrolling in a charter school. From their point of view, the full amount of tuition (after reimbursement) is "lost" to the district schools, regardless of whether the funding originally came from the state or a municipality. This is especially true if the student had already been enrolled in the district. With this important caveat in mind, we can examine the net local cost in several scenarios.

One scenario is that a student switches from a private school or home schooling to a charter school, or if the sibling of a charter school student enrolls in the charter and pushes a district's tuition payment above the legally mandated 9% cap. For these students, the state pays the first year of tuition directly, while at the same time the district may receive additional Chapter 70 aid. This applied to about 480 students in FY2008, generating $5 million in state subsidies. Approximately 25% of these students showed up in foundation aid districts, meaning that the districts would receive the most additional aid (albeit one year after the student shows up). The other 75% were in districts where the additional aid depends on the target aid percentage. After the first year, the districts face the additional tuition cost which is partially offset by state aid.

The majority of new charter students are subject to the more common 100-60-40 reimbursement formula. As stated above, 18% of charter students came from foundation aid districts. Average tuition in these sending districts was approximately $9,800, or only $8,930 excluding facilities tuition. At the same time, the foundation budget in these foundation aid districts averaged $8,500 (compared to $8,600 across all districts sending students to charter schools). This means that for these districts the tuition payment is almost entirely covered by the extra foundation aid (although the state aid is delayed one year) – the gap between foundation budget and tuition was only $430 before any reimbursement. This gap may slightly understate the net cost to a sending district, depending on the characteristics of the students who enroll at the charter. Because charter students are less likely to be low-income or non-English proficient, the foundation budget and state aid will increase by a lesser amount than the average, leaving a larger gap.

Reimbursement for foundation aid districts depends on whether tuition was increasing and differs on a case-by-case basis. Tuition was increasing in roughly half of the foundation aid sending districts in FY2008, meaning that they received 100% reimbursement as well as the additional foundation aid.[19] In these districts, the reimbursement plus the foundation aid means that the districts probably face no net cost.

In total, a student in a foundation aid district transferring to a charter school has roughly the same impact as a student graduating or moving out of the district. When a student moves or graduates, the district's operating costs fall by some indeterminate amount, but the state aid falls by approximately $8,500. When the student enrolls in a charter, the difference is that tuition rises by about $9,000 per student, but the district does not lose the state aid and it may get temporary reimbursement.

For non-foundation aid districts, the net cost of an additional student enrolling at a charter school is determined by the target aid percentage. The target aid percentage averages 42% among the non-foundation aid districts, meaning that they could expect to receive an average of approximately $3,500 in state aid to partially offset the cost, before any reimbursement. This aid would cover almost 40% of the cost if tuition

Table 7: Data on Boston Charter School Finances, FY07 and FY08

	FY07	FY08	Difference	% Difference
Charter Students	4,508	4,763	255	5.6%
Total Tuition ($ millions)	$44.8	$51.5	$6.7	14.9%
Tuition per pupil	$9,940	$10,820	$880	8.9%
Reimbursement (non-facilities) ($ millions)	$6.2	$10	$3.8	61%
Reimbursement % of Tuition	13.8%	19%		5.2%

(excluding the facilities portion) was $9,000.

Example: Boston

We can use Boston as an example of how some of the spending and revenue figures play out. Boston sent more than 4,700 students to 22 different charter schools in FY2008, with the largest number going to the Boston Renaissance school. Table 7 contains data on enrollment, tuition, and the state reimbursement for Boston.

In FY2007, reimbursement covered only 14% of tuition payments. The reason that this number is relatively low is that charter enrollment (and tuition) grew quickly in Boston when charters were first established, meaning that reimbursement payments were already dropping off by 2007. From FY2007 to FY2008, tuition increased by almost $7 million, which generated a 60% increase in reimbursement.

Boston paid an average tuition of $10,800 for the students it sent to charter schools. Boston was not a foundation aid district and had a target aid percentage of only 20% (near the state minimum of 17.5%), leaving a relatively large share of the tuition cost to the local district.

According to DESE data, Boston spent approximately $17,150 per student in district. In total the charter schools in Boston spent $14,500 per student, but almost $1,800 of this was for leases and other capital facilities expenses that traditional schools do not face. Excluding these costs left the charters with $12,700 per student, roughly $4,400 less than the district average.

As stated previously, districts may spend more than charters for many reasons: special education costs, additional sources of revenue, different student characteristics, etc. Each of these plays a part in Boston, although the size of the gap and the explanation for the gap varies among different charter schools. One additional factor that explains a large part of the gap in spending in Boston is the difference in teacher salaries: the average teacher salary for all charters in Boston was $61,000, while in the district of Boston the average was $76,000.

V. Conclusion

The difficulties over charter school funding are unlikely to be solved – the two sides have different views on the fundamental question of whether funding should follow students. Local districts often feel that losing students to charter schools takes money away from the local schools. In a narrow sense this is true – as students leave a local district the district must pay tuition to the charter school.

This sense of financial loss is probably the driving force behind the opposition of district and school officials to charter schools, whether the opposition manifests as a call to raise reimbursement rates or to maintain or tighten caps on charter enrollment.

While opposition to the charter school funding mechanism is vocal and persistent, it is hard to imagine anyone making a credible argument that the state should limit the ability of a student's family to move from one district to another. But the move from a regular district school to a charter school is very similar conceptually to a move to another district.

The financial impact of a student enrolling in a charter school is also very similar to the impact if the student moves or graduates. The most important difference is that when the student enrolls in a charter school the cost is easy to identify – the district essentially receives a bill from the state.

The burden of the tuition payment is shared by local districts and the state. The local share depends not only on the amount of tuition per pupil and the reimbursement formula, but also on the Chapter 70 state aid formula. Districts that spend more per pupil face higher tuition payments, and increases in tuition are partially offset by reimbursement. At the same time, state aid can compensate for a large portion of the burden for some districts.

Chapter 71 states that tuition payments should be roughly equal to district spending per pupil, but the financial data make it clear that this is not the case; charter schools generally receive much less in tuition and spend less per pupil than sending districts spend. The financial gap stems from differences in both revenue sources and spending requirements. The tuition calculation excludes several revenue sources and adjusts tuition downward because charter schools have fewer high-cost students. Because revenue is lower, the charter schools are constrained to spend less than their district counterparts.

The gap in spending may not accurately reflect differences in resources devoted to students. The figures may overstate the differences in teaching resources available because charter schools rarely enroll students with more severe special education needs (and very high costs), and they also pay teachers less. On the other hand, charter schools also usually spend more to lease and improve property than the facilities tuition payment provides, leaving less funding available for other operating expenses. In total it appears that charter schools spend less on comparable students than sending districts, but the details vary from school to school.

Opponents of the current funding formula argue that any diversion of resources away from local districts is unwise, even if students leave for a charter school. While this fundamental disagreement is unlikely to be solved, the debate might be more informative if it were based on a better understanding of how the funding mechanism works. The discussion is made more difficult by the complex nature of the problem; the calculation of tuition, reimbursement, and state aid interact in ways that disguise the impact of growth in charter school enrollment. This paper was an attempt to explain the charter school funding mechanism and clarify the impact of charter schools on local districts.

About the Author:

Ken Ardon received a PhD in economics from the University of California at Santa Barbara in 1999, where he coauthored a book on school spending and student achievement. He taught economics at Pomona College before moving to Massachusetts, and, from 2000 to 2004, Dr. Ardon worked for the state of Massachusetts in the Executive Office of Administration and Finance. Since 2004, he has been an assistant professor of economics at Salem State College.

About Pioneer:

Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to change the intellectual climate in the Commonwealth by supporting scholarship that challenges the "conventional wisdom" on Massachusetts public policy issues.

Endnotes

1. "Informing the Debate: Comparing Boston's Charter, Pilot and Traditional Schools" January 2009, The Boston Foundation.

2. 9/30/09 Letter from Salem Teachers Union

Local 1258 to members.

3. DESE Charter School Factsheet, http://www.doe.mass.edu/charter/factsheet.pdf. This paper focuses on 2007 – 2008 data because more current data is not available for some measures. In 2008 – 2009 enrollment grew to 26,384.

4. Public school data from DESE. Private school figures from National Center for Education Statistics, Private School Universe Survey.

5. "Other Tuitioned Out" is made up mostly of special education students sent outside the local district.

6. FTE enrollment measures the "full time equivalent average membership" which adjusts enrollment based on the percentage of the year a student is enrolled. A student who enters school in November and stays for the rest of the year would count as approximately 0.8 of an FTE.

7. Figure 3 only includes data for Commonwealth charters. In FY03 the reimbursement payments were not funded, and in FY04 they were only partially funded.

8. Chapter 71, section 89, paragraph nn, http://www.mass.gov/legis/laws/mgl/71-89.htm

9. See http://finance1.doe.mass.edu/chapter70/chapter_cal.pdf for a full explanation of the foundation budget calculation.

10. See http://finance1.doe.mass.edu/chapter70/chapter_09_explain.html for a detailed explanation.

11. For a complete explanation, see http://finance1.doe.mass.edu/charter/charter09_rates_jun_b.html.

12. Unlike much education aid, charter school reimbursement is regressive and provides more aid to wealthier districts that tend to spend more per pupil.

13. A similar example is available at http://finance1.doe.mass.edu/charter/Reimbursements.html

14. For example, the FY10 budget was written during the winter and spring of 2009, so the foundation budget was based on enrollment during October of 2008.

15. Aid may not actually decrease from one year to the next, but the district would receive less aid than it would have if the student had not left.

16. The state's historic reluctance to cut aid to districts when enrollment drops can achieve the same result, so that a district receives aid for a student who has left.

17. Districts sending fewer than 25 students to charter schools were excluded because with small numbers of students the average tuition is extremely volatile. Districts sending more than 25 students accounted for 94% of total charter school enrollment.

18. Spending by function data is also available for individual schools, but the extremely large variation across schools makes it hard to interpret.

19. A small number of districts might not receive the full 100% reimbursement the first year because the increase in tuition might be less than the full tuition amount. For example, if tuition for the new student is $10,000 but tuition had been about to fall by $2,000, the new student would only generate $8,000 in reimbursement.

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