

Part II. Financial Aspects of Education Reform

One of the major strategic goals of MERA was to establish a fair and equitable system of school finance. MERA established a "foundation budget" designed to bring all schools to an "adequate" level of per-pupil spending, regardless of the wealth of their local communities. The Act committed the state legislature, in an unprecedented way, to increase funding for seven consecutive years in order to bring all districts to foundation-level funding. The Act also established a required local contribution level for each district. This section includes data on: (1) state spending on education, (2) the state's progress on foundation funding, and (3) trends in various types of expenditures.

1. State Spending on Education

How much does Massachusetts spend on K-12 education?

State funding for education totaled \$3.94 billion in FY01 (see Table 2.1). The Department of Education also administered approximately \$663 million in federal funding, \$78 million in trust funds, and \$14 million in capital funding (see Table 2.2).

TABLE 2.1: MASSACHUSETTS DEPARTMENT OF EDUCATION FY01-FY02 BUDGET ANALYSIS²⁰

	FY 2001 Budget	FY01 % of Total	FY 2002 Budget	FY02 % of Total
Total Non-Discretionary State Aid and SPED Services	\$3,579,776,198	90.82%	\$3,814,812,918	91.85%
Assessment & Accountability	\$59,668,559	1.51%	\$72,053,219	1.73%
Educator Quality Enhancement	\$3,121,692	0.08%	\$2,848,875	0.07%
Transfers to Other Agencies	\$8,015,689	0.20%	\$5,164,582	0.12%
Categorical Grant Programs	\$278,675,098	7.07%	\$246,801,409	5.94%
DOE Administration	\$12,183,649	0.31%	\$11,457,693	0.28%
Total State Funding	\$3,941,440,885	100.00%	\$4,153,138,696	100.00%

²⁰ For detailed version of this budget analysis, see Appendix B.

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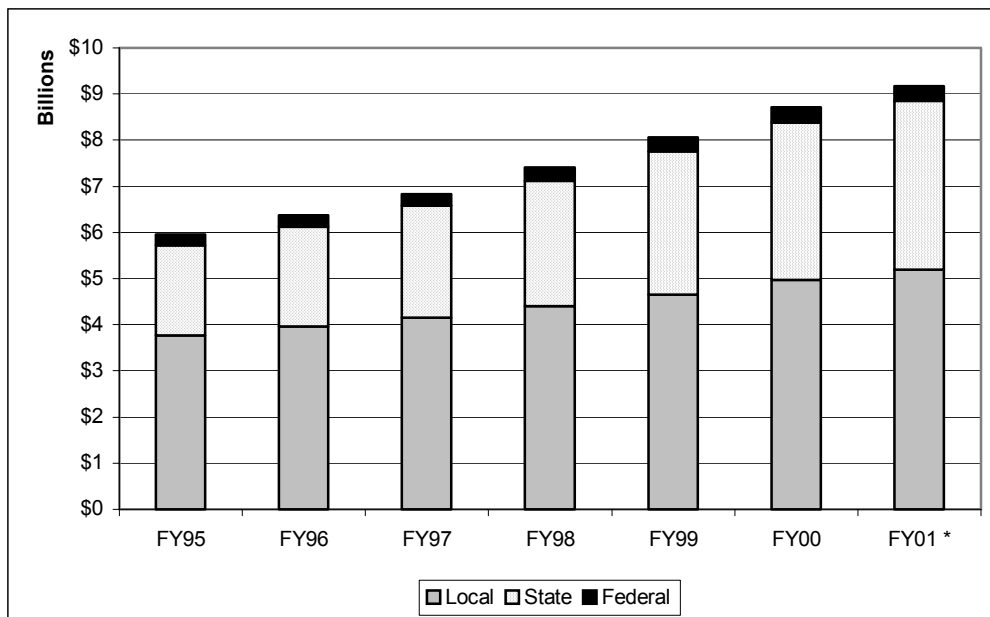
TABLE 2.2: MASSACHUSETTS STATE, FEDERAL, TRUST AND CAPITAL FUNDING FOR EDUCATION, FY01-FY02 BUDGET ANALYSIS²¹

	FY 2001 Budget	FY01 % of Total	FY 2002 Budget	FY02 % of Total
State Funding	\$3,941,440,885	83.93%	\$4,153,138,696	84.51%
Federal Funding	\$662,820,504	14.11%	\$680,291,154	13.84%
Trust Funds	\$78,014,145	1.66%	\$73,376,799	1.49%
Capital Funding	\$13,749,984	0.29%	\$7,384,044	0.15%
Grand Total	\$469,025,518	100.00%	\$4,914,190,693	100.00%

How are local schools funded?

K-12 schools are largely funded through a combination of local property tax revenues and state aid (“Chapter 70” funds), plus a relatively small amount of federal funds. The state spent \$2.95 billion in Chapter 70 support to local schools in FY01, while local communities spent \$4.3 billion. Under MERA’s financial provisions, codified in Chapter 70 of the Massachusetts General Laws, the state has assumed greater responsibility for funding local schools; since 1990, the state’s portion of funding has risen from 33% to 40%.

FIGURE 2.1: MASSACHUSETTS PUBLIC SCHOOL EXPENDITURES, BY REVENUE SOURCE (2001 DOLLARS)²²

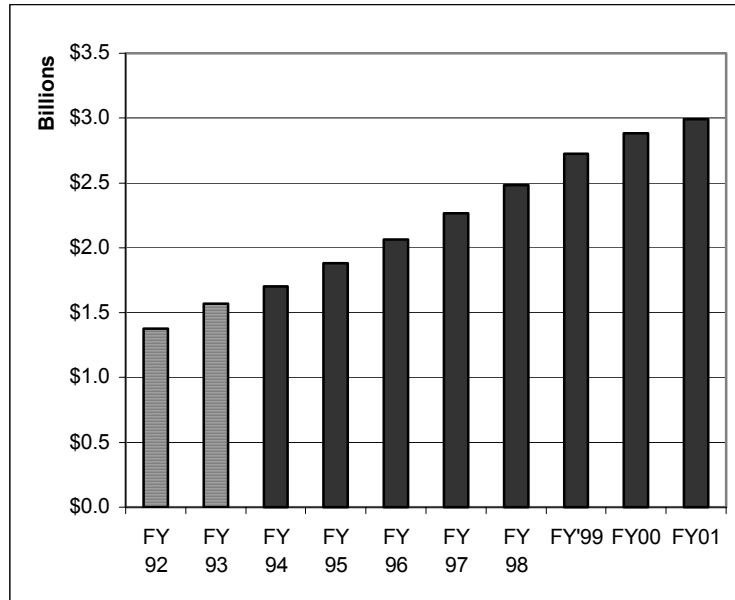


²¹ For detailed version of budget, see Appendix B.

²² Data prior to 1994 are not comparable because of changes in data collection according to MA DOE staff.

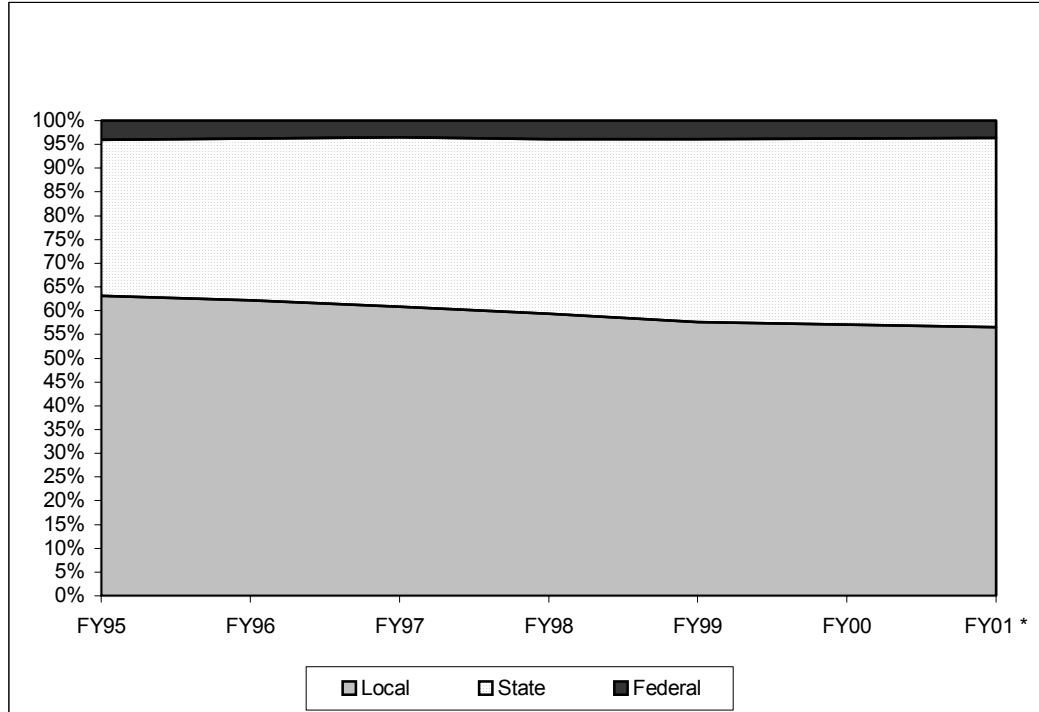
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FIGURE 2.2: CHAPTER 70 AID, FY92-FY01 (2001 Dollars)



Solid black bars represent Chapter 70 Aid after MERA

FIGURE 2.3: EDUCATION SPENDING: FEDERAL, STATE AND LOCAL CONTRIBUTIONS, 1990-2001



** Preliminary Estimate – Some local contributions are still being verified by the DOE.*

2. The State's Progress on Foundation Funding

MERA's financial component addressed the problem of how to provide adequate education funding for all communities, despite significantly different levels of local resources and tax effort. The basic approach of the Chapter 70 foundation budget formula was to:

1. set the minimum level of spending required for educational adequacy for each school district (the foundation budget),
2. determine what the local community should be required to contribute (the required local contribution), and
3. commit state resources to make up the difference (state aid).

How is "adequate funding" (the foundation budget) determined for each district?

MERA, through Chapter 70, created a foundation budget for each school district based on the particular mix and number of students in that district. The foundation budget is calculated by the Department of Education, based on per-pupil allowances for each of 19 spending categories:

- Teaching salaries
- Support staff salaries
- School aide salaries
- Principal/Assistant principal salaries
- Clerical salaries
- Health care staff salaries
- Central office salaries
- Custodial staff salaries
- Employee benefits (2 categories)
- Expanded programs for low-income students
- Professional development
- Athletics
- Extra-curricular activities
- Utilities and ordinary maintenance
- Special needs tuitions
- Miscellaneous expenses
- Books, computers, supplies, equipment
- Extraordinary maintenance

A budget amount is computed for each category, based on (1) numbers of students of various types in the district²³ and (2) multiplication factors for various types of students for each category.²⁴

The foundation budget thus establishes the minimum adequate spending level for each school district by adding up the various categories of projected spending needs, as calculated by the foundation budget formula. The particular amounts in each spending category, however, are intended as guidelines and are not currently binding on school districts. The formula is adjusted annually using a regional wage adjustment factor, inflation and current school enrollments to accommodate for regional, state and national shifts in the economy and population.

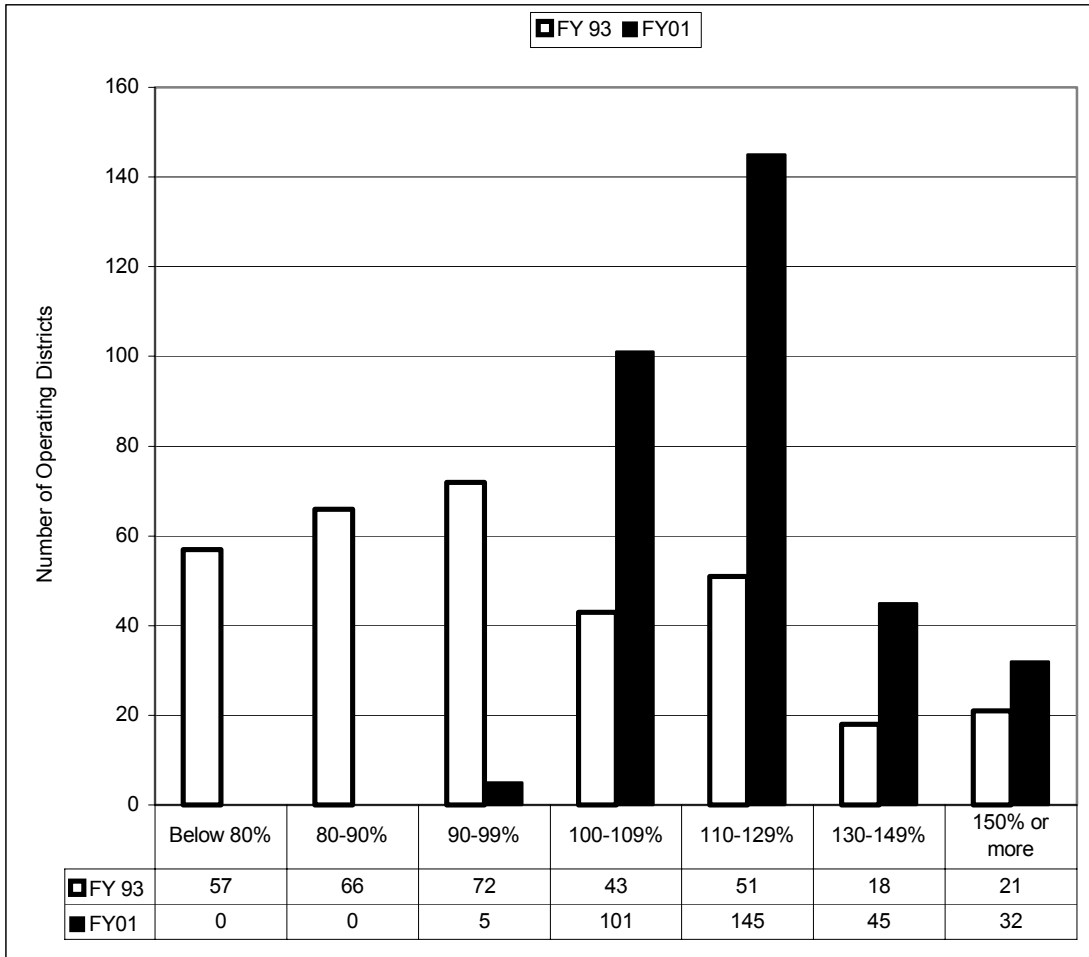
²³ Actual student numbers from the previous year are used for each year's foundation budget calculation, except for special education (SPED) student numbers, which are calculated by formula at 3.5% of all students for in-district SPED students and 1% of all students for tuitioned-out SPED students.

²⁴ See Appendix C for more detailed information on the Foundation Budget Formula.

How has MERA affected school district spending levels?

The foundation budget is a theoretical threshold level representing adequate spending in each local district. By this calculation, in FY93, 195 school districts were below their minimum adequate (foundation) level, with 123 being more than 10% below foundation. By FY01, only 5 districts were below foundation, and none of these were more than 10% below²⁵.

FIGURE 2.4: NET SCHOOL SPENDING AS % OF FOUNDATION, FY93 VS. FY01

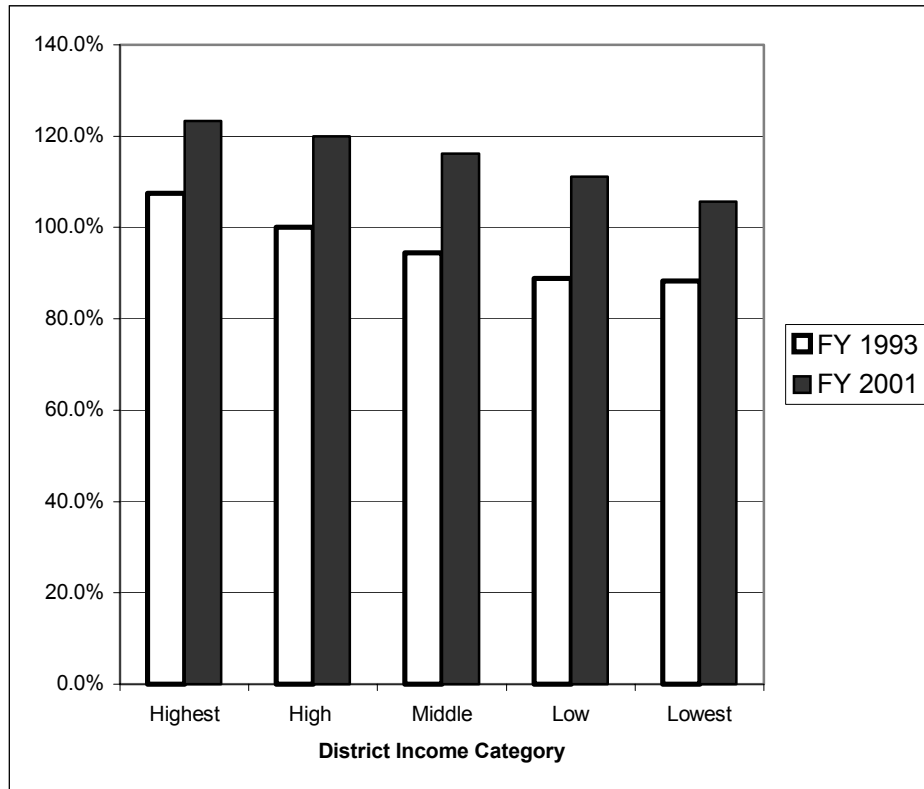


²⁵ Districts may be below foundation because districts can use excess debt (which are credits for districts with per pupil school construction debt that exceeds the state average) to reduce their required local contribution.

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In terms of district income categories, in FY93 only the two highest-income groups had average spending at or above foundation. By FY01, all five groups averaged above foundation level. However, the highest-income districts' spending averaged 123% of foundation, while the lowest-income districts' spending averaged 106% of foundation.

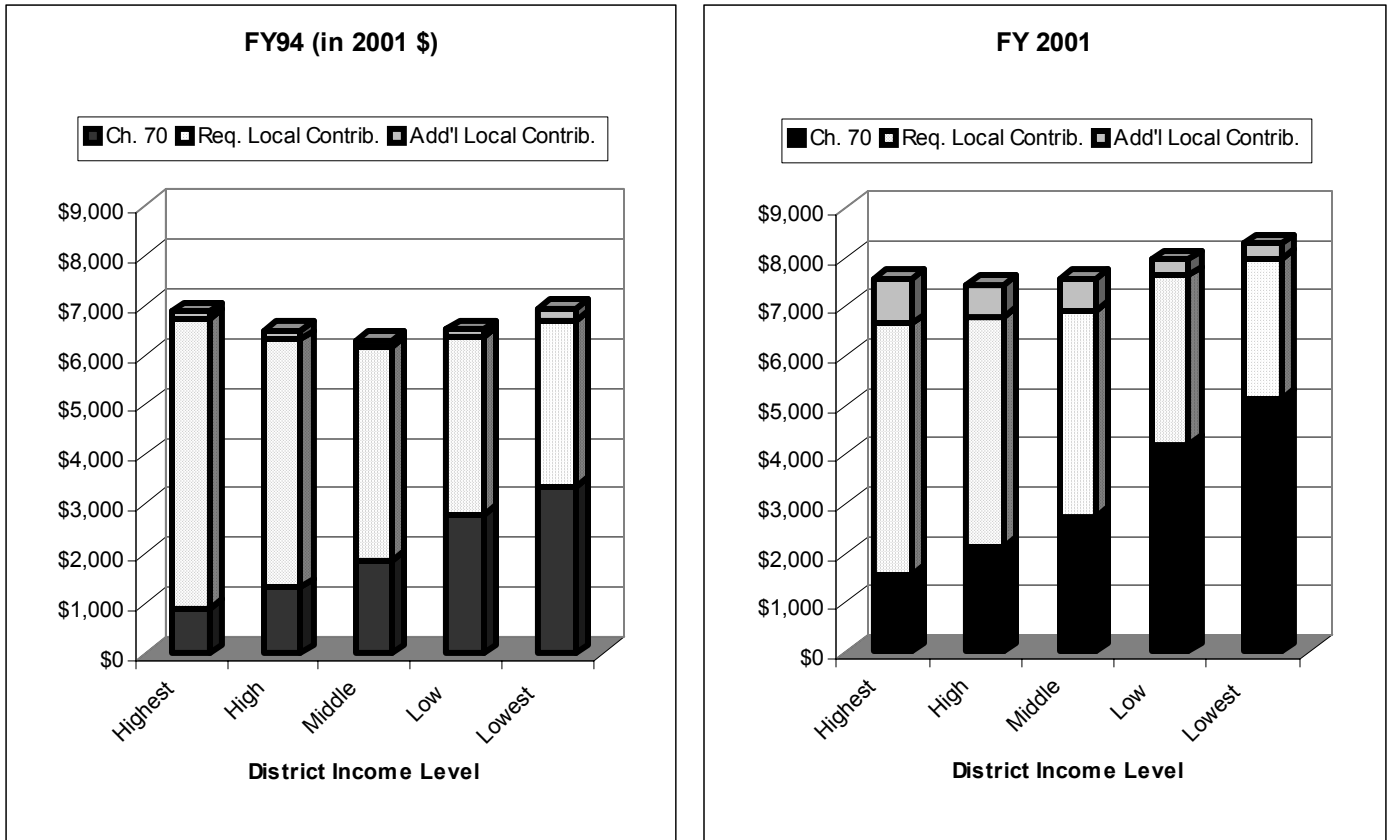
FIGURE 2.5: NET SCHOOL SPENDING AS % OF FOUNDATION, BY DISTRICT INCOME CATEGORY



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As noted, above the foundation formula sets an “adequacy threshold” for each school district and determines the mix of required local funding and state aid that will get that district to its threshold. Local communities may also contribute additional funds, above their required local contribution.

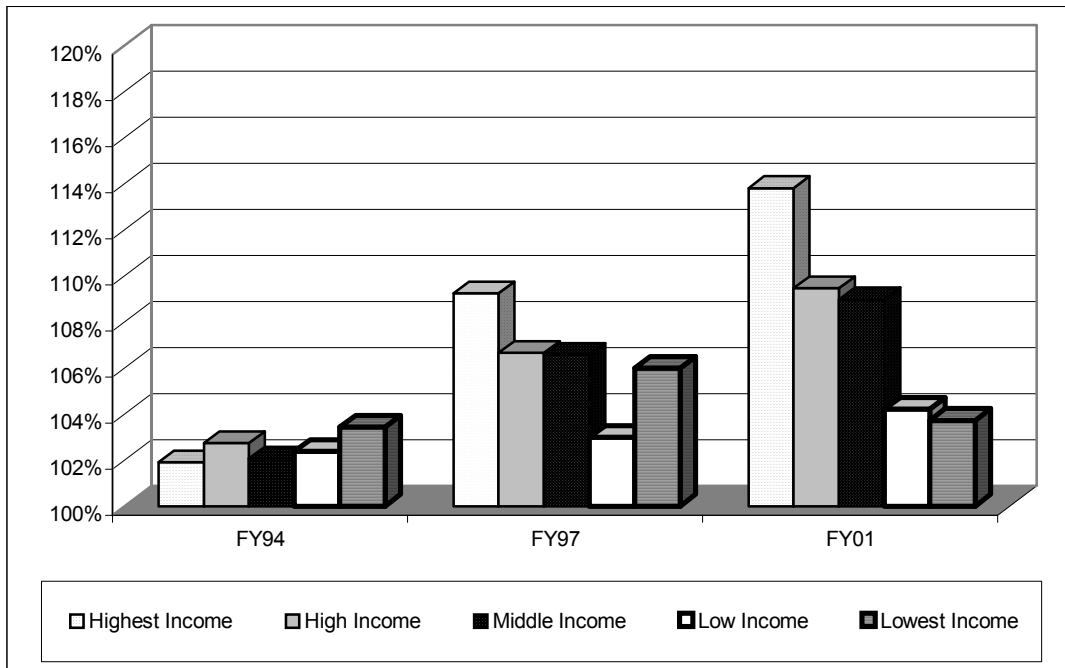
FIGURE 2.6: COMPARISON OF STATE AND LOCAL FUNDING IN FY94 AND FY01 (2001 Dollars)



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Since FY94, required local contributions have decreased (adjusted for inflation) among all district categories. At the same time, additional local contributions have increased, particularly in the middle-to-highest income districts. On an inflation-adjusted basis, the highest-income districts have increased their additional local contributions by an average of \$800 (435%) per pupil, while the lowest-income districts have increased theirs by an average of \$60 (238%) per pupil.

FIGURE 2.7: PERCENTAGE OF SCHOOL SPENDING BEYOND REQUIRED, BY DISTRICT CATEGORY



How are charter schools funded?

Charter schools are funded from tuitions received from attending students' sending districts. The amount of tuition accompanying a particular student is based on the per-pupil expenditures in that student's district. Consequently, students from lower-income districts, which have higher per-pupil expenditures, bring higher tuitions to a charter school than students from lower-income districts. MERA does not require state fiscal support for charter school buildings and other capital costs, which has been an area of significant challenge for charter school development.

A higher percentage of students from lowest-income districts are choosing to attend charter schools. The percentage of students choosing to attend charter schools decreases as the district income level increases.

TABLE 2.3: 2001 CHARTER SCHOOL STUDENT ENROLLMENT, BY SENDING DISTRICT CATEGORY

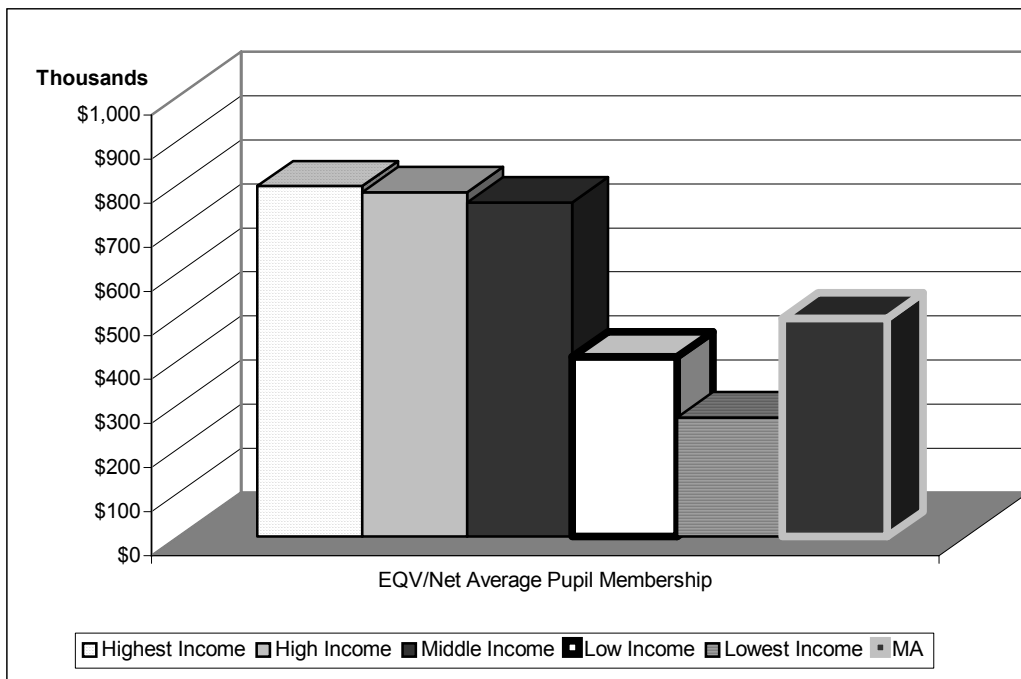
Sending District Category	Percentage of Students Eligible for Free/Reduced Price Lunches	Total Charter School Enrollment (2001)	Enrollment as a Percentage of Total Sending District Category Enrollment
Highest Income	Less than 5%	962	0.55%
High Income	5%-10%	1343	0.65%
Middle Income	11%-23%	1552	0.76%
Low Income	24%-49%	1820	0.94%
Lowest Income	50% or more	6679	3.74%

How has MERA accommodated differences in community resources?

As noted above, Chapter 70 not only established an adequacy threshold (the foundation budget) but also made a determination of each community’s ability to pay for local schools (local required contribution) and committed the state to making up the difference (state aid). The state uses a standard measure of relative property wealth, the Equalized Property Valuation or EQV, to identify communities with greater or lesser property values than average and to direct state aid accordingly.²⁶

On a per-pupil basis, there is a remarkable gap between the average property values of the three highest-income district groups and the two lowest. The middle and higher income districts all average about \$800,000 EQV per pupil, or 155% of the state average, while the low-income districts average about \$408,000 (82% of state average), and the lowest-income districts average about \$271,000 (55% of state average).

FIGURE 2.8: EQUALIZED PROPERTY VALUATION PER PUPIL (FY00)

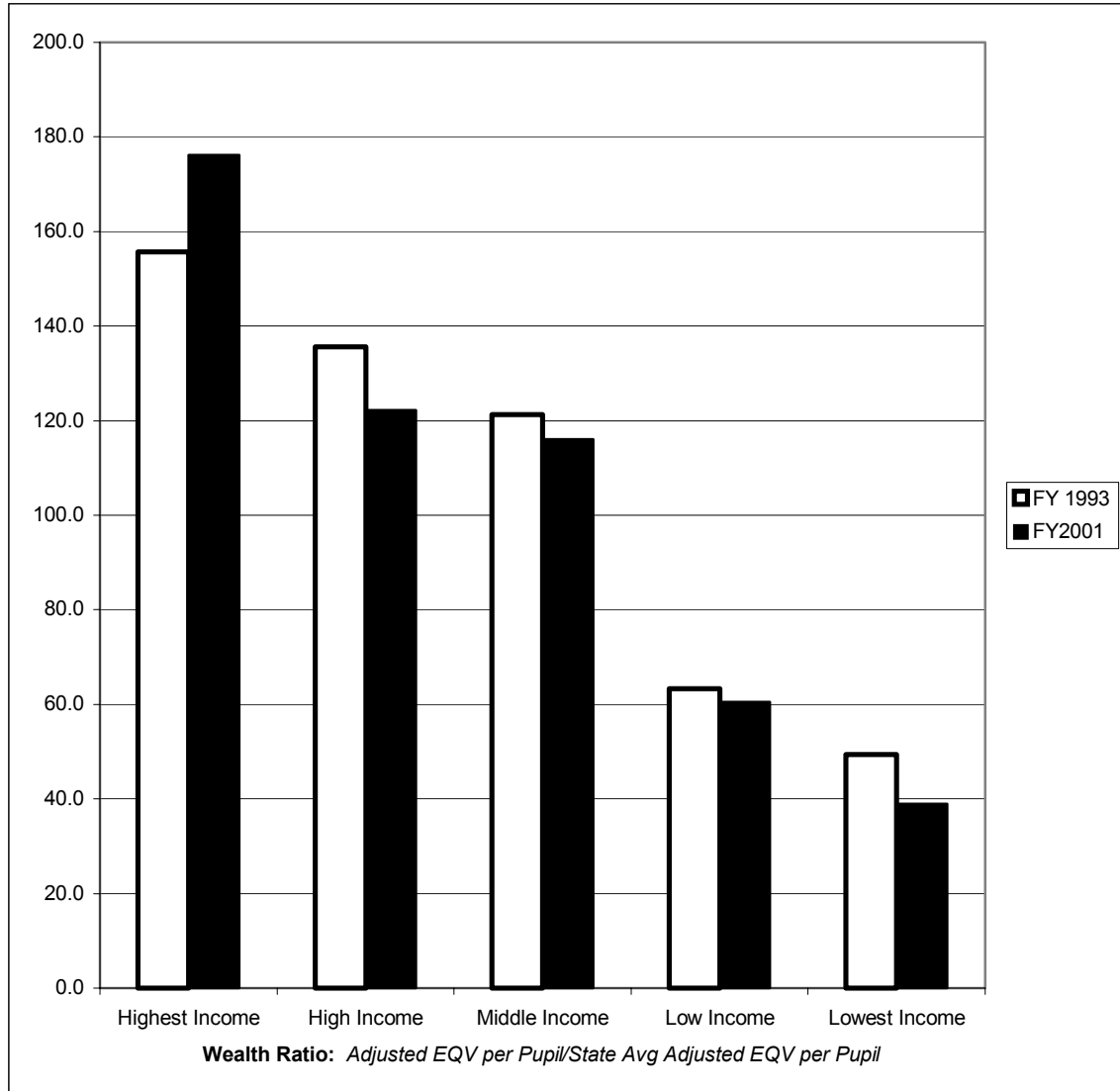


²⁶ As defined by the Department of Revenue, “EQVs present an estimate of fair cash value of all taxable property in each city and town as of January 1 of each year (MGL Ch. 58, Sections 9 & 10C). The EQV is a measure of the relative property wealth in each municipality. Its purpose is to allow for comparisons of municipal property values at one point in time, adjusting for differences in local assessing practices and revaluation schedules. EQVs have historically been used as a variable in the allocation of certain state aid distributions, the calculation of various state and county assessments to municipalities, and the determination of municipal debt limits. EQVs are used in some distribution formulas so that communities with lower property values receive proportionately more aid than those with higher property values. In some assessment formulas they are used so that those with lower property values assume proportionately less of the cost than communities with higher property values. The local aid receipt programs using EQV are: Lottery, Public Libraries, Chapter 70, and School Construction Aid.”(MA Department of Revenue website, retrieved 3/18/02)

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This wealth disparity has actually increased between FY93 and FY 2001. The following graphic shows how average EQV per pupil in each district income category compares with the state average EQV per pupil. The property values of the highest-income districts have increased faster than the state average, while those of the other districts have increased at a slower rate.

FIGURE 2.9: AVERAGE WEALTH RATIO BY DISTRICT INCOME CATEGORY, FY93 AND FY01

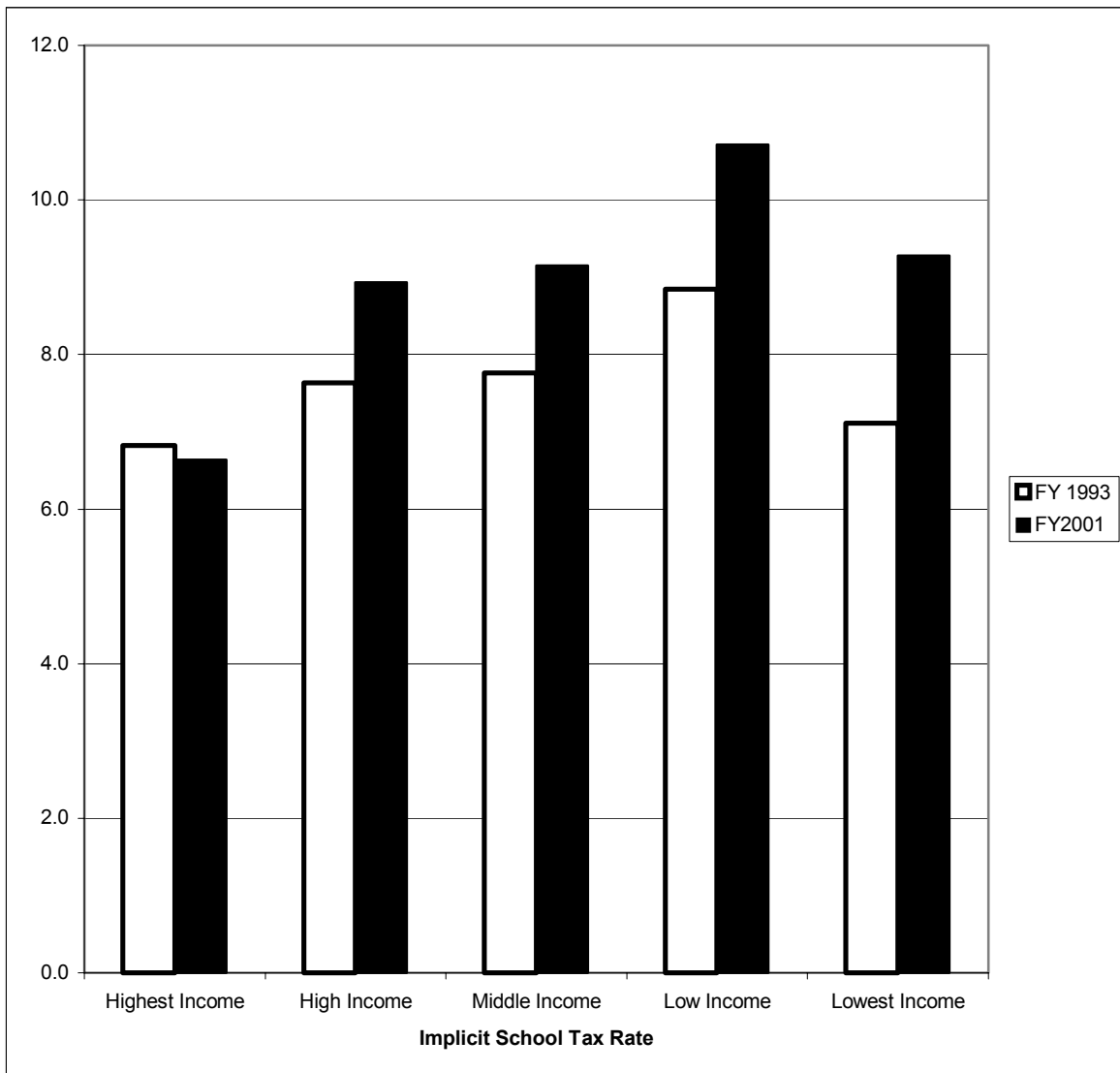


The foundation formula takes these property-value differences into account in determining the level of required effort from local districts. (See Appendix C for a more detailed discussion of the formula.) However, the level of taxation necessary to meet required local contributions is not equal: higher-wealth towns meet their contributions using smaller portions of their income and tax base.

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A recent analysis by the Foundation Budget Review Commission computes an “implicit school tax rate,” comparing the income-adjusted residential portion of the EQV with the required local contribution for each community. Comparison of implicit tax rates across district income categories shows that, on average, the level of effort is lowest for the highest-income category and highest for the second-lowest income category. Level of effort between fiscal years 1993 and 2001 has dropped slightly for the highest-income category while increasing for all other categories, with the greatest increases in effort found in the lower income categories.

FIGURE 2.10: IMPLICIT SCHOOL TAX RATE BY DISTRICT INCOME CATEGORY, FY93 AND FY01



3. Trends in Education Expenditures

To what extent have per-pupil expenditures increased, and for what types of students and activities?

When MERA was enacted, per-pupil expenditures (total day) had actually been dropping for several years, from \$6,490 in FY89 to \$6,132 in FY93 (both 2001 dollars). As a result, while per-pupil expenditures have risen to \$7,348, an increase of 19.8% since FY93, this represents a somewhat smaller increase of 13.2% above the FY89 level (all figures adjusted for inflation).

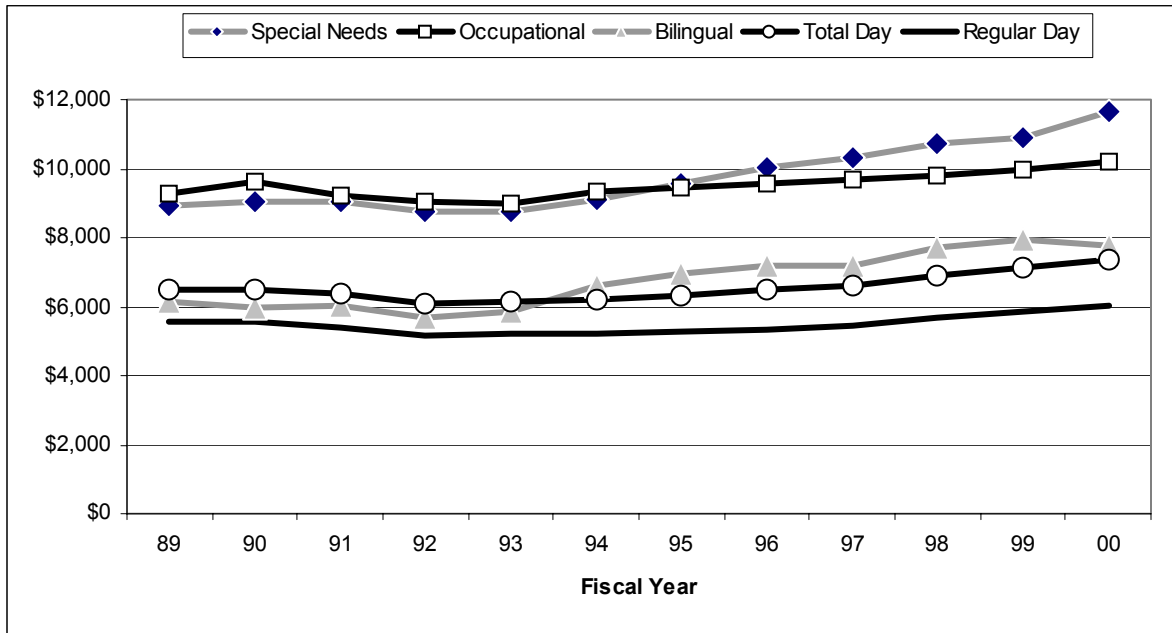
TABLE 2.4: AVERAGE PER-PUPIL EXPENDITURES, FY00, AND CHANGE FROM FY93 AND FY89 (2001 dollars)

Program	Fiscal Year 2000	\$ Change Since 1993	% Change Since 1993	\$ Change Since 1989	% Change Since 1989
Regular Day	\$6,040	\$841	16.2%	\$456	8.2%
Special Needs	\$11,626	\$2,893	33.1%	\$2,684	30.0%
Bilingual Education	\$7,777	\$1,901	32.4%	\$1,643	26.8%
Occupational	\$10,221	\$1,263	14.1%	\$937	10.1%
Total Day	\$7,348	\$1,216	19.8%	\$858	13.2%

As the following graphic shows, much of the average increase in total per-pupil expenditures is due to increases in special education and bilingual education per-pupil costs. Between FY89 and FY00, average special education expenditures rose by 30%, and average bilingual education expenditures rose by 27%. During the same time period, average occupational education expenditures rose by 10% and average regular-day expenditures rose by 8% (all figures adjusted for inflation).

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FIGURE 2.11: ADJUSTED PER PUPIL EXPENDITURES BY PROGRAM, MASSACHUSETTS AVERAGES, FY98-FY00 (2001 dollars)

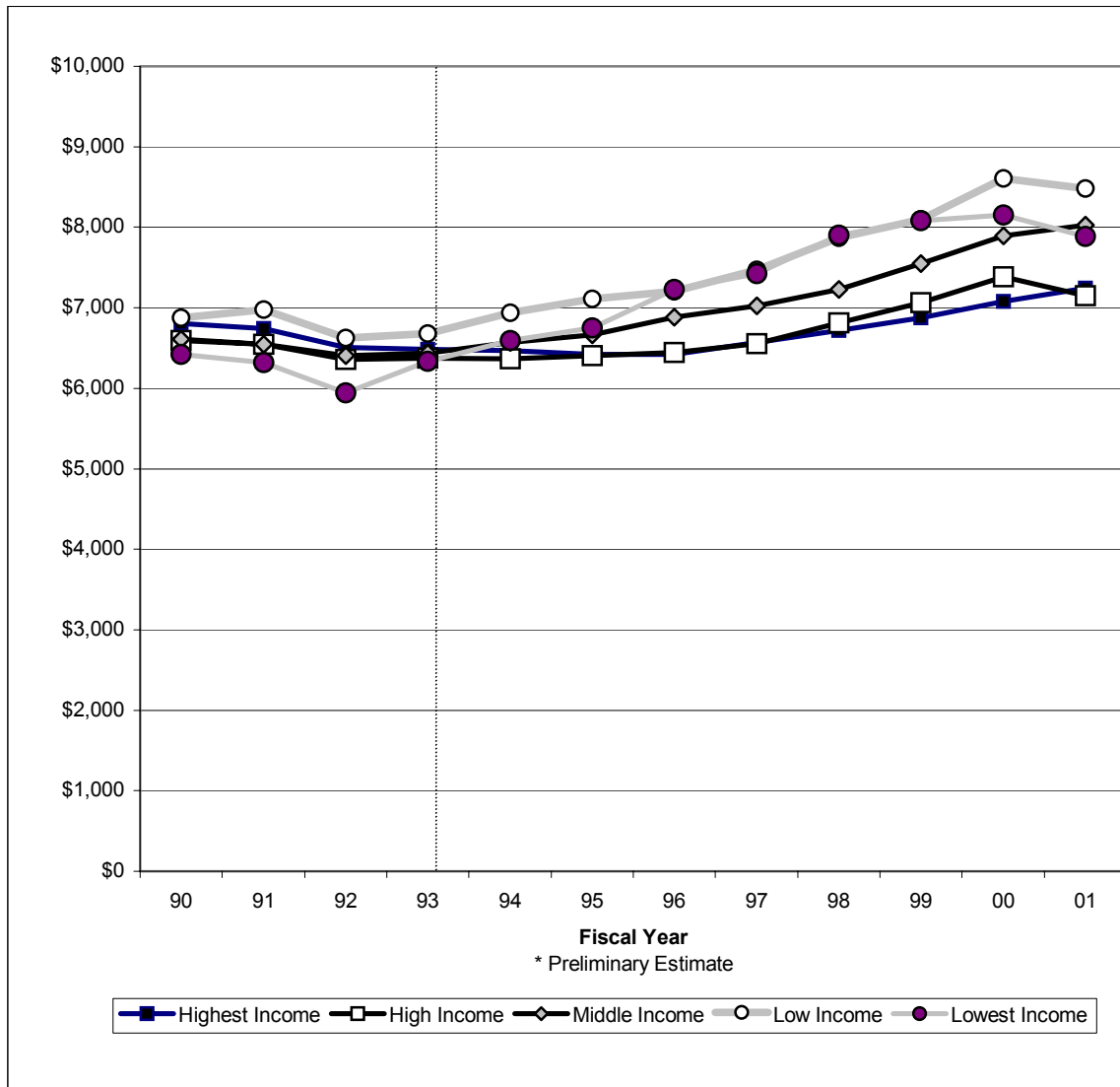


Total per-pupil expenditures (total expenditures, including regular day, special needs, bilingual, and occupational students, divided by total enrollment) have increased for all district categories (adjusted for inflation). Expenditures rose more quickly for lower-income districts in the mid-1990s, prior to converging with the other district categories toward the end of the decade. This mirrors the pattern seen in per-pupil special education expenditures (Figure 2.13), and is likely a function of that pattern.

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Even though net spending as a percentage of foundation budget (see Figures 2.4 and 2.5) is greater in the higher-income districts, the actual amount of dollars of expenditure per pupil is higher in the lower-income districts (see Figure 2.12). This is attributed to differences in student population. For example, the foundation budget formula recognizes the greater cost of educating students living in poverty as well as students who are learning English as a second language. Lower-income districts serve more students in both of these categories. Consequently, the per-pupil expenditures within the lower-income districts are higher than those of the middle and higher-income districts.

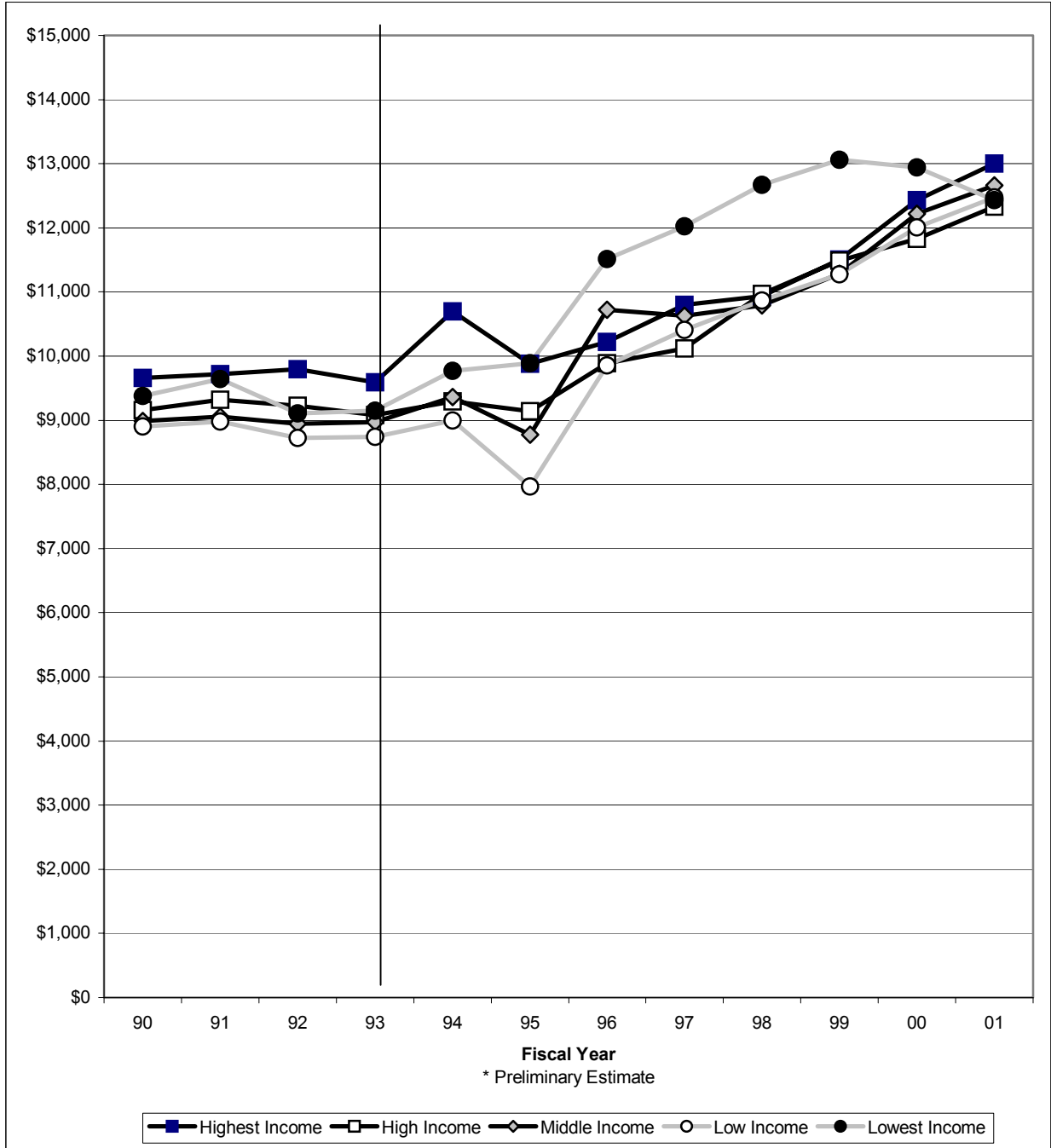
FIGURE 2.12: AVERAGE PER-PUPIL EXPENDITURES (TOTAL DAY), FY90 – FY01, BY DISTRICT CATEGORY (2001 dollars)



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Per-pupil special education costs (adjusted for inflation) have increased for all district categories. These costs increased fastest in the lowest-income category during the mid-1990s, but decreases in this category toward the end of the decade brought these districts' costs back to general parity with the other district categories, on a per-pupil basis.

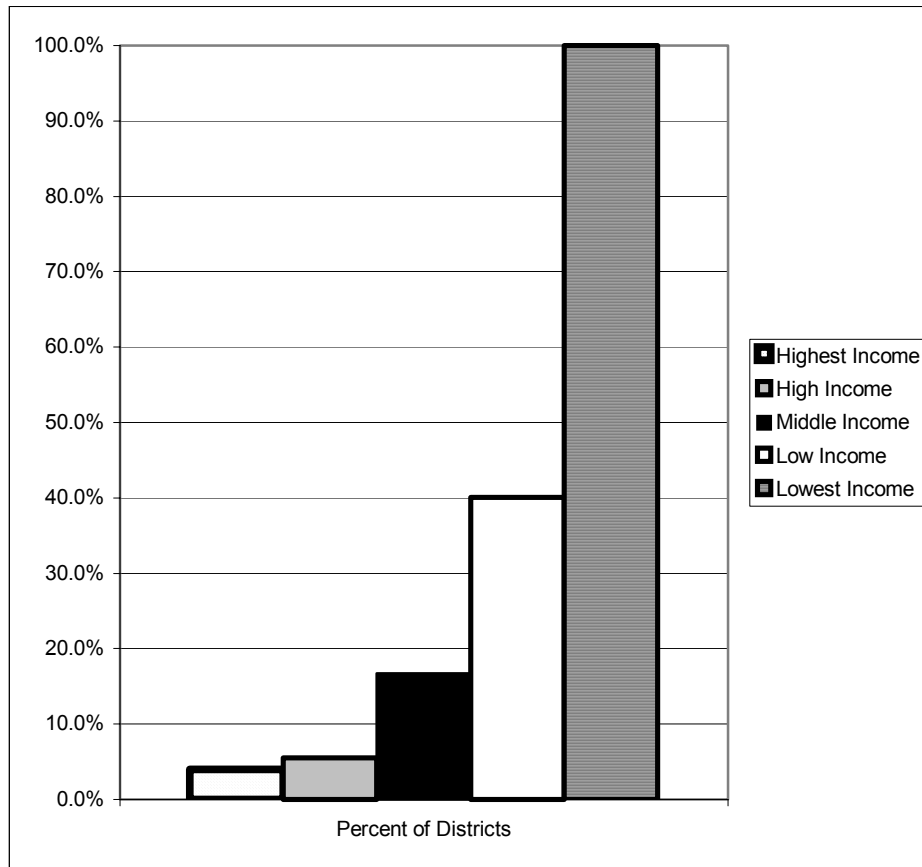
FIGURE 2.13: AVERAGE SPECIAL EDUCATION EXPENDITURES, BY DISTRICT CATEGORY (2001 dollars)



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Chapter 71A of the Massachusetts General Laws requires schools to provide transitional bilingual programs for students who do not know enough English to function within a regular classroom if there are 20 or more students in the district speaking the same language. In FY00, 53 districts reported expenditures on bilingual programs. Bilingual programs are concentrated in the lower-income district categories.²⁷

FIGURE 2.14: PERCENT OF DISTRICTS REPORTING BILINGUAL EXPENDITURES, FY90-FY00, BY DISTRICT CATEGORY

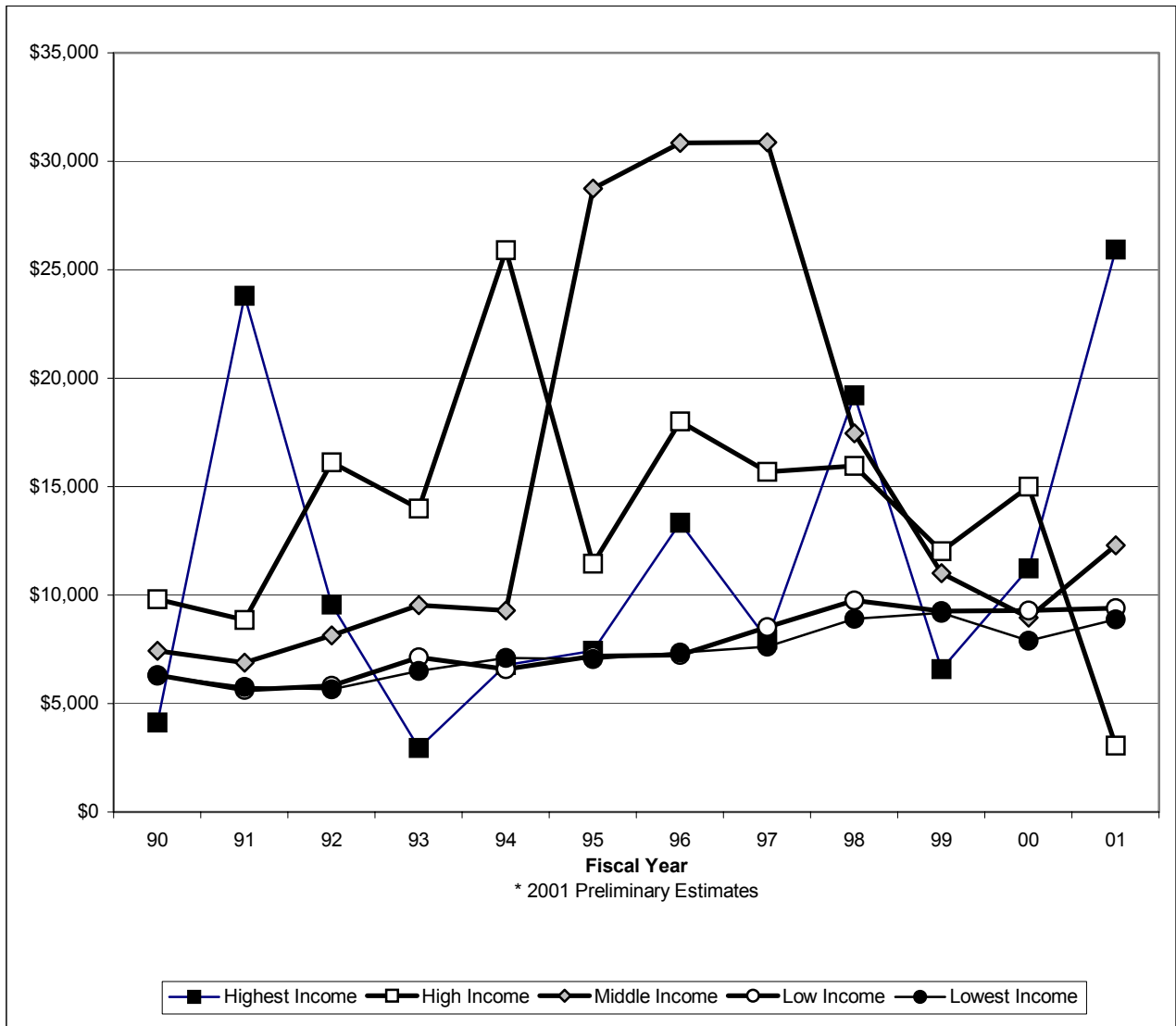


²⁷ As of the printing of this report, a new law and referendum may alter bilingual education programs and funding in subsequent years.

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In the chart below, the state average is weighted toward the lower-income districts by the predominance of bilingual students in those districts; therefore, it more closely follows the lower-income districts' averages. The erratic per-pupil expenditures in higher-income districts is likely a function of the relatively small number of bilingual students in those communities, which magnifies changes as well as any reporting irregularities.

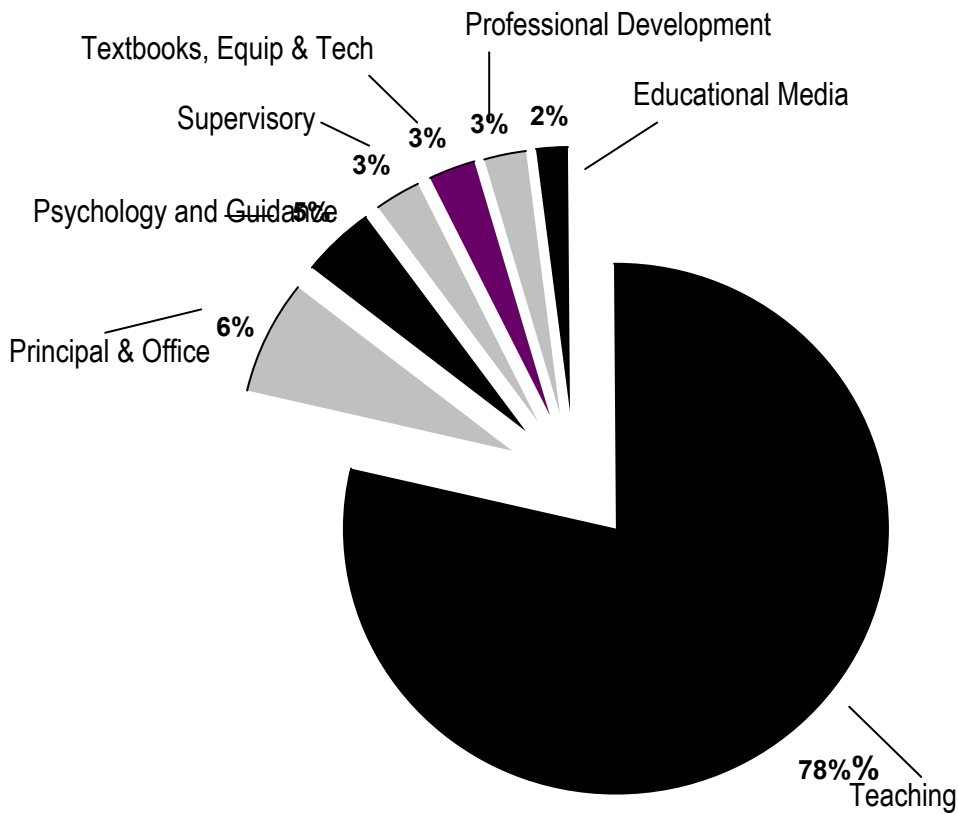
FIGURE 2.15: AVERAGE PER-PUPIL BILINGUAL EXPENDITURES, BY DISTRICT CATEGORY (2001 dollars)



On what do districts spend their funds?

In FY00, 68% of per-pupil expenditures were categorized as instructional expenditures (see distribution in Figure 2.16). The remaining 32% of expenditures went to non-instructional areas such as extraordinary maintenance, utilities and ordinary maintenance, custodial staff, and athletics.

FIGURE 2.16: USES OF FY00 PER-PUPIL INSTRUCTIONAL EXPENDITURES



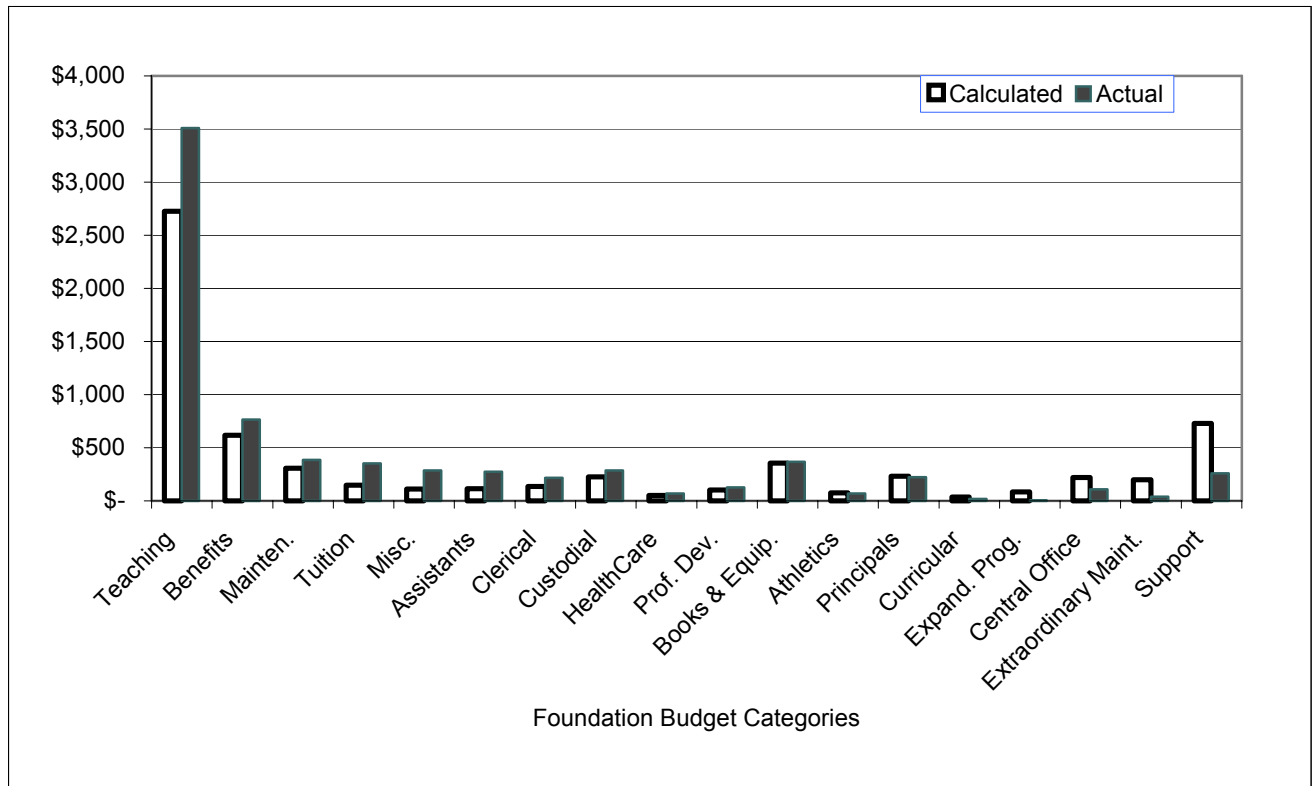
As discussed earlier, the Chapter 70 foundation budget formula calculates per-pupil allowances for each of 19 spending categories. The Department of Education collects detailed expenditure and budget data from school districts annually. With some matching and adjusting of the collected spending data to the Chapter 70 categories, since about 1995, comparison of calculated funding needs versus actual spending patterns is possible. Since the calculated allowances are only guidelines used in calculating the foundation budget, districts are free to allocate funds as they wish, to meet local needs. This analysis is interesting, however, because it reveals areas where the foundation formula may have resulted in an underestimation of dollars needed to fund certain categories. It also reveals district priorities by observing where dollars are actually spent, and ultimately this

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analysis may serve policymakers in identifying and revising funding formula priorities, needs and actual costs.

As the Figure 2.17 indicates, districts on average have overspent calculated amounts in some categories, such as teaching, assistants, and tuitions, and underspent the calculated amounts in others, such as support staff, extraordinary maintenance, and expanded programs for low-income students.

FIGURE 2.17: FOUNDATION-CALCULATED FUNDING v. REPORTED SPENDING IN FOUNDATION CATEGORIES, PER-STUDENT²⁸, STATE AVERAGE

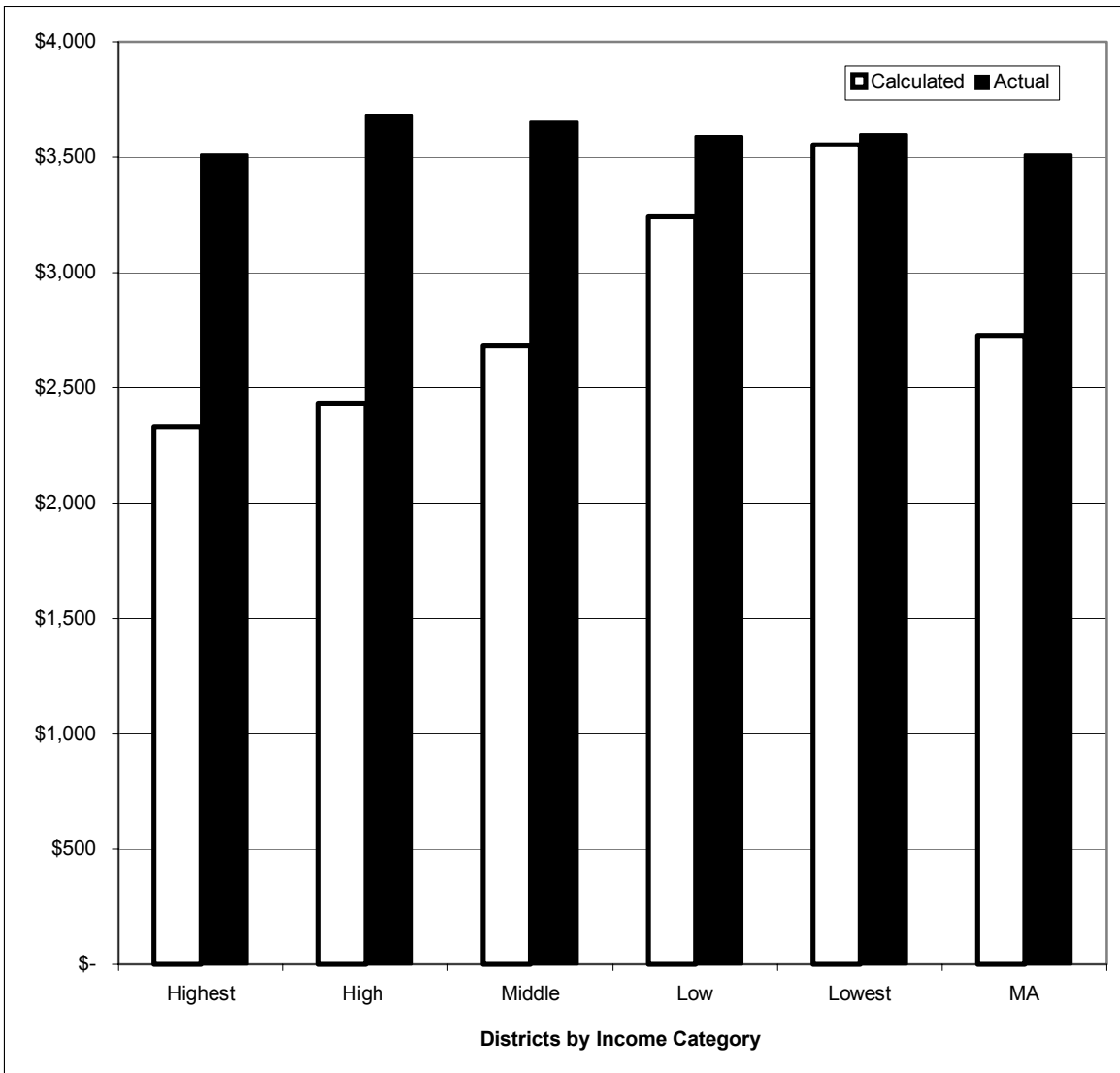


²⁸ Per-student calculated as per-foundation enrollment.

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Teaching is by far the highest calculated expenditure in the funding formula, and reported expenditures exceed the calculated amount. Across the different income groupings, there is a large degree of uniformity in districts' per-pupil teaching expenditures. Despite higher calculated spending targets for the lower-income districts, the higher-income districts exceed their lower targets to a degree that equalizes per-student expenditures.

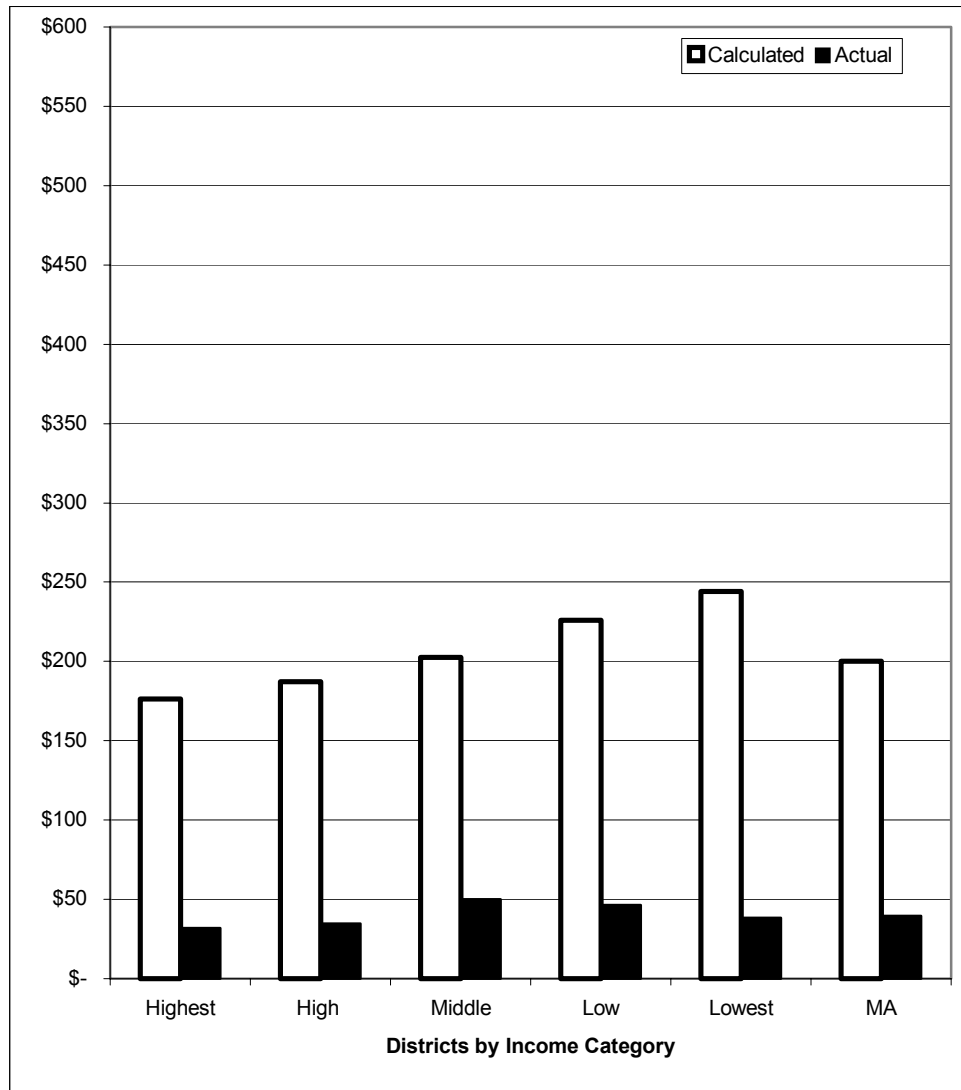
FIGURE 2.18: FOUNDATION-CALCULATED FUNDING v. REPORTED SPENDING ON TEACHING, FY00



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Two areas in which reported expenditures are far less than the foundation-calculated funding amounts are extraordinary maintenance and expanded programs for low-income students. Because local school committees have the flexibility to allocate funds as they deem necessary, it is difficult to make judgments about how the dollars are being used. However, extraordinary maintenance may be an area that is being under-funded due to perceived critical needs in other areas.

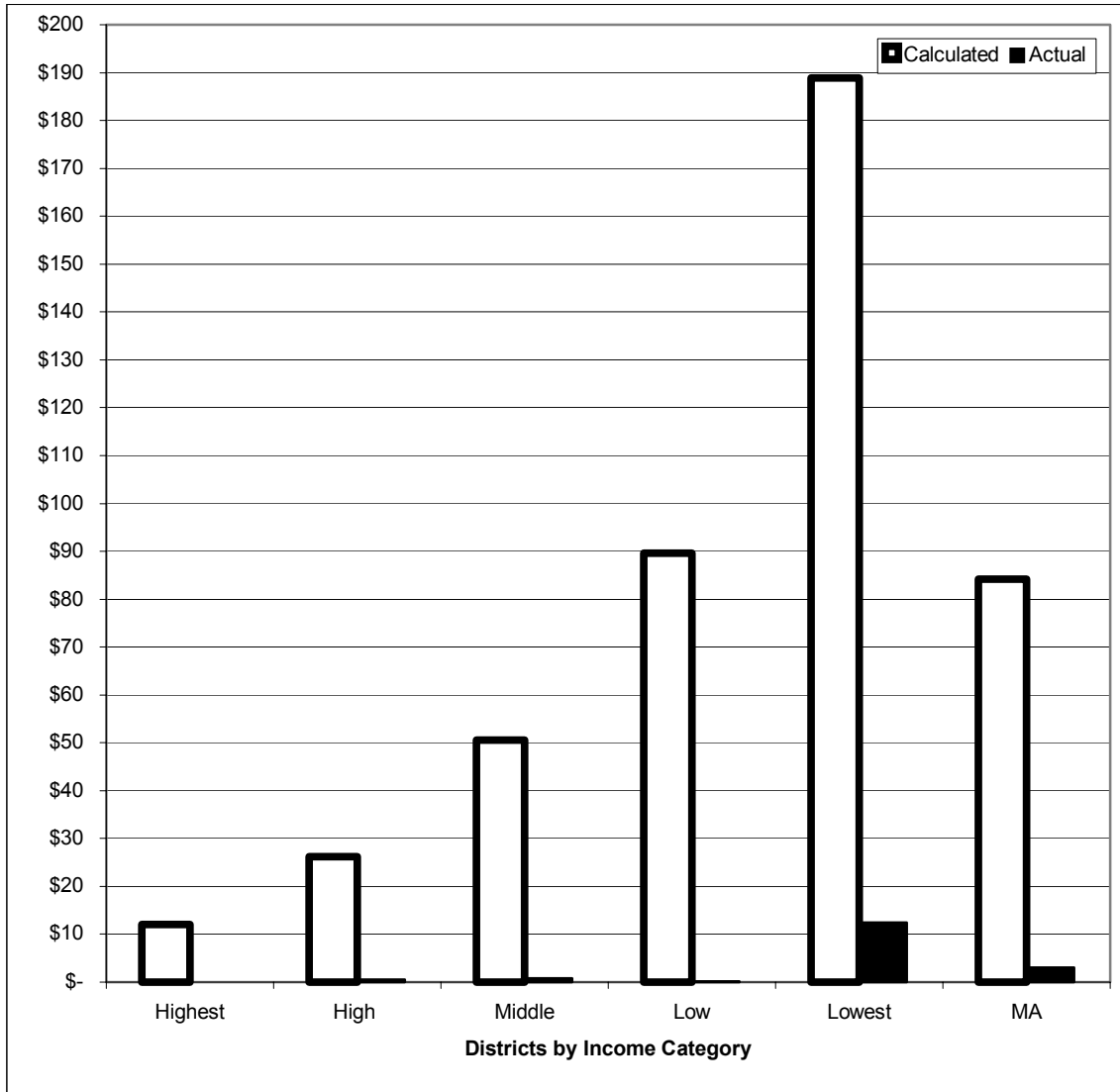
FIGURE 2.19: FOUNDATION-CALCULATED FUNDING v. REPORTED SPENDING ON EXTRAORDINARY MAINTENANCE, FY00



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“Expanded programs” are defined in Chapter 70 as programs to “provide expanded services for low-income students” to support them in meeting the increased demands of MERA. Because our district categories are defined by income, it is not surprising to see the highest calculated and spending amounts in the lowest-income districts. It is surprising to see the gap between the foundation-calculated funding amounts and actual spending in this category. This may be largely an artifact of how expenditures for low-income students are reported, with expenditures being credited to other funding sources for low-income students.

FIGURE 2.20: FOUNDATION-CALCULATED FUNDING v. REPORTED SPENDING ON EXPANDED PROGRAMS, FY00



Academic Support Services

In addition to increased state funding through Chapter 70, the legislature has also provided additional revenues targeted specifically at lower-performing students. These Academic Support Services funds are made available through a competitive grant process to enable schools to provide additional support to students struggling to pass the MCAS. Funds may be used for academic and other related extra-curricular activities and are “intended to supplement currently funded local, state, and federal programs.”²⁹

The state began funding Academic Support Services in 1998, after the first administration of the MCAS. The funds may be used for students scoring “needs improvement” or lower on any of the MCAS tests. In FY01, nearly 86% of the school districts in the commonwealth were receiving these funds.

TABLE 2.5: STATE-ALLOCATED ACADEMIC SUPPORT SERVICES FUNDING, FY99 – FY01

Fiscal Year	Total Allotted By State (line item 7061-9404)	# of Districts Funded	% of Total Operating Districts (n=373)
FY99	\$20,000,000	196 ³⁰	53%
FY00	\$20,000,000	175	47%
FY01	\$40,000,000	322	86%

²⁹ Massachusetts Department of Education (Dec 1998) Document received from Kimberly Beck regarding the Academic Support Program.

³⁰ This figure is derived from the accumulation of funding cycles 1, 2, and 3 in December 1998 through March 1999 as detailed in the “Summary of Academic Support Services Proposals Submitted” document from the Massachusetts Department of Education (no date).