



# School District Revenues for Elementary and Secondary Education: 1997-98



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# School District Revenues for Elementary and Secondary Education: 1997-98

## Statistical Analysis Report

June 2003

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# Executive Summary

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## Introduction

The “School District Finance Survey” (Form F-33) is an annual collection of school district financial data that is part of the Common Core of Data (CCD). The F-33 collects data on revenues and expenditures for pre-kindergarten through grade 12 in public schools in approximately 15,500 local education agencies (LEAs) in the 50 states and the District of Columbia.

This report presents analyses of school district revenues for the 1997–98 school year. The F-33 data form the core of these analyses, but information is supplemented by data on selected school district demographic and fiscal characteristics from the 1990 *School District Data Book*, prepared by the U.S. Census Bureau. The demographic and fiscal data are used to examine the relationship between selected district characteristics and revenues from different sources.<sup>1</sup>

This report is designed to address a number of questions about the financing of public elementary and secondary education at the state and district levels:

- How much money per pupil is raised for elementary and secondary education from federal, state, and local sources?
- What is the level of variation in revenues per pupil across school districts nationally and in each state?
- How do district demographic and economic characteristics relate to revenues per pupil nationally and in each state? How strong are these relationships?
- What proportion of funds for elementary and secondary education comes from federal, state, and local sources nationally and in each state? How do districts with different demographic and economic characteristics differ in their proportion of funds for education from different sources?

Analyses of school district revenues are presented for the nation and the states. The national analyses focus on school revenues in districts in different geographical regions, school districts of different size, school districts with different fiscal capacity to support education (measured as median household income and median value of owner-occupied housing), and school districts with different proportions of minority and school-age children in poverty. The state analyses focus on interdistrict variation in revenues per pupil and the relationship between revenues per pupil and the school district fiscal and demographic characteristics cited in the national analyses.

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<sup>1</sup>While more current census data on district characteristics are now available, the 1990 census data were used in these analyses because they were the most current data available at the time the report was planned and written. The national analyses include districts in all states, even when the percentage of districts with demographic and fiscal data was less than 50 percent of the total districts in the state. The state analyses, however, only included the 40 states in which at least 50 percent of the districts had demographic and fiscal data.

The analyses of revenues presented in this report are based on both actual dollars and cost-adjusted dollars. Cost adjustments are designed to take into account differences in the cost of education across school districts in a state. The cost adjustment used in these analyses is the Geographic Cost of Education Index (GCEI) (Fowler and Monk 2001; Chambers 1998). The GCEI uses data from three separate categories of school inputs: certified school personnel, noncertified school personnel, and nonpersonnel school items. The index reflects how much more or less it costs in different geographic locations to recruit and employ comparable school personnel, as well as the varying cost of nonpersonnel items such as purchased services, supplies and materials, furnishings and equipment, travel, utilities, and facilities.

In the remainder of this summary, the major findings of the report are presented using cost-adjusted revenues. Findings based on actual revenues are included in the body of the report, with both actual dollars and cost-adjusted dollars reported in the text.

## National Findings

The national findings focus on three areas: geographic differences in revenues, revenues in school districts of different size, and the relationship between revenues and selected school district fiscal and demographic characteristics.

### Revenues in Different Geographic Regions

Cost-adjusted school district revenues for elementary and secondary education totaled \$319.7 billion in 1997–98, or about \$7,028 per pupil. State governments provided nearly half the total (49 percent)—about \$155 billion, or about \$3,413 per pupil. Local governments provided the second-largest share (45 percent)—about \$144 billion, or \$3,167 per pupil. The federal government provided the remaining 6 percent of revenues—more than \$20 billion, or \$447 per pupil.

School districts in the Northeast started out with the highest cost-adjusted local revenues per pupil—\$4,699 per pupil in 1997–98. Even though state revenues per pupil were lowest in the Northeast—\$3,201 per pupil, state and local revenues per pupil of \$7,899 were still higher than in all other regions. Federal revenues per pupil of \$380 were also lowest in the Northeast. However, even with lower federal revenues, the Northeast still had the highest total revenues per pupil. Put differently, school districts in the Northeast had an advantage in local revenues per pupil that was not offset when other regions obtained greater revenues from state and federal sources.

At the other end of the spectrum, school districts in the West had the lowest local revenues per pupil—\$2,114 per pupil in 1997–98. After the addition of state revenues of \$3,515 per pupil, school districts in the West still had the lowest state and local revenues per pupil—\$5,629. Federal revenues were an additional \$436 per pupil in the West. However, even with the addition of state and federal revenues, total revenues of \$6,066 per pupil in school districts in the West were still lower than in all other regions of the country.

### Revenues in School Districts of Different Size

Small school districts (those with fewer than 1,000 students) consistently had the highest revenues per pupil for education in cost-adjusted dollars. These school districts had local revenues of \$3,819 per

pupil, which was \$652 per pupil above the national average. With state revenues of \$4,087 per pupil, state and local revenues per pupil were more than \$1,300 higher than the national average—\$7,906 in the smallest school districts compared to the national average of \$6,580. Federal revenues per pupil, which averaged \$499 in the smallest districts, were also about \$52 above the national average of \$447. As a result, total revenues per pupil in these districts were nearly \$1,400 above the national average—\$8,405, compared to \$7,028. In other words, the revenue advantage that the smallest school districts had from local revenues more than doubled with the addition of state and federal revenues.

In contrast, the largest school districts (those with 10,000 or more students) consistently had the lowest revenues per pupil. These school districts had the lowest local revenues per pupil (\$2,896) and the second-lowest state revenues per pupil (\$3,328), compared with districts with fewer students.<sup>2</sup> State and local revenues per pupil of \$6,224 were therefore lower in the largest districts than in smaller districts. Although federal revenues of \$478 per pupil were only slightly lower than in the smallest districts, the largest school districts still had the lowest total revenues per pupil (\$6,702 in 1997–98) of all size categories.

### Relationship Between Revenues and School Districts' Fiscal Capacity

For the nation as a whole, school districts with higher median household income tended to raise more cost-adjusted revenues per pupil from local sources than lower income districts. School districts with median household income less than \$20,000 had local revenues per pupil (\$1,975) that were less than half of these revenues in districts with household income of \$35,000 or more (\$4,113). However, revenues per pupil from state sources were negatively related to household income and tended to partially offset the revenue advantage of high-income districts. As a result, while combined state and local revenues per pupil were positively related to household income, the relationship was much weaker than the relationship between household income and local revenues per pupil. Federal revenues per pupil had an even stronger negative relationship with district income (\$881 in the lowest income districts and \$210 in the highest income districts). Consequently, there was a small negative relationship between household income and total revenues per pupil. Put differently, higher state and federal revenues per pupil in school districts with lower household income tended to offset the local revenue advantage of high-income school districts.

Similar results were found when the median value of a school district's owner-occupied housing was used as the measure of fiscal capacity. A positive relationship between median value of owner-occupied housing and local revenues per pupil was counterbalanced by a stronger negative relationship between housing value and state revenues per pupil. As a result, there was only a small positive relationship between median value of owner-occupied housing and state and local revenues per pupil. A negative relationship between housing values and federal revenues per pupil changed the relationship between housing value and total revenues per pupil from slightly positive to slightly negative. Again, higher state and federal revenues per pupil in school districts with lower median housing values offset the local revenue advantage of school districts with higher housing values.

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<sup>2</sup>Four district size categories were examined: fewer than 1,000 students, 1,000 to 4,999 students, 5,000 to 9,999 students, and 10,000 or more students.

## Relationship Between Revenues and Minority and Poor Children

School districts with higher concentrations of minority and poor children tended to raise less money from local revenues than districts with lower concentrations of poor and minority children. However, higher state revenues per pupil in these districts partially offset the local revenue advantage in districts with smaller proportions of poor and minority children. With federal revenues per pupil having a strong positive correlation with a district's proportion of poor and minority children, total revenues per pupil had only a small negative relationship with percent minority enrollment and no significant relationship with proportion of children in poverty. In short, the local revenue disadvantage of districts with high proportions of poor and minority children was offset by higher revenues per pupil from state and federal sources.

### State Findings

The state findings focus on two areas. The first is interdistrict variation in revenues per pupil. This area was selected because the amount of interdistrict variation in revenues per pupil is often used as a measure of the equity of state school finance systems. States with little variation in revenue per pupil are generally considered to have more equitable systems than those with large interdistrict variation (Berne and Stiefel 1984).

The second area is the relationship between revenues per pupil and selected school district fiscal and demographic characteristics. Fiscal characteristics such as median household income and median housing values were selected because school district wealth, as measured by these variables, has been found in many states to be associated with differences in funding for education (Parrish, Hikido, and Fowler 1998). States in which finance arrangements produce either no relationship or only a weak positive relationship between district wealth and school funds are generally considered to be more equitable than those that have a strong positive relationship between district wealth and revenues (Berne and Stiefel 1984). Demographic characteristics such as proportion of children in poverty and proportion of minority enrollment were also selected because of equity considerations. States in which revenues are positively associated with students' special educational needs, (e.g., needs based on poverty) are generally regarded as more equitable than those that do not provide additional funding to address the educational needs of poor students (Goertz and Odden 1999).

### Interdistrict Variation in Revenues Per Pupil

This study created a synthesized measure of variation that combined state rankings on three standardized variation measures to assess the amount of interdistrict variation in revenues per pupil across school districts.<sup>3</sup> Based on their rankings on this synthesized measure, states were then organized into 4 groups with approximately 12 states in each group. States with the lowest rankings had the smallest overall variation in revenues per pupil; states with the highest rankings had the largest variation. This analysis includes 49 states; the District of Columbia and Hawaii are not included because each has only one school district.

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<sup>3</sup>The three measures used to create the synthesized measure were the restricted range ratio, the coefficient of variation, and the Gini coefficient. The method used to create the synthesized measure is explained more fully in the introduction to the report.

The 12 states with the largest variation in unadjusted local revenues per pupil were Alaska, Arizona, California, Connecticut, Idaho, Illinois, Kansas, Massachusetts, Michigan, New Jersey, Texas, and Wyoming. Five of the 12 states (Alaska, Arizona, California, Idaho, and Wyoming) were in the West, 3 (Connecticut, Massachusetts, and New Jersey) were in the Northeast, and 3 (Illinois, Kansas, and Michigan) were in the Midwest. There was only one state in this group from the South (Texas).

When state revenues were added to local revenues, only 4 of the original 12 states (Alaska, Illinois, Kansas, and Wyoming) were in the group with the largest overall variation in state and local revenues per pupil. The addition of state revenues tempered the variation in local revenues per pupil. The states with the largest variation in state and local revenues per pupil were now distributed nearly evenly across three regions—Alaska, Montana, New Mexico, and Wyoming in the West; Illinois, Kansas, and North Dakota in the Midwest; and New Hampshire, New York, and Vermont in the Northeast.

With the addition of federal revenues, 5 of the 12 states with the largest variation in local revenues per pupil (Alaska, Arizona, Illinois, Kansas, and Texas) continued to show the largest variation in total revenues per pupil. The largest concentration of states was in the Midwest (Illinois, Kansas, Missouri, Nebraska, and North Dakota) and the West (Alaska, Arizona, Montana, and Wyoming), with only one state from the South (Texas) in this group.

Looking at cost-adjusted revenues per pupil, 6 of the 13 states with the smallest variation in cost-adjusted local revenues per pupil were in the South (Delaware, Florida, North Carolina, South Carolina, Tennessee, and West Virginia), 5 were in the Midwest (Indiana, Iowa, Missouri, North Dakota, and South Dakota), 1 was in the Northeast (New Hampshire), and one was in the West (Nevada).

When state revenues were added to local revenues, the balance shifted more heavily to the South. Eight of the 12 states with the smallest overall variation in state and local revenues per pupil were in this region (Arkansas, Delaware, Florida, Kentucky, North Carolina, South Carolina, Tennessee, and West Virginia); only 4 states were outside the South—3 of them in the Midwest (Indiana, Iowa, and Wisconsin).

With the addition of federal revenues, 9 of the 12 states with the smallest overall variation in cost-adjusted total revenues per pupil were in the South. Alabama and Louisiana were added to the group, and South Carolina was eliminated. Put differently, disparities in local revenues per pupil, which were less pronounced in the South, were lessened even further with the addition of state and federal revenues.

## Relationship Between Revenues and School Districts' Fiscal Capacity

Analyses of the relationship between school districts' fiscal capacity and revenues per pupil were conducted in the 40 states in which at least 50 percent of the school districts had demographic and fiscal data. In 34 of these 40 states, there was a positive relationship between median household income and cost-adjusted local revenues per pupil. There was, however, a negative relationship between district median household income and state revenues per pupil in 39 states. As a result, there was a positive relationship between median household income and state and local revenues per pupil in just 10 states. Higher state revenues per pupil overcame the local revenue advantage of high-income districts. Federal revenues reinforced this trend. After the addition of federal revenues per pupil, which had a negative relationship to district income in 39 states, only 7 states still showed a positive relationship between

household income and total revenues per pupil. In 21 states, lower income districts actually tended to have higher total revenues per pupil.

District fiscal capacity, measured as median value of owner-occupied housing, showed similar relationships to district revenues. Median value of owner-occupied housing was positively related to local revenues per pupil in 35 of the 40 states with available data, and negatively related to state and federal revenues per pupil in 40 and 34 states, respectively. When state and federal revenues were added to local revenues, the local revenue advantage of districts with higher median housing values was overcome by larger amounts of state aid in most states. Only 10 states continued to show a positive relationship between median housing value and cost-adjusted state and local revenues per pupil, and only 7 states showed a positive relationship between median housing and total revenues per pupil.

### **Relationship Between Revenues and District Poverty and Proportion of Minority Enrollment**

School district poverty was negatively related to cost-adjusted local revenues per pupil in 33 of the 40 states with available data. State and federal revenues per pupil were positively related to school district poverty in 36 and 38 states, respectively. With the addition of state revenues to local revenues, there was still a negative relationship between district poverty and state and local revenues per pupil in nine states. With the addition of state and federal funds, there was a negative relationship between district poverty and revenues per pupil in only three states. Higher state and federal revenues in high-poverty districts offset their local revenue disadvantage in a substantial number of states.

Similar results were found for minority enrollment. In 17 of the 40 states with available data, there was a negative relationship between proportion of minority enrollment and cost-adjusted local revenues per pupil. However, state revenues per pupil were positively related to minority enrollment in 19 states. With the addition of state revenues, the proportion of minority enrollment was negatively related to state and local revenues per pupil in only 12 states. Federal revenues per pupil were also positively related to the proportion of minority enrollment in 36 states. As a result, with the addition of federal revenues, there was a negative relationship between proportion of minority enrollment and total revenues per pupil in only 6 states, and a positive relationship in 18 states. Higher state and federal revenues in school districts with large minority enrollments worked to overcome the local revenue advantage of school districts with relatively small minority populations.

### **Organization of the Report**

In addition to the introduction (chapter 1), the report has six chapters. Chapter 2 presents an analysis of local revenues, including property taxes and student fees. Chapter 3 examines state revenues, including general formula assistance and instructional program revenues. Chapter 4 examines state and local revenues combined. Chapter 5 examines Title I and other federal revenues. Chapter 6 presents an analysis of total district revenues, including local, state, and federal funds. Chapter 7 presents a synthesis and summary of the report's major findings. Appendices to the report contain technical notes and detailed correlation tables on district revenues.

# Contents

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Acknowledgments .....	iii
Executive Summary .....	v
Introduction .....	v
National Findings .....	vi
Revenues in Different Geographic Regions .....	vi
Revenues in School Districts of Different Size .....	vi
Relationship Between Revenues and School Districts' Fiscal Capacity .....	vii
Relationship Between Revenues and Minority and Poor Children .....	viii
State Findings .....	viii
Interdistrict Variation in Revenues Per Pupil .....	viii
Relationship Between Revenues and School Districts' Fiscal Capacity .....	ix
Relationship Between Revenues and District Poverty and Proportion of Minority Enrollment .....	x
Organization of the Report .....	x
List of Tables .....	xv
List of Figures .....	xix
Chapter 1: Introduction .....	1
Background and Introduction .....	1
Data Sources .....	1
Methods of Analysis .....	2
National Analyses .....	2
State Analyses .....	4
Interdistrict Variation in Revenues Per Pupil .....	7
Relationship between Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics .....	8
Definitions .....	12
Organization of the Report .....	13
Chapter 2: Local Revenues .....	15
Local Revenues .....	15
Local Revenues Per Pupil .....	15
Variations in Local Revenues Per Pupil .....	17
Restricted Range Ratio .....	17
Coefficient of Variation .....	17
Gini Coefficient .....	20
Overall Variation .....	20
Relationship between Local Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics .....	20
Local Property Tax Revenues .....	26
Local Property Tax Revenues Per Pupil .....	26
Student Fees Revenues .....	27
Student Fees Per Pupil .....	27
Variations in Student Fees Per Pupil .....	29
Relationship between Student Fees Per Pupil and Selected District Fiscal and Demographic Characteristics .....	33
Local Revenues as a Percent of Total Revenues .....	35
Variations in Local Revenues as a Percent of Total Revenues .....	35
Relationship between Percent Local Revenues and Selected District Fiscal and Demographic Characteristics .....	35
Chapter 3: State Revenues .....	39
State Revenues .....	39

State Revenues Per Pupil .....	39
Variations in State Revenues Per Pupil .....	41
Restricted Range Ratio .....	41
Coefficient of Variation .....	41
Gini Coefficient .....	41
Overall Variation .....	44
Relationship between State Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics ..	45
General Formula Assistance and General Assistance Revenues .....	49
General Assistance Revenues Per Pupil .....	49
Variations in General Assistance Revenues Per Pupil .....	51
Relationship between General Assistance Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics .....	55
State Instructional Program Revenues .....	55
State Instructional Program Revenues Per Pupil .....	57
State Revenues as a Percent of Total Revenues .....	59
Variations in State Revenues as a Percent of Total Revenues .....	59
Relationship between Percent State Revenues and Selected District Fiscal and Demographic Characteristics ...	59
<b>Chapter 4: State and Local Revenues .....</b>	<b>63</b>
State and Local Revenues .....	63
State and Local Revenues Per Pupil .....	63
Variations in State and Local Revenues Per Pupil .....	65
Restricted Range Ratio .....	65
Coefficient of Variation .....	65
Gini Coefficient .....	65
Overall Variation .....	68
Relationship between State and Local Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics .....	69
<b>Chapter 5: Federal Revenues .....</b>	<b>75</b>
Federal Revenues .....	75
Federal Revenues Per Pupil .....	75
Variations in Federal Revenues Per Pupil .....	77
Restricted Range Ratio .....	77
Coefficient of Variation .....	77
Gini Coefficient .....	77
Overall Variation .....	80
Relationship between Federal Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics .....	81
Title I Revenues .....	85
Title I Revenues Per Pupil .....	85
Variations in Title I Revenues Per Pupil .....	87
Relationship between Title I Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics ..	90
Federal Revenues as a Percentage of Total Revenues .....	93
Variations in Federal Revenues as a Percentage of Total Revenues .....	93
Relationship between Percent Federal Revenues and Selected District Fiscal and Demographic Characteristics .....	95
<b>Chapter 6: Total Revenues .....</b>	<b>99</b>
Total Revenues .....	99
Total Revenues Per Pupil .....	99
Restricted Range Ratio .....	102
Coefficient of Variation .....	102
Gini Coefficient .....	102
Overall Variation .....	105
Relationship between Total Revenue Per Pupil and Selected District Fiscal and Demographic Characteristics ..	106
<b>Chapter 7: Summary of Findings .....</b>	<b>111</b>
National Findings about Education Revenues .....	111

---

Regional Differences in School District Revenues Per Pupil .....	111
Differences in Revenues Per Pupil in Districts of Different Size .....	112
Variation in Revenues Per Pupil Across School Districts .....	112
Relationship between School District Fiscal and Demographic Characteristics and Revenues Per Pupil .....	113
School District Wealth .....	113
School District Poverty and Minority Enrollments .....	114
State Findings about Education Revenues .....	114
Interdistrict Variation in Revenues Per Pupil within the States .....	115
Relationship between Selected District Fiscal and Demographic Characteristics and Revenues Per Pupil .....	116
District Wealth .....	116
Minority Enrollment and Children in Poverty .....	118
References .....	121
Appendix A: Supplementary Tables .....	123
Appendix B: Technical Notes .....	151
Data Sources .....	153
Survey of Local Government Finances (F-33) .....	153
Census School District Special Tabulation (Census Mapping) .....	154
Cost of Education Indices .....	154
Construction of Key Revenue Categories .....	154
Total Revenue .....	154
Local Revenues .....	154
State Revenues .....	155
Federal Revenues .....	155
Selection of Observations .....	155
Primary Analysis Dataset .....	155
Data Modifications and Imputation Procedures .....	156
Glossary .....	157



## List of Tables

---

Table 1-1.	Total number of school districts, students, and revenues, by state: 1997–98 .....	3
Table 1-2.	Total number of school districts and students for regular school districts and percentages based on all school districts, by state: 1997–98 .....	5
Table 1-3.	Total number of school districts and students for regular school districts with Geographic Cost of Education Index (GCEI) and percentages based on all school districts, by state: 1997–98 .....	6
Table 1-4.	Total number of school districts and students for regular school districts with Census Mapping Data and percentages based on all school districts, by state: 1997–98 .....	10
Table 1-5.	Total number of school districts and students for regular school districts with Geographic Cost of Education Index (GCEI) and Census Mapping Data and percentages based on all school districts, by state: 1997–98 .....	11
Table 2-1.	Local revenues, cost-adjusted local revenues, local revenues per pupil, and cost-adjusted local revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median income, and median value owner-occupied housing: 1997–98 .....	16
Table 2-2.	Variation in local revenues per pupil (unadjusted dollars), by state: 1997–98 .....	18
Table 2-3.	Variation in local revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	19
Table 2-4.	Variation in local revenues per pupil, by region: 1997–98 .....	21
Table 2-5.	Correlations between local revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98 .....	22
Table 2-6.	Local property tax revenues, cost-adjusted local property tax revenues, property tax revenues per pupil, and cost-adjusted property tax revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	26
Table 2-7.	Student fees, cost-adjusted student fees, student fees per pupil, and cost-adjusted student fees per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	28
Table 2-8.	Variation in student fees per pupil (unadjusted dollars), by state: 1997–98 .....	30
Table 2-9.	Variation in student fees per pupil (cost-adjusted dollars), by state: 1997–98 .....	31
Table 2-10.	Variation in student fees per pupil, by region: 1997–98 .....	33
Table 2-11.	Correlations between student fees per pupil and selected fiscal and demographic characteristics, by state: 1997–98 .....	34
Table 2-12.	Variation in percent local revenues, by state: 1997–98 .....	36
Table 2-13.	Correlations between percent local revenues and selected fiscal and demographic characteristics, by state: 1997–98 .....	37
Table 3-1.	State revenues, cost-adjusted state revenues, state revenues per pupil, and cost-adjusted state revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	40
Table 3-2.	Variation in state revenues per pupil (unadjusted dollars), by state: 1997–98 .....	42
Table 3-3.	Variation in state revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	43
Table 3-4.	Variation in state revenues per pupil, by region: 1997–98 .....	44
Table 3-5.	Correlations between state revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98 .....	46
Table 3-6.	State general formula assistance revenues, cost-adjusted general formula assistance revenues, general formula assistance revenues per pupil, and cost-adjusted general formula assistance revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	50
Table 3-7.	Variation in general formula assistance revenues per pupil (unadjusted dollars), by state: 1997–98 .....	52

Table 3-8.	Variation in general formula assistance revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	53
Table 3-9.	Variation in general formula assistance revenues per pupil, by region: 1997–98 .....	54
Table 3-10.	Correlations between general formula assistance revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98 .....	56
Table 3-11.	State instructional program revenues, cost-adjusted instructional program revenues, instructional program revenues per pupil, and cost-adjusted instructional program revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	58
Table 3-12.	Variation in percent state revenues, by state: 1997–98 .....	60
Table 3-13.	Variation in percent state revenues, by region: 1997–98 .....	61
Table 3-14.	Correlations between percent state revenues and selected fiscal and demographic characteristics, by state: 1997–98 .....	62
Table 4-1.	State and local revenues, cost-adjusted state and local revenues, state and local revenues per pupil, and cost-adjusted state and local revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	64
Table 4-2.	Variation in state and local revenues per pupil (unadjusted dollars), by state: 1997–98 .....	66
Table 4-3.	Variation in state and local revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	67
Table 4-4.	Variation in state and local revenues per pupil, by region: 1997–98 .....	68
Table 4-5.	Correlations between state and local revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98 .....	70
Table 5-1.	Federal revenues, cost-adjusted federal revenues, federal revenues per pupil, and cost-adjusted federal revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	76
Table 5-2.	Variation in federal revenues per pupil (unadjusted dollars), by state: 1997–98 .....	78
Table 5-3.	Variation in federal revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	79
Table 5-4.	Variation in federal revenues per pupil, by region: 1997–98 .....	81
Table 5-5.	Correlations between federal revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98 .....	82
Table 5-6.	Federal Title I revenues, cost-adjusted Title I revenues, Title I revenues per pupil, and cost-adjusted Title I revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	86
Table 5-7.	Variation in Title I revenues per pupil (unadjusted dollars), by state: 1997–98 .....	88
Table 5-8.	Variation in Title I revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	89
Table 5-9.	Variation in Title I revenues per pupil, by region: 1997–98 .....	91
Table 5-10.	Correlations between Title I revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98 .....	92
Table 5-11.	Variation in percent federal revenues, by state: 1997–98 .....	94
Table 5-12.	Variation in percent federal revenues, by region: 1997–98 .....	95
Table 5-13.	Correlations between percent federal revenues and selected fiscal and demographic characteristics, by state: 1997–98 .....	96
Table 6-1.	Total revenues, cost-adjusted total revenues, total revenues per pupil, and cost-adjusted total revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98 .....	100
Table 6-2.	Percent of total revenues (in unadjusted dollars) across sources, by state: 1997–98 .....	101
Table 6-3.	Variation in total revenues per pupil (unadjusted dollars), by state: 1997–98 .....	103
Table 6-4.	Variation in total revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	104
Table 6-5.	Variation in total revenues per pupil, by region: 1997–98 .....	105
Table 6-6.	Correlations between total revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98 .....	107
Table 7-1.	Regional differences in school district revenues per pupil: 1997–98 .....	111
Table 7-2.	School district revenues per pupil, by district size: 1997–98 .....	112
Table 7-3.	Variation in school district revenues per pupil: 1997–98 .....	112
Table 7-4.	Correlation between school district revenues per pupil and selected district fiscal and demographic characteristics: 1997–98 .....	114
Table 7-5.	States with the largest overall variation in revenues per pupil: 1997–98 .....	115
Table 7-6.	States with the smallest overall variation in revenues per pupil: 1997–98 .....	116

Table 7-7. Number of states by the strength of the correlation between median household income and various per pupil revenue measures: 1997–98 .....	117
Table 7-8. Number of states by the strength of the correlation between median value owner-occupied housing and various per pupil revenue measures: 1997–98 .....	118
Table 7-9. Number of states by the strength of the correlation between percent minority enrollment and various per pupil revenue measures: 1997–98 .....	119
Table 7-10. Number of states by the strength of the correlation between percent poverty children and various per pupil revenue measures: 1997–98 .....	120
Table A-1. Correlations between district enrollment and revenues per pupil (unadjusted dollars), by state: 1997–98 .....	125
Table A-2. Correlations between district enrollment and revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	126
Table A-3. Correlation between local revenues per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	127
Table A-4. Correlation between local revenues per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	128
Table A-5. Correlation between property tax revenues per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	129
Table A-6. Correlation between local property tax revenues per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	130
Table A-7. Correlation between student fees per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	131
Table A-8. Correlation between student fees per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	132
Table A-9. Correlation between percent local revenues and selected school district fiscal and demographic characteristics, by state: 1997–98 .....	133
Table A-10. Correlation between state revenues per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	134
Table A-11. Correlation between state revenues per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	135
Table A-12. Correlation between General Formula Assistance revenues per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	136
Table A-13. Correlation between General Formula Assistance revenues per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	137
Table A-14. Correlation between state instructional program revenues per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	138
Table A-15. Correlation between state instructional program revenues per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	139
Table A-16. Correlation between percent state revenues and selected school district fiscal and demographic characteristics, by state: 1997–98 .....	140
Table A-17. Correlation between state and local revenues combined per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	141
Table A-18. Correlation between state and local revenues combined per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	142
Table A-19. Correlation between federal revenues per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	143
Table A-20. Correlation between federal revenues per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	144
Table A-21. Correlation between Title I revenues per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	145
Table A-22. Correlation between Title I revenues per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	146
Table A-23. Correlation between percent federal revenues and selected school district fiscal and demographic characteristics, by state: 1997–98 .....	147
Table A-24. Correlation between total revenues per pupil and selected school district fiscal and demographic characteristics (unadjusted dollars), by state: 1997–98 .....	148
Table A-25. Correlation between total revenues per pupil and selected school district fiscal and demographic characteristics (cost-adjusted dollars), by state: 1997–98 .....	149



# List of Figures

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Figure 2-1. Synthesis of variation measures of local revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	21
Figure 2-2. Correlations between local revenues per pupil and median value owner-occupied housing (cost-adjusted dollars), by state: 1997–98 .....	23
Figure 2-3. Correlations between local revenues per pupil and median household income (cost-adjusted dollars), by state: 1997–98 .....	24
Figure 2-4. Correlations between local revenues per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98 .....	25
Figure 2-5. Correlations between local revenues per pupil and percent school-age children in poverty (cost-adjusted dollars), by state: 1997–98 .....	25
Figure 2-6. Synthesis of variation measures of student fees per pupil (cost-adjusted dollars), by state: 1997–98 .....	32
Figure 3-1. Synthesis of variation measures of state revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	44
Figure 3-2. Correlations between state revenues per pupil and median value owner-occupied housing (cost-adjusted dollars), by state: 1997–98 .....	47
Figure 3-3. Correlations between state revenues per pupil and median household income (cost-adjusted dollars), by state: 1997–98 .....	48
Figure 3-4. Correlations between state revenues per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98 .....	48
Figure 3-5. Correlations between state revenues per pupil and percent school-age children in poverty (cost-adjusted dollars), by state: 1997–98 .....	49
Figure 3-6. Synthesis of variation measures of general formula assistance revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	54
Figure 3-7. Synthesis of variation measures of percent state revenues, by state: 1997–98 .....	61
Figure 4-1. Synthesis of variation measures of state and local revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	68
Figure 4-2. Correlations between state and local revenues per pupil and median value owner-occupied housing (cost-adjusted dollars), by state: 1997–98 .....	71
Figure 4-3. Correlations between state and local revenues per pupil and median household income (cost-adjusted dollars), by state: 1997–98 .....	72
Figure 4-4. Correlations between state and local revenues per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98 .....	72
Figure 4-5. Correlations between state and local revenues per pupil and percent school-age children in poverty (cost-adjusted dollars), by state: 1997–98 .....	73
Figure 5-1. Synthesis of variation measures of federal revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	80
Figure 5-2. Correlations between federal revenues per pupil and median value owner-occupied housing (cost-adjusted dollars), by state: 1997–98 .....	83
Figure 5-3. Correlations between federal revenues per pupil and median household income (cost-adjusted dollars), by state: 1997–98 .....	84
Figure 5-4. Correlations between federal revenues per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98 .....	84
Figure 5-5. Correlations between federal revenues per pupil and percent school-age children in poverty (cost-adjusted dollars), by state: 1997–98 .....	85
Figure 5-6. Synthesis of variation measures of Title I revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	90
Figure 5-7. Synthesis of variation measures of percent federal revenues, by state: 1997–98 .....	95
Figure 6-1. Synthesis of variation measures of total revenues per pupil (cost-adjusted dollars), by state: 1997–98 .....	105
Figure 6-2. Correlations between total revenues per pupil and median value owner-occupied housing (cost-adjusted dollars), by state: 1997–98 .....	108

Figure 6-3. Correlations between total revenues per pupil and median household income (cost-adjusted dollars), by state: 1997–98 .....	109
Figure 6-4. Correlations between total revenues per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98 .....	110
Figure 6-5. Correlations between total revenues per pupil and percent school-age children in poverty (cost-adjusted dollars), by state: 1997–98 .....	110

# Chapter 1: Introduction

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## Background and Introduction

The financing of elementary and secondary education is always an important issue for policymakers at the national, state, and local levels. Even during times of economic growth, education must compete with other public functions for the taxpayer’s dollar; during periods of economic slowdown, that competition is even more intense. In addition, issues of equity and productivity invariably enter into the public debate, as policymakers seek to ensure equitable access to education for all children and the most effective use of public funds.

Looking at education funding nationally is necessary to understand the overall investment of the United States in education and how much funding comes from national, state, and local governments. However, a complete picture of education funding can only be developed by looking at funding at the state and local levels, since state and local governments provide well over 90 percent of the funds for elementary and secondary education. Since funding within states is generally not uniform across school districts, it is important not only to look at average funding levels in the states, but to also examine variation in funding across school districts and district characteristics that may be associated with differences in funding levels.

This report is designed to address a number of questions about the financing of public elementary and secondary education at the state and district levels. These questions are:

- How much money per pupil is raised for elementary and secondary education from federal, state, and local sources?
- What is the level of variation in revenues per pupil across school districts nationally and in each state?
- How do district demographic and economic characteristics relate to revenues per pupil nationally and in each state? How strong are these relationships?
- What proportion of funds for elementary and secondary education comes from federal, state, and local sources nationally and in each state? How do districts with different demographic and economic characteristics differ in their proportion of funds for education from different sources?

## Data Sources

The primary source of data for this report on school district financing of elementary and secondary education was the 1997–98 “School District Financial Survey (Form F-33).” The F-33 is an annual district-level collection of revenue and expenditure data in grades pre-kindergarten through 12. It is part of the Common Core of Data (CCD) collection of surveys and administrative-records data relating

to public elementary and secondary education. In 1997–98, the F-33 data file contained 15,512 districts across the United States enrolling 45,772,962 students (table 1-1). Data on revenues and expenditures collected through the F-33 were supplemented with data from the U.S. Census Bureau, 1990 Decennial Census School District Special Tabulation, which contain 1990 school district demographic and fiscal characteristics. These data are also called the Census Mapping data. Percentage of minority enrollment, percentage of school-age children in poverty, median household income, and median value of owner-occupied housing data were used from the Census Mapping data.

While more current Census data on district characteristics are now available, the 1990 Census data were used in these analyses because they were the most current data available at the time the report was planned and written. Although, overall, demographic characteristics may have remained relatively constant over time, readers should be aware that there may be individual districts whose demographic characteristics changed significantly between 1990 and 1997. It is difficult to say what the effect of updated census demographic data would have on the analysis in the report.

## Methods of Analysis

The analysis focuses on revenues from federal, state, and local governments. Each of the analyses presented in the report contains two parts. One is a national analysis of school district revenues. The second is an analysis of school district revenues in the 50 states. Both the national analyses and the state analyses are presented using two types of revenue measures. One is a measure of *actual* education revenues. These figures represent the amount of money school districts actually raise for education and are the figures they report as revenues in their audited financial records and in financial reports to the state. The second component is an analysis of *cost-adjusted revenues* per pupil at the national level. “Cost-adjusted” revenues are designed to take into account differences in the cost of education across school districts. The cost adjustment used in these analyses is the Geographic Cost of Education Index (GCEI) (Fowler and Monk 2001; Chambers 1998). The GCEI uses data from three separate categories of school inputs: certified school personnel, non-certified school personnel, and non-personnel school items. The index reflects how much more or less it costs in different geographic locations to recruit and employ comparable school personnel, as well as the varying costs of non-personnel items such as purchased services, supplies and materials, furnishings and equipment, travel, utilities, and facilities. The index is established by weighting each component of expenditure by its share of current expenditure during the 1993–94 school year.

Although cost-adjusted revenues provide a more rigorous way to compare revenues across school districts and states, the report includes “actual” revenues—in addition to cost-adjusted revenues—for certain reasons. First, “actual” revenues are the figures that appear in both official reports and other communications to policymakers, education administrators and teachers, and the general public. Second, a number of adjustment procedures could have been used to take into account cost-of-education differences across communities (McMahon 1996). While only the GCEI was selected for use in this report, it was important to also present analyses that correspond with data that are recognized as the “real” data, in addition to cost-adjusted revenues.

## National Analyses

The national analyses of school district revenues first present total education revenues per pupil for all school districts in the nation. They then present average revenues per pupil for school districts in differ-

Table 1-1. Total number of school districts, students, and revenues, by state: 1997–98

State	Number of school districts	Number of students	Revenues (in thousands)
United States	15,512	45,772,962	331,730,773
Alabama	127	739,321	4,140,537
Alaska	53	130,633	1,206,195
Arizona	230	794,331	4,675,296
Arkansas	326	456,355	2,567,380
California	1,077	5,727,224	39,183,018
Colorado	195	686,360	4,359,021
Connecticut	174	515,141	5,024,673
Delaware	19	111,428	934,530
District of Columbia	1	77,111	706,938
Florida	67	2,292,161	15,595,671
Georgia	196	1,375,980	9,207,163
Hawaii	1	189,887	1,279,125
Idaho	112	244,403	1,310,960
Illinois	1,046	1,972,406	14,688,777
Indiana	315	985,690	7,656,749
Iowa	392	501,054	3,589,705
Kansas	304	468,980	3,207,670
Kentucky	176	645,232	3,938,009
Louisiana	66	774,561	4,443,468
Maine	292	212,038	1,611,926
Maryland	24	830,744	6,521,269
Massachusetts	392	942,331	7,726,497
Michigan	719	1,680,559	14,712,250
Minnesota	416	841,723	6,672,384
Mississippi	152	504,792	2,400,660
Missouri	525	909,441	5,990,499
Montana	483	162,164	1,035,636
Nebraska	657	291,570	2,062,836
Nevada	17	296,621	1,906,860
New Hampshire	177	196,734	1,420,100
New Jersey	615	1,238,948	13,786,951
New Mexico	89	331,673	1,913,783
New York	690	2,834,992	27,900,803
North Carolina	117	1,230,010	7,516,979
North Dakota	260	116,813	731,384
Ohio	727	1,846,585	13,577,343
Oklahoma	586	623,681	3,559,980
Oregon	220	540,226	3,892,091
Pennsylvania	605	1,791,100	15,671,363
Rhode Island	36	152,356	1,255,280
South Carolina	98	648,084	4,109,130
South Dakota	176	133,698	793,101
Tennessee	138	876,693	4,757,639
Texas	1,063	3,888,061	24,485,263
Utah	40	480,811	2,295,870
Vermont	328	101,413	1,089,658
Virginia	155	1,110,815	7,723,744
Washington	305	991,235	6,928,738
West Virginia	55	300,737	2,178,936
Wisconsin	430	881,552	7,083,655
Wyoming	48	96,504	703,280

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

ent geographic regions, school districts of different size, school districts with different fiscal capacity to support education, and school districts with different proportions of minorities and school-age children in poverty. The two measures of fiscal capacity used in the analysis are median household income and median value of owner-occupied housing.

Revenues per pupil are calculated by dividing revenues in the 1997–98 school year by the fall 1997 student enrollment in each district. Average revenues per pupil for school districts in different regions and for school districts with different demographic and fiscal characteristics are calculated as *weighted averages*; each district’s weight is the number of students enrolled in fall 1997.

Analyses of “actual” or “unadjusted” revenues use a subset of districts on the F-33 file. This subset file contains 14,254 regular school districts or about 92 percent of the districts in the original file (table 1-2). Districts designated as “college-grade,” “vocational or special education,” “non-operating,” and “education service agency” were not included in the analysis since these are not school districts that provide the regular elementary and secondary school programs. Districts with total revenues and total expenditures reported as “zero” or “missing” and special districts for vocational education, technical education, special education, and agricultural education were also removed from the original file.

Cost-of-education adjustments were not available for all school districts in the F-33 file. One hundred and seventy-seven districts without GCEI data were therefore removed from these analyses. The analyses of cost-adjusted revenues therefore contained 14,077 school districts or about 91 percent of the districts in the original F-33 file (table 1-3). The districts in this analysis file contained about 99 percent of the students enrolled in elementary and secondary education in fall 1997.<sup>1</sup>

## State Analyses

The state analyses presented in the report generally follow the national model, but focus more on two issues. One is the amount of variation in revenues per pupil across school districts within each state. The second is the relationship between revenues per pupil and selected district demographic and fiscal characteristics.<sup>2</sup>

Several factors motivated the selection of these analyses for the report. The amount of interdistrict variation in revenues per pupil was selected because the literature on school finance equity uses

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<sup>1</sup>In the national analyses of unadjusted districted revenues, total revenues for the nation and for each category of school district include 91.9 percent of the nation’s school districts and 99.7 percent of the nation’s students (table 1-2). The analyses of cost-adjusted revenues include 91 percent of school districts and 99 percent of students (table 1-3). The national analyses of the relationship between selected district demographic and fiscal characteristics and unadjusted revenues include 78 percent of the nation’s school districts and 95 percent of the nation’s students (table 1-4). The analyses of the relationship between district characteristics and adjusted revenues include 78 percent of school districts and 94 percent of students (table 1-5).

<sup>2</sup>The state analyses of the variation in both unadjusted and cost-adjusted revenues per pupils include all states except Hawaii and the District of Columbia and all the school districts that are included in the national analyses (tables 1-2 and 1-3). The state analyses of the relationship between districts’ demographic and fiscal characteristics and both unadjusted and cost-adjusted revenues per pupil, however, only include states in which at least 50 percent of the districts had demographic and fiscal data (tables 1-4 and 1-5). These exclusions were made in order to avoid imputing demographic and fiscal values to more than half of the state’s school districts. It should be noted, however, that even with the exclusion of these states, the state analyses of both unadjusted and cost-adjusted district revenues still include 74 percent of the nation’s school districts and 85 percent of the nation’s students. Missing GCEI and Census Mapping data were imputed when data were missing. If more than half of the districts in a state were missing, that state was not included in the state analysis.

Table 1-2. Total number of school districts and students for regular school districts and percentages based on all school districts, by state: 1997–98

State	Number of school districts	Percent of school districts	Number of students	Percent of students	Percent of revenues
United States	14,254	92.0	45,637,135	100.0	97.0
Alabama	127	100.0	739,321	100.0	100.0
Alaska	53	100.0	130,633	100.0	100.0
Arizona	215	93.5	794,325	100.0	99.0
Arkansas	310	95.1	453,779	99.4	97.0
California	988	91.7	5,664,044	98.9	94.0
Colorado	176	90.3	686,360	100.0	99.0
Connecticut	166	95.4	515,141	100.0	98.0
Delaware	16	84.2	105,697	94.9	92.0
District of Columbia	1	100.0	77,111	100.0	100.0
Florida	67	100.0	2,292,161	100.0	100.0
Georgia	180	91.8	1,375,980	100.0	99.0
Hawaii	1	100.0	189,887	100.0	100.0
Idaho	112	100.0	244,403	100.0	100.0
Illinois	896	85.7	1,971,705	100.0	97.0
Indiana	292	92.7	985,690	100.0	99.0
Iowa	377	96.2	501,054	100.0	94.0
Kansas	304	100.0	468,980	100.0	100.0
Kentucky	176	100.0	645,232	100.0	100.0
Louisiana	66	100.0	774,561	100.0	100.0
Maine	227	77.7	212,038	100.0	98.0
Maryland	24	100.0	830,744	100.0	100.0
Massachusetts	298	76.0	912,500	96.8	95.0
Michigan	656	91.2	1,679,792	100.0	90.0
Minnesota	348	83.7	841,723	100.0	96.0
Mississippi	149	98.0	503,635	99.8	100.0
Missouri	522	99.4	901,668	99.1	97.0
Montana	457	94.6	162,164	100.0	99.0
Nebraska	622	94.7	291,570	100.0	96.0
Nevada	17	100.0	296,621	100.0	100.0
New Hampshire	163	92.1	196,734	100.0	100.0
New Jersey	552	89.8	1,215,967	98.1	95.0
New Mexico	89	100.0	331,673	100.0	100.0
New York	687	99.6	2,834,082	100.0	100.0
North Carolina	117	100.0	1,230,010	100.0	100.0
North Dakota	231	88.8	116,813	100.0	93.0
Ohio	611	84.0	1,846,585	100.0	93.0
Oklahoma	548	93.5	623,681	100.0	92.0
Oregon	198	90.0	540,226	100.0	93.0
Pennsylvania	500	82.6	1,791,100	100.0	90.0
Rhode Island	36	100.0	152,356	100.0	100.0
South Carolina	86	87.8	648,084	100.0	99.0
South Dakota	173	98.3	133,698	100.0	100.0
Tennessee	137	99.3	876,693	100.0	100.0
Texas	1,041	97.9	3,887,847	100.0	100.0
Utah	40	100.0	480,811	100.0	100.0
Vermont	245	74.7	101,413	100.0	90.0
Virginia	132	85.2	1,110,815	100.0	99.0
Washington	296	97.0	991,235	100.0	98.0
West Virginia	55	100.0	300,737	100.0	100.0
Wisconsin	426	99.1	881,552	100.0	100.0
Wyoming	48	100.0	96,504	100.0	100.0

NOTE: Regular school districts exclude non-operating and special districts. The percent of school districts is calculated by dividing the number of regular districts by the total number of districts in the F-33 file shown in table 1-1. The percent of students is calculated by dividing the number of students in regular districts by the total number of students in the F-33 file; the percent of revenues is calculated by dividing the revenues in regular districts by the revenues of all districts in the F-33 file.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

Table 1-3. Total number of school districts and students for regular school districts with Geographic Cost of Education Index (GCEI) and percentages based on all school districts, by state: 1997–98

State	Number of school districts	Percent of school districts	Number of students	Percent of students	Percent of revenues
United States	14,077	91.0	45,496,799	99.0	97.0
Alabama	127	100.0	739,321	100.0	100.0
Alaska	53	100.0	130,633	100.0	100.0
Arizona	214	93.0	794,221	100.0	99.0
Arkansas	310	95.1	453,779	99.4	97.0
California	975	90.5	5,631,188	98.3	93.0
Colorado	176	90.3	686,360	100.0	99.0
Connecticut	166	95.4	515,141	100.0	98.0
Delaware	16	84.2	105,697	94.9	92.0
District of Columbia	1	100.0	77,111	100.0	100.0
Florida	67	100.0	2,292,161	100.0	100.0
Georgia	180	91.8	1,375,980	100.0	99.0
Hawaii	1	100.0	189,887	100.0	100.0
Idaho	112	100.0	244,403	100.0	100.0
Illinois	891	85.2	1,966,656	99.7	97.0
Indiana	292	92.7	985,690	100.0	99.0
Iowa	377	96.2	501,054	100.0	94.0
Kansas	304	100.0	468,980	100.0	100.0
Kentucky	176	100.0	645,232	100.0	100.0
Louisiana	66	100.0	774,561	100.0	100.0
Maine	224	76.7	211,613	99.8	98.0
Maryland	24	100.0	830,744	100.0	100.0
Massachusetts	295	75.3	909,978	96.6	95.0
Michigan	552	76.8	1,655,333	98.5	89.0
Minnesota	327	78.6	820,211	97.4	94.0
Mississippi	149	98.0	503,635	99.8	100.0
Missouri	522	99.4	901,668	99.1	97.0
Montana	456	94.4	162,040	99.9	99.0
Nebraska	618	94.1	289,873	99.4	95.0
Nevada	17	100.0	296,621	100.0	100.0
New Hampshire	162	91.5	194,270	98.7	98.0
New Jersey	550	89.4	1,213,634	98.0	95.0
New Mexico	88	98.9	322,742	97.3	97.0
New York	679	98.4	2,820,089	99.5	99.0
North Carolina	117	100.0	1,230,010	100.0	100.0
North Dakota	229	88.1	116,339	99.6	93.0
Ohio	611	84.0	1,846,585	100.0	93.0
Oklahoma	547	93.3	623,174	99.9	92.0
Oregon	194	88.2	520,290	96.3	90.0
Pennsylvania	500	82.6	1,791,100	100.0	90.0
Rhode Island	36	100.0	152,356	100.0	100.0
South Carolina	86	87.8	648,084	100.0	99.0
South Dakota	173	98.3	133,698	100.0	100.0
Tennessee	137	99.3	876,693	100.0	100.0
Texas	1,041	97.9	3,887,847	100.0	100.0
Utah	40	100.0	480,811	100.0	100.0
Vermont	243	74.1	99,216	97.8	88.0
Virginia	132	85.2	1,110,815	100.0	99.0
Washington	296	97.0	991,235	100.0	98.0
West Virginia	55	100.0	300,737	100.0	100.0
Wisconsin	425	98.8	880,799	99.9	100.0
Wyoming	48	100.0	96,504	100.0	100.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

interdistrict variation in revenue per pupil as a measure of the equity of a state's school finance system (Bern and Stiefel 1984). This analysis was designed to determine whether states uniformly have a high or low level of interdistrict variation in school revenues or whether the level of variation differs across the states.

Of particular interest was whether there are regional differences in interdistrict variation in revenues per pupil. Regional differences are important because different regions of the country have different political cultures, which often affect the way schools are governed and financed. New England states, for example, have historically organized school districts around cities and towns, which then play a major role in the financing of education. Southern states, in contrast, have organized school districts around larger county units, with state governments playing a larger role in education policy and finance (Kirst 1970).

The second set of analyses, for example, analyses of the relationship between school district fiscal capacity and revenues for education was also included because this relationship is also an important equity measure in school finance research (Berne and Stiefel 1984). A state finance system in which revenues for education are a function of a school district's wealth is considered to be less equitable than one in which funding for education is wealth neutral. This study attempted to assess whether the relationship between school district wealth and education revenues still exists nationally and in the 50 states.

In addition, school districts with higher concentrations of poor and minority children often require additional resources for special language programs and remediation in reading and mathematics for children with special educational needs (Parrish, Hikido, and Fowler 1998). The study attempted to ascertain whether, in fact, school districts with larger poor and minority school populations were actually receiving greater resources for education than school districts with lower concentrations of children from poor and minority backgrounds.

### *Interdistrict Variation in Revenues Per Pupil*

The equity framework developed by Berne and Stiefel (1984) contained several measures of interdistrict variation in revenues. This analysis used three measures from that framework—the restricted range ratio, the coefficient of variation, and the Gini coefficient—and a synthesized measure of variation that integrates the three measures.<sup>3</sup>

- The **restricted range ratio** calculates the difference in revenues per pupil between the district at the 95<sup>th</sup> percentile and the district at the 5<sup>th</sup> percentile and divides that difference by revenues per pupil of the district at the 5<sup>th</sup> percentile. This measure demonstrates how many times greater the resources are at the high end of the distribution than at the low end, while excluding outliers from the analysis.
- The **coefficient of variation** expresses the standard deviation as a percentage of the mean. It has a minimum value of zero, and increasing values indicate increasing disparity. The coeffi-

<sup>3</sup>The term “restricted range ratio” is used interchangeably with the term “Federal range ratio” in school finance analyses, although Berne and Stiefel use the term Federal range ratio in their framework. The national statistics were calculated based on data for all school districts, the country, not as the averages of states figures. The upper bound for reporting the ratio for states was set at 200, since this level included almost all states whose ratios were less than infinity.

cient of variation does not exclude outliers and indicates roughly the percentage above and below the mean within which two-thirds of the observations lie.

- The **Gini coefficient** is the cumulative proportion of revenues against the cumulative proportion of students in districts. If every school district had the same revenues per pupil, this curve would be a straight line with a positive 45-degree slope. The Gini coefficient, which ranges from 0 to 1, is a measure of the difference between the ideal straight line and the curve plotted by the data. A value of 0 indicates no variation, while a value of 1 indicates maximum variation among districts.
- The **synthesized measure of variation** is an average of the ranking of the states on each of the three measures discussed above. States were divided into quartiles based on their ranking on the synthesized measure; states in the lowest quartile had the least variation in revenues per pupil, while those in the highest quartile had the greatest variation.

The analyses of interdistrict variation in revenues per pupil using the coefficient of variation and the Gini coefficient are *weighted* analyses. Each district's value on the measure of revenues per pupil is weighted by the number of students enrolled in fall 1997. The analyses include 49 states. The District of Columbia and Hawaii were not included in state-level analyses since they each only contain one school district.

Regional analyses of interdistrict variation in revenues per pupil used the quartile ranking of the synthesized measure of variation. Within each region states were classified in either the top two quartiles (states with low variation) or the bottom two quartiles (states with high variation).

Analyses of interdistrict variation in revenues per pupil were conducted using both unadjusted and cost-adjusted revenues. The number of school districts and students included in the unadjusted analyses is found in table 1-2; the number of districts and students in the cost-adjusted analyses is found in table 1-3.

### ***Relationship between Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics***

The final component of the state analyses was an examination of the relationship between revenues per pupil and the following district demographic and fiscal characteristics: percent minority enrollment; percent school-age children in poverty; median household income; and median value of owner-occupied housing. These analyses used simple correlation coefficients as the basis for determining whether school district revenues per pupil in each state were related to these school district characteristics.

Using their strength and direction, these relationships were characterized as:

- **Strong positive:** +0.50 to +1.00; **Moderate positive:** +0.11 to +0.49; **Weak positive:** +0.01 to +0.10;
- **Weak negative:** -0.01 to -0.10; **Moderate negative:** -0.11 to -0.49; **Strong negative:** -0.50 to -1.00.

For a correlation to be classified in the above way, the relationship had to be significant at least at the 0.05 level, based on a two-tailed test of significance. When doing these significance tests it is assumed that the data come from a simple random sample without replacement.

All the analyses of correlation between revenues per pupil and district fiscal and demographic characteristics are *weighted* analyses. Again, each district's weight in the analyses is the number of students enrolled in fall 1997.

Although included in national analyses, the presence of a single school district in the District of Columbia and Hawaii precluded them from state-level variance and correlation analyses. In addition to the District of Columbia and Hawaii, nine states were excluded from the correlation analyses because more than 50 percent of the school districts were missing the required demographic and fiscal data. These states are Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota.

Finally, correlation analyses were conducted using both unadjusted and cost-adjusted revenues. Table 1-4 presents the number of districts and students in the correlation analysis based on unadjusted revenues nationally and for each state. The 3,355 school districts without Census Mapping Data in the F-

$$r_{xy} = \frac{\sum w_i (x_i - \bar{x}_w)(y_i - \bar{y}_w)}{\sqrt{\sum w_i (x_i - \bar{x}_w)^2 \sum w_i (y_i - \bar{y}_w)^2}}$$

33 file were removed. Table 1-5 presents this information for the analysis based on cost-adjusted revenues, with the 3,357 school districts without GCEI data removed. Both cost-adjusted and unadjusted national correlation analyses therefore included about 78 percent of the school districts in the original F-33 file and 94 percent of the students in the original file.

The computation of correlations in the report was based on a weighted Pearson product-moment correlation. The computations were implemented by using Proc Corr in SAS. The formula for a weighted Pearson product-moment correlation is

Where

$w_i$  = the number of students in the district

$x_i$  = the district's value on the demographic characteristics (e.g., percent minority enrollment) or the fiscal characteristic (e.g., median housing value)

$\bar{x}_w$  = the weighted mean on the demographic or fiscal characteristic

$y_i$  = the district's value on the revenue measure (e.g., local revenues per pupil)

$\bar{y}_w$  = the weighted mean on the revenue measure

The analysis used two-tailed t-tests comparing each correlation to zero as a way to determine which correlations were significant. The correlation had to be significant at the 0.05 level in order to be reported.

Table 1-4. Total number of school districts and students for regular school districts with Census Mapping Data and percentages based on all school districts, by state: 1997–98

State	Number of school districts	Percent of school districts	Number of students	Percent of students	Percent of revenues
United States	12,157	78.0	43,260,940	95.0	92.0
Alabama	127	100.0	739,321	100.0	100.0
Alaska	53	100.0	130,633	100.0	100.0
Arizona	211	91.7	790,784	99.6	99.0
Arkansas	116	35.6	321,196	70.4	69.0
California	952	88.4	5,547,426	96.9	91.0
Colorado	57	29.2	603,604	87.9	86.0
Connecticut	166	95.4	515,141	100.0	98.0
Delaware	16	84.2	105,697	94.9	92.0
District of Columbia	1	100.0	77,111	100.0	100.0
Florida	67	100.0	2,292,161	100.0	100.0
Georgia	66	33.7	1,039,075	75.5	77.0
Hawaii	1	100.0	189,887	100.0	100.0
Idaho	110	98.2	243,209	99.5	99.0
Illinois	882	84.3	1,956,864	99.2	96.0
Indiana	292	92.7	985,690	100.0	99.0
Iowa	366	93.4	492,080	98.2	92.0
Kansas	304	100.0	468,980	100.0	100.0
Kentucky	86	48.9	494,553	76.6	77.0
Louisiana	66	100.0	774,561	100.0	100.0
Maine	222	76.0	211,536	99.8	98.0
Maryland	24	100.0	830,744	100.0	100.0
Massachusetts	296	75.5	911,858	96.8	95.0
Michigan	553	76.9	1,659,550	98.7	89.0
Minnesota	297	71.4	785,222	93.3	90.0
Mississippi	68	44.7	332,183	65.8	67.0
Missouri	352	67.0	609,277	67.0	64.0
Montana	449	93.0	161,518	99.6	98.0
Nebraska	611	93.0	287,215	98.5	94.0
Nevada	17	100.0	296,621	100.0	100.0
New Hampshire	158	89.3	191,246	97.2	96.0
New Jersey	142	23.1	689,987	55.7	55.0
New Mexico	41	46.1	286,067	86.2	84.0
New York	674	97.7	2,812,718	99.2	99.0
North Carolina	116	99.1	1,214,492	98.7	99.0
North Dakota	225	86.5	114,891	98.4	92.0
Ohio	611	84.0	1,846,585	100.0	93.0
Oklahoma	63	10.8	321,252	51.5	47.0
Oregon	190	86.4	516,606	95.6	89.0
Pennsylvania	500	82.6	1,791,100	100.0	90.0
Rhode Island	35	97.2	148,385	97.4	97.0
South Carolina	86	87.8	648,084	100.0	99.0
South Dakota	81	46.0	105,792	79.1	78.0
Tennessee	135	97.8	875,401	99.9	100.0
Texas	1,041	97.9	3,887,847	100.0	100.0
Utah	40	100.0	480,811	100.0	100.0
Vermont	237	72.3	96,381	95.0	86.0
Virginia	132	85.2	1,110,815	100.0	99.0
Washington	295	96.7	991,226	100.0	98.0
West Virginia	55	100.0	300,737	100.0	100.0
Wisconsin	424	98.6	880,316	99.9	100.0
Wyoming	48	100.0	96,504	100.0	100.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table 1-5. Total number of school districts and students for regular school districts with Geographic Cost of Education Index (GCEI) and Census Mapping Data and percentages based on all school districts, by state: 1997–98

State	Number of school districts	Percent of school districts	Number of students	Percent of students	Percent of revenues
United States	12,155	78.0	43,254,843	94.0	92.0
Alabama	127	100.0	739,321	100.0	100.0
Alaska	53	100.0	130,633	100.0	100.0
Arizona	211	91.7	790,784	99.6	99.0
Arkansas	116	35.6	321,196	70.4	69.0
California	952	88.4	5,547,426	96.9	91.0
Colorado	57	29.2	603,604	87.9	86.0
Connecticut	166	95.4	515,141	100.0	98.0
Delaware	16	84.2	105,697	94.9	92.0
District of Columbia	1	100.0	77,111	100.0	100.0
Florida	67	100.0	2,292,161	100.0	100.0
Georgia	66	33.7	1,039,075	75.5	77.0
Hawaii	1	100.0	189,887	100.0	100.0
Idaho	110	98.2	243,209	99.5	99.0
Illinois	882	84.3	1,956,864	99.2	96.0
Indiana	292	92.7	985,690	100.0	99.0
Iowa	366	93.4	492,080	98.2	92.0
Kansas	304	100.0	468,980	100.0	100.0
Kentucky	86	48.9	494,553	76.6	77.0
Louisiana	66	100.0	774,561	100.0	100.0
Maine	222	76.0	211,536	99.8	98.0
Maryland	24	100.0	830,744	100.0	100.0
Massachusetts	295	75.3	909,978	96.6	95.0
Michigan	552	76.8	1,655,333	98.5	89.0
Minnesota	297	71.4	785,222	93.3	90.0
Mississippi	68	44.7	332,183	65.8	67.0
Missouri	352	67.0	609,277	67.0	64.0
Montana	449	93.0	161,518	99.6	98.0
Nebraska	611	93.0	287,215	98.5	94.0
Nevada	17	100.0	296,621	100.0	100.0
New Hampshire	158	89.3	191,246	97.2	96.0
New Jersey	142	23.1	689,987	55.7	55.0
New Mexico	41	46.1	286,067	86.2	84.0
New York	674	97.7	2,812,718	99.2	99.0
North Carolina	116	99.1	1,214,492	98.7	99.0
North Dakota	225	86.5	114,891	98.4	92.0
Ohio	611	84.0	1,846,585	100.0	93.0
Oklahoma	63	10.8	321,252	51.5	47.0
Oregon	190	86.4	516,606	95.6	89.0
Pennsylvania	500	82.6	1,791,100	100.0	90.0
Rhode Island	35	97.2	148,385	97.4	97.0
South Carolina	86	87.8	648,084	100.0	99.0
South Dakota	81	46.0	105,792	79.1	78.0
Tennessee	135	97.8	875,401	99.9	100.0
Texas	1,041	97.9	3,887,847	100.0	100.0
Utah	40	100.0	480,811	100.0	100.0
Vermont	237	72.3	96,381	95.0	86.0
Virginia	132	85.2	1,110,815	100.0	99.0
Washington	295	96.7	991,226	100.0	98.0
West Virginia	55	100.0	300,737	100.0	100.0
Wisconsin	424	98.6	880,316	99.9	100.0
Wyoming	48	100.0	96,504	100.0	100.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

## Definitions

Several revenues measures were used in the analyses described above. These include local revenues, state revenues, the total of state and local revenues, federal revenues, and total revenues. Local revenues analyzed in the report are property tax revenues and student fees; state revenues included general formula assistance and instructional program funds; federal revenues include Title I and other federal revenues. These revenue measures are defined below:

**Local revenues** include funds from local property taxes, non-property taxes (e.g., sales, utility, and income taxes), contributions from parent governments (in dependent school systems), investments, and revenues from student activities, textbook sales, transportation and tuition fees, and food service revenues.

- **Property tax revenues** include taxes levied by a local education agency (LEA) on the assessed value of real and personal property located within the LEA, which is the final authority in determining the amount of tax raised for school purposes.
- **Student fees** include revenues from individuals for tuition and fees for transportation and other school services.

**State revenues** include general formula assistance, funds for students with special educational needs (e.g., special education, bilingual education, vocational education), funds for staff improvement programs, as well as funds for school lunch, transportation, and capital outlay.

- **State general formula assistance revenues** include revenue recorded as grants from state funds, which can be used for any legal purpose desired by the LEA without restriction.
- **Instructional program revenues** include funds received by LEAs from the state for special education, compensatory and basic skills attainment, bilingual education, gifted and talented education, and vocational education.

**Federal revenues** include funds from federal sources that flow through state governments (e.g., Title I, Eisenhower Professional Development Program (Eisenhower Math and Science) and funds from federal sources that flow directly to the school district (e.g., Impact Aid, and bilingual education funds).

Several of the analyses in the report stratify states on different characteristics, including region. The grouping of states into regions was based on the classification used by the U.S. Bureau of the Census. It should be recognized that regional averages often mask differences among states and school districts with the region. However, since “region” is generally recognized as a standard stratification of states in many statistical reports, it was used in this report as well to present differences in revenues in different parts of the country. The Census categories of region include the following states.

- **Northeast:** Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.
- **Midwest:** Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.
- **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

- **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

The analyses of relationships between school district characteristics and local, state, and federal revenues include two measures of district wealth (median household income and median value of owner-occupied housing)<sup>4</sup> and two demographic measures (percent minority enrollment and percent school-age children in poverty)—all from the 1990 Census. These measures have the following definitions:

- **Median household income** is defined as the median income of the householder and all other persons 15 years old and over in the household, whether related to the householder or not, in calendar year 1989.
- **Median value owner-occupied housing** is defined as the median value of specified owner-occupied housing units in a district in 1990.
- **Percent minority students** is defined as the percent of students who enrolled in public schools who are African American, Hispanic, Asian, American Indian, and Alaskan Native in 1990.
- **Percent children in poverty** is defined as children within a district who are 5 years of age and living in households with income at or below the poverty level in 1989.

It should be recognized that the correlations presented in the report are based on bivariate statistics that do not reflect the influence of other factors on school district revenues. The influence of other factors would need to be examined through multivariate analyses, which was beyond the scope of this report.

## Organization of the Report

The balance of the report is organized into six chapters. Chapter 2 presents an analysis of local revenues, including property taxes and student fees. Chapter 3 examines state revenues, including general formula assistance and instructional program revenues. Chapter 4 examines state and local revenues combined. Chapter 5 examines Title I and other federal revenues. Chapter 6 presents an analysis of total district revenues, including local, state and federal funds. Chapter 7 presents a synthesis and summary of the report's major findings. Appendices to the report contain technical notes and detailed correlation tables on district revenues. Finally, the glossary provides definitions of key terms in the report.

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<sup>4</sup>In most school districts, property taxes are the primary source of local revenue for education. Median value of owner-occupied housing is one measure of a school district's property tax base. The use of residential property as a proxy for total property wealth may, however, affect the analyses of the relationships between district wealth and district revenues, since it excludes commercial and industrial property from total property valuation. However, it was used in these analyses, since it is the only standard measure of property wealth that is available across states that can be attributed to school districts. Since school district residents pay their taxes from income and other assets, median household income is used as another measure of a community's tax base.



## Chapter 2: Local Revenues

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### Local Revenues

Local revenues for public elementary and secondary education totaled \$146.9 billion in 1997–98 (table 2-1). This was approximately 46 percent of total district revenues (\$321.6 billion) in 1997–98. Just over 63 percent of local revenues came from property taxes (\$93.2 billion) (table 2-6), with just over 4 percent from student fees (\$6.0 billion) (table 2-7), and 32 percent from other local sources.

### Local Revenues Per Pupil

Local revenues per pupil in the United States averaged \$3,219 in 1997–98 before cost adjustments. Local revenues per pupil were highest in the Northeast (\$5,232) and lowest in the West (\$2,228). At \$3,453 per pupil, local revenues in the Midwest were higher than in the South (\$2,736) (table 2-1). The use of cost adjustments decreased the range between the highest and lowest regions to between \$3,004 and \$2,585. The unadjusted ratio of revenues per pupil between the highest and lowest regions was 2.3 to 1. Cost adjustments decreased the ratio to 2.2 to 1. After adjusting for cost of education differences, the Northeast remained the region with the highest per pupil revenues at \$4,699, and the West remained the region with the lowest local revenues per pupil at \$2,114.

Very large districts tended to have lower local revenues per pupil than smaller districts, especially after cost adjustments. Before cost adjustments, local revenues per pupil averaged \$3,462 in districts with fewer than 1,000 students, and \$2,975 in districts with 10,000 or more students. After cost adjustments, local revenues per pupil averaged \$3,819 in the smallest districts and \$2,896 in the largest. Thus, the difference between the smallest and the largest districts increased from \$487 to \$923 per pupil. Correlation studies, however, found a weak negative relationship between district enrollment and local revenues per pupil, both before (-0.03) and after (-0.05) cost adjustments (tables A-1 and A-2).

Before cost adjustments, local revenues per pupil showed positive relationships with two measures of district wealth—median household income (+0.53) and median value owner-occupied housing (+0.35) (table A-3). This indicates that districts in areas with a larger economic base tended to have more revenues from local sources than districts in areas with smaller economic bases. School districts with median household incomes at or above \$35,000 had average local revenues per pupil of \$4,464, while districts with median household incomes below \$20,000 had revenues per pupil of \$1,781 (table 2-1). Similarly, districts with median housing values at or above \$85,000 had average local revenues of \$4,069 per pupil, while districts with median housing values below \$40,000 had local revenues per pupil of \$2,148.

After cost adjustments, there was still a relationship between district wealth and local revenues per pupil. Cost adjustments reduced the range from \$2,683 to \$2,138 between the highest- and lowest-income districts, and from \$1,921 to \$1,325 between districts with the highest and lowest housing

Table 2-1. Local revenues, cost-adjusted local revenues, local revenues per pupil, and cost-adjusted local revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median income, and median value owner-occupied housing: 1997–98

School district characteristics	Local revenues (in thousands)	Cost-adjusted local revenues (in thousands)	Local revenues per pupil	Cost-adjusted local revenues per pupil
All districts	\$146,892,005	\$144,105,712	\$3,219	\$3,167
Region				
Northeast	41,494,209	37,153,679	5,232	4,699
Midwest	36,675,257	37,156,742	3,453	3,516
South	45,084,952	47,499,238	2,736	2,883
West	23,637,587	22,296,052	2,228	2,114
District enrollment				
0–999	9,410,880	10,234,507	3,462	3,819
1,000–4,999	45,138,689	44,463,461	3,476	3,439
5,000–9,999	24,285,487	23,250,651	3,442	3,302
10,000 or more	68,056,949	66,157,093	2,975	2,896
Minority enrollment				
Less than 5 percent	38,879,006	39,410,649	3,442	3,491
5 percent–<20 percent	43,093,264	41,987,294	3,591	3,499
20 percent–<50 percent	37,595,417	37,121,137	2,929	2,892
50 percent or more	19,652,429	18,370,589	2,757	2,577
Data missing	7,671,889	7,216,043	—	—
School-age children in poverty				
Less than 5 percent	29,072,244	26,591,156	5,621	5,148
5 percent–<15 percent	52,480,297	51,876,028	3,389	3,350
15 percent–<25 percent	30,938,661	32,128,305	2,611	2,711
25 percent or more	26,728,914	26,294,180	2,485	2,445
Data missing	7,671,889	7,216,043	—	—
Median household income				
Less than \$20,000	6,165,620	6,835,652	1,781	1,975
\$20,000–<\$25,000	20,670,962	22,145,374	2,462	2,637
\$25,000–<\$30,000	33,397,096	33,589,172	2,980	2,997
\$30,000–<\$35,000	22,592,507	22,388,622	2,987	2,960
\$35,000 or more	56,393,931	51,930,849	4,464	4,113
Data missing	7,671,889	7,216,043	—	—
Median value owner-occupied housing				
Less than \$40,000	7,859,244	8,796,982	2,148	2,404
\$40,000–<\$55,000	18,706,071	20,194,964	2,389	2,580
\$55,000–<\$85,000	42,150,152	43,298,136	2,917	2,998
\$85,000 or more	70,504,649	64,599,587	4,069	3,729
Data missing	7,671,889	7,216,043	—	—

—Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, “School District Financial Survey (Form F-33): School Year 1997–98” and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

values. The ratios were reduced from 2.5 to 2.1 to 1 for median household income and from 1.9 to 1.6 to 1 for median value owner-occupied housing. Correlation measures decreased after cost adjustments. The correlation between adjusted local revenues per pupil and median household income was +0.45 after cost adjustments compared to +0.53 before.<sup>5</sup> The correlation between local revenues per pupil and owner-occupied housing value was +0.23 after cost adjustments and +0.35 before (tables A-3 and A-4).

Local revenues per pupil showed a negative relationship with two district demographic characteristics—percent minority enrollment and percent school-age children living in poverty—both before and after cost adjustments. Before adjustments, school districts with the highest minority enrollments had lower local revenues per pupil than districts with the lowest minority enrollments, \$2,757 and \$3,442,

<sup>5</sup>The decrease reported here is as expected because correlation measure is a function of the range of difference. When the range decreases, so will the correlation.

respectively. After adjustments, the range between the lowest- and highest-minority districts increased—from \$685 to \$914. Correlation analysis also demonstrated this relationship between local revenues per pupil and percent minority enrollment (-0.16 unadjusted, -0.20 adjusted).

Local revenues per pupil were highest in the lowest-poverty districts and lowest in the highest-poverty districts both before and after cost adjustments—\$5,621 and \$2,485, respectively, before cost adjustments, and \$5,148 and \$2,445 respectively, after cost adjustments. Correlation analysis also demonstrated that districts with greater poverty tended to have lower local revenues per pupil (-0.39 unadjusted, -0.38 adjusted).

## Variations in Local Revenues Per Pupil

Tables 2-2 and 2-3 present three measures of variation in local revenues per pupil across school districts in the 49 states with more than one school district. These include the restricted range ratio, the coefficient of variation, and the Gini coefficient. The table also includes a column with the state's average rank on these three variation measures. A final column presents each state's quartile assignment based on the average ranking. The 49 states were ranked on their average ranking and divided into four quartiles of approximately 12 states each. States in quartile 1 had the lowest variation; states in quartile 4 had the highest variation.

### *Restricted Range Ratio*

The restricted range ratio for unadjusted local revenues per pupil across the United States was 6.19 (table 2-2). This means that local revenues in the district at the 95<sup>th</sup> percentile were 6.19 times higher than local revenues in the district at the 5<sup>th</sup> percentile. Variation in the states ranged from 0.48 in Nevada to 6.20 in Massachusetts. Only 1 state—Massachusetts—had a restricted range ratio that was higher than the United States ratio.

When cost adjustments were applied, the restricted range ratio for local revenues per pupil across the United States decreased to 5.39. Again, only Massachusetts exceeded the national variation after cost adjustments (table 2-3). Cost adjustments decreased the range between the lowest-variation and highest-variation states. After cost adjustments, the restricted range ratio ranged from 0.46 in Nevada to 5.93 in Massachusetts.

### *Coefficient of Variation*

The coefficient of variation for unadjusted local revenues per pupil across the United States was 0.64 (table 2-2). Variation in the states ranged from 0.16 in Nevada to 0.64 in Kansas. No states had a coefficient of variation higher than that for the United States, though Kansas' was equal to the United States coefficient.

When local revenues were adjusted for cost of education differences, the coefficient of variation for local revenues per pupil across the United States was reduced to 0.59 (table 2-3). Three states exceeded the national variation after cost adjustments: Kansas, Texas, and Wyoming. Cost adjustments had no effect on the range between the lowest-variation and highest-variation states. After cost adjustments, the coefficient of variation ranged from 0.18 in Nevada to 0.67 in Texas.

Table 2-2. Variation in local revenues per pupil (unadjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Average rank	Average quartile
	Value	Rank	Value	Rank	Value	Rank		
United States	6.19	†	0.64	†	0.32	†	†	†
Alabama	1.79	9	0.47	37	0.22	27	24.33	3
Alaska	4.26	45	0.63	46	0.22	27	39.33	4
Arizona	3.53	38	0.45	30	0.23	31	33.00	3
Arkansas	3.12	34	0.46	33	0.24	35	34.00	3
California	3.16	35	0.50	39	0.25	37	37.00	3
Colorado	2.19	17	0.37	19	0.19	13	16.33	2
Connecticut	3.68	40	0.46	33	0.26	41	38.00	4
Delaware	2.04	13	0.34	9	0.19	13	11.67	1
District of Columbia	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Florida	1.66	7	0.34	9	0.18	9	8.33	1
Georgia	3.94	43	0.45	30	0.25	37	36.67	3
Hawaii	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Idaho	2.96	29	0.52	41	0.27	42	37.33	4
Illinois	4.68	46	0.56	44	0.28	45	45.00	4
Indiana	1.58	5	0.30	4	0.16	4	4.33	1
Iowa	1.04	2	0.22	2	0.12	2	2.00	1
Kansas	3.87	41	0.64	49	0.27	42	44.00	4
Kentucky	3.21	37	0.45	30	0.25	37	34.67	3
Louisiana	2.96	29	0.36	14	0.19	13	18.67	2
Maine	2.22	18	0.41	23	0.21	24	21.67	2
Maryland	2.59	28	0.36	14	0.20	20	20.67	2
Massachusetts	6.20	49	0.51	40	0.29	47	45.33	4
Michigan	4.19	44	0.59	45	0.30	48	45.67	4
Minnesota	3.09	33	0.55	43	0.24	35	37.00	3
Mississippi	2.18	16	0.36	14	0.20	20	16.67	2
Missouri	2.00	12	0.36	14	0.19	13	13.00	2
Montana	2.10	15	0.46	33	0.20	20	22.67	2
Nebraska	2.05	14	0.32	7	0.16	4	8.33	1
Nevada	0.48	1	0.16	1	0.06	1	1.00	1
New Hampshire	1.07	3	0.25	3	0.14	3	3.00	1
New Jersey	4.88	47	0.48	38	0.27	42	42.33	4
New Mexico	2.26	21	0.37	19	0.18	9	16.33	2
New York	3.87	41	0.52	41	0.25	37	39.67	4
North Carolina	1.79	9	0.33	8	0.19	13	10.00	1
North Dakota	1.20	4	0.36	14	0.17	7	8.33	1
Ohio	3.07	32	0.44	27	0.23	31	30.00	3
Oklahoma	2.24	19	0.41	23	0.21	24	22.00	2
Oregon	1.73	8	0.37	19	0.19	13	13.33	2
Pennsylvania	2.30	23	0.41	23	0.22	27	24.33	3
Rhode Island	2.47	26	0.35	12	0.19	13	17.00	2
South Carolina	1.64	6	0.34	9	0.18	9	8.00	1
South Dakota	2.24	19	0.30	4	0.16	4	9.00	1
Tennessee	2.39	25	0.35	12	0.20	20	19.00	2
Texas	5.33	48	0.63	46	0.28	45	46.33	4
Utah	1.79	9	0.44	27	0.17	7	14.33	2
Vermont	3.06	31	0.42	26	0.22	27	28.00	3
Virginia	2.54	27	0.44	27	0.23	31	28.33	3
Washington	3.18	36	0.37	19	0.21	24	26.33	3
West Virginia	2.29	22	0.31	6	0.18	9	12.33	1
Wisconsin	2.32	24	0.46	33	0.23	31	29.33	3
Wyoming	3.53	38	0.63	46	0.33	49	44.33	4

†Not applicable.

<sup>1</sup>Variation is not measured in the District of Columbia or Hawaii where there is only one school district.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

Table 2-3. Variation in local revenues per pupil (cost-adjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Average rank	Average quartile
	Value	Rank	Value	Rank	Value	Rank		
United States	5.39	†	0.59	†	0.30	†	†	†
Alabama	1.69	11	0.44	31	0.21	26	22.67	2
Alaska	4.90	46	0.52	45	0.22	31	40.67	4
Arizona	3.45	41	0.45	35	0.23	37	37.67	4
Arkansas	2.63	30	0.43	30	0.22	31	30.33	3
California	2.84	33	0.47	37	0.24	40	36.67	4
Colorado	2.26	23	0.38	19	0.19	19	20.33	2
Connecticut	4.06	45	0.45	35	0.25	41	40.33	4
Delaware	1.81	13	0.32	9	0.18	13	11.67	1
District of Columbia	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Florida	1.40	5	0.33	11	0.16	6	7.33	1
Georgia	3.06	38	0.39	24	0.21	26	29.33	3
Hawaii	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Idaho	2.98	37	0.51	42	0.26	42	40.33	4
Illinois	3.65	43	0.51	42	0.26	42	42.33	4
Indiana	1.54	7	0.28	3	0.15	4	4.67	1
Iowa	1.14	3	0.22	2	0.12	2	2.33	1
Kansas	3.19	39	0.66	48	0.26	42	43.00	4
Kentucky	2.91	35	0.41	26	0.23	37	32.67	3
Louisiana	2.93	36	0.35	14	0.18	13	21.00	2
Maine	2.45	25	0.42	28	0.21	26	26.33	3
Maryland	2.56	27	0.35	14	0.19	19	20.00	2
Massachusetts	5.93	49	0.50	40	0.28	46	45.00	4
Michigan	3.92	44	0.56	46	0.28	46	45.33	4
Minnesota	2.55	26	0.51	42	0.21	26	31.33	3
Mississippi	1.99	17	0.35	14	0.19	19	16.67	2
Missouri	1.53	6	0.30	5	0.16	6	5.67	1
Montana	2.58	28	0.50	40	0.22	31	33.00	3
Nebraska	2.11	19	0.37	18	0.18	13	16.67	2
Nevada	0.46	1	0.18	1	0.06	1	1.00	1
New Hampshire	1.12	2	0.28	3	0.14	3	2.67	1
New Jersey	5.07	47	0.48	38	0.27	45	43.33	4
New Mexico	2.11	19	0.38	19	0.18	13	17.00	2
New York	2.88	34	0.48	38	0.23	37	36.33	3
North Carolina	1.68	10	0.31	7	0.17	8	8.33	1
North Dakota	1.39	4	0.39	24	0.17	8	12.00	1
Ohio	2.64	31	0.41	26	0.22	31	29.33	3
Oklahoma	2.03	18	0.42	28	0.20	23	23.00	3
Oregon	1.80	12	0.38	19	0.18	13	14.67	2
Pennsylvania	1.93	16	0.36	17	0.20	23	18.67	2
Rhode Island	2.61	29	0.38	19	0.21	26	24.67	3
South Carolina	1.63	9	0.33	11	0.17	8	9.33	1
South Dakota	1.91	15	0.31	7	0.15	4	8.67	1
Tennessee	1.88	14	0.32	9	0.18	13	12.00	1
Texas	5.11	48	0.67	49	0.28	46	47.67	4
Utah	1.60	8	0.44	31	0.17	8	15.67	2
Vermont	3.24	40	0.44	31	0.22	31	34.00	3
Virginia	2.11	19	0.38	19	0.20	23	20.33	2
Washington	2.73	32	0.34	13	0.19	19	21.33	2
West Virginia	2.13	22	0.30	5	0.17	8	11.67	1
Wisconsin	2.39	24	0.44	31	0.22	31	28.67	3
Wyoming	3.49	42	0.63	47	0.33	49	46.00	4

†Not applicable.

<sup>1</sup>Variation is not measured in the District of Columbia or Hawaii where there is only one school district.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

## **Gini Coefficient**

The Gini coefficient for unadjusted local revenues per pupil across the United States was 0.32 (table 2-2). A Gini coefficient of 0 means revenues are distributed equally; higher values such as 0.32 imply revenues are more concentrated among a smaller share of students. Variation in the states ranged from 0.06 in Nevada to 0.33 in Wyoming. Only Wyoming had a Gini coefficient higher than that for the United States.

Cost of education adjustments decreased the Gini coefficient across the United States to 0.30 (table 2-3). Again, only Wyoming exceeded the United States level of variation. Cost adjustments had no effect on the range of variation among the states. After adjustments, the Gini coefficient still ranged from 0.06 in Nevada to 0.33 in Wyoming.

## **Overall Variation**

To take all three measure of variation into account at once, a synthesized measure of variation was created. The states were ranked on each of the three measures of variation, with the lowest-ranking states being those with the values closest to zero (i.e., states having the least variation in revenues per pupil). The three rank values for each state were then averaged to create an “average rank” for the state. The states were then assigned to quartiles based on their average rank value, with states in quartile 1 being those with least overall variation.

In a synthesis of the three unadjusted variation measures, states in the Northeast had high variation relative to states across the country, while states in the South had low variation among districts (figure 2-1). Before cost adjustments, 67 percent of the states in the Northeast ranked in the lowest two quartiles, while 78 percent ranked in these quartiles after cost adjustments (table 2-4). Two-thirds of the states in the South (63 percent before cost adjustments, 69 percent after) ranked in the highest two quartiles. States in the Midwest and the West were evenly spread among the quartiles.

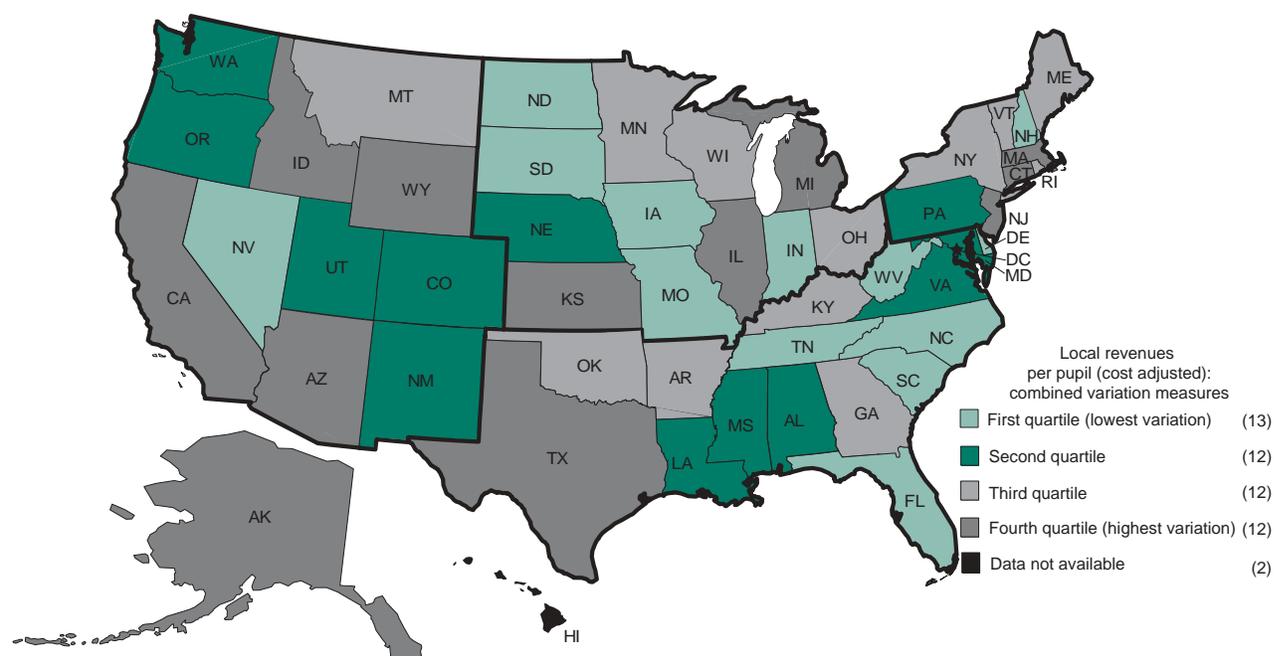
## **Relationship between Local Revenues Per Pupil and Selected District Fiscal and Demographic Characteristics**

For the United States as a whole, local revenues per pupil in unadjusted dollars showed a positive relationship with a school district’s median household income (+0.53 ) and its median value owner-occupied housing (+0.35) (table A-3). Similarly, at the state level, median value owner-occupied housing was positively related to local revenues per pupil in all but 6 of the 40 states with available data;<sup>6</sup> there was no significant relationship found in Alaska, Montana, Nevada, North Dakota, or Utah, and a moderate negative relationship in Nebraska (table 2-5). A moderate positive relationship was found in 14 states, while half of the states with sufficient data (20) showed a strong positive relationship between owner-occupied housing value and local revenues per pupil. Median household income was also positively related to local revenues per pupil in 36 states. Four states (Montana, Nebraska, Nevada, and Utah) showed no statistically significant relationship between district income and local revenues per pupil, and no states showed a negative relationship between household income and revenues.

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<sup>6</sup>Although included in national analyses, the presence of a single school district in the District of Columbia and Hawaii precluded them from state-level variance and correlation analyses. Nine additional states were also excluded from state-level correlation analyses because more than 50 percent of the school districts were missing the required demographic and fiscal data.

Figure 2-1. Synthesis of variation measures of local revenues per pupil (cost-adjusted dollars), by state: 1997–98



NOTE: Variation is not measured in the District of Columbia or Hawaii where there is only one school district. Regions are delineated in black; Alaska and Hawaii are part of the Western Region.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

Table 2-4. Variation in local revenues per pupil, by region: 1997–98

Region	Percent of states in quartiles 1 and 2 (low variation)	Percent of states in quartiles 3 and 4 (high variation)
Unadjusted local revenues per pupil		
Northeast	33	67
Midwest	50	50
South	63	38
West	50	50
Cost-adjusted local revenues per pupil		
Northeast	22	78
Midwest	50	50
South	69	31
West	50	50

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

After cost adjustments, the relationship between district wealth and local revenues per pupil was weakened for the United States as a whole and for many states (table 2-5). The national cost-adjusted correlation with median household income was +0.45, and the national cost-adjusted correlation with median value owner-occupied housing was +0.23 (table A-4). After cost adjustments, three states (Montana, Nebraska, and North Dakota) showed a negative relationship between local revenues per pupil and median value owner-occupied housing (figure 2-2). Only two states (Nevada and Utah) showed no significant relationship, while the remaining 35 states with sufficient data continued to show a positive

Table 2-5. Correlations between local revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98

Characteristics	States (before cost adjustments)	States (after cost adjustments)
<b>Minority enrollment</b>		
Strong positive relationship	[none]	Nevada <sup>1</sup>
Moderate positive relationship	Maine, Minnesota, Missouri, Oregon, Tennessee, West Virginia	Minnesota, Tennessee
Weak positive relationship	[none]	[none]
Weak negative relationship	[none]	Texas <sup>1</sup>
Moderate negative relationship	Alabama, Arizona, California, Connecticut, Idaho, Illinois, Kansas, Michigan, Montana, Nebraska, New York, North Carolina, North Dakota, Pennsylvania, Wisconsin, <i>US overall</i>	Alabama, Arizona, California, Idaho, Illinois, Iowa, <sup>1</sup> Kansas, Michigan, Montana, Nebraska, New York, North Carolina, North Dakota, Pennsylvania, Wisconsin, <i>US overall</i>
Strong negative relationship	Rhode Island	Connecticut, <sup>1</sup> Rhode Island
No significant relationship	Alaska, Delaware, Florida, Indiana, Iowa, Louisiana, Maryland, Massachusetts, Nevada, New Hampshire, Ohio, South Carolina, Texas, Utah, Vermont, Virginia, Washington, Wyoming	Alaska, Delaware, Florida, Indiana, Louisiana, Maine, <sup>1</sup> Maryland, Massachusetts, Missouri, <sup>1</sup> New Hampshire, Ohio, Oregon, <sup>1</sup> South Carolina, Utah, Vermont, Virginia, Washington, West Virginia, <sup>1</sup> Wyoming
<b>School-age children in poverty</b>		
Strong positive relationship	[none]	[none]
Moderate positive relationship	[none]	[none]
Weak positive relationship	[none]	[none]
Weak negative relationship	Nebraska	Montana <sup>1</sup>
Moderate negative relationship	Alaska, Arizona, California, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Massachusetts, Michigan, Missouri, Montana, New Hampshire, North Carolina, North Dakota, Ohio, Oregon, South Carolina, Texas, Vermont, Virginia, Washington, Wisconsin, Wyoming, <i>US overall</i>	Alabama, <sup>1</sup> Alaska, Arizona, California, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Massachusetts, Michigan, Missouri, New Hampshire, North Carolina, North Dakota, Ohio, Oregon, Texas, Vermont, Virginia, Washington, Wisconsin, Wyoming, <i>US overall</i>
Strong negative relationship	Alabama, Connecticut, Delaware, Maryland, New York, Pennsylvania, Rhode Island, West Virginia	Connecticut, Delaware, Maryland, New York, Pennsylvania, Rhode Island, West Virginia
No significant relationship	Minnesota, Nevada, Tennessee, Utah	Maine, <sup>1</sup> Minnesota, Nebraska, <sup>1</sup> Nevada, South Carolina, <sup>1</sup> Tennessee, Utah
<b>Median household income</b>		
Strong positive relationship	Alabama, Alaska, Connecticut, Delaware, Illinois, Louisiana, Maryland, Massachusetts, Michigan, Missouri, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Virginia, Washington, West Virginia, Wisconsin, Wyoming, <i>US overall</i>	Alabama, Alaska, Connecticut, Delaware, Illinois, Louisiana, Maryland, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Virginia, Washington, West Virginia, Wisconsin, Wyoming
Moderate positive relationship	Arizona, California, Florida, Idaho, Indiana, Iowa, Kansas, Maine, Minnesota, New Hampshire, North Dakota, Oregon, South Carolina, Tennessee, Texas, Vermont	Arizona, California, Florida, Idaho, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, <sup>1</sup> Oregon, South Carolina, Tennessee, Texas, Vermont, <i>US overall</i> <sup>1</sup>
Weak positive relationship	[none]	[none]
Weak negative relationship	[none]	[none]
Moderate negative relationship	[none]	Nebraska <sup>1</sup>
Strong negative relationship	[none]	[none]
No significant relationship	Montana, Nebraska, Nevada, Utah	Montana, Nevada, New Hampshire, <sup>1</sup> North Dakota, <sup>1</sup> Utah
<b>Median value owner-occupied housing</b>		
Strong positive relationship	Alabama, Delaware, Florida, Idaho, Illinois, Indiana, Louisiana, Maryland, Massachusetts, Michigan, Missouri, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Virginia, Washington, West Virginia, Wisconsin	Alabama, Delaware, Florida, Idaho, Illinois, Indiana, Louisiana, Maryland, Massachusetts, Michigan, North Carolina, Ohio, Pennsylvania, Rhode Island, Virginia, Washington, Wisconsin
Moderate positive relationship	Arizona, California, Connecticut, Iowa, Kansas, Maine, Minnesota, New Hampshire, Oregon, South Carolina, Tennessee, Texas, Vermont, Wyoming, <i>US overall</i>	Alaska, <sup>1</sup> Arizona, California, Connecticut, Iowa, Kansas, Maine, Minnesota, Missouri, <sup>1</sup> New Hampshire, New York, <sup>1</sup> Oregon, South Carolina, Tennessee, Texas, Vermont, West Virginia, <sup>1</sup> Wyoming, <i>US overall</i>
Weak positive relationship	[none]	[none]
Weak negative relationship	[none]	[none]
Moderate negative relationship	Nebraska	Montana, <sup>1</sup> Nebraska, North Dakota <sup>1</sup>
Strong negative relationship	[none]	[none]
No significant relationship	Alaska, Montana, Nevada, North Dakota, Utah	Nevada, Utah

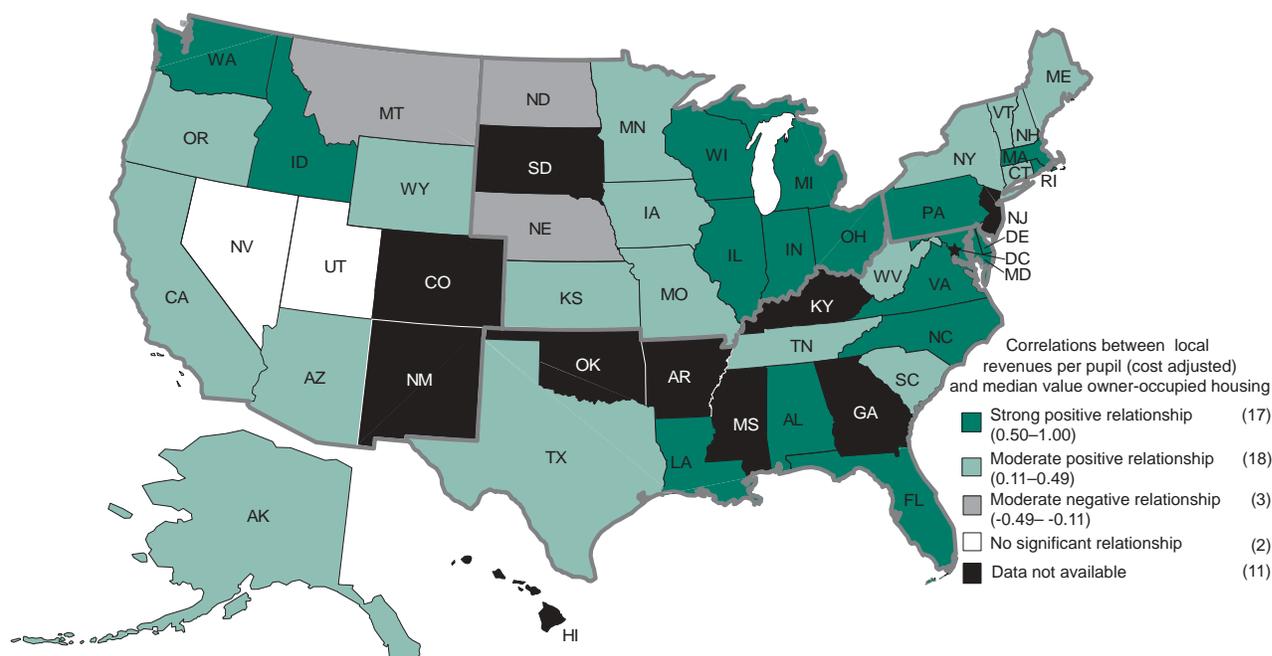
Table 2-5. Correlations between local revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98—Continued

Characteristics	States (before cost adjustments)	States (after cost adjustments)
<b>Student membership</b>		
Strong positive relationship	Delaware	Delaware
Moderate positive relationship	Arkansas, Georgia, Indiana, Kentucky, Mississippi, Missouri, Tennessee, Washington, West Virginia	Georgia, Kentucky, Mississippi, Tennessee, West Virginia
Weak positive relationship	Ohio	[none]
Weak negative relationship	Nebraska, <i>US overall</i>	<i>US overall</i>
Moderate negative relationship	Connecticut, Iowa, Maine, Massachusetts, Montana, New Hampshire, New Jersey, Rhode Island, Vermont	Connecticut, Iowa, Maine, Massachusetts, Montana, Nebraska, <sup>1</sup> New Hampshire, New Jersey, Rhode Island, Vermont
Strong negative relationship	[none]	[none]
No significant relationship	Alabama, Alaska, Arizona, California, Colorado, Florida, Idaho, Illinois, Kansas, Louisiana, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, Wisconsin, Wyoming	Alabama, Alaska, Arizona, Arkansas, <sup>1</sup> California, Colorado, Florida, Idaho, Illinois, Indiana, <sup>1</sup> Kansas, Louisiana, Maryland, Michigan, Minnesota, Missouri, <sup>1</sup> Nevada, New Mexico, New York, North Carolina, North Dakota, Ohio, <sup>1</sup> Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, <sup>1</sup> Wisconsin, Wyoming, <i>US overall</i>

<sup>1</sup>State changed categories after cost adjustments.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Figure 2-2. Correlations between local revenues per pupil and median value owner-occupied housing (cost-adjusted dollars), by state: 1997–98

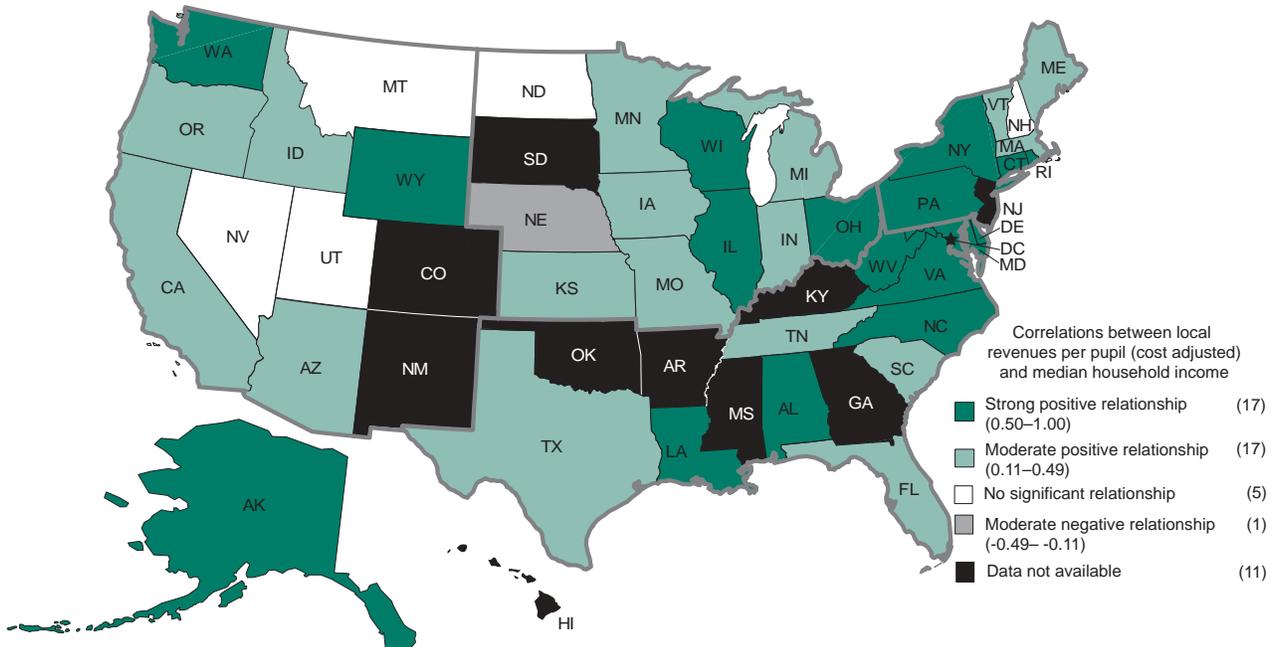


NOTE: No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one district. Nine other states (Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota) were excluded from state-level correlation analysis because more than 50 percent of the school districts in the state were missing Census data. Regions are delineated in gray; Alaska and Hawaii are part of the Western Region.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

relationship between housing values and local revenues. After cost adjustments, 1 state (Nebraska) demonstrated a negative relationship between median household income and local revenues per pupil (figure 2-3).

Figure 2-3. Correlations between local revenues per pupil and median household income (cost-adjusted dollars), by state: 1997–98



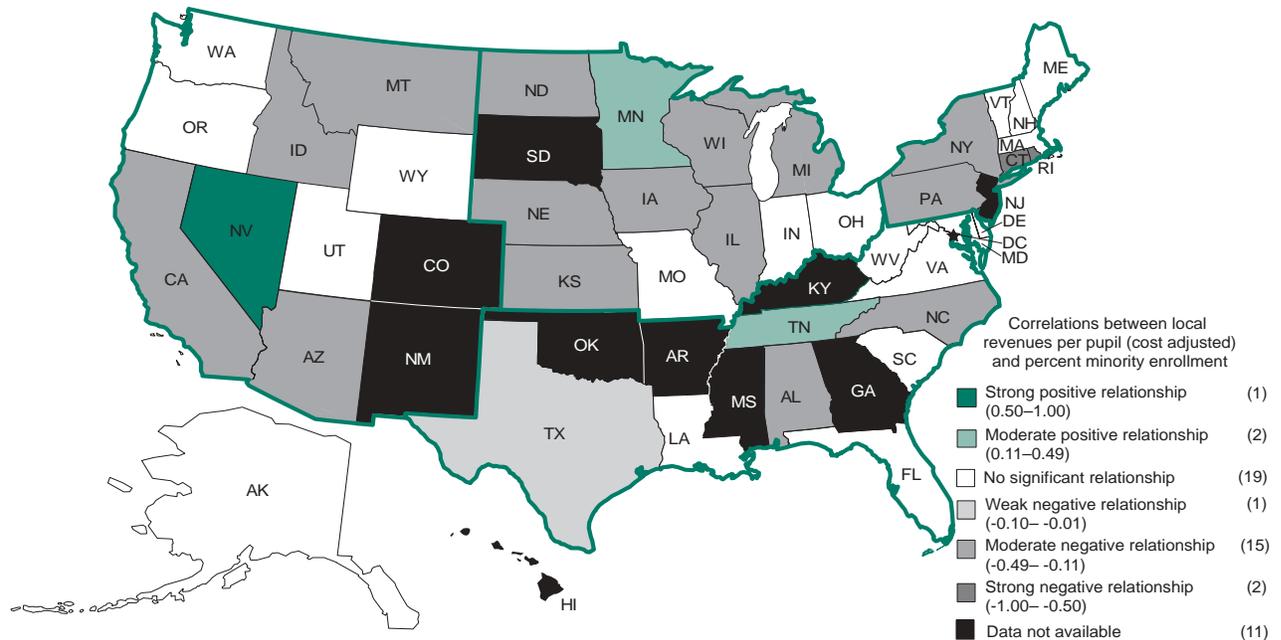
NOTE: No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one district. Nine other states (Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota) were excluded from state-level correlation analysis because more than 50 percent of the school districts in the state were missing Census data. Regions are delineated in gray; Alaska and Hawaii are part of the Western Region.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, “School District Financial Survey (Form F-33): School Year 1997–98” and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Local revenues per pupil showed a small negative relationship with minority enrollment for the United States as a whole, both before (-0.16) and after (-0.20) cost adjustments. Among the states, only Nevada showed a strong positive relationship between minority enrollment and local revenues per pupil after cost adjustments, and Rhode Island and Connecticut demonstrated a strong negative relationship (Connecticut only after cost adjustments) (figure 2-4). Nearly half of the states (18 before cost adjustments and 19 after) showed no significant relationship between minority enrollment and local revenues per pupil.

In contrast, local revenues per pupil showed a relatively larger negative relationship with the percent of school-age children in poverty in a district. The correlation between percent school-age children in poverty and local revenues per pupil was -0.39 before cost adjustments and -0.38 after cost adjustments. No states showed a positive relationship between children in poverty and local revenues per pupil, either before or after cost adjustments. All but four states with sufficient data showed a negative relationship before cost adjustments. Minnesota, Nevada, Tennessee, and Utah showed no significant relationship before cost adjustments, and Maine, Nebraska, and South Carolina joined them after cost adjustments (figure 2-5).

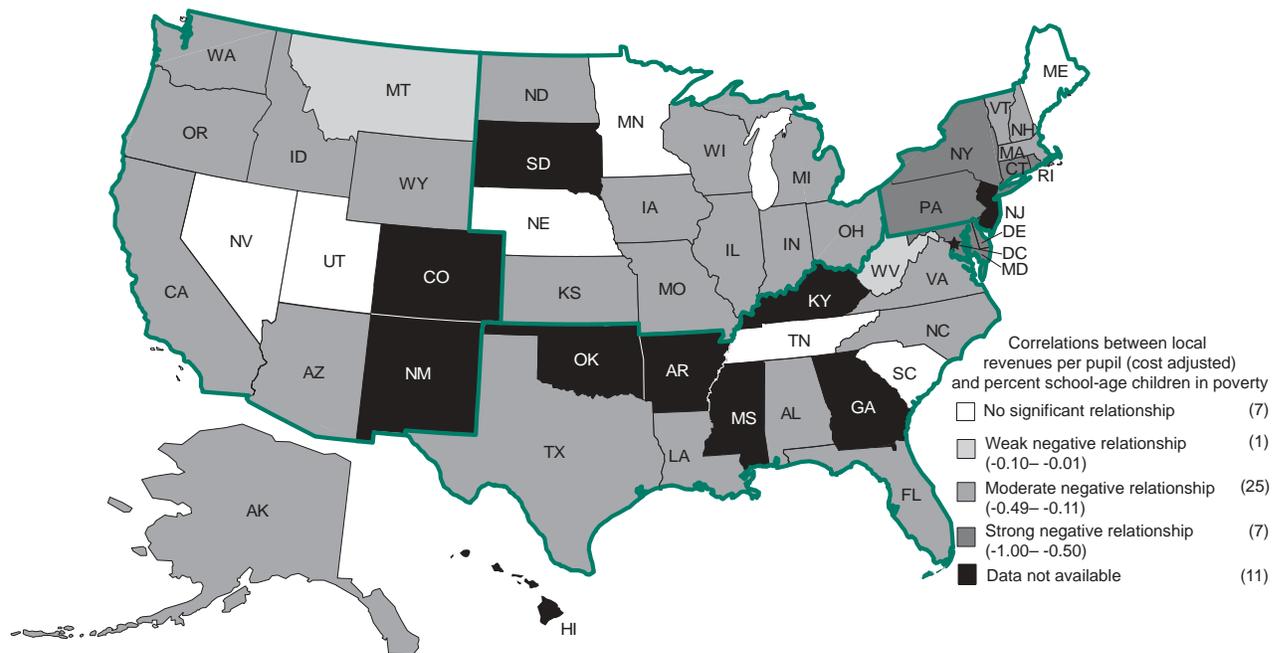
Figure 2-4. Correlations between local revenues per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98



NOTE: No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one district. Nine other states (Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota) were excluded from state-level correlation analysis because more than 50 percent of the school districts in the state were missing Census data. Regions are delineated in green; Alaska and Hawaii are part of the Western Region.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Figure 2-5. Correlations between local revenues per pupil and percent school-age children in poverty (cost-adjusted dollars), by state: 1997–98



NOTE: No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one district. Nine other states (Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota) were excluded from state-level correlation analysis because more than 50 percent of the school districts in the state were missing Census data. Regions are delineated in green; Alaska and Hawaii are part of the Western Region.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

## Local Property Tax Revenues

Local property tax revenues for public elementary and secondary education totaled \$93.2 billion in 1997–98 (table 2-6). This was just over 63 percent of local revenues (\$146.9 billion) in 1997–98.

Table 2-6. Local property tax revenues, cost-adjusted local property tax revenues, property tax revenues per pupil, and cost-adjusted property tax revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98

School district characteristics	Property tax revenues (in thousands)	Cost-adjusted property tax revenues (in thousands)	Property tax revenues per pupil	Cost-adjusted property tax revenues per pupil
All districts	\$93,202,869	\$91,791,089	\$2,042	\$2,018
Region				
Northeast	23,567,930	21,357,416	2,971	2,701
Midwest	28,369,662	28,639,339	2,671	2,710
South	24,221,398	25,726,765	1,470	1,562
West	17,043,879	16,067,569	1,607	1,523
District enrollment				
0–999	6,816,930	7,427,792	2,508	2,772
1,000–4,999	31,077,239	30,591,720	2,393	2,366
5,000–9,999	16,418,912	15,635,750	2,327	2,221
10,000 or more	38,889,788	38,135,828	1,700	1,669
Minority enrollment				
Less than 5 percent	26,042,386	26,588,580	2,306	2,356
5 percent–<20 percent	29,363,005	28,535,580	2,447	2,378
20 percent–<50 percent	22,847,253	22,522,040	1,780	1,755
50 percent or more	9,099,928	8,716,498	1,276	1,223
Data missing	5,850,297	5,428,391	—	—
School-age children in poverty				
Less than 5 percent	19,650,970	17,990,212	3,800	3,483
5 percent–<15 percent	32,498,259	32,194,973	2,099	2,079
15 percent–<25 percent	20,940,004	21,691,513	1,767	1,830
25 percent or more	14,263,339	14,486,001	1,326	1,347
Data missing	5,850,297	5,428,391	—	—
Median household income				
Less than \$20,000	3,899,480	4,313,864	1,127	1,246
\$20,000–<\$25,000	13,371,106	14,367,813	1,592	1,711
\$25,000–<\$30,000	19,667,734	20,254,967	1,755	1,807
\$30,000–<\$35,000	14,928,631	14,817,475	1,974	1,959
\$35,000 or more	35,485,621	32,608,579	2,809	2,583
Data missing	5,850,297	5,428,391	—	—
Median value owner-occupied housing				
Less than \$40,000	5,377,023	6,042,651	1,470	1,651
\$40,000–<\$55,000	12,328,917	13,286,166	1,575	1,697
\$55,000–<\$85,000	29,579,751	30,243,002	2,047	2,094
\$85,000 or more	40,066,881	36,790,880	2,313	2,124
Data missing	5,850,297	5,428,391	—	—

—Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

## Local Property Tax Revenues Per Pupil

Local property tax revenues per pupil in the United States averaged \$2,042 in 1997–98 before cost adjustments (table 2-6). Local property tax revenues per pupil were highest in the Northeast (\$2,971) and Midwest (\$2,671) and lowest in the South (\$1,470) and West (\$1,607). Cost adjustments decreased the difference between the highest and lowest regions from \$1,501 to \$1,187 and the ratio of revenues per pupil from 2.0 to 1.8 to 1. (Revenues per pupil in the highest region were twice those in the lowest

before cost adjustments, and 1.8 times as high after.) The Midwest (\$2,710) replaced the Northeast (\$2,701) as the region with the highest per-pupil revenues, and the West (\$1,523) replaced the South (\$1,562) as the region with lowest local property tax revenues per pupil.

Smaller districts tended to have higher local property tax revenues per pupil than larger districts, both before and after cost adjustments. Before cost adjustments, revenues per pupil averaged \$2,508 in districts with fewer than 1,000 students, compared to \$1,700 in districts with 10,000 or more students. After cost adjustments, smaller districts continued to have higher average local property tax revenues per pupil than larger districts. In addition, the difference between the smallest and the largest districts increased from \$808 to \$1,103 per pupil. Correlation analysis found a weak negative relationship between district enrollment and local property tax revenues per pupil, both before (-0.04) and after cost adjustments (-0.06) (tables A-1 and A-2).

Before cost adjustments, local property tax revenues per pupil showed a positive relationship with two measures of district wealth—median household income (+0.33) and owner-occupied housing value (+0.11) (table A-5). School districts with median household income at or above \$35,000 had average revenues per pupil of \$2,809, while districts with median household incomes below \$20,000 had revenues per pupil of \$1,127. Similarly, districts with median housing values at or above \$85,000 had average local property tax revenues of \$2,313 per pupil, while districts with median housing values below \$40,000 had revenues per pupil of \$1,470.

After cost adjustments, the differences decreased. Local property tax adjusted revenues per pupil became higher in districts with the lowest median household incomes (\$1,246 per pupil), and lower in districts with the highest incomes (\$2,583). Adjustments also raised property tax revenues per pupil in districts with the lowest median housing values (\$1,651) and lowered them in districts with the highest housing values (\$2,124). Correlation measures were weakened by cost adjustments. The correlation between cost-adjusted local property tax revenues per pupil and median household income was +0.26 and median value owner-occupied housing was +0.03 (table A-6).

Local property tax revenues per pupil showed a negative relationship with percent minority enrollment both before (-0.21) and after (-0.24) cost adjustments. Before cost adjustments, property tax revenues per pupil ranged from \$1,276, on average, in districts with 50 percent or higher minority enrollment to \$2,306 in districts with less than 5 percent minority. Cost adjustments increased the range, from \$1,223 in high-minority districts to \$2,356 in low-minority districts.

Local property tax revenues per pupil were also negatively correlated with district poverty, both before (-0.28) and after (-0.27) cost adjustments. Revenues per pupil were lowest in the highest-poverty districts and highest in the lowest-poverty districts—\$1,326 and \$3,800, respectively, before cost adjustments, and \$1,347 and \$3,483 respectively, after cost adjustments.

## Student Fees Revenues

Student fees for public elementary and secondary education totaled \$6.0 billion in 1997–98 (table 2-7). This was just over 4 percent of local revenues (\$146.9 billion) in 1997–98.

## Student Fees Per Pupil

Student fees per pupil in the United States averaged \$132 in 1997–98 before cost adjustments (table 2-7). Student fees per pupil were highest in the Midwest (\$166) and lowest in the West (\$99). At \$134,

Table 2-7. Student fees, cost-adjusted student fees, student fees per pupil, and cost-adjusted student fees per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98

School district characteristics	Student fees (in thousands)	Cost-adjusted student fees (in thousands)	Student fees per pupil	Cost-adjusted student fees per pupil
All districts	\$6,010,218	\$6,083,363	\$132	\$134
Region				
Northeast	976,126	889,265	123	112
Midwest	1,768,182	1,825,225	166	173
South	2,214,216	2,370,688	134	144
West	1,051,694	998,186	99	95
District enrollment				
0–999	346,535	387,434	127	145
1,000–4,999	1,919,588	1,972,713	148	153
5,000–9,999	1,027,974	1,022,030	146	145
10,000 or more	2,716,121	2,701,186	119	118
Minority enrollment				
Less than 5 percent	1,819,282	1,888,712	161	167
5 percent–<20 percent	1,899,448	1,903,439	158	159
20 percent–<50 percent	1,545,331	1,560,138	120	122
50 percent or more	441,944	430,526	62	60
Data missing	304,213	300,548	—	—
School-age children in poverty				
Less than 5 percent	977,092	915,058	189	177
5 percent–<15 percent	2,456,000	2,477,967	159	160
15 percent–<25 percent	1,517,407	1,606,769	128	136
25 percent or more	755,506	783,022	70	73
Data missing	304,213	300,548	—	—
Median household income				
Less than \$20,000	288,172	325,137	83	94
\$20,000–<\$25,000	960,350	1,047,272	114	125
\$25,000–<\$30,000	1,347,858	1,413,182	120	126
\$30,000–<\$35,000	998,459	1,008,757	132	133
\$35,000 or more	2,111,166	1,988,468	167	157
data missing	304,213	300,548	—	—
Median value owner-occupied housing				
Less than \$40,000	387,664	441,130	106	121
\$40,000–<\$55,000	987,772	1,080,899	126	138
\$55,000–<\$85,000	2,025,490	2,110,736	140	146
\$85,000 or more	2,305,079	2,150,050	133	124
Data missing	304,213	300,548	—	—

—Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, “School District Financial Survey (Form F-33): School Year 1997–98” and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

student fees per pupil were higher in the South than in the Northeast (\$123). The use of cost adjustments increased the range between the highest and lowest regions from \$67 to \$78 and the ratio of student fees revenues per pupil from 1.7 to 1.8 to 1. The Midwest (\$173) remained the region with the highest per pupil revenues, and the West (\$95) remained the region with lowest student fees per pupil.

Large districts tended to have the lowest student fees per pupil, both before and after cost adjustments. Before cost adjustments, revenues per pupil averaged \$119 in districts with 10,000 or more students, compared to \$127 in districts with less than 1,000 students and \$148 in districts with between 1,000 and 5,000 students. After cost adjustments, the difference became greater. Cost-adjusted revenues ranged from \$118 in the largest districts to \$145 and \$153 in districts with smaller enrollment. Correlation analysis found no significant relationship between district enrollment and student fees per pupil before cost adjustments and a weak negative relationship after cost adjustments (-0.02) (tables A-1 and A-2).

Before cost adjustments, student fees per pupil showed a positive relationship with median household income (+0.32) and a weak negative relationship with median value owner-occupied housing (-0.05) (table A-7). School districts with median household income at or above \$35,000 had average revenues per pupil of \$167, while districts with median household incomes below \$20,000 had revenues per pupil of \$83. Districts with median housing values at or above \$85,000 had average student fees of \$133 per pupil, while districts with median housing values below \$40,000 had revenues per pupil of \$106. Districts with median housing values between \$55,000 and \$85,000 had the highest student fees per pupil at \$140.

After cost adjustments, the differences decreased. Adjusted student fees per pupil became higher in districts with the lowest median household incomes (\$94), and lower in districts with the highest incomes (\$157). Adjustments also raised student fees per pupil in districts with the lowest median housing values (\$121) and lowered them in districts with the highest housing values (\$124). As expected, correlation measures between household income and student fees per pupil (+0.21) were weakened by cost adjustments, while median value owner-occupied housing showed a stronger negative relationship (-0.16) with adjusted student fees per pupil in correlation analysis (table A-8).

Student fees per pupil showed a negative relationship with percent minority enrollment both before (-0.46) and after (-0.48) cost adjustments. Before cost adjustments, student fees per pupil ranged from \$62 on average in districts with 50 percent or higher minority enrollments to \$161 in districts with less than 5 percent minority. Cost adjustments increased the range, from \$60 in high-minority districts to \$167 in low-minority districts.

Student fees per pupil were also negatively correlated with district poverty, both before (-0.52) and after (-0.47) cost adjustments. Revenues per pupil were lowest in the highest-poverty districts and highest in the lowest-poverty districts—\$70 and \$189, respectively, before cost adjustments, and \$73 and \$177, respectively, after cost adjustments.

## Variations in Student Fees Per Pupil

The restricted range ratio for unadjusted student fees per pupil ranged from 0.33 in Nevada to 14.19 in New Jersey (table 2-8).<sup>7</sup> The United States ratio was 10.60, with 4 states exceeding the national measure: Illinois, Michigan, New Jersey, and New York. After cost adjustments, the restricted range ratio ranged from 0.35 in Nevada to 15.28 in New Jersey (table 2-9).<sup>8</sup> The cost-adjusted United States ratio was 10.30, with Illinois, Michigan, New Jersey, and New York continuing to exceed the national measure.

The coefficient of variation for unadjusted student fees per pupil ranged from 0.13 in Nevada to 0.95 in Vermont. Nine states exceeded the national variation of 0.59: Alaska, California, Connecticut, Illinois, Montana, New Jersey, New York, Oregon, and Vermont. After cost adjustments, the coefficient of variation ranged from 0.13 in Nevada to 0.97 in Vermont. The cost-adjusted United States coefficient was 0.59, and the same nine states continued to exceed the national measure.

<sup>7</sup>The range in ratios is only presented for states in which ratios could be calculated. It excludes three states, Connecticut, Montana, and Vermont, which have infinite restricted range ratios.

<sup>8</sup>See footnote seven above.

Table 2-8. Variation in student fees per pupil (unadjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Average rank	Average quartile
	Value	Rank	Value	Rank	Value	Rank		
United States	10.60	†	0.59	†	0.31	†	†	†
Alabama	2.42	19	0.45	27	0.25	29	25.00	2
Alaska	7.05	40	0.82	44	0.27	34	39.33	4
Arizona	7.73	41	0.53	33	0.28	36	36.67	4
Arkansas	2.42	19	0.36	13	0.19	14	15.33	2
California	6.26	39	0.62	41	0.32	43	41.00	4
Colorado	4.31	32	0.53	33	0.28	36	33.67	3
Connecticut	(?)	(?)	0.83	45	0.47	48	46.50	4
Delaware	0.68	2	0.27	5	0.12	2	3.00	1
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	1.12	4	0.25	3	0.13	3	3.33	1
Georgia	5.37	37	0.41	21	0.22	21	26.33	3
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	1.46	7	0.36	13	0.18	12	10.67	1
Illinois	11.26	44	0.77	43	0.40	46	44.33	4
Indiana	4.78	35	0.36	13	0.19	14	20.67	2
Iowa	1.64	11	0.25	3	0.14	5	6.33	1
Kansas	1.60	10	0.29	6	0.17	9	8.33	1
Kentucky	2.30	18	0.37	19	0.20	17	18.00	2
Louisiana	2.05	14	0.55	36	0.24	25	25.00	2
Maine	2.44	21	0.50	31	0.23	24	25.33	2
Maryland	3.27	27	0.31	8	0.16	6	13.67	2
Massachusetts	2.92	24	0.53	33	0.25	29	28.67	3
Michigan	11.33	45	0.59	39	0.32	43	42.33	4
Minnesota	5.06	36	0.55	36	0.27	34	35.33	3
Mississippi	5.72	38	0.43	23	0.24	25	28.67	3
Missouri	4.27	30	0.59	39	0.29	38	35.67	3
Montana	(?)	(?)	0.94	47	0.48	49	48.00	4
Nebraska	1.75	13	0.36	13	0.20	17	14.33	2
Nevada	0.33	1	0.13	1	0.05	1	1.00	1
New Hampshire	1.45	6	0.35	12	0.18	12	10.00	1
New Jersey	14.19	46	0.65	42	0.30	40	42.67	4
New Mexico	9.46	42	0.51	32	0.29	38	37.33	4
New York	10.73	43	0.88	46	0.45	47	45.33	4
North Carolina	1.59	9	0.33	11	0.16	6	8.67	1
North Dakota	3.23	26	0.36	13	0.20	17	18.67	2
Ohio	2.17	16	0.41	21	0.21	20	19.00	2
Oklahoma	4.48	34	0.49	29	0.25	29	30.67	3
Oregon	2.17	16	0.94	47	0.30	40	34.33	3
Pennsylvania	2.93	25	0.38	20	0.22	21	22.00	2
Rhode Island	4.16	29	0.44	26	0.24	25	26.67	3
South Carolina	1.73	12	0.36	13	0.19	14	13.00	2
South Dakota	2.16	15	0.31	8	0.17	9	10.67	1
Tennessee	2.84	23	0.49	29	0.25	29	27.00	3
Texas	4.30	31	0.47	28	0.26	33	30.67	3
Utah	0.91	3	0.23	2	0.13	3	2.67	1
Vermont	(?)	(?)	0.95	49	0.39	45	47.00	4
Virginia	1.54	8	0.29	6	0.16	6	6.67	1
Washington	2.81	22	0.43	23	0.22	21	22.00	2
West Virginia	4.47	33	0.57	38	0.31	42	37.67	4
Wisconsin	3.84	28	0.43	23	0.24	25	25.33	2
Wyoming	1.37	5	0.31	8	0.17	9	7.33	1

†Not applicable.

<sup>1</sup>Variation is not measured in the District of Columbia or Hawaii where there is only one school district.

<sup>2</sup>The restricted range ratio could not be calculated for student fees per pupil in Connecticut, Montana, or Vermont because the fifth percentile—by which the difference is divided—was equal to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, “School District Financial Survey (Form F-33): School Year 1997–98.”

Table 2-9. Variation in student fees per pupil (cost-adjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Average rank	Average quartile
	Value	Rank	Value	Rank	Value	Rank		
United States	10.30	†	0.59	†	0.31	†	†	†
Alabama	2.64	21	0.43	24	0.24	25	23.33	2
Alaska	6.44	40	0.82	44	0.26	34	39.33	4
Arizona	6.84	41	0.52	34	0.27	36	37.00	4
Arkansas	2.24	18	0.36	16	0.19	15	16.33	2
California	6.01	39	0.62	41	0.32	44	41.33	4
Colorado	4.12	30	0.51	32	0.27	36	32.67	3
Connecticut	(?)	(?)	0.83	45	0.47	48	46.50	4
Delaware	0.71	2	0.29	7	0.13	2	3.67	1
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	1.08	4	0.25	3	0.13	2	3.00	1
Georgia	5.58	36	0.38	19	0.21	20	25.00	2
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	1.55	10	0.35	13	0.17	10	11.00	1
Illinois	11.83	45	0.75	43	0.40	46	44.67	4
Indiana	5.32	35	0.35	13	0.19	15	21.00	2
Iowa	1.78	13	0.25	3	0.14	5	7.00	1
Kansas	1.65	11	0.28	6	0.16	7	8.00	1
Kentucky	2.14	17	0.38	19	0.20	18	18.00	2
Louisiana	1.90	14	0.55	37	0.24	25	25.33	2
Maine	2.79	24	0.51	32	0.23	24	26.67	3
Maryland	3.37	28	0.31	8	0.16	7	14.33	2
Massachusetts	3.02	26	0.54	36	0.25	30	30.67	3
Michigan	11.38	44	0.56	39	0.30	41	41.33	4
Minnesota	5.95	38	0.52	34	0.25	30	34.00	3
Mississippi	5.78	37	0.43	24	0.24	25	28.67	3
Missouri	3.29	27	0.55	37	0.27	36	33.33	3
Montana	(?)	(?)	0.95	48	0.48	49	48.50	4
Nebraska	1.73	12	0.38	19	0.21	20	17.00	2
Nevada	0.35	1	0.13	1	0.04	1	1.00	1
New Hampshire	1.41	7	0.36	16	0.18	12	11.67	1
New Jersey	15.28	46	0.68	42	0.31	42	43.33	4
New Mexico	9.04	42	0.50	31	0.27	36	36.33	4
New York	11.12	43	0.86	46	0.45	47	45.33	4
North Carolina	1.51	8	0.32	10	0.16	7	8.33	1
North Dakota	2.86	25	0.35	13	0.19	15	17.67	2
Ohio	2.32	19	0.40	22	0.20	18	19.67	2
Oklahoma	4.46	33	0.48	29	0.24	25	29.00	3
Oregon	1.96	15	0.94	47	0.29	40	34.00	3
Pennsylvania	2.78	23	0.37	18	0.21	20	20.33	2
Rhode Island	4.58	34	0.45	27	0.25	30	30.33	3
South Carolina	1.54	9	0.34	12	0.18	12	11.00	1
South Dakota	2.04	16	0.32	10	0.18	12	12.67	2
Tennessee	2.73	22	0.49	30	0.25	30	27.33	3
Texas	3.85	29	0.47	28	0.26	34	30.33	3
Utah	0.90	3	0.23	2	0.13	2	2.33	1
Vermont	(?)	(?)	0.97	49	0.38	45	47.00	4
Virginia	1.32	5	0.27	5	0.15	6	5.33	1
Washington	2.47	20	0.40	22	0.21	20	20.67	2
West Virginia	4.41	32	0.56	39	0.31	42	37.67	4
Wisconsin	4.32	31	0.44	26	0.24	25	27.33	3
Wyoming	1.40	6	0.31	8	0.17	10	8.00	1

†Not applicable.

!Variation is not measured in the District of Columbia or Hawaii where there is only one school district.

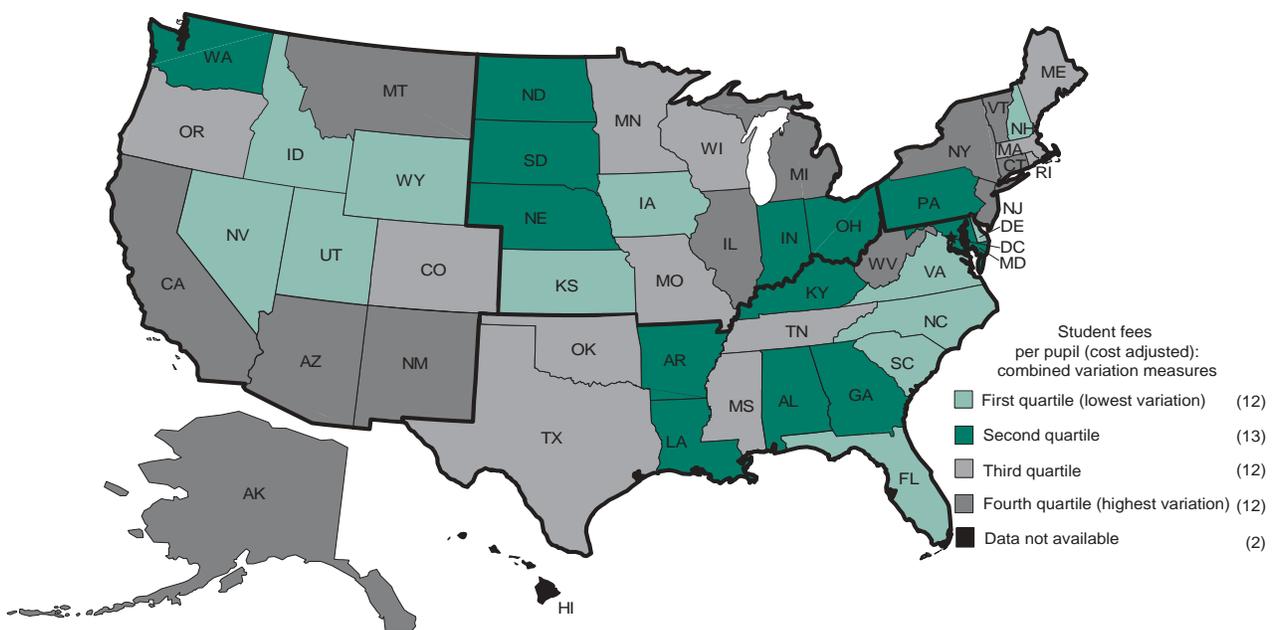
?The restricted range ratio could not be calculated for student fees per pupil in Connecticut, Montana, or Vermont because the fifth percentile—by which the difference is divided—was equal to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

Before cost adjustments, the Gini coefficient for student fees per pupil ranged from 0.05 in Nevada to 0.48 in Montana. The unadjusted coefficient for the United States was 0.31, with seven states exceeding the national measure: California, Connecticut, Illinois, Michigan, Montana, New York, and Vermont. After cost adjustments, the coefficient ranged from 0.04 in Nevada to 0.48 in Montana. The national Gini coefficient was again 0.31 after cost adjustments. Michigan no longer had an adjusted variation greater than the national measure.

In a composite of the three variation measures, states in the South had relatively low variation, while states in the Northeast had higher variation in cost-adjusted student fees per pupil (figure 2-6). After cost adjustments, 78 percent of states in the Northeast were in the bottom two quartiles when ranked with states across the country (table 2-10). In contrast, 69 percent of states in the South were in the two quartiles with lowest variation.

Figure 2-6. Synthesis of variation measures of student fees per pupil (cost-adjusted dollars), by state: 1997–98



NOTE: Variation is not measured in the District of Columbia or Hawaii where there is only one school district. Regions are delineated in black; Alaska and Hawaii are part of the Western Region.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

Table 2-10. Variation in student fees per pupil, by region: 1997–98

Region	Percent of states in quartiles 1 and 2 (low variation)	Percent of states in quartiles 3 and 4 (high variation)
<b>Unadjusted student fees per pupil</b>		
Northeast	33	67
Midwest	67	33
South	63	38
West	42	58
<b>Cost-adjusted student fees per pupil</b>		
Northeast	22	78
Midwest	58	42
South	69	31
West	42	58

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

## Relationship between Student Fees Per Pupil and Selected District Fiscal and Demographic Characteristics

For the majority of the states, student fees per pupil showed a positive relationship with two measures of district fiscal capacity—median value owner-occupied housing and median household income—both before and after cost adjustments (tables A-7 and A-8). For the United States as a whole, the relationship between median household income and student fees per pupil was also positive (+0.32 unadjusted, +0.21 adjusted). However, correlation analysis found a weak negative relationship between student fees per pupil and owner-occupied housing value before cost adjustments (-0.05), and a moderate negative relationship nationally after cost adjustments (-0.16). Before cost adjustments, 10 states—Alaska, Connecticut, Delaware, Florida, Maine, Montana, Nevada, New Hampshire, New York, and Vermont—showed no significant relationship between student fees per pupil and owner-occupied housing value (table 2-11). The remaining 30 states with sufficient data showed a positive relationship between these two variables, with 14 of those states showing a strong positive relationship. After cost adjustments, only Arizona, Maryland, Michigan, Rhode Island, and Washington showed a strong positive relationship. Tennessee joined those states with no significant relationship, and New York showed a moderate negative relationship.

Similarly, 33 states demonstrated a positive relationship between unadjusted student fees per pupil and median household income. No states demonstrated a negative relationship, and 7 states—Delaware, Maine, Massachusetts, Nevada, New Hampshire, Tennessee, and Vermont—showed no significant relationship between revenues per pupil and income. After cost adjustments, the same 7 states showed no significant relationship. Whereas there were 19 states with a strong positive relationship before cost adjustments, after cost adjustments there were 13—Indiana, Kansas, New York, Pennsylvania, Virginia, and Wyoming all decreased to a moderate positive relationship after cost adjustments.

For the United States as a whole, a negative relationship was found between student fees per pupil and percent minority enrollment, both before (-0.46) and after (-0.48) cost adjustments. Before cost adjustments, no significant relationship was found in Delaware, Florida, Maine, Maryland, Massachusetts, Vermont, or West Virginia (table 2-11). Eleven states showed a strong negative relationship, while 22 states showed a moderate negative relationship between percent minority enrollment and unadjusted student fees per pupil. After cost adjustments were applied, the same seven states showed no significant relationship. Twelve states showed a strong, negative relationship between adjusted student fees per pupil and percent minority enrollment, and 21 states showed a moderate negative relationship between these two variables.

Percent school-age children in poverty was also negatively correlated with student fees per pupil, both before (-0.52) and after (-0.47) cost adjustments and in nearly all the states. No states showed a positive correlation between the variables either before or after cost adjustments. Before cost adjustments, 7 states did not show a negative relationship: in Alaska, Delaware, Maine, Massachusetts, Nevada, New Hampshire, and Vermont there was no significant relationship between revenues per pupil and school-age children in poverty. After cost adjustments, the same seven states continued to show no relationship.

Table 2-11. Correlations between student fees per pupil and selected fiscal and demographic characteristics, by state: 1997–98

Characteristics	States (before cost adjustments)	States (after cost adjustments)
<b>Minority enrollment</b>		
Strong positive relationship	[none]	[none]
Moderate positive relationship	[none]	[none]
Weak positive relationship	[none]	[none]
Weak negative relationship	[none]	[none]
Moderate negative relationship	Alaska, Arizona, California, Connecticut, Idaho, Iowa, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Ohio, Oregon, Tennessee, Texas, Utah, Virginia, Washington, Wyoming, <i>US overall</i>	Alaska, Arizona, California, Connecticut, Idaho, Iowa, Louisiana, Minnesota, Missouri, Montana, Nevada, <sup>1</sup> New Hampshire, North Carolina, North Dakota, Ohio, Oregon, Tennessee, Utah, Virginia, Washington, Wyoming, <i>US overall</i>
Strong negative relationship	Alabama, Illinois, Indiana, Kansas, Michigan, Nevada, New York, Pennsylvania, Rhode Island, South Carolina, Wisconsin	Alabama, Illinois, Indiana, Kansas, Michigan, Nebraska, <sup>1</sup> New York, Pennsylvania, Rhode Island, South Carolina, Texas, <sup>1</sup> Wisconsin
No significant relationship	Delaware, Florida, Maine, Maryland, Massachusetts, Vermont, West Virginia	Delaware, Florida, Maine, Maryland, Massachusetts, Vermont, West Virginia
<b>School-age children in poverty</b>		
Strong positive relationship	[none]	[none]
Moderate positive relationship	[none]	[none]
Weak positive relationship	[none]	[none]
Weak negative relationship	[none]	[none]
Moderate negative relationship	Connecticut, Florida, Idaho, Iowa, Missouri, Montana, North Dakota, Oregon, Tennessee, West Virginia	California, <sup>1</sup> Connecticut, Florida, Idaho, Iowa, Missouri, Montana, Nebraska, <sup>1</sup> North Carolina, <sup>1</sup> North Dakota, Oregon, Tennessee, Virginia, <sup>1</sup> West Virginia, <i>US overall</i> <sup>1</sup>
Strong negative relationship	Alabama, Arizona, California, Illinois, Indiana, Kansas, Louisiana, Maryland, Michigan, Minnesota, Nebraska, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Virginia, Washington, Wisconsin, Wyoming, <i>US overall</i>	Alabama, Arizona, Illinois, Indiana, Kansas, Louisiana, Maryland, Michigan, Minnesota, New York, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Washington, Wisconsin, Wyoming
No significant relationship	Alaska, Delaware, Maine, Massachusetts, Nevada, New Hampshire, Vermont	Alaska, Delaware, Maine, Massachusetts, Nevada, New Hampshire, Vermont
<b>Median household income</b>		
Strong positive relationship	Alabama, Arizona, Indiana, Kansas, Louisiana, Maryland, Michigan, Minnesota, New York, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Virginia, Washington, West Virginia, Wyoming	Alabama, Arizona, Louisiana, Maryland, Michigan, Minnesota, Ohio, Rhode Island, South Carolina, Texas, Utah, Washington, West Virginia
Moderate positive relationship	Alaska, California, Connecticut, Florida, Idaho, Illinois, Iowa, Missouri, Montana, Nebraska, North Carolina, North Dakota, Oregon, Wisconsin, <i>US overall</i>	Alaska, California, Connecticut, Florida, Idaho, Illinois, Indiana, <sup>1</sup> Iowa, Kansas, <sup>1</sup> Missouri, Montana, Nebraska, New York, <sup>1</sup> North Carolina, North Dakota, Oregon, Pennsylvania, <sup>1</sup> Virginia, <sup>1</sup> Wisconsin, Wyoming, <sup>1</sup> <i>US overall</i>
Weak positive relationship	[none]	[none]
Weak negative relationship	[none]	[none]
Moderate negative relationship	[none]	[none]
Strong negative relationship	[none]	[none]
No significant relationship	Delaware, Maine, Massachusetts, Nevada, New Hampshire, Tennessee, Vermont	Delaware, Maine, Massachusetts, Nevada, New Hampshire, Tennessee, Vermont
<b>Median Value Owner-Occupied Housing</b>		
Strong positive relationship	Arizona, Indiana, Kansas, Maryland, Michigan, Minnesota, Ohio, Pennsylvania, Rhode Island, Texas, Utah, Virginia, Washington, West Virginia	Arizona, Maryland, Michigan, Rhode Island, Washington
Moderate positive relationship	Alabama, California, Idaho, Illinois, Iowa, Louisiana, Massachusetts, Missouri, Nebraska, North Carolina, North Dakota, Oregon, South Carolina, Tennessee, Wisconsin, Wyoming	Alabama, California, Idaho, Illinois, Indiana, <sup>1</sup> Iowa, Kansas, <sup>1</sup> Louisiana, Massachusetts, Minnesota, <sup>1</sup> Missouri, North Carolina, North Dakota, Ohio, <sup>1</sup> Oregon, Pennsylvania, <sup>1</sup> South Carolina, Texas, <sup>1</sup> Utah, <sup>1</sup> Virginia, <sup>1</sup> West Virginia, <sup>1</sup> Wisconsin, Wyoming, Nebraska <sup>1</sup>
Weak positive relationship	[none]	[none]
Weak negative relationship	[none]	[none]
Moderate negative relationship	[none]	New York, <sup>1</sup> <i>US overall</i> <sup>1</sup>
Strong negative relationship	[none]	[none]
No significant relationship	Alaska, Connecticut, Delaware, Florida, Maine, Montana, Nevada, New Hampshire, New York, Vermont, <i>US overall</i>	Alaska, Connecticut, Delaware, Florida, Maine, Montana, Nevada, New Hampshire, Tennessee, <sup>1</sup> Vermont

Table 2-11. Correlations between student fees per pupil and selected fiscal and demographic characteristics, by state: 1997–98—Continued

Characteristics	States (before cost adjustments)	States (after cost adjustments)
<b>Student membership</b>		
Strong positive relationship	[none]	[none]
Moderate positive relationship	Arkansas, Colorado, Georgia, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, Vermont, Washington, West Virginia	Colorado, Mississippi, Vermont, West Virginia
Weak positive relationship	Michigan	Nebraska, <sup>1</sup> Oklahoma <sup>1</sup>
Weak negative relationship	New Jersey	<i>US overall</i> <sup>1</sup>
Moderate negative relationship	Indiana, Rhode Island	Indiana, Iowa, <sup>1</sup> New Jersey, <sup>1</sup> Pennsylvania, <sup>1</sup> Rhode Island, Wisconsin <sup>1</sup>
Strong negative relationship	Delaware	Delaware
No significant relationship	Alabama, Alaska, Arizona, California, Connecticut, Florida, Idaho, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Montana, Nevada, New Hampshire, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, Wyoming, <i>US overall</i>	Alabama, Alaska, Arizona, Arkansas, <sup>1</sup> California, Connecticut, Florida, Georgia, <sup>1</sup> Idaho, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, <sup>1</sup> Minnesota, <sup>1</sup> Missouri, <sup>1</sup> Montana, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, <sup>1</sup> Ohio, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, <sup>1</sup> Wyoming

<sup>1</sup>State changed categories after cost adjustments.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

## Local Revenues as a Percent of Total Revenues

Local revenues were just under 46 percent of total district revenues for public elementary and secondary education in the United States in 1997–98. Local revenues were the second-largest source of funds for public education, following state revenues (48 percent) and before federal revenues (6 percent).<sup>9</sup>

### Variations in Local Revenues as a Percent of Total Revenues

The restricted range ratio was 3.80 for percent local revenues across the United States (table 2-12). Among the states, the ratio ranged from a low of 0.34 in New Hampshire to a high of 7.04 in Alaska. Four states—Alaska, Massachusetts, New Jersey, and Texas—had a higher restricted range ratio than the national measure.

The coefficient of variation ranged from 0.09 in New Hampshire to 0.54 in Wyoming. Only Wyoming had greater variation than the national level of 0.44.

The smallest Gini coefficient was found in two states: Nevada and New Hampshire both had a Gini coefficient of 0.05. Wyoming again had the highest variation at 0.29. Again, only Wyoming exceeded the national measure of 0.25.

### Relationship between Percent Local Revenues and Selected District Fiscal and Demographic Characteristics

For the United States as a whole and for nearly all states with sufficient data, percent local revenues showed a positive relationship with both measures of district fiscal capacity—median value owner-occupied housing (+0.27) and median household income (+0.52) (table A-9). All 40 states with sufficient data except Nebraska showed a positive relationship between percent local revenues and median value owner-occupied housing, with 33 states demonstrating a strong positive correlation (table 2-13).

<sup>9</sup>Because percent local revenues is a proportion and not a dollar amount, cost adjustments are not used in this section.

Table 2-12. Variation in percent local revenues, by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Average rank	Average quartile
	Value	Rank	Value	Rank	Value	Rank		
United States	3.80	†	0.44	†	0.25	†	†	†
Alabama	1.38	13	0.32	31	0.17	22	22.00	2
Alaska	7.04	49	0.37	37	0.18	32	39.33	4
Arizona	3.05	43	0.34	34	0.19	36	37.67	4
Arkansas	2.15	34	0.37	37	0.20	38	36.33	3
California	2.82	41	0.43	44	0.23	42	42.33	4
Colorado	1.73	21	0.28	19	0.16	20	20.00	2
Connecticut	3.49	45	0.40	40	0.23	42	42.33	4
Delaware	2.13	32	0.32	31	0.17	22	28.33	3
District of Columbia	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Florida	1.27	11	0.27	15	0.15	13	13.00	2
Georgia	2.05	29	0.31	28	0.18	32	29.67	3
Hawaii	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Idaho	2.09	30	0.40	40	0.21	40	36.67	3
Illinois	1.85	25	0.31	28	0.17	22	25.00	3
Indiana	1.11	6	0.21	4	0.12	7	5.67	1
Iowa	0.73	2	0.16	3	0.09	3	2.67	1
Kansas	2.61	39	0.42	43	0.21	40	40.67	4
Kentucky	3.22	44	0.41	42	0.23	42	42.67	4
Louisiana	1.98	27	0.27	15	0.15	13	18.33	2
Maine	1.71	20	0.30	23	0.17	22	21.67	2
Maryland	1.78	23	0.26	11	0.14	10	14.67	2
Massachusetts	5.79	48	0.43	44	0.24	45	45.67	4
Michigan	2.76	40	0.44	47	0.24	45	44.00	4
Minnesota	2.14	33	0.35	36	0.18	32	33.67	3
Mississippi	1.56	19	0.28	19	0.16	20	19.33	2
Missouri	1.24	7	0.26	11	0.15	13	10.33	1
Montana	1.55	18	0.23	7	0.12	7	10.67	1
Nebraska	1.26	9	0.21	4	0.11	5	6.00	1
Nevada	0.78	4	0.15	2	0.05	1	2.33	1
New Hampshire	0.34	1	0.09	1	0.05	1	1.00	1
New Jersey	4.76	46	0.44	47	0.25	47	46.67	4
New Mexico	2.10	31	0.30	23	0.17	22	25.33	3
New York	2.23	36	0.31	28	0.17	22	28.67	3
North Carolina	1.43	14	0.27	15	0.15	13	14.00	2
North Dakota	0.77	3	0.21	4	0.10	4	3.67	1
Ohio	1.86	26	0.30	23	0.17	22	23.67	3
Oklahoma	2.04	28	0.34	34	0.19	36	32.67	3
Oregon	1.48	15	0.28	19	0.15	13	15.67	2
Pennsylvania	1.53	17	0.29	22	0.17	22	20.33	2
Rhode Island	2.18	35	0.33	33	0.18	32	33.33	3
South Carolina	1.27	11	0.24	8	0.13	9	9.33	1
South Dakota	2.46	38	0.27	15	0.14	10	21.00	2
Tennessee	1.49	16	0.26	11	0.15	13	13.33	2
Texas	4.79	47	0.43	44	0.25	47	46.00	4
Utah	0.96	5	0.24	8	0.11	5	6.00	1
Vermont	1.24	7	0.26	11	0.15	13	10.33	1
Virginia	1.26	9	0.24	8	0.14	10	9.00	1
Washington	1.73	21	0.30	23	0.17	22	22.00	2
West Virginia	1.84	24	0.30	23	0.17	22	23.00	3
Wisconsin	2.23	36	0.37	37	0.20	38	37.00	3
Wyoming	2.97	42	0.54	49	0.29	49	46.67	4

†Not applicable.

<sup>1</sup>Variation is not measured in the District of Columbia or Hawaii where there is only one school district.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98."

Table 2-13. Correlations between percent local revenues and selected fiscal and demographic characteristics, by state: 1997–98

Characteristics	States
<b>Minority enrollment</b>	
Strong positive relationship	Nevada
Moderate positive relationship	Maine, Tennessee, West Virginia
Weak positive relationship	[none]
Weak negative relationship	[none]
Moderate negative relationship	Alabama, Arizona, California, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, Missouri, Nebraska, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Virginia, Washington, Wisconsin, <i>US overall</i>
Strong negative relationship	Alaska, Connecticut, Maryland, Montana, North Dakota, Rhode Island
No significant relationship	Delaware, Louisiana, Minnesota, New Hampshire, Oregon, Texas, Utah, Vermont, Wyoming
<b>School-age children in poverty</b>	
Strong positive relationship	[none]
Moderate positive relationship	[none]
Weak positive relationship	[none]
Weak negative relationship	[none]
Moderate negative relationship	Florida, Idaho, Kansas, Maine, Michigan, Minnesota, Nebraska, New Hampshire, Oregon, South Carolina, Vermont, <i>US overall</i>
Strong negative relationship	Alabama, Alaska, Arizona, California, Connecticut, Delaware, Illinois, Indiana, Iowa, Louisiana, Maryland, Massachusetts, Missouri, Montana, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Rhode Island, Texas, Virginia, Washington, West Virginia, Wisconsin, Wyoming
No significant relationship	Nevada, Tennessee, Utah
<b>Median household income</b>	
Strong positive relationship	Alabama, Alaska, California, Connecticut, Delaware, Florida, Illinois, Indiana, Kansas, Louisiana, Maryland, Massachusetts, Minnesota, Missouri, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Texas, Virginia, Washington, West Virginia, Wisconsin, Wyoming, <i>US overall</i>
Moderate positive relationship	Arizona, Idaho, Iowa, Maine, Michigan, Montana, North Dakota, Oregon, South Carolina, Tennessee, Vermont
Weak positive relationship	[none]
Weak negative relationship	[none]
Moderate negative relationship	[none]
Strong negative relationship	[none]
No significant relationship	Nebraska, Nevada, Utah
<b>Median value owner-occupied housing</b>	
Strong positive relationship	Alabama, Alaska, Arizona, Connecticut, Delaware, Florida, Idaho, Illinois, Indiana, Kansas, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nevada, New Hampshire, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, Wisconsin
Moderate positive relationship	California, Iowa, Montana, North Dakota, Utah, Wyoming, <i>US overall</i>
Weak positive relationship	[none]
Weak negative relationship	[none]
Moderate negative relationship	[none]
Strong negative relationship	[none]
No significant relationship	Nebraska

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, "School District Financial Survey (Form F-33): School Year 1997–98" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Nebraska demonstrated no significant relationship. Only three states did not show a positive relationship between percent local revenues and median household income: Nebraska, Nevada, and Utah showed no significant relationship.

A moderate negative relationship (-0.24) was found between percent local revenues and percent minority enrollment. Twenty-seven of the 40 states with sufficient data showed a negative relationship. Nine states showed no significant relationship, while Maine, Nevada, Tennessee, and West Virginia showed a positive relationship between percent local revenues and percent minority enrollment.

The relationship between percent local revenues and percent school-age children in poverty (-0.48) was relatively larger than that between percent local revenues and percent minority enrollment, both at the national level and among the states. Twenty-six states with sufficient data showed a strong negative relationship between percent poverty and percent local revenues, while 11 states showed a moderate

negative relationship. No states demonstrated a positive relationship between percent poverty and percent local revenues. Three states—Nevada, Tennessee, and Utah—demonstrated no significant relationship.