

Chapter 5: Summary Of Findings

This report examined school district expenditures for elementary and secondary education during the 1997–98 school year. Separate chapters were devoted to total education expenditures, current expenditures, and the major functions within current expenditures. This chapter synthesizes the material presented previously and highlights the key findings of the report.

National Findings on Education Expenditures

School district expenditures for elementary and secondary education totaled \$326.8 billion in 1997–98 (table 2-1). The largest share of total school expenditures went to current expenses—\$274.9 billion, or 84.1 percent of the total (table 3-1). Capital expenditures made up 10.8 percent of total district expenditures—\$35.4 billion. The remaining \$16.5 billion were used for nonelementary or nonsecondary programs and expenditures by local education agencies (NCES 1998).

Regional Differences in School District Expenditures Per Pupil

Unadjusted expenditures per pupil for education were consistently highest in the Northeast (table 5-1). Cost-adjusted expenditures were highest in the Northeast for all expenditure measures except for administration, which was higher in the Midwest. With the exception of expenditures for plant maintenance and operation, which were lowest in the South, expenditures per pupil for all other education functions were consistently lowest in the West. In unadjusted dollars, however, the differences in expenditures per pupil between the West and the South were generally small. Unadjusted instructional expenditures per pupil, for example, averaged \$3,302 in the West and \$3,310 in the South (table 4-1). In cost-adjusted dollars, the differences between the two regions were larger.

Differences in Expenditures Per Pupil in Districts of Different Size

Expenditures per pupil for most school functions were generally highest in small school districts and lowest in large districts (table 5-2). In unadjusted dollars, expenditures per pupil were highest in districts with fewer than 1,000 students for most functions. In cost-adjusted dollars, these smallest districts had the highest expenditures per pupil for all functions except student and instructional staff support services. This was the one function for which expenditures per pupil were highest in the largest districts (10,000 or more students) and lowest in the smallest districts (fewer than 1,000 students).

It should be noted, however, that unadjusted expenditures per pupil for salaries and fringe benefits differed from the general pattern. In contrast with expenditures for educational functions, expenditures per pupil for salaries and fringe benefits combined were highest in larger school districts (between 5,000 and 9,999 students) and lowest in the smallest districts (fewer than 1,000 students). A possible explanation for this finding might be that average teacher salaries, which tend to be higher in larger school districts than smaller school districts (Henke et al. 1996), would more than offset the effect of

Table 5-1. Regional differences in school district expenditures per pupil: 1997–98

Characteristics	Instructional expenditures per pupil	Student and instructional staff support services per pupil	Administration per pupil	School operations per pupil	Salaries expenditures per pupil	Salaries and benefits expenditures per pupil	Current expenditures per pupil	Total expenditures per pupil
Unadjusted dollars								
Highest region	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast	Northeast
Lowest region	West	West	West	South	West	West	West	West
Cost-adjusted dollars								
Highest region	Northeast	Northeast	Midwest	Northeast	Northeast	Northeast	Northeast	Northeast
Lowest region	West	West	West	South	West	West	West	West

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

Table 5-2. School district expenditures, by district size: 1997–98

Characteristics	Instructional expenditures per pupil	Student and instructional staff support services per pupil	Administration per pupil	School operations per pupil	Salaries expenditures per pupil	Salaries and benefits expenditures per pupil	Current expenditures per pupil	Total expenditures per pupil
Unadjusted dollars								
Highest group	0–999	10,000 & over	0–999	0–999	5,000–9,999	5,000–9,999	0–999	0–999
Lowest group	10,000 & over	0–999	5,000–9,999	10,000 & over	10,000 & over	0–999	10,000 & over	10,000 & over
Cost-adjusted dollars								
Highest group	0–999	10,000 & over	0–999	0–999	0–999	0–999	0–999	0–999
Lowest group	10,000 & over	0–999	5,000–9,999	10,000 & over	10,000 & over	10,000 & over	10,000 & over	10,000 & over

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

smaller average pupil/staff ratios in smaller school districts on per-pupil expenditures. It should also be noted though that, with cost adjustments to expenditures, expenditures per pupil for salaries and benefits combined revert to the general pattern: expenditures per pupil are highest in the smallest districts and lowest in the largest districts.

Variation in Expenditures Per Pupil Across School Districts

Three different statistics were used to measure the extent of variation in expenditures per pupil in school districts across the nation: the restricted range ratio, the coefficient of variation, and the Gini coefficient. Table 5-3 summarizes variation in current expenditures, expenditures for different education functions, and total expenditures per pupil in both unadjusted and cost-adjusted dollars.

The variation in current expenditures per pupil was smallest on all three measures used in this analysis—1.04 on the restricted range ratio, 0.25 on the coefficient of variation, and 0.13 on the Gini coefficient (table 5-3). Variation in expenditures per pupil was also relatively small on four other measures of spending: instructional expenditures per pupil, salaries expenditures per pupil, salaries and benefits expenditures per pupil, and total expenditures per pupil. In contrast, variation in expenditures per pupil was largest in the area of student and instructional staff support services. The other two functions with relatively large variation in expenditures per pupil were administration and plant maintenance and operations.

Table 5-3. Variation in school district expenditures per pupil: 1997–98

Variation measure	Instructional expenditures per pupil	Student and instructional staff support services per pupil	Administration per pupil	School operations per pupil	Salaries expenditures per pupil	Salaries and benefits expenditures per pupil	Current expenditures per pupil	Total expenditures per pupil
Unadjusted dollars								
Restricted range ratio	1.19	3.91	2.09	2.03	1.08	1.10	1.04	1.16
Coefficient of variation	0.27	0.47	0.40	0.39	0.26	0.26	0.25	0.27
Gini coefficient	0.14	0.25	0.19	0.20	0.13	0.13	0.13	0.14
Cost-adjusted dollars								
Restricted range ratio	0.97	3.12	1.76	1.80	0.90	0.91	0.91	1.00
Coefficient of variation	0.22	0.43	0.38	0.35	0.21	0.21	0.21	0.24
Gini coefficient	0.12	0.23	0.18	0.18	0.11	0.11	0.11	0.12

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

Cost adjustments to expenditures generally reduced the variation in per-pupil spending, but the patterns were similar to those described above for unadjusted expenditures. The variation in expenditures per pupil was smallest on three measures of spending—salaries expenditures, salaries and benefits expenditures, and current expenditures—and relatively small on instructional expenditures and total expenditures per pupil. Variation was largest on student and instructional staff support services, followed by administration, and plant maintenance operations expenditures per pupil.

Relationship Between School District Fiscal and Demographic Characteristics and Expenditures Per Pupil

School District Wealth

In unadjusted dollars, the two measures of district wealth used in the analysis—median household income and median housing value—consistently showed weak to moderate positive relationships with all expenditure measures used in this analysis (table 5-4). For median household income, the correlations ranged from +0.16 for administration expenditures per pupil to +0.31 for salaries and benefits expenditures per pupil. For median housing value, the correlations ranged from +0.09 for administration expenditures per pupil to +0.35 for instructional expenditures per pupil. With cost-adjustments to expenditures, however, the positive relationship between district wealth and all measures of expenditure was reduced substantially or became statistically insignificant. Nationally, there were weak or statistically insignificant relationships between school district wealth and all measures of expenditures per pupil except for median housing value and administration expenditures per pupil, which had a moderate negative relationship (-0.11).

School District Minority Enrollment and Poverty Rate

In unadjusted dollars, minority enrollment showed moderate positive relationships with three measures of education spending (student and instructional staff support services, salaries, and current expenditures per pupil) and a weak relationship with five other measures (instruction, administration, plant maintenance and operations, salaries and employee benefits, and total expenditures per pupil) (table 5-4). With cost adjustments, there were weak negative relationships between minority enrollment and five measures of expenditure per pupil for the nation as a whole.

Table 5-4. Correlation between school district expenditures per pupil and selected school district fiscal and demographic characteristics: 1997–98

School district characteristics	Instructional expenditures per pupil	Student and instructional staff support services per pupil	Administration per pupil	School operations per pupil	Salaries expenditures per pupil	Salaries and benefits expenditures per pupil	Current expenditures per pupil	Total expenditures per pupil
Unadjusted dollars								
Median household income	+0.28*	+0.20*	+0.16*	+0.22*	+0.33*	+0.31*	+0.28*	+0.29*
Median housing value	+0.35*	+0.12*	+0.09*	+0.23*	+0.33*	+0.34*	+0.31*	+0.28*
Minority enrollment	+0.09*	+0.12*	+0.05*	+0.06*	+0.11*	+0.10*	+0.12*	+0.05*
District poverty rate	-0.05*	-0.05*	-0.05*	-0.04*	-0.07*	-0.07*	-0.03*	-0.10*
Cost-adjusted dollars								
Median household income	+0.06*	+0.07*	-0.01	+0.07*	+0.09*	+0.08*	+0.03*	+0.07*
Median housing value	+0.06*	-0.04*	-0.11*	+0.03*	+0.02*	+0.03*	-0.01	-0.01
Minority enrollment	-0.02*	+0.08*	-0.02*	-0.02*	#	#	+0.01	-0.06*
District poverty rate	+0.02*	+0.01	+0.00	+0.02	+0.02*	+0.01	+0.06*	-0.04*

#Rounds to zero.

*Figure is statistically significant at the 0.05 level or better.

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

District poverty rate showed a weak relationship with all measures of unadjusted expenditure per pupil. In cost-adjusted dollars, the correlations were either weak or statistically insignificant.

State Findings on Education Expenditures

In the analyses of variation in per-pupil expenditures presented in chapters 2 to 4 of the report, the three individual measures of variation of expenditure per pupil were integrated into an overall measure of variation based on an average of state rankings on the three individual measures. Each state's average on the three variation measures was then ranked, with states divided into four quartiles from lowest to highest variation. The first part of discussion below highlights differences in state variation on the different measures of expenditure per pupil. The second part of the discussion reviews key findings about the relationship between selected district fiscal and demographic characteristics and expenditures per pupil from different sources.

Interdistrict Variation in Expenditures Per Pupil Within the States

Table 5-5 shows the 12 states that had the greatest interdistrict variation in unadjusted current expenditures per pupil based on the integrated measure of variation. These 12 states included Alaska, Illinois, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New York, North Dakota, Ohio, Pennsylvania, and Vermont. Three states (Illinois, Montana, and Vermont) showed the greatest interdistrict variation on all eight expenditure measures. Two states (Alaska and Ohio) showed the greatest interdistrict variation on five components of current expenditure, as well as total expenditures per pupil.

When expenditures per pupil were adjusted to reflect cost-of-education differences across school districts, seven states (Alaska, Illinois, Massachusetts, Missouri, Montana, New Hampshire, and North Dakota) remained in the quartile with the greatest overall variation in current expenditures per pupil (table 5-5). Two states (Illinois and North Dakota) showed the greatest interdistrict variation on all

Table 5-5. States with the largest overall variation in expenditures per pupil: 1997–98

Type of expenditure per pupil	States (unadjusted dollars)	States (cost-adjusted dollars)
Instructional expenditures	Alaska, Illinois, Kansas, Maine, Massachusetts, Minnesota, Montana, New Hampshire, North Dakota, Ohio, Pennsylvania, Vermont	Alaska, Illinois, Kansas, Maine, Massachusetts, Montana, Nebraska, New Hampshire, North Dakota, Oklahoma, Texas
Student and instructional staff support services	California, Illinois, Indiana, Kansas, Maine, Michigan, Montana, New York, North Dakota, Ohio, South Dakota, Vermont	California, Illinois, Indiana, Kansas, Maine, Michigan, Montana, New York, North Dakota, Ohio, South Dakota, Vermont
Administration	Alaska, California, Colorado, Illinois, Kentucky, Missouri, Montana, New Hampshire, New York, North Dakota, South Dakota, Vermont	Alaska, California, Colorado, Illinois, Montana, Nebraska, New Hampshire, New Mexico, New York, North Dakota, South Dakota, Vermont
School operations	Alaska, Arizona, California, Illinois, Missouri, Montana, Nebraska, North Dakota, Ohio, Oregon, Vermont, Wyoming	Alaska, Arizona, California, Idaho, Illinois, Kansas, Missouri, Montana, Nebraska, North Dakota, Oregon, Wyoming
Salaries	Alaska, Illinois, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Vermont	Alaska, Illinois, Kansas, Massachusetts, Montana, Nebraska, New Hampshire, New York, North Dakota, Ohio, Oklahoma, Vermont
Salaries and benefits	Alaska, Illinois, Michigan, Minnesota, Missouri, Montana, New Hampshire, New York, Ohio, Pennsylvania, Vermont, Virginia	Alaska, Illinois, Kansas, Massachusetts, Minnesota, Montana, Nebraska, New Hampshire, New York, North Dakota, Ohio, Vermont
Current expenditures	Alaska, Illinois, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New York, North Dakota, Ohio, Pennsylvania, Vermont	Alaska, Idaho, Illinois, Kansas, Massachusetts, Missouri, Montana, Nebraska, New Hampshire, North Dakota, South Dakota, Wyoming
Total expenditures	Alaska, Illinois, Michigan, Minnesota, Missouri, Montana, New Hampshire, Ohio, Pennsylvania, South Dakota, Vermont, Wyoming	Alaska, Illinois, Maine, Michigan, Minnesota, Montana, New Hampshire, North Dakota, South Dakota, Vermont, Wisconsin, Wyoming

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

expenditure measures, while one state (Alaska) showed the greatest variation on five components of current expenditure and on total expenditures per pupil.

At the other end of the spectrum were 12 states with the smallest interdistrict variation in unadjusted current expenditures per pupil. As shown in table 5-6, these states included Alabama, California, Delaware, Florida, Iowa, Kentucky, Louisiana, Nevada, North Carolina, Rhode Island, Washington, and West Virginia. Four states (Delaware, Florida, Nevada, and North Carolina) showed the smallest interdistrict variation on each of the eight expenditure measures, and two states (Louisiana and West Virginia) showed the smallest interdistrict variation on five components of current expenditure and on total expenditures per pupil.

With cost adjustments to expenditures, nine states (Alabama, Delaware, Florida, Iowa, Kentucky, Louisiana, Nevada, North Carolina, and West Virginia) remained in the quartile with the smallest overall variation in current expenditures per pupil (table 5-6). Four states (Delaware, Florida, Nevada, and North Carolina) showed the smallest interdistrict variation on each of the eight expenditure measures, and three other states (Alabama, Louisiana, and West Virginia) showed the smallest interdistrict variation on five components of current expenditures and on total expenditures per pupil.

Table 5-6. States with the smallest overall variation in expenditures per pupil: 1997–98

Type of expenditure per pupil	States (unadjusted dollars)	States (cost-adjusted dollars)
Instructional expenditures	California, Delaware, Florida, Kentucky, Louisiana, Nevada, North Carolina, Oregon, Rhode Island, South Carolina, Washington, West Virginia	Alabama, Arkansas, Delaware, Florida, Kentucky, Louisiana, Mississippi, Nevada, North Carolina, South Carolina, West Virginia
Student and instructional staff support services	Delaware, Florida, Georgia, Louisiana, Maryland, Nevada, New Jersey, New Mexico, North Carolina, South Carolina, Washington, Wisconsin, Wyoming	Delaware, Florida, Georgia, Louisiana, Maryland, Nevada, New Jersey, North Carolina, South Carolina, Washington, Wisconsin, Wyoming
Administration	Alabama, Delaware, Florida, Iowa, Maryland, Nevada, North Carolina, Oregon, Rhode Island, South Carolina, Washington, West Virginia	Alabama, Delaware, Florida, Maryland, Nevada, North Carolina, South Carolina, Tennessee, Washington, West Virginia, Wisconsin
School operations	Colorado, Delaware, Florida, Iowa, Kentucky, Louisiana, Maryland, Nevada, North Carolina, Rhode Island, South Carolina, Texas, West Virginia	Alabama, Delaware, Florida, Indiana, Iowa, Kentucky, Louisiana, Maryland, Mississippi, Nevada, North Carolina, South Carolina, West Virginia
Salaries	Colorado, Delaware, Florida, Iowa, Kentucky, Louisiana, Nevada, North Carolina, Oregon, Rhode Island, Utah, Washington, West Virginia	Alabama, Colorado, Delaware, Florida, Georgia, Iowa, Kentucky, Louisiana, Nevada, North Carolina, Utah, West Virginia
Salaries and benefits	California, Colorado, Delaware, Florida, Kentucky, Louisiana, Nevada, North Carolina, Oregon, Utah, Washington, West Virginia	Alabama, Colorado, Delaware, Florida, Georgia, Iowa, Kentucky, Louisiana, Nevada, North Carolina, Utah, West Virginia
Current expenditures	Alabama, California, Delaware, Florida, Iowa, Kentucky, Louisiana, Nevada, North Carolina, Rhode Island, Washington, West Virginia	Alabama, Delaware, Florida, Iowa, Kentucky, Louisiana, Maryland, Nevada, North Carolina, South Carolina, West Virginia, Wisconsin
Total expenditures	Alabama, California, Delaware, Florida, Kentucky, Louisiana, Maryland, Nevada, North Carolina, Rhode Island, Utah, West Virginia	Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Nevada, North Carolina, Rhode Island, West Virginia

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data. "School District Financial Survey (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 Selected District Fiscal and Demographic Characteristics and Expenditures Per Pupil

Median Household Income

For the 40 states with adequate data for correlation analysis, the relationship between median household income and the expenditure measures was quite mixed. In 17 of the 40 states, there was no relationship or a weak relationship between median household income and unadjusted current expenditures per pupil. (Table 5-7 lists states with moderate or strong relationships.) However, in eight states there was a positive correlation between median household income and current expenditures per pupil and in four states (Louisiana, New York, Pennsylvania, and Virginia), there was a strong correlation. On the other hand, median household income showed a negative relationship with current expenditures per pupil in 15 states, although the relationship was moderate in all but 1 state (Utah).

In unadjusted dollars, 26 states showed a positive relationship between median household income and at least one measure of expenditure (table 5-8). However, household income was related to all eight expenditure measures in only five states (Illinois, Louisiana, New York, Pennsylvania, and Virginia) and to six of the eight expenditure measures in only two other states (Maryland and Michigan) (table 5-7). In contrast, there was a negative relationship between median household income and at least 1 expenditure measure in 21 states. However, only two states (Arizona and Montana) showed a negative

Table 5-7. States with strong and moderate correlations between median household income and expenditures per pupil (unadjusted dollars): 1997–98

Type of expenditure per pupil and relationship	States
Instructional expenditures	
Strong positive	Delaware, Louisiana, New York, Pennsylvania, Virginia
Moderate positive	Alabama, Illinois, Michigan, Missouri, Ohio
Moderate negative	Arizona, Indiana, Iowa, Kansas, Massachusetts, Minnesota, Montana, Nebraska, North Dakota, Oregon, Texas, Washington, West Virginia
Strong negative	Alaska, Utah
Student and instructional staff support services	
Strong positive	Maryland, New York, Pennsylvania
Moderate positive	Alaska, Connecticut, Idaho, Illinois, Iowa, Louisiana, Maine, Michigan, Oregon, Virginia, West Virginia
Moderate negative	Arizona, Indiana, Montana, Rhode Island, Texas, Utah
Strong negative	[none]
Administration	
Strong positive	Delaware, Maryland, New York
Moderate positive	Illinois, Louisiana, Pennsylvania, Tennessee, Virginia
Moderate negative	Alaska, Arizona, Idaho, Indiana, Iowa, Kansas, Maine, Montana, Nebraska, New Hampshire, North Dakota, Oregon, South Carolina, Texas, Utah
Strong negative	[none]
School operations	
Strong positive	Maryland, New York
Moderate positive	Illinois, Louisiana, North Carolina, Ohio, Pennsylvania, Rhode Island, Virginia
Moderate negative	Alaska, Arizona, Kansas, Massachusetts, Minnesota, Montana, Nebraska, North Dakota, Oregon, Washington, West Virginia
Strong negative	[none]
Salaries	
Strong positive	Louisiana, Maryland, New York, Pennsylvania, Virginia
Moderate positive	Illinois, Michigan, Missouri, North Carolina, Wisconsin
Moderate negative	Alaska, Arizona, California, Indiana, Kansas, Montana, North Dakota, Texas, Washington
Strong negative	Utah
Salaries and benefits	
Strong positive	Louisiana, Maryland, New York, Pennsylvania, Virginia
Moderate positive	Illinois, Michigan, Missouri, Wisconsin
Moderate negative	Alaska, Arizona, California, Indiana, Kansas, Montana, Nebraska, North Dakota, Oregon, Texas, Washington
Strong negative	Utah
Current expenditures	
Strong positive	Louisiana, New York, Pennsylvania, Virginia
Moderate positive	Alabama, Illinois, Michigan, Ohio
Moderate negative	Alaska, Arizona, California, Indiana, Iowa, Kansas, Massachusetts, Minnesota, Montana, Nebraska, North Dakota, Oregon, Texas, Washington
Strong negative	Utah
Total expenditures	
Strong positive	Louisiana, Maryland, New York, Virginia
Moderate positive	Alabama, Florida, Illinois, Michigan, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Washington
Moderate negative	Alaska, Arizona, Massachusetts, Montana, North Dakota
Strong negative	[none]

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data. "School District Financial Survey (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 household income and all eight measures of expenditure. In another six states (Alaska, Indiana, Kansas, North Dakota, Texas, and Utah), there was a negative relationship between household income and at least six expenditure measures.

Cost adjustments shifted the balance among the states, with fewer states showing a positive relationship between household income and expenditures and more states showing a negative relationship between these variables (table 5-9). Of the 40 states with adequate data, 5 states (Illinois, Louisiana, New York, Pennsylvania, and Virginia) had a moderate positive correlation between median household

Table 5-8. Summary of strong and moderate correlations between median household income and measures of expenditure per pupil: 1997–98

Unadjusted dollars				Cost-adjusted dollars			
Positive relationship with expenditures per pupil		Negative relationship with expenditures per pupil		Positive relationship with expenditures per pupil		Negative relationship with expenditures per pupil	
State	Number of expenditure measures						
Alabama	3	Alaska	7	Alaska	1	Alaska	7
Alaska	1	Arizona	8	Connecticut	1	Arizona	8
Connecticut	1	California	3	Illinois	7	California	6
Delaware	2	Idaho	1	Louisiana	7	Florida	6
Florida	1	Indiana	6	Maryland	5	Idaho	2
Idaho	1	Iowa	3	Michigan	4	Indiana	8
Illinois	8	Kansas	6	New York	8	Iowa	7
Iowa	1	Maine	1	Ohio	3	Kansas	7
Louisiana	8	Massachusetts	4	Pennsylvania	7	Maine	7
Maine	1	Minnesota	3	Rhode Island	1	Massachusetts	4
Maryland	6	Montana	8	Virginia	7	Michigan	1
Michigan	6	Nebraska	5			Minnesota	7
Missouri	3	New Hampshire	1			Missouri	8
New York	8	North Dakota	7			Montana	8
North Carolina	3	Oregon	5			Nebraska	8
Ohio	4	Rhode Island	1			New Hampshire	3
Oregon	1	South Carolina	1			North Carolina	4
Pennsylvania	8	Texas	6			North Dakota	7
Rhode Island	1	Utah	6			Oregon	7
South Carolina	1	Washington	5			South Carolina	4
Tennessee	1	West Virginia	2			Texas	7
Texas	1					Utah	7
Virginia	8					Vermont	2
Washington	1					Washington	7
West Virginia	1					West Virginia	6
Wisconsin	2					Wisconsin	5
						Wyoming	1

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

income and current expenditures per pupil and no state had a strong correlation. On the other hand, median household income was negatively related to current expenditures per pupil in 24 states, with 5 states (Alaska, Arizona, Iowa, Utah, and Washington) having a strong negative correlation between these variables.

In cost-adjusted dollars, only 11 states showed a positive relationship between median household income and at least one measure of expenditure (table 5-8). Household income was related to all eight expenditure measures in only one state (New York) and to at least six of the eight expenditure measures in only four other states (Illinois, Louisiana, Pennsylvania, and Virginia) (table 5-9). In contrast, there was a negative relationship between median household income and at least 1 expenditure measure in 27 states. Five states (Arizona, Indiana, Missouri, Montana, and Nebraska) showed a negative relationship between household income and all eight measures of expenditure. Another 13 states (Alaska, California, Florida, Iowa, Kansas, Maine, Minnesota, North Dakota, Oregon, Texas, Utah, Washington, and West Virginia) showed a negative relationship between household income and at least 6 expenditure measures.

Median Housing Value

District property values, as measured by median housing value, were positively related to current expenditures per pupil in more states than median household income (table 5-10). In unadjusted dollars,

Table 5-9. States with strong and moderate correlations between median household income and expenditures per pupil (cost-adjusted dollars): 1997–98

Type of expenditure per pupil and relationship	States
Instructional expenditures	
Strong positive	[none]
Moderate positive	Louisiana, New York, Ohio, Pennsylvania, Virginia
Moderate negative	Arizona, California, Indiana, Kansas, Maine, Massachusetts, Minnesota, Missouri, Montana, Nebraska, North Carolina, North Dakota, Oregon, Texas, Wisconsin, Wyoming
Strong negative	Alaska, Iowa, Utah, Washington, West Virginia
Student and instructional staff support services	
Strong positive	New York
Moderate positive	Alaska, Connecticut, Illinois, Louisiana, Michigan, Pennsylvania, Virginia
Moderate negative	Arizona, Florida, Indiana, Missouri, Montana, Nebraska, Texas, Utah, Washington
Strong negative	[none]
Administration	
Strong positive	Maryland
Moderate positive	Illinois, Louisiana, New York, Virginia
Moderate negative	Alaska, Florida, Idaho, Indiana, Iowa, Kansas, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, North Dakota, Oregon, South Carolina, Texas, Utah, Washington, Wisconsin
Strong negative	Arizona
School operations	
Strong positive	[none]
Moderate positive	Illinois, Maryland, New York, Ohio, Pennsylvania, Rhode Island
Moderate negative	Arizona, California, Florida, Indiana, Iowa, Kansas, Maine, Massachusetts, Missouri, Montana, Nebraska, North Dakota, Oregon, Texas, Utah, Vermont, Washington, West Virginia
Strong negative	Alaska, Minnesota
Salaries	
Strong positive	Maryland, New York
Moderate positive	Illinois, Louisiana, Michigan, Pennsylvania, Virginia
Moderate negative	Alaska, Arizona, California, Florida, Indiana, Iowa, Kansas, Maine, Minnesota, Missouri, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Oregon, South Carolina, Texas, Washington, West Virginia
Strong negative	Utah
Salaries and benefits	
Strong positive	Maryland, New York
Moderate positive	Illinois, Louisiana, Michigan, Pennsylvania, Virginia
Moderate negative	Alaska, Arizona, California, Florida, Indiana, Iowa, Kansas, Maine, Minnesota, Missouri, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Oregon, South Carolina, Texas, West Virginia, Wisconsin
Strong negative	Utah, Washington
Current expenditures	
Strong positive	[none]
Moderate positive	Illinois, Louisiana, New York, Pennsylvania, Virginia
Moderate negative	California, Florida, Idaho, Indiana, Kansas, Maine, Massachusetts, Minnesota, Missouri, Montana, Nebraska, North Carolina, North Dakota, Oregon, South Carolina, Texas, Vermont, West Virginia, Wisconsin
Strong negative	Alaska, Arizona, Iowa, Utah, Washington
Total expenditures	
Strong positive	[none]
Moderate positive	Illinois, Louisiana, Maryland, Michigan, New York, Ohio, Pennsylvania, Virginia
Moderate negative	Arizona, California, Indiana, Iowa, Kansas, Maine, Massachusetts, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, West Virginia, Wisconsin
Strong negative	Alaska

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

current expenditures per pupil were positively related to property value in 19 of the 40 states with available data, compared to only 8 states with median household income. On the other hand, current expenditures per pupil were negatively related to median housing value in only 11 states, compared to 15 states with median household income.

In unadjusted dollars, 33 of the 40 states with available data showed a positive relationship between median housing value and at least 1 measure of expenditure (table 5-11). Household income was posi-

Table 5-10. States with strong and moderate correlations between median housing value and expenditures per pupil (unadjusted dollars): 1997–98

Type of expenditure per pupil and relationship	States
Instructional expenditures	
Strong positive	Delaware, Louisiana, New York, Pennsylvania, Virginia
Moderate positive	Alabama, Illinois, Michigan, Missouri, Ohio
Moderate negative	Arizona, Indiana, Iowa, Kansas, Massachusetts, Minnesota, Montana, Nebraska, North Dakota, Oregon, Texas, Washington, West Virginia
Strong negative	Alaska, Utah
Student and instructional staff support services	
Strong positive	Illinois, Maryland, Pennsylvania, Virginia
Moderate positive	Alabama, California, Idaho, Iowa, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, North Carolina, North Dakota, Ohio, Vermont, Washington, West Virginia, Wisconsin
Moderate negative	Arizona, Indiana
Strong negative	[none]
Administration	
Strong positive	Delaware, Maryland, Virginia
Moderate positive	California, Illinois, Louisiana, Massachusetts, Missouri, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Vermont, Wisconsin
Moderate negative	Arizona, Idaho, Indiana, Iowa, Kansas, Montana, Nebraska, North Dakota, Texas
Strong negative	Alaska, Nevada
School operations	
Strong positive	Maryland, North Carolina, Virginia
Moderate positive	Connecticut, Florida, Illinois, Michigan, New Hampshire, New York, Ohio, Pennsylvania, South Carolina, Tennessee, Wisconsin
Moderate negative	Arizona, California, Kansas, Montana, Nebraska, North Dakota, Oregon, Texas, West Virginia
Strong negative	Alaska
Salaries	
Strong positive	Florida, Illinois, Maryland, Pennsylvania, Virginia
Moderate positive	Alabama, California, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New York, North Carolina, Ohio, Tennessee, Vermont, Wisconsin
Moderate negative	Arizona, Indiana, Kansas, Montana, Texas, Utah
Strong negative	Alaska
Salaries and benefits	
Strong positive	Delaware, Florida, Maryland, Pennsylvania, Virginia
Moderate positive	Alabama, California, Illinois, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New York, North Carolina, Ohio, Tennessee, Vermont, Wisconsin
Moderate negative	Arizona, Indiana, Kansas, Montana, Oregon, Texas, Utah, West Virginia
Strong negative	Alaska
Current expenditures	
Strong positive	Delaware, Maryland, Pennsylvania, Virginia
Moderate positive	Alabama, California, Florida, Illinois, Louisiana, Massachusetts, Michigan, Missouri, New Hampshire, New York, North Carolina, Ohio, Tennessee, Vermont, Wisconsin
Moderate negative	Arizona, Indiana, Kansas, Montana, Nebraska, North Dakota, Oregon, Texas, Utah, West Virginia
Strong negative	Alaska
Total expenditures	
Strong positive	Florida, Illinois, Maryland, Pennsylvania, Virginia
Moderate positive	Alabama, Indiana, Louisiana, Massachusetts, Michigan, Missouri, New Hampshire, New York, North Carolina, Ohio, South Carolina, Tennessee, Texas, Vermont, Washington
Moderate negative	Montana, Nebraska, North Dakota
Strong negative	Alaska, Nevada

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

tively related to all eight expenditure measures in four states (Illinois, Ohio, Pennsylvania, and Virginia) and to at least 6 of the 8 expenditure measures in another 12 states (Alabama, Louisiana, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New York, North Carolina, Tennessee, Vermont, and Wisconsin) (table 5-10). In contrast, there was a negative relationship between median housing value and at least 1 expenditure measure in only 18 states. While no state showed a negative

Table 5-11. Summary of strong and moderate correlations between median housing value and measures of expenditure per pupil: 1997–98

Unadjusted dollars				Cost-adjusted dollars			
Positive relationship with expenditures per pupil		Negative relationship with expenditures per pupil		Positive relationship with expenditures per pupil		Negative relationship with expenditures per pupil	
State	Number of expenditure measures						
Alabama	6	Alaska	7	Alabama	1	Alaska	7
California	5	Arizona	7	California	2	Arizona	8
Connecticut	1	California	1	Florida	1	California	6
Delaware	4	Idaho	1	Idaho	1	Idaho	1
Florida	5	Indiana	6	Illinois	7	Indiana	7
Idaho	1	Iowa	2	Iowa	1	Iowa	7
Illinois	8	Kansas	6	Louisiana	2	Kansas	7
Indiana	1	Massachusetts	1	Maine	1	Maine	4
Iowa	1	Minnesota	1	Maryland	6	Massachusetts	1
Kansas	1	Montana	7	Massachusetts	5	Michigan	1
Louisiana	7	Nebraska	5	Michigan	4	Minnesota	7
Maine	3	Nevada	2	Minnesota	1	Missouri	6
Maryland	7	North Dakota	5	New York	2	Montana	7
Massachusetts	6	Oregon	4	North Carolina	1	Nebraska	7
Michigan	7	Texas	6	North Dakota	1	Nevada	2
Minnesota	3	Utah	4	Ohio	7	North Carolina	1
Missouri	7	Washington	1	Pennsylvania	7	North Dakota	7
Nebraska	1	West Virginia	4	Rhode Island	2	Ohio	1
Nevada	1			South Carolina	1	Oregon	5
New Hampshire	6			Tennessee	1	Texas	7
New York	7			Vermont	4	Utah	6
North Carolina	7			Virginia	8	Washington	6
North Dakota	1			West Virginia	1	West Virginia	5
Ohio	8					Wisconsin	2
Pennsylvania	8					Wyoming	1
South Carolina	2						
Tennessee	6						
Texas	1						
Vermont	6						
Virginia	8						
Washington	2						
West Virginia	1						
Wisconsin	6						

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data. "School District Financial Survey (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 household income and all eight measures of expenditure, 6 states (Alaska, Arizona, Indiana, Kansas, Montana, and Texas) did show a negative relationship between household income and at least 6 expenditure measures.

As with household income, cost adjustments also resulted in a decrease in the number of states with positive relationships between housing value and expenditures per pupil and an increase in the number of states with negative relationships between these variables (table 5-11). For the 40 states with adequate data, only 6 states (Illinois, Massachusetts, Ohio, Pennsylvania, Vermont, and Virginia) had a positive correlation between median housing value and current expenditures per pupil and only 1 state (Virginia) had a strong correlation (table 5-12). On the other hand, median housing value was negatively related to current expenditures per pupil in 17 states, with 5 states (Alaska, Iowa, Montana, Nebraska, and West Virginia) having a strong negative correlation between these variables.

Finally, in cost-adjusted dollars, only 23 states showed a positive relationship between median housing value and at least one measure of expenditure (table 5-11). Median housing value was positively related to all eight expenditure measures in only one state (Virginia) and to at least six of the eight expenditure

Table 5-12. States with strong and moderate correlations between median housing value and expenditures per pupil (cost-adjusted dollars): 1997–98

Type of expenditure per pupil and relationship	States
Instructional expenditures	
Strong positive	[none]
Moderate positive	Louisiana, New York, Ohio, Pennsylvania, Virginia
Moderate negative	Arizona, California, Indiana, Kansas, Maine, Massachusetts, Minnesota, Missouri, Montana, Nebraska, North Carolina, North Dakota, Ohio, Texas, Wisconsin, Wyoming
Strong negative	Alaska, Iowa, Utah, Washington, West Virginia
Student and instructional staff support services	
Strong positive	Maryland, Pennsylvania, Virginia
Moderate positive	California, Idaho, Illinois, Iowa, Maine, Massachusetts, Michigan, Minnesota, North Dakota, Ohio, West Virginia
Moderate negative	Arizona, Indiana, Texas, Utah
Strong negative	[none]
Administration	
Strong positive	Maryland, Virginia
Moderate positive	California, Illinois, Louisiana, Massachusetts, Rhode Island, Tennessee, Vermont
Moderate negative	Arizona, Idaho, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, Texas, Washington
Strong negative	Alaska, Nevada
School operations	
Strong positive	[none]
Moderate positive	Illinois, Maryland, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Virginia
Moderate negative	Arizona, California, Indiana, Iowa, Kansas, Maine, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, Texas, Utah, Washington
Strong negative	Alaska, West Virginia
Salaries	
Strong positive	Maryland, Virginia
Moderate positive	Illinois, Massachusetts, Michigan, Ohio, Pennsylvania, Vermont
Moderate negative	Arizona, California, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, Texas, Utah, Washington, West Virginia
Strong negative	Alaska
Salaries and benefits	
Strong positive	Maryland, Virginia
Moderate positive	Illinois, Massachusetts, Michigan, Ohio, Pennsylvania, Vermont
Moderate negative	Arizona, California, Indiana, Iowa, Kansas, Minnesota, Nebraska, North Dakota, Oregon, Texas, Utah, Washington
Strong negative	Alaska, Montana, West Virginia
Current expenditures	
Strong positive	Virginia
Moderate positive	Illinois, Massachusetts, Ohio, Pennsylvania, Vermont
Moderate negative	Arizona, California, Indiana, Kansas, Maine, Minnesota, Missouri, North Dakota, Oregon, Texas, Utah, Washington
Strong negative	Alaska, Iowa, Montana, Nebraska, West Virginia
Total expenditures	
Strong positive	Maryland
Moderate positive	Alabama, Florida, Illinois, Michigan, Ohio, Pennsylvania, South Carolina, Virginia
Moderate negative	Arizona, California, Iowa, Kansas, Maine, Minnesota, Missouri, Montana, Nebraska, North Dakota, Wisconsin
Strong negative	Alaska, Nevada

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

measures in four other states (Illinois, Maryland, Ohio, and Pennsylvania) (table 5-12). In contrast, there was a negative relationship between median household income and at least 1 expenditure measure in 25 states. One state (Arizona) showed a negative relationship between median housing value and all eight measures of expenditure. Another 13 states (Alaska, California, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Texas, Utah, and Washington) showed a negative relationship between household income and at least 6 expenditure measures.

Minority Enrollment

At the national level, minority enrollment showed a moderate positive relationship with current expenditures per pupil in unadjusted dollars and no relationship with current expenditures per pupil in cost-adjusted dollars (table 5-4).

These national patterns were partially reflected in the states. Minority enrollment showed no relationship or a weak relationship with unadjusted current expenditures per pupil in 16 states of the 40 states with available data (table 5-13). However, minority enrollment was positively related to current expenditures per pupil in 23 states, and strongly related in 11 of those states (Alaska, Arizona, Indiana, Iowa, Massachusetts, Minnesota, Missouri, Ohio, Oregon, Utah, and Wisconsin). On the other hand, minority enrollment was negatively related to current expenditures per pupil in only one state (New York), and this was a moderate negative relationship.

In unadjusted dollars, 34 states showed a positive relationship between minority enrollment and at least one measure of expenditure (table 5-14). However, minority enrollment was positively related to all 8 expenditure measures in 8 states (Arizona, Indiana, Massachusetts, Minnesota, Missouri, Montana, Ohio, and Washington) and to 6 or more of the 8 expenditure measures in 12 other states (Alaska, California, Connecticut, Florida, Illinois, Michigan, North Dakota, Oregon, South Carolina, Tennessee, Utah, and Wisconsin). In contrast, there was a negative relationship between minority enrollment and all eight expenditure measures in no state and a negative relationship with six of the eight expenditure measures in only one state (New York).

Cost-of-education adjustments reduced the number of states showing a positive relationship between minority enrollment and current expenditures per pupil and increased the number of states showing a negative relationship between these variables. For the 40 states with adequate data, 19 states had a positive correlation between minority enrollment and cost-adjusted current expenditures per pupil, compared to 23 states with unadjusted expenditures (table 5-15). Five states had a strong negative correlation between minority enrollment and cost-adjusted expenditures, compared with one state with unadjusted expenditures. However, minority enrollment was still positively related to cost-adjusted expenditures per pupil in just under half the states with available data.

In cost-adjusted dollars, 35 states showed a positive relationship between minority enrollment and at least one measure of expenditure (table 5-14). Minority enrollment continued to be positively related to all eight measures of expenditure in seven states (Arizona, Indiana, Massachusetts, Minnesota, Missouri, Montana, and Ohio) and to at least six of the eight expenditure measures in another six states (Alaska, Michigan, North Dakota, Oregon, South Carolina, and Wisconsin) (table 5-15). However, the number of states with a negative relationship between minority enrollment and at least one measure of expenditure increased from 8 states before expenditure adjustments to 11 states after cost adjustments. In addition, one state (New York) now showed a negative relationship between minority enrollment and all eight measures of expenditure.

District Poverty Rate

District poverty rate showed similar relationships with expenditures per pupil in the states. District poverty rate showed no relationship or a weak relationship with unadjusted current expenditures per pupil in 13 of the 40 states with available data. It was positively related to current expenditures per pupil in 24 states, and strongly related in three of those states (Alaska, Indiana, and Utah) (table 5-16).

Table 5-13. States with strong and moderate correlations between percent minority enrollment and expenditures per pupil (unadjusted dollars): 1997–98

Type of expenditure per pupil and relationship	States
Instructional expenditures	
Strong positive	Alaska, Connecticut, Indiana, Iowa, Massachusetts, Wisconsin, Wyoming
Moderate positive	Arizona, California, Florida, Illinois, Michigan, Minnesota, Missouri, Montana, North Dakota, Ohio, Oregon, South Carolina, Tennessee, Utah, Washington
Moderate negative	Nebraska, Pennsylvania
Strong negative	Nevada
Student and instructional staff support services	
Strong positive	Indiana, Massachusetts, Minnesota, Missouri, Ohio, Rhode Island, Utah
Moderate positive	Alabama, Arizona, California, Florida, Illinois, Iowa, Kansas, Maine, Montana, Nebraska, New Hampshire, North Dakota, Oregon, South Carolina, Tennessee, Texas, Vermont, Washington, Wisconsin
Moderate negative	[none]
Strong negative	New York
Administration	
Strong positive	Alaska, Arizona, Indiana, Missouri, South Carolina
Moderate positive	Alabama, California, Connecticut, Idaho, Maine, Massachusetts, Michigan, Minnesota, Montana, North Dakota, Ohio, Pennsylvania, Vermont, Virginia, Washington, Wisconsin, Wyoming
Moderate negative	Illinois, New York
Strong negative	[none]
School operations	
Strong positive	Alaska, Indiana, Massachusetts, Minnesota, Missouri, Oregon, Tennessee
Moderate positive	Arizona, Connecticut, Florida, Michigan, Montana, Nebraska, Ohio, South Carolina, Texas, Virginia, Washington, Wisconsin
Moderate negative	California, New Hampshire, New York
Strong negative	Nevada
Salaries	
Strong positive	Alaska, Indiana, Iowa, Minnesota, Missouri, Ohio, Oregon, Utah
Moderate positive	Arizona, California, Connecticut, Florida, Illinois, Maine, Massachusetts, Michigan, Montana, New Hampshire, North Dakota, South Carolina, Tennessee, Texas, Vermont, Washington, West Virginia, Wisconsin, Wyoming
Moderate negative	New York
Strong negative	[none]
Salaries and benefits	
Strong positive	Alaska, Indiana, Iowa, Massachusetts, Minnesota, Missouri, Ohio, Oregon, Utah
Moderate positive	Arizona, California, Connecticut, Florida, Illinois, Maine, Michigan, Montana, North Dakota, South Carolina, Tennessee, Texas, Vermont, Washington, Wisconsin, Wyoming
Moderate negative	New York
Strong negative	[none]
Current expenditures	
Strong positive	Alaska, Arizona, Indiana, Iowa, Massachusetts, Minnesota, Missouri, Ohio, Oregon, Utah, Wisconsin
Moderate positive	California, Connecticut, Florida, Illinois, Michigan, Montana, North Dakota, South Carolina, Tennessee, Vermont, Washington, Wyoming
Moderate negative	New York
Strong negative	[none]
Total expenditures	
Strong positive	Alaska, Massachusetts, Missouri
Moderate positive	Arizona, California, Connecticut, Illinois, Indiana, Minnesota, Montana, North Dakota, Ohio, Oregon, Tennessee, Utah, Washington
Moderate negative	New Hampshire, Texas
Strong negative	[none]

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

District poverty rate had a moderate negative relationship with current expenditures per pupil in three states (Louisiana, New York, and Pennsylvania).

In unadjusted dollars, 28 states showed a positive relationship between district poverty rate and at least one measure of expenditure (table 5-17). However, district poverty rate was positively related to all eight expenditure measures in only eight states (Arizona, Indiana, Massachusetts, Minnesota, Mis-

Table 5-14. Summary of strong and moderate correlations between percent minority enrollment and measures of expenditure per pupil: 1997–98

Unadjusted dollars				Cost-adjusted dollars			
Positive relationship with expenditures per pupil		Negative relationship with expenditures per pupil		Positive relationship with expenditures per pupil		Negative relationship with expenditures per pupil	
State	Number of expenditure measures						
Alabama	2	California	1	Alabama	2	California	1
Alaska	7	Illinois	1	Alaska	7	Illinois	2
Arizona	8	Nebraska	1	Arizona	8	Iowa	3
California	7	Nevada	2	California	5	Kansas	5
Connecticut	7	New Hampshire	2	Connecticut	4	Louisiana	4
Florida	6	New York	6	Delaware	1	Nebraska	5
Idaho	1	Pennsylvania	1	Florida	1	New Hampshire	5
Illinois	6	Texas	1	Idaho	1	New York	8
Indiana	8			Illinois	2	Pennsylvania	5
Iowa	5			Indiana	8	Rhode Island	1
Kansas	1			Iowa	4	Texas	2
Maine	4			Kansas	1		
Massachusetts	8			Maine	2		
Michigan	6			Massachusetts	8		
Minnesota	8			Michigan	6		
Missouri	8			Minnesota	8		
Montana	8			Missouri	8		
Nebraska	2			Montana	8		
New Hampshire	2			Nebraska	2		
North Dakota	7			New Hampshire	1		
Ohio	8			North Carolina	2		
Oregon	7			North Dakota	7		
Pennsylvania	1			Ohio	8		
Rhode Island	1			Oregon	7		
South Carolina	7			Pennsylvania	1		
Tennessee	7			Rhode Island	1		
Texas	4			South Carolina	7		
Utah	6			Tennessee	5		
Vermont	5			Texas	1		
Virginia	2			Utah	5		
Washington	8			Vermont			
West Virginia	1			Virginia	1		
Wisconsin	7			Washington	5		
Wyoming	5			Wisconsin	6		
				Wyoming	5		

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

souri, Montana, North Dakota, and Utah) and to at least six of the eight expenditure measures in seven other states (Alaska, California, Connecticut, Kansas, Oregon, Texas, and Wisconsin) (table 5-16). In contrast, there was a negative relationship between district poverty rate and all eight expenditure measures in only one state (New York) and a negative relationship with at least six of the eight expenditure measures in only two states (Louisiana and Pennsylvania).

Cost-of-education adjustments increased the number of states showing a positive relationship between district poverty rate and current expenditures per pupil and decreased by four the number of states showing a negative relationship between these variables (table 5-17). For the 40 states with adequate data, 27 states had a positive correlation between district poverty rate and cost-adjusted current expenditures per pupil, compared to 24 with unadjusted expenditures (table 5-18). Three states had a negative correlation between district poverty rate, both before and after cost adjustments to expenditures.

In cost-adjusted dollars, 33 states showed a positive relationship between district poverty rate and at least one measure of expenditure. District poverty rate was now positively related to all 8 expenditure measures in 10 states (Arizona, Indiana, Kansas, Massachusetts, Minnesota, Missouri, Montana, North

Table 5-15. States with strong and moderate correlations between percent minority enrollment and expenditures per pupil (cost-adjusted dollars): 1997–98

Type of expenditure per pupil and relationship	States
Instructional expenditures	
Strong positive	Alaska, Delaware, Massachusetts, Wyoming
Moderate positive	Arizona, Connecticut, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Montana, North Dakota, Ohio, Oregon, South Carolina, Utah, Wisconsin
Moderate negative	Kansas, Louisiana, Nebraska, New Hampshire, New York, Pennsylvania, Texas
Strong negative	[none]
Student and instructional staff support services	
Strong positive	Massachusetts, Minnesota, Missouri, Ohio, Utah
Moderate positive	Alabama, Arizona, California, Illinois, Indiana, Iowa, Kansas, Maine, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Oregon, Rhode Island, South Carolina, Tennessee, Texas, Washington, Wisconsin
Moderate negative	Pennsylvania
Strong negative	New York
Administration	
Strong positive	Alaska, Arizona, South Carolina
Moderate positive	Alabama, California, Idaho, Indiana, Massachusetts, Michigan, Minnesota, Missouri, Montana, North Carolina, North Dakota, Ohio, Pennsylvania, Vermont, Wisconsin, Wyoming
Moderate negative	Illinois, Iowa, New Hampshire
Strong negative	New York
School operations	
Strong positive	Alaska, Massachusetts, Missouri, Oregon
Moderate positive	Arizona, Indiana, Michigan, Minnesota, Montana, Nebraska, Ohio, South Carolina, Tennessee, Virginia, Washington, Wisconsin
Moderate negative	California, Illinois, Iowa, New Hampshire, New York, Rhode Island
Strong negative	[none]
Salaries	
Strong positive	Alaska, Ohio
Moderate positive	Arizona, California, Connecticut, Indiana, Iowa, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, North Dakota, Oregon, South Carolina, Tennessee, Utah, Washington, Wyoming
Moderate negative	Kansas, Louisiana, Nebraska, Pennsylvania
Strong negative	New York
Salaries and benefits	
Strong positive	Alaska, Ohio
Moderate positive	Arizona, California, Connecticut, Florida, Indiana, Iowa, Massachusetts, Michigan, Minnesota, Missouri, Montana, North Dakota, Oregon, South Carolina, Tennessee, Utah, Washington, Wisconsin, Wyoming
Moderate negative	Kansas, Louisiana, Nebraska
Strong negative	New York
Current expenditures	
Strong positive	Alaska, Arizona, Massachusetts, South Carolina
Moderate positive	California, Connecticut, Indiana, Michigan, Minnesota, Missouri, Montana, North Dakota, Ohio, Oregon, Tennessee, Utah, Washington, Wisconsin, Wyoming
Moderate negative	Kansas, Nebraska, New Hampshire, New York, Pennsylvania
Strong negative	[none]
Total expenditures	
Strong positive	Alaska, Massachusetts
Moderate positive	Arizona, Indiana, Minnesota, Missouri, Montana, North Dakota, Ohio, Oregon
Moderate negative	Iowa, Kansas, Louisiana, Nebraska, New Hampshire, New York, Pennsylvania, Texas
Strong negative	[none]

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

Dakota, Utah, and Washington) and to at least 6 of the 8 expenditure measures in another 11 states (table 5-18). The number of states with a negative relationship between district poverty rate and at least 1 measure of expenditure decreased from 12 states before cost adjustments to 8 states after adjustments. Again, only one state (New York) showed a negative relationship between district poverty rate and all eight measures of expenditure.

Table 5-16. States with strong and moderate correlations between district poverty rate and expenditures per pupil (unadjusted dollars): 1997–98

Type of expenditure per pupil and relationship	States
Instructional expenditures	
Strong positive	Alaska, Utah, Wyoming
Moderate positive	Arizona, California, Connecticut, Indiana, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Missouri, Montana, North Dakota, Oregon, Texas, Washington, West Virginia, Wisconsin
Moderate negative	Alabama, Louisiana, New York, Pennsylvania, Virginia
Strong negative	[none]
Student and instructional staff support services	
Strong positive	Utah
Moderate positive	Arizona, California, Indiana, Massachusetts, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Rhode Island, Tennessee, Texas, Wisconsin
Moderate negative	Louisiana, Pennsylvania, West Virginia
Strong negative	New York
Administration	
Strong positive	Alaska, Arizona, Indiana
Moderate positive	Connecticut, Florida, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, South Carolina, Texas, Utah, Vermont, Wisconsin, Wyoming
Moderate negative	Illinois
Strong negative	New York
School operations	
Strong positive	Alaska
Moderate positive	Arizona, Connecticut, Indiana, Kansas, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, Tennessee, Utah, Washington, West Virginia, Wisconsin
Moderate negative	Illinois, Maryland, New Hampshire, New York, Pennsylvania, Rhode Island
Strong negative	[none]
Salaries	
Strong positive	Alaska, Indiana, Utah
Moderate positive	Arizona, California, Connecticut, Florida, Iowa, Kansas, Massachusetts, Minnesota, Missouri, Montana, North Dakota, Ohio, Oregon, Texas, Washington, Wisconsin, Wyoming
Moderate negative	Louisiana, Pennsylvania
Strong negative	New York
Salaries and benefits	
Strong positive	Alaska, Indiana, Utah
Moderate positive	Arizona, California, Connecticut, Florida, Iowa, Kansas, Maine, Massachusetts, Minnesota, Missouri, Montana, North Dakota, Ohio, Oregon, Texas, Washington, West Virginia, Wisconsin, Wyoming
Moderate negative	Louisiana, Pennsylvania
Strong negative	New York
Current expenditures	
Strong positive	Alaska, Indiana, Utah
Moderate positive	Arizona, California, Connecticut, Florida, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Oregon, South Carolina, Texas, Washington, West Virginia, Wisconsin, Wyoming
Moderate negative	Louisiana, New York, Pennsylvania
Strong negative	[none]
Total expenditures	
Strong positive	Alaska
Moderate positive	Arizona, California, Connecticut, Indiana, Massachusetts, Minnesota, Missouri, Montana, North Dakota, Oregon, Utah
Moderate negative	Louisiana, Michigan, New York, Pennsylvania, Texas, Virginia
Strong negative	[none]

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

Table 5-17. Summary of strong and moderate correlations between district poverty rate and measures of expenditure per pupil: 1997–98

Unadjusted dollars			Cost-adjusted dollars				
Positive relationship with expenditures per pupil		Negative relationship with expenditures per pupil		Positive relationship with expenditures per pupil		Negative relationship with expenditures per pupil	
State	Number of expenditure measures						
Alaska	7	Alabama	1	Alabama	4	Illinois	2
Arizona	8	Illinois	2	Alaska	7	Louisiana	5
California	6	Louisiana	6	Arizona	8	Maryland	2
Connecticut	7	Maryland	1	California	7	Michigan	1
Florida	4	Michigan	1	Connecticut	5	New York	8
Indiana	8	New Hampshire	1	Florida	6	Pennsylvania	6
Iowa	4	New York	8	Idaho	1	Rhode Island	2
Kansas	6	Pennsylvania	7	Illinois	1	West Virginia	1
Maine	2	Rhode Island	1	Indiana	8		
Massachusetts	8	Texas	1	Iowa	5		
Michigan	4	Virginia	2	Kansas	8		
Minnesota	8	West Virginia	1	Maine	5		
Missouri	8			Massachusetts	8		
Montana	8			Michigan	6		
Nebraska	4			Minnesota	8		
North Dakota	8			Missouri	8		
Ohio	5			Montana	8		
Oregon	6			Nebraska	7		
Rhode Island	1			North Carolina	4		
South Carolina	2			North Dakota	8		
Tennessee	2			Ohio	5		
Texas	6			Oregon	7		
Utah	8			Pennsylvania	1		
Vermont	1			Rhode Island	1		
Washington	5			South Carolina	6		
West Virginia	4			Tennessee	7		
Wisconsin	7			Texas	7		
Wyoming	5			Utah	8		
				Vermont	1		
				Washington	8		
				West Virginia	5		
				Wisconsin	6		
				Wyoming	6		

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

Table 5-18. States with strong and moderate correlations between district poverty rate and expenditures per pupil (cost-adjusted dollars): 1997–98

Type of expenditure per pupil and relationship	States
Instructional expenditures	
Strong positive	Alaska, Utah, West Virginia, Wyoming
Moderate positive	Arizona, California, Connecticut, Florida, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, North Carolina, North Dakota, Oregon, South Carolina, Tennessee, Texas, Washington, Wisconsin
Moderate negative	Louisiana, New York, Pennsylvania
Strong negative	[none]
Student and instructional staff support services	
Strong positive	Utah
Moderate positive	Alabama, Arizona, California, Indiana, Kansas, Massachusetts, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Tennessee, Texas, Washington, Wisconsin
Moderate negative	Pennsylvania, West Virginia
Strong negative	New York
Administration	
Strong positive	Alaska, Arizona, Indiana
Moderate positive	Alabama, California, Florida, Idaho, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, Texas, Utah, Vermont, Washington, Wisconsin, Wyoming
Moderate negative	Illinois
Strong negative	New York
School operations	
Strong positive	Alaska, Missouri
Moderate positive	Arizona, Florida, Indiana, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Montana, Nebraska, North Dakota, Oregon, South Carolina, Tennessee, Texas, Utah, Washington, West Virginia, Wyoming
Moderate negative	Illinois, Maryland, New York, Rhode Island
Strong negative	[none]
Salaries	
Strong positive	Alaska, Indiana, Utah
Moderate positive	Alabama, Arizona, California, Connecticut, Florida, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oregon, South Carolina, Tennessee, Texas, Washington, West Virginia, Wisconsin, Wyoming
Moderate negative	Louisiana, Maryland, Pennsylvania, Rhode Island
Strong negative	New York
Salaries and benefits	
Strong positive	Alaska, Indiana, Utah
Moderate positive	Alabama, Arizona, California, Connecticut, Florida, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oregon, South Carolina, Tennessee, Texas, Washington, West Virginia, Wisconsin, Wyoming
Moderate negative	Louisiana, Pennsylvania
Strong negative	New York
Current expenditures	
Strong positive	Alaska, Arizona, Florida, Indiana, Minnesota, Missouri, Utah
Moderate positive	California, Connecticut, Iowa, Kansas, Maine, Massachusetts, Michigan, Montana, Nebraska, North Carolina, North Dakota, Ohio, Oregon, South Carolina, Tennessee, Texas, Washington, West Virginia, Wisconsin, Wyoming
Moderate negative	Louisiana, Pennsylvania
Strong negative	New York
Total expenditures	
Strong positive	Alaska
Moderate positive	Arizona, California, Connecticut, Indiana, Kansas, Massachusetts, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, Tennessee, Utah, Washington
Moderate negative	Louisiana, Michigan, New York, Pennsylvania
Strong negative	[none]

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

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Appendix A: Supplementary Tables

Table A-1. Correlations between student membership and expenditures per pupil (unadjusted dollars), by state: 1997–98

State	Total	Current	Instruc- tional	Student and support staff	Admini- stration	Opera- tions	Salary	Salary and benefit	Capital outlay	Facility
United States	-0.03*	-0.03*	-0.03*	0.07*	-0.05*	-0.04*	-0.01	0.00	0.00	0.00
Alabama	-0.01	-0.06	-0.06	0.16	-0.21*	0.12	-0.04	-0.04	0.04	0.07
Alaska	-0.30*	-0.33*	-0.35*	-0.04	-0.23	-0.27	-0.29*	-0.29*	-0.01	-0.18
Arizona	-0.18*	-0.19*	-0.14*	0.09	-0.25*	-0.21*	-0.14*	-0.15*	0.02	-0.05
Arkansas	0.00	-0.02	0.01	0.35*	-0.19*	0.00	0.11*	0.11	-0.02	-0.01
California	-0.04	-0.05	-0.05	0.34*	0.31*	-0.14*	-0.01	-0.02	-0.03	0.01
Colorado	-0.16*	-0.17*	-0.20*	0.09	-0.03	-0.21*	-0.11	-0.13	-0.05	-0.08
Connecticut	-0.06	0.15	0.17*	0.19*	-0.14	-0.08	0.28*	0.31*	-0.03	0.04
Delaware	0.43	0.56*	0.69*	0.19	0.15	0.05	0.51*	0.54*	0.14	0.13
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	0.12	0.10	0.30*	0.05	-0.21	-0.01	0.25*	0.25*	0.02	0.03
Georgia	0.05	0.10	0.19*	0.08	-0.06	0.15*	0.18*	0.23*	0.00	0.02
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	-0.24*	-0.30*	-0.27*	0.10	-0.35*	-0.22*	-0.26*	-0.25*	-0.01	-0.08
Illinois	0.04	0.04	0.05	0.07*	-0.03	0.01	0.05	0.05	0.02	0.03
Indiana	0.28*	0.40*	0.39*	0.39*	0.00	0.17*	0.38*	0.43*	0.13*	0.16*
Iowa	-0.10*	-0.03	0.02	0.29*	-0.11*	-0.14*	0.06	0.10	-0.04	-0.04
Kansas	-0.16*	-0.18*	-0.12*	0.20*	-0.22*	-0.24*	-0.16*	-0.13*	-0.13*	-0.19*
Kentucky	0.05	0.01	-0.04	0.07	-0.01	0.16*	0.06	0.06	0.08	0.10
Louisiana	0.03	0.05	0.21	-0.01	-0.01	-0.13	0.09	0.12	-0.06	-0.02
Maine	-0.38*	-0.29*	-0.27*	0.35*	-0.28*	-0.29*	-0.09	-0.09	0.01	-0.03
Maryland	0.32	0.41*	0.47*	-0.02	0.41*	0.28	0.48*	0.54*	-0.12	-0.04
Massachusetts	0.07	0.13*	0.16*	0.14*	-0.08	0.03	0.04	0.09	0.09	0.11
Michigan	0.08	0.12*	0.12*	0.22*	-0.09*	0.10*	0.19*	0.19*	0.00	0.01
Minnesota	-0.01	0.00	0.02	0.21*	-0.10	-0.07	0.05	0.06	-0.01	-0.02
Mississippi	0.12	-0.09	-0.03	0.00	-0.25*	0.11	0.02	0.01	0.20*	0.23*
Missouri	0.01	0.06	0.05	0.23*	-0.08	0.13*	0.13*	0.15*	0.00	0.05
Montana	-0.14*	-0.17*	-0.16*	0.21*	-0.17*	-0.18*	-0.13*	-0.12*	-0.01	-0.06
Nebraska	-0.06	-0.06	-0.08*	0.15*	-0.05	-0.04	-0.04	-0.03	0.03	0.00
Nevada	-0.19	-0.26	-0.27	0.07	-0.25	-0.24	-0.25	-0.25	0.06	-0.02
New Hampshire	-0.30*	-0.19*	-0.11	0.03	-0.29*	-0.26*	0.02	0.00	-0.06	-0.07
New Jersey	-0.06	0.04	0.05	0.09*	-0.19*	0.07	0.08	0.09*	0.02	0.05
New Mexico	-0.24*	-0.28*	-0.25*	-0.09	-0.29*	-0.28*	-0.23*	-0.23*	-0.10	-0.14
New York	-0.02	-0.02	-0.01	-0.05	-0.04	-0.02	-0.03	-0.03	0.00	0.00
North Carolina	-0.16	-0.24*	-0.21*	-0.19*	-0.26*	-0.06	-0.22*	-0.22*	-0.05	-0.06
North Dakota	-0.13*	-0.13*	-0.11	0.15*	-0.13*	-0.11	-0.11	-0.10	0.01	-0.05
Ohio	0.11*	0.18*	0.17*	0.28*	0.05	0.09*	0.25*	0.25*	-0.04	-0.01
Oklahoma	-0.10*	-0.15*	-0.17*	0.21*	-0.15*	-0.08	-0.14*	-0.12*	0.14*	0.07
Oregon	-0.16*	-0.18*	-0.18*	0.24*	-0.21*	-0.16*	-0.13	-0.14	-0.07	-0.09
Pennsylvania	0.00	0.02	0.03	0.05	-0.01	0.01	0.05	0.07	-0.02	-0.01
Rhode Island	-0.15	-0.08	-0.08	0.31	-0.20	-0.23	-0.08	0.00	0.20	0.16
South Carolina	0.00	-0.12	0.03	-0.21	-0.20	0.03	-0.02	-0.04	0.11	0.11
South Dakota	-0.10	-0.15	-0.12	0.38*	-0.25*	-0.18*	-0.09	-0.08	0.01	0.00
Tennessee	0.13	0.22*	0.19*	0.11	0.10	0.36*	0.18*	0.24*	-0.03	0.03
Texas	-0.11*	-0.17*	-0.20*	0.13*	-0.18*	-0.10*	-0.14*	-0.13*	-0.03	-0.04
Utah	-0.36*	-0.37*	-0.39*	0.04	-0.40*	-0.35*	-0.33*	-0.34*	-0.07	-0.18
Vermont	-0.33*	0.08	0.15*	0.26*	0.03	-0.24*	0.21*	0.23*	0.03	0.04
Virginia	0.11	0.10	0.12	0.19*	-0.01	0.03	0.14	0.15	0.05	0.07
Washington	-0.17*	-0.23*	-0.24*	0.40*	-0.28*	-0.22*	-0.19*	-0.20*	0.12*	0.06
West Virginia	-0.10	0.04	0.12	0.23	-0.07	-0.20	0.22	0.12	-0.16	-0.13
Wisconsin	-0.07	0.04	0.09	0.12*	-0.10*	-0.02	0.10*	0.10*	-0.06	-0.06
Wyoming	-0.42*	-0.46*	-0.41*	-0.03	-0.47*	-0.48*	-0.41*	-0.41*	-0.09	-0.21

*Figure is statistically significant at the 0.05 level or better.

!No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-2. Correlations between student membership and expenditures per pupil (cost-adjusted dollars), by state: 1997–98

State	Total	Current	Instruc- tional	Student and support staff	Admini- stration	Opera- tions	Salary	Salary and benefit	Capital outlay	Facility
United States	-0.07*	-0.08*	-0.08*	0.05*	-0.08*	-0.07*	-0.07*	-0.06*	-0.01	-0.02*
Alabama	-0.15	-0.24*	-0.25*	0.09	-0.29*	0.04	-0.22*	-0.22*	0.03	0.05
Alaska	-0.30*	-0.33*	-0.34*	-0.07	-0.22	-0.30*	-0.32*	-0.32*	-0.03	-0.20
Arizona	-0.22*	-0.23*	-0.19*	0.04	-0.26*	-0.22*	-0.19*	-0.20*	-0.01	-0.09
Arkansas	-0.16*	-0.18*	-0.17*	0.24*	-0.24*	-0.12*	-0.07	-0.07	-0.04	-0.05
California	-0.07*	-0.08*	-0.10*	0.34*	0.31*	-0.14*	-0.06	-0.06*	-0.04	0.00
Colorado	-0.24*	-0.25*	-0.27*	0.00	-0.11	-0.25*	-0.22*	-0.23*	-0.08	-0.12
Connecticut	-0.24*	-0.11	-0.08	0.10	-0.27*	-0.22*	0.01	0.05	-0.04	-0.01
Delaware	0.11	0.14	0.44	0.06	-0.11	-0.12	0.17	0.22	0.09	0.04
District of Columbia	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Florida	-0.13	-0.30*	-0.16	-0.12	-0.33*	-0.27*	-0.17	-0.16	-0.02	-0.03
Georgia	-0.11	-0.23*	-0.22*	-0.12	-0.21*	-0.07	-0.20*	-0.17*	-0.02	-0.02
Hawaii	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
Idaho	-0.29*	-0.34*	-0.31*	0.04	-0.37*	-0.24*	-0.33*	-0.31*	-0.03	-0.10
Illinois	0.00	-0.01	0.00	0.06	-0.05	-0.03	0.00	0.00	0.02	0.01
Indiana	0.11	0.16*	0.17*	0.32*	-0.14*	0.00	0.15*	0.22*	0.09	0.10
Iowa	-0.16*	-0.16*	-0.14*	0.20*	-0.14*	-0.20*	-0.13*	-0.10	-0.05	-0.06
Kansas	-0.25*	-0.27*	-0.23*	0.11*	-0.27*	-0.29*	-0.26*	-0.24*	-0.16*	-0.24*
Kentucky	-0.08	-0.12	-0.16*	0.02	-0.07	0.07	-0.10	-0.09	0.06	0.07
Louisiana	-0.17	-0.21	-0.07	-0.13	-0.14	-0.27*	-0.17	-0.15	-0.09	-0.08
Maine	-0.44*	-0.37*	-0.36*	0.28*	-0.33*	-0.34*	-0.26*	-0.26*	0.00	-0.08
Maryland	-0.09	-0.06	0.07	-0.25	0.12	-0.07	0.05	0.12	-0.16	-0.14
Massachusetts	-0.03	0.01	0.02	0.07	-0.14*	-0.05	-0.08	-0.03	0.08	0.08
Michigan	-0.02	-0.03	-0.02	0.19*	-0.12*	0.02	0.10*	0.10*	-0.02	-0.01
Minnesota	-0.10	-0.12*	-0.10	0.12*	-0.15*	-0.17*	-0.08	-0.07	-0.03	-0.06
Mississippi	-0.02	-0.25*	-0.22*	-0.06	-0.32*	0.02	-0.16*	-0.17*	0.17*	0.19*
Missouri	-0.17*	-0.19*	-0.20*	0.09*	-0.19*	-0.07	-0.13*	-0.12*	-0.03	-0.02
Montana	-0.18*	-0.21*	-0.20*	0.17*	-0.19*	-0.20*	-0.18*	-0.17*	-0.02	-0.08
Nebraska	-0.09*	-0.10*	-0.11*	0.11*	-0.06	-0.06	-0.08*	-0.08	0.02	-0.02
Nevada	-0.20	-0.25	-0.27	0.06	-0.24	-0.23	-0.25	-0.25	0.04	-0.03
New Hampshire	-0.33*	-0.30*	-0.24*	-0.04	-0.32*	-0.30*	-0.12	-0.14	-0.07	-0.09
New Jersey	-0.14*	-0.09*	-0.08	0.02	-0.26*	-0.01	-0.04	-0.04	0.01	0.02
New Mexico	-0.25*	-0.30*	-0.28*	-0.13	-0.29*	-0.28*	-0.27*	-0.27*	-0.11	-0.14
New York	-0.03	-0.05	-0.04	-0.07	-0.06	-0.03	-0.06	-0.05	-0.01	-0.01
North Carolina	-0.27*	-0.38*	-0.38*	-0.28*	-0.32*	-0.19*	-0.37*	-0.37*	-0.08	-0.10
North Dakota	-0.15*	-0.16*	-0.15*	0.12	-0.15*	-0.12	-0.15*	-0.14*	0.00	-0.07
Ohio	0.03	0.08*	0.06	0.24*	-0.04	0.03	0.17*	0.16*	-0.05	-0.03
Oklahoma	-0.17*	-0.20*	-0.22*	0.15*	-0.17*	-0.12*	-0.20*	-0.18*	0.10*	0.01
Oregon	-0.19*	-0.22*	-0.22*	0.16*	-0.24*	-0.18*	-0.18*	-0.18*	-0.08	-0.11
Pennsylvania	-0.04	-0.05	-0.05	0.01	-0.05	-0.04	-0.01	0.01	-0.02	-0.02
Rhode Island	-0.22	-0.17	-0.16	0.23	-0.23	-0.28	-0.17	-0.11	0.14	0.05
South Carolina	-0.11	-0.24*	-0.13	-0.27*	-0.26*	-0.07	-0.16	-0.18	0.10	0.09
South Dakota	-0.15*	-0.22*	-0.20*	0.30*	-0.26*	-0.23*	-0.17*	-0.16*	0.00	-0.03
Tennessee	-0.01	0.05	0.01	0.03	0.00	0.26*	0.02	0.08	-0.04	-0.01
Texas	-0.15*	-0.23*	-0.26*	0.06	-0.20*	-0.15*	-0.22*	-0.22*	-0.05	-0.08*
Utah	-0.39*	-0.40*	-0.43*	-0.02	-0.41*	-0.35*	-0.36*	-0.37*	-0.10	-0.22
Vermont	-0.38*	-0.12	-0.06	0.18*	-0.06	-0.31*	0.01	0.03	0.01	0.01
Virginia	-0.07	-0.11	-0.12	0.10	-0.13	-0.11	-0.07	-0.05	0.02	0.02
Washington	-0.26*	-0.30*	-0.31*	0.29*	-0.31*	-0.25*	-0.27*	-0.28*	0.07	-0.02
West Virginia	-0.19	-0.19	-0.10	0.17	-0.16	-0.30*	-0.04	-0.12	-0.16	-0.15
Wisconsin	-0.11*	-0.08	-0.04	0.06	-0.15*	-0.10*	-0.03	-0.03	-0.06	-0.07
Wyoming	-0.45*	-0.49*	-0.44*	-0.08	-0.49*	-0.49*	-0.45*	-0.44*	-0.10	-0.23

*Figure is statistically significant at the 0.05 level or better.

¹No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table A-3. Correlations between total expenditures per pupil and selected school district demographic and economic characteristics (unadjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.05*	-0.10*	0.29*	0.28*
Alabama	-0.07	-0.15	0.29*	0.45*
Alaska	0.83*	0.64*	-0.46*	-0.60*
Arizona	0.29*	0.25*	-0.16*	-0.13
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.21*	0.13*	-0.09*	0.08*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.29*	0.29*	0.08	0.00
Delaware	0.47	-0.19	0.40	0.47
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.19	0.06	0.27*	0.60*
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.04	-0.05	-0.01	0.10
Illinois	0.17*	-0.06	0.35*	0.52*
Indiana	0.40*	0.25*	0.01	0.18*
Iowa	0.01	-0.02	0.01	0.01
Kansas	-0.09	0.08	-0.05	-0.06
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.12	-0.36*	0.53*	0.42*
Maine	0.00	-0.03	-0.01	0.04
Maryland	0.05	-0.13	0.51*	0.66*
Massachusetts	0.59*	0.41*	-0.13*	0.19*
Michigan	0.02	-0.13*	0.33*	0.37*
Minnesota	0.38*	0.27*	-0.08	0.05
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.52*	0.21*	0.10*	0.17*
Montana	0.28*	0.24*	-0.18*	-0.31*
Nebraska	-0.08*	0.07	-0.10*	-0.13*
Nevada	0.42	0.35	-0.37	-0.58*
New Hampshire	-0.16*	-0.06	0.05	0.19*
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.08*	-0.24*	0.51*	0.45*
North Carolina	0.05	-0.07	0.27*	0.45*
North Dakota	0.31*	0.39*	-0.29*	-0.28*
Ohio	0.31*	0.00	0.27*	0.43*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.41*	0.28*	-0.11	-0.02
Pennsylvania	-0.10*	-0.28*	0.46*	0.51*
Rhode Island	0.22	0.17	-0.12	0.08
South Carolina	0.00	-0.16	0.26*	0.37
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.25*	0.11	0.06	0.19*
Texas	-0.20*	-0.11*	0.13*	0.15*
Utah	0.34*	0.38*	-0.22	0.03
Vermont	0.03	-0.09	0.09	0.14*
Virginia	0.14	-0.18*	0.52*	0.72*
Washington	0.18*	-0.07	0.17*	0.37*
West Virginia	0.02	0.09	-0.13	-0.06
Wisconsin	0.03	0.06	-0.01	0.04
Wyoming	0.25	0.17	0.05	0.08

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-4. Correlations between total expenditures per pupil and selected school district demographic and economic characteristics (cost-adjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	-0.06*	-0.04*	0.07*	-0.01
Alabama	-0.07	-0.01	0.07	0.24*
Alaska	0.82*	0.66*	-0.51*	-0.59*
Arizona	0.34*	0.32*	-0.26*	-0.22*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.10*	0.26*	-0.28*	-0.17*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.15	0.20*	0.06	-0.04
Delaware	0.49	0.07	0.04	0.23
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.08	0.20	0.01	0.25*
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.05	0.00	-0.11	-0.02
Illinois	0.05	-0.04	0.21*	0.34*
Indiana	0.20*	0.23*	-0.13*	0.01
Iowa	-0.20*	0.03	-0.19*	-0.23*
Kansas	-0.21*	0.16*	-0.27*	-0.30*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.27*	-0.32*	0.37*	0.10
Maine	-0.07	0.06	-0.15*	-0.13*
Maryland	-0.06	-0.14	0.41*	0.59*
Massachusetts	0.56*	0.41*	-0.18*	0.11
Michigan	-0.04	-0.11*	0.20*	0.25*
Minnesota	0.21*	0.29*	-0.30*	-0.24*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.34*	0.35*	-0.20*	-0.17*
Montana	0.25*	0.24*	-0.19*	-0.37*
Nebraska	-0.25*	0.13*	-0.30*	-0.41*
Nevada	0.43	0.38	-0.41	-0.58*
New Hampshire	-0.23*	0.02	-0.07	0.06
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.31*	-0.30*	0.30*	0.09*
North Carolina	0.08	0.13	-0.02	0.18
North Dakota	0.28*	0.41*	-0.36*	-0.42*
Ohio	0.18*	-0.01	0.23*	0.37*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.34*	0.35*	-0.22*	-0.12
Pennsylvania	-0.18*	-0.21*	0.29*	0.34*
Rhode Island	-0.01	-0.05	0.09	0.26
South Carolina	0.09	-0.04	0.12	0.25*
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.10	0.18*	-0.15	-0.06
Texas	-0.24*	-0.03	-0.02	-0.01
Utah	0.28	0.41*	-0.30	-0.08
Vermont	-0.03	-0.06	0.02	0.08
Virginia	0.09	-0.05	0.31*	0.49*
Washington	0.08	0.13*	-0.11	0.04
West Virginia	-0.08	0.20	-0.27*	-0.21
Wisconsin	-0.09	0.04	-0.14*	-0.11*
Wyoming	0.23	0.20	-0.01	0.03

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table A-5. Correlations between current expenditures per pupil and selected school district demographic and economic characteristics (unadjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.12*	-0.03*	0.28*	0.31*
Alabama	0.08	-0.06	0.19*	0.29*
Alaska	0.80*	0.63*	-0.48*	-0.65*
Arizona	0.53*	0.49*	-0.44*	-0.43*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.33*	0.33*	-0.20*	0.11*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.43*	0.39*	0.04	0.04
Delaware	0.42	-0.35	0.42	0.53*
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.40*	0.36*	0.02	0.46*
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.10	0.03	-0.12	0.04
Illinois	0.23*	0.01	0.28*	0.46*
Indiana	0.67*	0.57*	-0.30*	-0.17*
Iowa	0.51*	0.34*	-0.17*	-0.07
Kansas	0.04	0.26*	-0.25*	-0.20*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.04	-0.36*	0.57*	0.46*
Maine	0.13	0.10	-0.06	0.10
Maryland	0.25	0.10	0.34	0.50*
Massachusetts	0.69*	0.49*	-0.18*	0.20*
Michigan	0.46*	0.24*	0.16*	0.24*
Minnesota	0.57*	0.47*	-0.18*	0.00
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.64*	0.33*	0.02	0.12*
Montana	0.38*	0.34*	-0.26*	-0.44*
Nebraska	-0.01	0.17*	-0.23*	-0.26*
Nevada	-0.46	-0.33	-0.14	-0.36
New Hampshire	-0.05	-0.14	0.03	0.28*
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.23*	-0.42*	0.66*	0.43*
North Carolina	0.12	0.03	0.13	0.32*
North Dakota	0.38*	0.47*	-0.40*	-0.31*
Ohio	0.54*	0.16*	0.13*	0.33*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.58*	0.33*	-0.24*	-0.23*
Pennsylvania	-0.08	-0.27*	0.51*	0.56*
Rhode Island	0.13	0.07	-0.06	0.06
South Carolina	0.39*	0.22*	-0.12	0.08
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.37*	0.16	0.09	0.24*
Texas	0.07*	0.34*	-0.34*	-0.27*
Utah	0.57*	0.66*	-0.56*	-0.35*
Vermont	0.14*	0.02	-0.01	0.29*
Virginia	0.17	-0.13	0.52*	0.75*
Washington	0.38*	0.32*	-0.25*	-0.03
West Virginia	0.07	0.31*	-0.25	-0.34*
Wisconsin	0.54*	0.39*	0.05	0.23*
Wyoming	0.45*	0.43*	-0.12	-0.19

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-6. Correlations between current expenditures per pupil and selected school district demographic and economic characteristics (cost-adjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.01	0.06*	0.03*	-0.01
Alabama	0.09	0.12	-0.07	0.04
Alaska	0.78*	0.64*	-0.53*	-0.64*
Arizona	0.53*	0.52*	-0.50*	-0.48*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.17*	0.45*	-0.42*	-0.22*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.28*	0.30*	0.03	-0.02
Delaware	0.42	0.01	-0.08	0.18
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.24	0.60*	-0.44*	-0.15
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.11	0.09	-0.22*	-0.10
Illinois	0.10*	0.05	0.11*	0.26*
Indiana	0.47*	0.58*	-0.48*	-0.39*
Iowa	0.08	0.40*	-0.51*	-0.50*
Kansas	-0.16*	0.31*	-0.46*	-0.46*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.24	-0.31*	0.35*	0.04
Maine	0.02	0.20*	-0.24*	-0.13*
Maryland	0.16	0.12	0.21	0.40
Massachusetts	0.65*	0.49*	-0.25*	0.12*
Michigan	0.43*	0.34*	-0.06	0.06
Minnesota	0.37*	0.53*	-0.49*	-0.38*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.47*	0.52*	-0.33*	-0.27*
Montana	0.33*	0.32*	-0.26*	-0.50*
Nebraska	-0.21*	0.21*	-0.41*	-0.53*
Nevada	-0.33	-0.19	-0.24	-0.43
New Hampshire	-0.18*	-0.02	-0.14	0.08
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.49*	-0.51*	0.49*	0.09*
North Carolina	0.16	0.30*	-0.27*	-0.07
North Dakota	0.34*	0.48*	-0.46*	-0.46*
Ohio	0.43*	0.18*	0.07	0.27*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.46*	0.41*	-0.37*	-0.34*
Pennsylvania	-0.21*	-0.18*	0.29*	0.33*
Rhode Island	-0.09	-0.14	0.14	0.24
South Carolina	0.50*	0.38*	-0.32*	-0.11
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.24*	0.25*	-0.14	-0.02
Texas	-0.06*	0.33*	-0.44*	-0.41*
Utah	0.47*	0.64*	-0.58*	-0.41*
Vermont	0.04	0.07	-0.13*	0.18*
Virginia	0.11	0.03	0.29*	0.52*
Washington	0.17*	0.49*	-0.52*	-0.41*
West Virginia	-0.13	0.48*	-0.48*	-0.57*
Wisconsin	0.30*	0.37*	-0.22*	-0.08
Wyoming	0.40*	0.44*	-0.18	-0.24

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table A-7. Correlations between salaries expenditures per pupil and selected school district demographic and economic characteristics (unadjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.11*	-0.07*	0.33*	0.33*
Alabama	0.15	0.01	0.17	0.29*
Alaska	0.76*	0.59*	-0.37*	-0.54*
Arizona	0.46*	0.36*	-0.35*	-0.36*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.34*	0.26*	-0.12*	0.18*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.36*	0.31*	0.11	0.04
Delaware	0.41	-0.22	0.29	0.49
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.32*	0.27*	0.07	0.51*
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	-0.01	-0.08	0.03	0.17
Illinois	0.17*	-0.05	0.34*	0.51*
Indiana	0.62*	0.52*	-0.26*	-0.13*
Iowa	0.56*	0.28*	-0.03	0.06
Kansas	-0.04	0.15*	-0.17*	-0.14*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.05	-0.34*	0.54*	0.44*
Maine	0.27*	0.13	-0.01	0.20*
Maryland	-0.04	-0.39	0.67*	0.79*
Massachusetts	0.44*	0.22*	0.09	0.41*
Michigan	0.30*	0.07	0.30*	0.35*
Minnesota	0.56*	0.40*	-0.07	0.12*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.52*	0.15*	0.17*	0.28*
Montana	0.36*	0.31*	-0.23*	-0.41*
Nebraska	0.08*	0.08*	-0.09*	-0.01
Nevada	-0.42	-0.29	-0.18	-0.35
New Hampshire	0.25*	-0.02	0.01	0.31*
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.39*	-0.57*	0.70*	0.32*
North Carolina	0.04	-0.05	0.18*	0.37*
North Dakota	0.35*	0.40*	-0.27*	-0.13
Ohio	0.59*	0.20*	0.10*	0.32*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.51*	0.22*	-0.13	-0.13
Pennsylvania	-0.08	-0.32*	0.58*	0.61*
Rhode Island	-0.20	-0.22	0.17	0.17
South Carolina	0.30*	0.13	-0.06	0.09
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.37*	0.15	0.12	0.25*
Texas	0.13*	0.33*	-0.28*	-0.19*
Utah	0.56*	0.64*	-0.53*	-0.34*
Vermont	0.19*	-0.05	0.12	0.40*
Virginia	0.15	-0.16	0.52*	0.76*
Washington	0.34*	0.23*	-0.16*	0.03
West Virginia	0.34*	0.17	-0.07	-0.21
Wisconsin	0.31*	0.15*	0.18*	0.33*
Wyoming	0.40*	0.39*	-0.04	-0.22

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-8. Correlations between salaries expenditures per pupil and selected school district demographic and economic characteristics (cost-adjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	#	0.02*	0.09*	0.02*
Alabama	0.16	0.18*	-0.09	0.05
Alaska	0.76*	0.62*	-0.44*	-0.53*
Arizona	0.47*	0.42*	-0.45*	-0.43*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.19*	0.40*	-0.35*	-0.15*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.22*	0.22*	0.09	-0.01
Delaware	0.40	0.08	-0.13	0.20
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.23	0.47*	-0.26*	0.12
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.02	-0.01	-0.11	0.01
Illinois	0.04	-0.02	0.18*	0.32*
Indiana	0.42*	0.52*	-0.44*	-0.35*
Iowa	0.16*	0.39*	-0.41*	-0.41*
Kansas	-0.22*	0.24*	-0.41*	-0.43*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.25*	-0.30*	0.32*	0.01
Maine	0.14*	0.26*	-0.25*	-0.10
Maryland	-0.14	-0.43*	0.61*	0.74*
Massachusetts	0.40*	0.22*	0.01	0.31*
Michigan	0.26*	0.13*	0.14*	0.21*
Minnesota	0.39*	0.49*	-0.39*	-0.27*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.37*	0.36*	-0.19*	-0.12*
Montana	0.31*	0.30*	-0.23*	-0.49*
Nebraska	-0.18*	0.16*	-0.36*	-0.41*
Nevada	-0.28	-0.13	-0.29	-0.43
New Hampshire	0.08	0.09	-0.17*	0.13
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.62*	-0.65*	0.54*	#
North Carolina	0.09	0.23*	-0.22*	-0.02
North Dakota	0.32*	0.44*	-0.38*	-0.34*
Ohio	0.52*	0.23*	0.05	0.26*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.38*	0.34*	-0.31*	-0.29*
Pennsylvania	-0.19*	-0.25*	0.40*	0.44*
Rhode Island	-0.32	-0.35*	0.31	0.31
South Carolina	0.42*	0.30*	-0.26*	-0.10
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.24*	0.24*	-0.11	#
Texas	-0.04	0.34*	-0.43*	-0.38*
Utah	0.44*	0.62*	-0.58*	-0.42*
Vermont	0.09	-0.01	#	0.30*
Virginia	0.10	-0.02	0.30*	0.56*
Washington	0.14*	0.45*	-0.49*	-0.40*
West Virginia	0.10	0.40*	-0.36*	-0.49*
Wisconsin	0.08	0.13*	-0.08	0.03
Wyoming	0.34*	0.42*	-0.12	-0.27

Rounds to zero.

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table A-9. Correlations between salaries and benefits expenditures per pupil and selected school district demographic and economic characteristics (unadjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.10*	-0.07*	0.31*	0.34*
Alabama	0.15	0.01	0.16	0.28*
Alaska	0.74*	0.56*	-0.36*	-0.55*
Arizona	0.46*	0.37*	-0.36*	-0.37*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.35*	0.30*	-0.16*	0.15*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.43*	0.37*	0.05	0.01
Delaware	0.31	-0.30	0.39	0.58*
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.33*	0.28*	0.07	0.52*
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	-0.01	-0.06	0.00	0.17
Illinois	0.14*	-0.07*	0.33*	0.49*
Indiana	0.61*	0.52*	-0.27*	-0.15*
Iowa	0.63*	0.36*	-0.09	0.02
Kansas	0.07	0.23*	-0.21*	-0.14*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.05	-0.39*	0.61*	0.49*
Maine	0.26*	0.16*	-0.05	0.17*
Maryland	0.00	-0.33	0.64*	0.76*
Massachusetts	0.51*	0.30*	-0.02	0.34*
Michigan	0.30*	0.08*	0.28*	0.33*
Minnesota	0.57*	0.40*	-0.06	0.13*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.55*	0.18*	0.17*	0.28*
Montana	0.39*	0.34*	-0.25*	-0.43*
Nebraska	0.05	0.09*	-0.13*	-0.07
Nevada	-0.40	-0.26	-0.21	-0.37
New Hampshire	0.14	-0.05	-0.02	0.29*
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.32*	-0.51*	0.68*	0.37*
North Carolina	0.04	-0.05	0.18	0.37*
North Dakota	0.40*	0.41*	-0.28*	-0.06
Ohio	0.58*	0.22*	0.07	0.29*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.50*	0.29*	-0.23*	-0.17*
Pennsylvania	0.02	-0.25*	0.55*	0.59*
Rhode Island	0.01	-0.02	-0.05	-0.01
South Carolina	0.32*	0.16	-0.10	0.06
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.39*	0.13	0.14	0.29*
Texas	0.16*	0.38*	-0.32*	-0.22*
Utah	0.52*	0.62*	-0.52*	-0.35*
Vermont	0.19*	-0.02	0.09	0.38*
Virginia	0.16	-0.13	0.51*	0.76*
Washington	0.35*	0.26*	-0.19*	0.01
West Virginia	0.17	0.29*	-0.24	-0.36*
Wisconsin	0.41*	0.26*	0.11*	0.29*
Wyoming	0.49*	0.41*	-0.06	-0.18

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-10. Correlation between salaries and benefits expenditures per pupil and selected school district demographic and economic characteristics (cost-adjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	#	0.01	0.08*	0.03*
Alabama	0.16	0.19*	-0.10	0.03
Alaska	0.74*	0.59*	-0.42*	-0.54*
Arizona	0.47*	0.43*	-0.46*	-0.44*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.19*	0.44*	-0.39*	-0.18*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.30*	0.30*	0.04	-0.04
Delaware	0.31	-0.03	0.02	0.33
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.24*	0.49*	-0.26*	0.12
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.01	0.01	-0.13	0.01
Illinois	0.01	-0.03	0.17*	0.30*
Indiana	0.43*	0.53*	-0.44*	-0.35*
Iowa	0.30*	0.48*	-0.45*	-0.40*
Kansas	-0.13*	0.30*	-0.44*	-0.42*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.26*	-0.35*	0.39*	0.07
Maine	0.13	0.29*	-0.28*	-0.12
Maryland	-0.10	-0.37	0.58*	0.72*
Massachusetts	0.48*	0.31*	-0.09	0.25*
Michigan	0.26*	0.14*	0.12*	0.20*
Minnesota	0.40*	0.49*	-0.38*	-0.25*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.41*	0.38*	-0.18*	-0.10*
Montana	0.34*	0.32*	-0.25*	-0.50*
Nebraska	-0.20*	0.17*	-0.38*	-0.45*
Nevada	-0.26	-0.11	-0.31	-0.44
New Hampshire	-0.01	0.06	-0.19*	0.10
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.57*	-0.59*	0.51*	0.03
North Carolina	0.09	0.24*	-0.23*	-0.03
North Dakota	0.37*	0.46*	-0.39*	-0.29*
Ohio	0.50*	0.25*	0.02	0.22*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.35*	0.38*	-0.38*	-0.31*
Pennsylvania	-0.08	-0.16*	0.36*	0.41*
Rhode Island	-0.17	-0.19	0.14	0.17
South Carolina	0.44*	0.33*	-0.30*	-0.13
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.28*	0.21*	-0.05	0.07
Texas	-0.01	0.37*	-0.45*	-0.40*
Utah	0.41*	0.61*	-0.55*	-0.43*
Vermont	0.09	0.02	-0.03	0.28*
Virginia	0.11	0.01	0.31*	0.56*
Washington	0.14*	0.47*	-0.51*	-0.41*
West Virginia	-0.04	0.48*	-0.48*	-0.59*
Wisconsin	0.19*	0.25*	-0.15*	-0.01
Wyoming	0.43*	0.43*	-0.13	-0.24

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table A-11. Correlations between instructional expenditures per pupil and selected school district demographic and economic characteristics (unadjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.09*	-0.05*	0.28*	0.35*
Alabama	-0.05	-0.19*	0.28*	0.38*
Alaska	0.78*	0.66*	-0.52*	-0.66*
Arizona	0.25*	0.18*	-0.18*	-0.21*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.26*	0.22*	-0.09*	0.21*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.51*	0.48*	-0.08	-0.05
Delaware	0.49	-0.49	0.56*	0.60*
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.31*	0.24	0.18	0.53*
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	-0.01	-0.04	-0.05	0.15
Illinois	0.29*	0.07*	0.26*	0.46*
Indiana	0.52*	0.48*	-0.26*	-0.13*
Iowa	0.56*	0.42*	-0.24*	-0.13*
Kansas	-0.03	0.17*	-0.20*	-0.15*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.04	-0.37*	0.61*	0.58*
Maine	0.09	0.08	-0.04	0.11
Maryland	0.25	0.32	0.13	0.31
Massachusetts	0.65*	0.48*	-0.17*	0.20*
Michigan	0.45*	0.23*	0.14*	0.22*
Minnesota	0.49*	0.43*	-0.19*	-0.04
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.41*	0.16*	0.13*	0.20*
Montana	0.28*	0.27*	-0.21*	-0.39*
Nebraska	-0.25*	0.02	-0.16*	-0.23*
Nevada	-0.56*	-0.44	-0.08	-0.28
New Hampshire	-0.03	-0.14	0.09	0.32*
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.05	-0.27*	0.60*	0.53*
North Carolina	0.02	-0.02	0.12	0.31*
North Dakota	0.42*	0.42*	-0.30*	-0.06
Ohio	0.44*	0.07	0.21*	0.41*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.44*	0.36*	-0.24*	-0.18*
Pennsylvania	-0.17*	-0.34*	0.55*	0.58*
Rhode Island	-0.01	-0.02	-0.04	0.04
South Carolina	0.22*	0.07	0.03	0.18
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.30*	0.09	0.14	0.26*
Texas	-0.06*	0.26*	-0.31*	-0.25*
Utah	0.45*	0.60*	-0.56*	-0.25
Vermont	0.10	-0.05	0.09	0.35*
Virginia	0.08	-0.18*	0.55*	0.77*
Washington	0.28*	0.33*	-0.28*	-0.13*
West Virginia	0.12	0.41*	-0.30*	-0.45*
Wisconsin	0.51*	0.36*	0.06	0.22*
Wyoming	0.58*	0.56*	-0.25	-0.25

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-12. Correlations between instructional expenditures per pupil and selected school district demographic and economic characteristics (cost-adjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	-0.02*	0.02*	0.06*	0.06*
Alabama	-0.05	-0.03	0.03	0.15
Alaska	0.73*	0.63*	-0.53*	-0.61*
Arizona	0.32*	0.29*	-0.32*	-0.33*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.10*	0.38*	-0.34*	-0.16*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.38*	0.40*	-0.09	-0.10
Delaware	0.55*	-0.27	0.22	0.39
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.19	0.46*	-0.19	0.05
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.02	0.03	-0.17	-0.01
Illinois	0.15*	0.12*	0.07*	0.24*
Indiana	0.31*	0.46*	-0.41*	-0.32*
Iowa	0.18*	0.48*	-0.54*	-0.51*
Kansas	-0.19*	0.25*	-0.41*	-0.41*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.28*	-0.35*	0.41*	0.14
Maine	0.00	0.17*	-0.21*	-0.10
Maryland	0.18	0.38	0.00	0.21
Massachusetts	0.62*	0.49*	-0.24*	0.11
Michigan	0.39*	0.32*	-0.10*	0.00
Minnesota	0.30*	0.48*	-0.46*	-0.38*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.14*	0.35*	-0.30*	-0.28*
Montana	0.24*	0.26*	-0.21*	-0.46*
Nebraska	-0.37*	0.10*	-0.35*	-0.49*
Nevada	-0.43	-0.30	-0.19	-0.37
New Hampshire	-0.15*	-0.03	-0.08	0.15
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.34*	-0.37*	0.42*	0.16*
North Carolina	0.08	0.28*	-0.31*	-0.11
North Dakota	0.38*	0.48*	-0.42*	-0.30*
Ohio	0.29*	0.07	0.16*	0.34*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.29*	0.43*	-0.38*	-0.31*
Pennsylvania	-0.31*	-0.26*	0.34*	0.37*
Rhode Island	-0.19	-0.20	0.15	0.21
South Carolina	0.36*	0.26*	-0.19	-0.02
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.14	0.18*	-0.10	-0.01
Texas	-0.15*	0.27*	-0.41*	-0.38*
Utah	0.36*	0.60*	-0.60*	-0.34*
Vermont	0.00	-0.01	-0.03	0.25*
Virginia	-0.02	-0.01	0.27*	0.48*
Washington	0.08	0.49*	-0.53*	-0.47*
West Virginia	-0.06	0.56*	-0.51*	-0.65*
Wisconsin	0.27*	0.34*	-0.21*	-0.09
Wyoming	0.51*	0.57*	-0.30*	-0.30*

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table A-13. Correlations between student and instructional staff support services expenditures per pupil and selected school district demographic and economic characteristics (unadjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.12*	-0.05*	0.20*	0.12*
Alabama	0.28*	0.10	0.15	0.24*
Alaska	0.01	-0.21	0.35*	0.16
Arizona	0.34*	0.23*	-0.24*	-0.23*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.46*	0.21*	-0.03	0.26*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	-0.05	-0.08	0.29*	0.13
Delaware	0.12	0.07	-0.12	0.22
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.24*	0.05	-0.06	0.14
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.01	-0.11	0.19*	0.30*
Illinois	0.15*	-0.10*	0.35*	0.50*
Indiana	0.57*	0.45*	-0.26*	-0.13*
Iowa	0.37*	0.02	0.18*	0.39*
Kansas	0.24*	0.07	0.05	0.19*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.09	-0.26*	0.39*	0.25*
Maine	0.21*	-0.04	0.18*	0.31*
Maryland	0.03	-0.34	0.54*	0.65*
Massachusetts	0.56*	0.33*	-0.04	0.30*
Michigan	0.07	-0.09*	0.33*	0.38*
Minnesota	0.61*	0.32*	0.06	0.28*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.64*	0.26*	0.03	0.16*
Montana	0.43*	0.26*	-0.11*	0.06
Nebraska	0.47*	0.16*	0.01	0.20*
Nevada	-0.07	-0.21	0.21	0.48*
New Hampshire	0.27*	-0.09	0.01	0.19*
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.63*	-0.72*	0.62*	0.05
North Carolina	0.16	-0.03	0.16	0.34*
North Dakota	0.47*	0.25*	-0.02	0.44*
Ohio	0.55*	0.22*	0.05	0.22*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.45*	-0.04	0.16*	0.08
Pennsylvania	-0.06	-0.32*	0.58*	0.62*
Rhode Island	0.52*	0.42*	-0.36*	-0.21
South Carolina	0.24*	0.08	-0.06	-0.04
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.38*	0.28*	-0.06	0.07
Texas	0.31*	0.40*	-0.22*	-0.06*
Utah	0.72*	0.56*	-0.40*	-0.30
Vermont	0.16*	0.02	-0.02	0.15*
Virginia	0.17	-0.16	0.47*	0.72*
Washington	0.45*	0.10	0.00	0.16*
West Virginia	0.15	-0.34*	0.30*	0.35*
Wisconsin	0.32*	0.16*	0.10*	0.25*
Wyoming	-0.03	0.01	0.25	0.13

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-14. Correlations between student and instructional staff support services expenditures per pupil and selected school district demographic and economic characteristics (cost-adjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.08*	0.01	0.07*	-0.04*
Alabama	0.30*	0.18*	0.05	0.15
Alaska	-0.03	-0.23	0.32*	0.20
Arizona	0.37*	0.29*	-0.32*	-0.29*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.45*	0.24*	-0.06	0.22*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	-0.11	-0.11	0.28*	0.10
Delaware	0.09	0.19	-0.28	0.09
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.17	0.15	-0.25*	-0.14
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.04	-0.07	0.11	0.22*
Illinois	0.12*	-0.08*	0.29*	0.44*
Indiana	0.49*	0.43*	-0.30*	-0.19*
Iowa	0.27*	0.05	0.07	0.27*
Kansas	0.18*	0.13*	-0.07	0.06
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.18	-0.22	0.27*	0.04
Maine	0.16*	0.00	0.09	0.20*
Maryland	-0.07	-0.33	0.39	0.50*
Massachusetts	0.55*	0.34*	-0.07	0.25*
Michigan	0.06	-0.08*	0.29*	0.34*
Minnesota	0.55*	0.36*	-0.08	0.12*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.58*	0.35*	-0.13*	-0.01
Montana	0.44*	0.28*	-0.12*	0.01
Nebraska	0.35*	0.20*	-0.14*	0.01
Nevada	-0.02	-0.14	0.14	0.42
New Hampshire	0.19*	-0.03	-0.07	0.10
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.70*	-0.73*	0.53*	-0.09*
North Carolina	0.19*	0.14	-0.08	0.11
North Dakota	0.48*	0.29*	-0.07	0.37*
Ohio	0.50*	0.23*	0.02	0.19*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.43*	0.02	0.07	0.01
Pennsylvania	-0.13*	-0.28*	0.47*	0.51*
Rhode Island	0.42*	0.32	-0.26	-0.12
South Carolina	0.30*	0.18	-0.17	-0.14
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.30*	0.31*	-0.17	-0.06
Texas	0.24*	0.45*	-0.34*	-0.19*
Utah	0.73*	0.59*	-0.45*	-0.34*
Vermont	0.11	0.03	-0.07	0.09
Virginia	0.16	-0.11	0.40*	0.65*
Washington	0.39*	0.25*	-0.19*	-0.07
West Virginia	0.11	-0.31*	0.26	0.30*
Wisconsin	0.20*	0.14*	-0.03	0.09
Wyoming	-0.04	0.06	0.18	0.06

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table A-15. Correlations between administration expenditures per pupil and selected school district demographic and economic characteristics (unadjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.05*	-0.05*	0.16*	0.09*
Alabama	0.19*	0.13	0.01	0.12
Alaska	0.79*	0.55*	-0.42*	-0.59*
Arizona	0.52*	0.53*	-0.48*	-0.46*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.40*	0.09*	0.06	0.30*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.24*	0.19*	0.10	0.13
Delaware	-0.16	-0.11	0.57*	0.54*
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.11	0.25*	-0.22	0.14
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.26*	0.18	-0.32*	-0.25*
Illinois	-0.15*	-0.27*	0.33*	0.35*
Indiana	0.55*	0.54*	-0.35*	-0.30*
Iowa	-0.03	0.07	-0.12*	-0.19*
Kansas	0.06	0.30*	-0.24*	-0.25*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	0.07	-0.24	0.45*	0.42*
Maine	0.18*	0.17*	-0.13*	0.01
Maryland	-0.04	-0.37	0.58*	0.62*
Massachusetts	0.43*	0.26*	-0.06	0.30*
Michigan	0.36*	0.25*	-0.07	-0.01
Minnesota	0.38*	0.29*	-0.09	0.03
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.51*	0.26*	0.04	0.12*
Montana	0.36*	0.31*	-0.25*	-0.43*
Nebraska	0.00	0.19*	-0.28*	-0.30*
Nevada	0.07	0.20	-0.40	-0.65*
New Hampshire	-0.11	0.00	-0.22*	-0.06
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.45*	-0.56*	0.58*	0.17*
North Carolina	0.17	0.08	0.11	0.25*
North Dakota	0.36*	0.43*	-0.37*	-0.41*
Ohio	0.48*	0.19*	0.02	0.17*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.13	0.10	-0.17*	-0.10
Pennsylvania	0.24*	0.07	0.17*	0.19*
Rhode Island	0.12	0.07	0.04	0.28
South Carolina	0.50*	0.37*	-0.28*	0.02
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.11	-0.14	0.25*	0.37*
Texas	-0.02	0.14*	-0.19*	-0.14*
Utah	0.30	0.38*	-0.32*	-0.22
Vermont	0.24*	0.14*	-0.01	0.22*
Virginia	0.19*	-0.11	0.47*	0.70*
Washington	0.17*	0.11	-0.06	0.08
West Virginia	0.04	-0.08	0.12	0.05
Wisconsin	0.35*	0.27*	0.00	0.15*
Wyoming	0.36*	0.30*	-0.08	-0.20

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-16. Correlations between administration expenditures per pupil and selected school district demographic and economic characteristics (cost-adjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	-0.02*	0.00	-0.01	-0.11*
Alabama	0.19*	0.22*	-0.13	-0.01
Alaska	0.79*	0.58*	-0.48*	-0.60*
Arizona	0.50*	0.53*	-0.51*	-0.48*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	0.40*	0.12*	0.02	0.25*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.14	0.12	0.09	0.09
Delaware	-0.20	0.12	0.31	0.34
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.00	0.34*	-0.43*	-0.20
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.24*	0.19*	-0.36*	-0.31*
Illinois	-0.24*	-0.24*	0.21*	0.20*
Indiana	0.37*	0.50*	-0.45*	-0.42*
Iowa	-0.18*	0.10	-0.25*	-0.35*
Kansas	-0.08	0.32*	-0.37*	-0.40
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.01	-0.23	0.38*	0.25*
Maine	0.12	0.21*	-0.22*	-0.12
Maryland	-0.12	-0.39	0.51*	0.55*
Massachusetts	0.39*	0.26*	-0.11	0.22*
Michigan	0.28*	0.25*	-0.18*	-0.11*
Minnesota	0.24*	0.32*	-0.28*	-0.22*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.40*	0.37*	-0.17*	-0.12*
Montana	0.32*	0.30*	-0.25*	-0.46*
Nebraska	-0.10*	0.20*	-0.35*	-0.43*
Nevada	0.11	0.24	-0.43	-0.65*
New Hampshire	-0.17*	0.05	-0.28*	-0.13
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.57*	-0.58*	0.46*	-0.03
North Carolina	0.19*	0.22*	-0.10	0.05
North Dakota	0.33*	0.43*	-0.39*	-0.46*
Ohio	0.37*	0.19*	-0.03	0.10*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.08	0.15*	-0.25*	-0.16*
Pennsylvania	0.20*	0.15*	0.01	0.02
Rhode Island	0.00	-0.05	0.14	0.38
South Carolina	0.55*	0.46*	-0.38*	-0.09
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.02	-0.10	0.13	0.23*
Texas	-0.09*	0.16*	-0.27*	-0.25*
Utah	0.26	0.39*	-0.35*	-0.27
Vermont	0.18*	0.15*	-0.06	0.17*
Virginia	0.16	-0.01	0.31*	0.54*
Washington	0.07	0.24*	-0.25*	-0.16*
West Virginia	-0.04	0.00	0.01	-0.06
Wisconsin	0.19*	0.24*	-0.15*	-0.04
Wyoming	0.33*	0.31*	-0.12	-0.23

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Table A-17. Correlations between school operations expenditures per pupil and selected school district demographic and economic characteristics (unadjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	0.06*	-0.04*	0.22*	0.23*
Alabama	-0.03	-0.11	0.15	0.10
Alaska	0.72*	0.58*	-0.47*	-0.66*
Arizona	0.48*	0.47*	-0.40*	-0.37*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	-0.32*	-0.02	-0.10*	-0.27*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.24*	0.18*	0.12	0.20*
Delaware	0.15	0.03	-0.11	-0.14
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.31*	0.21	0.05	0.32*
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.10	0.08	-0.11	-0.09
Illinois	-0.02	-0.18*	0.31*	0.39*
Indiana	0.57*	0.37*	-0.08	-0.01
Iowa	0.00	0.06	-0.08	-0.08
Kansas	0.07	0.27*	-0.30*	-0.34*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.09	-0.22	0.26*	0.07
Maine	0.00	0.00	-0.04	-0.04
Maryland	0.33	-0.41*	0.62*	0.59*
Massachusetts	0.57*	0.35*	-0.15*	0.11
Michigan	0.48*	0.30*	0.10*	0.14*
Minnesota	0.51*	0.44*	-0.25*	-0.0
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.74*	0.45*	-0.09*	0.02
Montana	0.22*	0.23*	-0.24*	-0.43*
Nebraska	0.32*	0.29*	-0.15*	-0.18*
Nevada	-0.51*	-0.35	-0.03	-0.36
New Hampshire	-0.29*	-0.23*	0.13	0.20*
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.15*	-0.32*	0.60*	0.45*
North Carolina	0.13	-0.09	0.35*	0.51*
North Dakota	0.09	0.28*	-0.29*	-0.41*
Ohio	0.37*	0.06	0.15*	0.31*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.57*	0.29*	-0.20*	-0.25
Pennsylvania	-0.01	-0.16*	0.35*	0.41*
Rhode Island	-0.25	-0.34*	0.39*	0.30
South Carolina	0.39*	0.16	-0.01	0.21*
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.50*	0.19*	0.11	0.24*
Texas	0.15*	0.10*	-0.06	-0.12*
Utah	0.30	0.39*	-0.30	-0.28
Vermont	-0.01	0.04	-0.10	0.03
Virginia	0.25*	-0.03	0.41*	0.58*
Washington	0.29*	0.18*	-0.17*	0.05
West Virginia	-0.10	0.33*	-0.37*	-0.40*
Wisconsin	0.41*	0.31*	0.09	0.20*
Wyoming	0.14	0.15	0.05	-0.07

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix A: Supplementary Tables

Table A-18. Correlations between school operations expenditures per pupil and selected school district demographic and economic characteristics (cost-adjusted dollars), by state: 1997–98

State	Minority enrollment	District poverty rate	Median household income	Median housing value
United States	-0.02*	0.02	0.07*	0.03*
Alabama	-0.03	-0.02	0.01	-0.04
Alaska	0.72*	0.63*	-0.55*	-0.69*
Arizona	0.47*	0.48*	-0.42*	-0.39*
Arkansas	(¹)	(¹)	(¹)	(¹)
California	-0.32*	0.02	-0.15*	-0.32*
Colorado	(¹)	(¹)	(¹)	(¹)
Connecticut	0.10	0.09	0.11	0.15
Delaware	0.12	0.18	-0.33	-0.30
District of Columbia	(²)	(²)	(²)	(²)
Florida	0.20	0.36*	-0.25*	-0.10
Georgia	(¹)	(¹)	(¹)	(¹)
Hawaii	(²)	(²)	(²)	(²)
Idaho	0.11	0.10	-0.16	-0.15
Illinois	-0.15*	-0.16*	0.16*	0.19*
Indiana	0.41*	0.35*	-0.19*	-0.15*
Iowa	-0.20*	0.11*	-0.26*	-0.31*
Kansas	-0.08	0.28*	-0.42*	-0.48*
Kentucky	(¹)	(¹)	(¹)	(¹)
Louisiana	-0.19	-0.18	0.12	-0.16
Maine	-0.07	0.10	-0.19*	-0.22*
Maryland	0.23	-0.42*	0.48*	0.44*
Massachusetts	0.52*	0.33*	-0.19*	0.04
Michigan	0.46*	0.35*	-0.04	0.01
Minnesota	0.28*	0.46*	-0.52*	-0.45*
Mississippi	(¹)	(¹)	(¹)	(¹)
Missouri	0.68*	0.55*	-0.25*	-0.15*
Montana	0.19*	0.22*	-0.24*	-0.46*
Nebraska	0.13*	0.30*	-0.27*	-0.37*
Nevada	-0.44	-0.27	-0.10	-0.40
New Hampshire	-0.35*	-0.12	-0.02	0.06
New Jersey	(¹)	(¹)	(¹)	(¹)
New Mexico	(¹)	(¹)	(¹)	(¹)
New York	-0.33*	-0.38*	0.47*	0.19*
North Carolina	0.17	0.07	0.12	0.30*
North Dakota	0.09	0.30*	-0.33*	-0.47*
Ohio	0.27*	0.06	0.12*	0.25*
Oklahoma	(¹)	(¹)	(¹)	(¹)
Oregon	0.54*	0.33*	-0.25*	-0.30*
Pennsylvania	-0.09*	-0.07	0.15*	0.21*
Rhode Island	-0.34*	-0.42*	0.46*	0.38*
South Carolina	0.48*	0.29*	-0.16	0.07
South Dakota	(¹)	(¹)	(¹)	(¹)
Tennessee	0.43*	0.24*	-0.02	0.09
Texas	0.04	0.15*	-0.21*	-0.27*
Utah	0.26	0.39*	-0.32*	-0.32*
Vermont	-0.07	0.07	-0.17*	-0.04
Virginia	0.20*	0.11	0.16	0.30*
Washington	0.17*	0.31*	-0.34*	-0.19*
West Virginia	-0.18	0.40*	-0.46*	-0.50*
Wisconsin	0.25*	0.28*	-0.08	0.00
Wyoming	0.12	0.17	0.01	-0.10

*Figure is statistically significant at the 0.05 level or better.

¹Nine 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 were missing Census data.

²No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one 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" and U.S. Department of Commerce, Bureau of the Census, 1990 Decennial Census School District Special Tabulation.

Appendix B: Technical Notes

Data Sources

The data in this report are based on three sources:

1. 1998 Survey of Local Government Finances, commonly known as the F-33: This source provided the financial information for school districts. This data collection effort was jointly conducted by the NCES and the U.S. Bureau of the Census (Governments Division) for all public school districts in the country. These data permit the assessment of education revenue and expenditures within states, as well as across the nation. It is part of the Common Core of Data (CCD) collection of surveys and administrative-records data relating to public elementary and secondary education.
2. 1990 Census School District Special Tabulation, commonly known as the Census Mapping (CM) file: This source provided information on district and community characteristics.
3. The 1993–94 Cost of Education Indices, downloaded from <http://nces.ed.gov/edfin/prodsurv/data.asp>. The file contains only the NCES AGENCY ID and CEI across geographic locations.

Taken together, these three data files were intended to include data on all public school districts. However, the CM file was missing a number of districts in certain states, and the CCD and F-33 data files contained missing information for some data fields. To account for this, some missing or deficient data was imputed as described below in Data Modifications and Imputation Procedures. In states where a large proportion (50 percent or greater) of the districts were missing CM data, the analyses dependent upon these data (relationships between expenditure measures and district fiscal and demographic characteristics) were excluded from the report. (This occurred in Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota.)

Variables used in this analysis and variable descriptions are listed below by source.

Survey of Local Government Finances (F-33)

TOTALEXP	Total General Expenditures (sum of TCURELSC, NONELSEC, TCAPOUT, L12, M12, Q11, I86)
TCURINST	Total current spending for instruction
E17	Current operation expenditures for pupil support
E07	Current operation expenditures for instructional staff support
E08	Current operation expenditures for general administration
E09	Current operation expenditures for school administration
V40	Current operation expenditures for operation and maintenance of plant
V45	Current operation expenditures for student transportation
V90	Current operation expenditures for business/central/other support services
V85	Current operation expenditures for: unspecified
TCURELSC	Total current spending for EL-SEC Programs (sum of TCURINST, TCURSSVC, TCUROTH)
Z32	Total salaries and wages
Z34	Total employee benefit payments

Census School District Special Tabulation (Census Mapping)

Median Income—All Households	Median income—all households in district
Median Value Housing Units—All	Median value housing unit—all in district
% Non-White Children	Percent of non-white children in the district
% Children Below Poverty Level	Percent of children below poverty level in the district

These data was imported into SAS from Excel.

Cost of Education Indices

GCEI Geographic Cost of Education Index. 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.

Construction of Key Expenditure Categories

The expenditures categories to which the reader is referred in the text and tables in this report were constructed from F-33 variables as shown below:

Total Expenditures

TCURELSC as described above, plus

NONELSEC	Total current spending for non EL-SEC programs
TCAPOUT	Capital outlay expenditures
L12	Payments to state governments
M12	Payments to local governments
Q11	Payments to other school systems
I86	Interest on school system indebtedness

Current Expenditures

TCURELSC, which is the sum of:

TCURINST	Total current spending for instruction (listed above)
TCURSSVC	Total current spending for support services
TCUROTH	Total current spending for other EL-SEC programs

Other Expenditure Categories

Salaries expenditures: Z32

Salaries and Benefits Expenditures: Z32 and Z34

Instructional Expenditures: TCURINST

Student and Instructional Staff Support Services Expenditures: E17 and E07

Administration Expenditures: E08, E09, V90, and V85

Operations Expenditures: V40 and V45

Selection of Observations

Primary Analysis Dataset

The F-33, Census Mapping, and Cost of Education files were merged to create the primary analysis dataset. After merging these files, observations were deleted from the dataset if they had any of the following characteristics:

- Designated as college-grade, vocational or special education, nonoperating, or education service agency (source: F-33 school level code)
- Had zero or missing total revenue and total expenditure (source: F-33 total revenue and total expenditure)
- Had the strings “VOC,” “TECH,” “SPEC ED,” or “AGRIC” in the name of the district (source: F-33 LEA name)

Data Modifications and Imputation Procedures

Taken together, the F-33, Census Mapping, and Cost of Education Index files were intended to include data on all public school districts. However, some data fields in these files contained missing information for some districts, or districts were simply missing from the data file altogether. For example, GCEI data were missing for several districts, and in nine states over half the districts were missing in the Census mapping file.

Conducting analyses with missing pieces of information would pose several logistical problems. In particular, the analysis dataset would change for each variable or data file investigated. That is, only those district observations with non-missing values for a particular variable could be analyzed, and each variable would be represented by a different set of districts. This type of analysis would pose potential problems with the interpretation of data results, as systematic reasons for missing data might produce or mask expenditure patterns. For example, new districts may universally be missing census mapping demographic data because of the timing of census data collection. If these districts were excluded from any given analysis for this reason, the results would obviously be affected by the omission. For these reasons, project staff decided to impute values for missing demographic and cost of education data. Data imputation procedures allow the researcher to run an analysis with a full dataset, with minimal compromising of the original data.

A “nearest neighbor” approach was used in the imputation process. The data were stratified by state so that any recipient always received a value from a donor in that same state. Then the data were sorted by

three variables, and “good” (in this case “good” = non-missing) values were supplanted over missing values. A missing value was always replaced by the last good value before it in the sort order.

Simple analysis revealed that all districts that were missing any one of the four census mapping variables were also missing the other three. There were 2,097 districts missing all 4 census mapping variables, out of 14,254 target districts. Further analysis revealed that all but two districts missing cost of education index data were also missing the census mapping variables. Thus, there were 175 districts missing all 5 pieces of information, 1,922 districts missing only the census mapping variables, and 2 districts missing only the cost of education index variable.

The districts were first sorted by state, a measure of size in descending order (in this case, v33: fall membership in October 1997), a type-of-district code in descending order (schlev: elementary, secondary, or unified district), and finally by a county code (first three digits of the FIPS code). The four census mapping variables were always imputed from the same donor. The cost of education index was occasionally imputed using a donor different from that used for the census mapping variables.

In nine different states, over half the districts were missing demographic census mapping data. These states were Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota. Missing data in these states were imputed for use in the national correlation analyses. However, such high imputation rates would have rendered suspicious data in the state-level demographic analyses. Consequently, these states were excluded from state-level analyses using census mapping data.

Expenditures data from the F-33 file were not imputed.

Glossary

Administration expenditures include general and school administration, as well as business support and central support services.

Capital expenditures include expenditures for construction of fixed assets and the purchasing of land, existing buildings and grounds and equipment.

Current expenditures include expenditures for salaries and wages, employee benefits, purchased services, supplies, and other miscellaneous expenditures in the following categories: elementary/secondary educational instructional programs in pre-kindergarten through grade 12; elementary/secondary non-instructional programs; and nonelementary/secondary programs. Employee benefits include state expenditures for retirement benefits that are allocated to districts.

District type is defined by the level of instruction provided. The categories and distinctions used in this report are

- Elementary—district provides instruction only below 8th grade
- Secondary—district provides instruction between 7th and 12th grades
- Unified—district provides instruction for any other combination of grades

Elementary is a general level of instruction classified by state and local practice as elementary, composed of any span of grades not above grade 8. Preschool or kindergarten is included only if it is an integral part of an elementary school or a regularly established school system.

Employee benefit expenditures include expenditures for all employee benefits paid for by the local education agency. These include the employer share of state or local employment retirement contributions, social security contributions, group life and health insurance, unemployment and workmen's compensation, and any tuition reimbursements.

Enrollment is defined as the count of students on the current roll on or about October 1, 1989.

Expenditures are defined as money paid out by a school district for the purchase, reimbursement, or hire of goods and services. These are reported as current expenditures and capital expenditures.

The **Geographic Cost of Education Index (GCEI)** 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. GCEI uses data from these separate categories of school inputs: certified school personnel, non-certified school personnel, and non-personnel school items. The index is established by weighting each component of expenditure by its share of current expenditure during the 1993–94 school year.

Geographic region refers to district location within a region of the country. The regional designators for this analysis are

- **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.

Instructional expenditures include current operating expenditures for activities dealing with the interaction of teachers and students in the classroom, home, or hospital, as well as co-curricular activities.

Instructional staff support services include expenditures for supervision of instructional services, instructional staff training, and media, library, audiovisual, television, and computer-assisted instruction services.

A **local education agency** is a government agency administratively responsible for providing public elementary and/or secondary instruction or education support services.

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 housing value is defined as the median value of specified owner-occupied housing units in a state in 1990.

Percent minority students is defined as the percent of students in a state's public schools who are African American, Hispanic, Asian, American Indian, and Alaskan Native in 1990.

Percent children in poverty is defined as children 5 years of age and living in households with income at or below the poverty level in 1990.

Pupil support expenditures include expenditures for guidance, health, and logistical support that enhance instruction. Such support includes attendance, social work, student accounting, counseling, student appraisal, information record maintenance, and placement services. Pupil support services also include medical, dental, nursing, psychological, and speech services.

Salaries expenditures include expenditures for all salaries and wages paid by the local education agency for education staff employed by the agency.

A **school district** is a geographic area within a state where a public school system operates as a governmental entity with responsibility for operating public schools in that geographic area.

School operations and maintenance expenditures includes building services (heating, electricity, air conditioning, property insurance), care and upkeep of grounds and equipment, all transportation vehicle operations and maintenance, and security services. These operations and services are for schools and all other school district facilities.

Secondary is defined as the general level of instruction classified by state and local practice as secondary and composed of any span of grades beginning with the next grade following the elementary grades and ending with or below grade 12.

A **student** is an individual for whom instruction is provided in an elementary or secondary education program that is not an adult education program and is under the jurisdiction of a school, school system, or other education institution.

A **vocational education district** is defined as a public elementary/secondary district that focuses primarily on vocational education, and provides education and training in one or more semiskilled or technical occupations.

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