

## Chapter 6: Total Revenues

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### Total Revenues

School district revenues for public elementary and secondary education totaled \$321.6 billion in 1997–98 (table 6-1). Just over 48 percent of these revenues (\$154.6 billion) came from state funds, while 46 percent (\$146.9 billion) came from local sources and just over 6 percent (\$20.1 billion) came from federal programs. The distribution of revenues from local, state, and federal sources for the 50 states and the District of Columbia is shown in table 6-2.

### Total Revenues Per Pupil

Total revenues per pupil in the United States averaged \$7,047 in 1997–98 before cost adjustments (table 6-1).

Total revenues per pupil were highest in the Northeast (\$9,164) and lowest in the South (\$6,324) and West (\$6,380). At \$7,255 per pupil, total revenues in the Midwest were higher than in the South and West. The use of cost adjustments decreased the range between the highest and lowest regions from \$2,840 to \$2,214 and the ratio of revenues per pupil from 1.5 to 1.4 to 1. Although the Northeast remained the highest-revenue region at \$8,280 per pupil, the West (\$6,066) replaced the South (\$6,773) as the region with lowest total per pupil revenues.

Smaller districts tended to have greater total revenues per pupil, both before and after cost adjustments. Before cost adjustments, total revenues per pupil averaged \$7,524 in districts with fewer than 1,000 students, compared to \$6,887 in districts with 10,000 or more students. After cost adjustments, smaller districts continued to have higher average total revenues per pupil than larger districts. In addition, the difference between the smallest and the largest districts increased from \$637 to \$1,703 per pupil. Nationally, however, there was a weak negative relationship between a district's enrollment and total revenues per pupil, both before (-0.04) and after (-0.08) cost adjustments (tables A-1 and A-2).

Before cost adjustments, total revenues per pupil showed small but statistically significant relationships with two measures of district wealth—median household income (+0.30) and median value owner-occupied housing (+0.29) (table A-24). School districts with median household income at or above \$35,000 had average total revenues per pupil of \$7,586, while districts with median household incomes below \$20,000 had revenues per pupil of \$6,674 (table 6-1). Similarly, districts with median housing values at or above \$85,000 had average total revenues of \$7,698 per pupil, while districts with median housing values below \$40,000 had revenues per pupil of \$6,905.

After cost adjustments, the situation was reversed. Total adjusted revenues per pupil were higher in districts with the lowest median household incomes (\$7,329 per pupil) than in districts with the highest incomes (\$7,018). Total revenues per pupil were also higher in districts with the lowest median housing values (\$7,676) than in districts with the highest housing values (\$7,049). However, there was a weak

Table 6-1. Total revenues, cost-adjusted total revenues, total revenues per pupil, and cost-adjusted total revenues per pupil in public school districts, by region, enrollment, minority enrollment, poverty, median household income, and median value owner-occupied housing: 1997–98

School district characteristics	Total revenues (in thousands)	Cost-adjusted total revenues (in thousands)	Total revenues per pupil	Cost-adjusted total revenues per pupil
All districts	\$321,622,156	\$319,728,825	\$7,047	\$7,028
Region				
Northeast	72,682,562	65,472,189	9,164	8,280
Midwest	77,058,766	78,684,493	7,255	7,446
South	104,199,649	111,596,706	6,324	6,773
West	67,681,179	63,975,437	6,380	6,066
District enrollment				
0–999	20,454,296	22,523,964	7,524	8,405
1,000–4,999	93,183,195	94,672,223	7,175	7,323
5,000–9,999	50,437,706	49,405,143	7,148	7,017
10,000 or more	157,546,959	153,127,496	6,887	6,702
Minority enrollment				
Less than 5 percent	79,897,569	82,397,885	7,074	7,300
5 percent–<20 percent	83,948,316	83,374,947	6,995	6,947
20 percent–<50 percent	87,836,784	87,474,578	6,843	6,814
50 percent or more	53,065,381	49,948,518	7,443	7,006
Data missing	16,874,106	16,532,898	—	—
School-age children in poverty				
Less than 5 percent	42,739,421	39,388,077	8,264	7,625
5 percent–<15 percent	106,317,343	105,759,079	6,866	6,830
15 percent–<25 percent	78,803,683	81,823,857	6,650	6,905
25 percent or more	76,887,603	76,224,915	7,149	7,088
Data missing	16,874,106	16,532,898	—	—
Median household income				
Less than \$20,000	23,097,182	25,366,086	6,674	7,329
\$20,000–<\$25,000	56,067,251	59,842,901	6,677	7,127
\$25,000–<\$30,000	78,290,883	78,663,371	6,985	7,018
\$30,000–<\$35,000	51,469,451	50,715,400	6,806	6,706
\$35,000 or more	95,823,283	88,608,169	7,586	7,018
Data missing	16,874,106	16,532,898	—	—
Median value owner-occupied housing				
Less than \$40,000	25,264,791	28,084,382	6,905	7,676
\$40,000–<\$55,000	51,312,366	55,347,453	6,554	7,070
\$55,000–<\$85,000	94,795,385	97,658,908	6,561	6,761
\$85,000 or more	133,375,508	122,105,185	7,698	7,049
Data missing	16,874,106	16,532,898	—	—

—Not available.

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

relationship between adjusted total revenues per pupil and both of the two measures of district wealth for the United States as a whole. The correlation between adjusted total revenues per pupil and median household income was +0.05 and median value owner-occupied housing was -0.03 (table A-25).

Total revenues per pupil showed very little relationship with district demographic characteristics such as percent minority enrollment and percent school-age children living in poverty—both before and after cost adjustments. Before adjustments, school districts with the highest minority enrollments had higher total revenues per pupil than districts with the lowest minority enrollments, \$7,443 and \$7,074, respectively. After adjustments, the figures were nearly reversed—\$7,006 in the highest-minority districts and \$7,300 in the lowest-minority districts. However, in both cases there was very little correlation between total revenues per pupil and percent minority enrollment. The correlation between minority enrollment and total revenues per pupil was +0.08 before cost adjustments and -0.04 after cost adjustments.

Table 6-2. Percent of total revenues (in unadjusted dollars) across sources, by state: 1997–98

State	Local	State	Federal	Total
United States	45.9	47.6	6.6	100.0
Alabama	28.4	62.5	9.0	100.0
Alaska	25.1	61.8	13.0	100.0
Arizona	47.1	42.8	10.1	100.0
Arkansas	32.5	58.6	8.8	100.0
California	33.7	58.3	8.0	100.0
Colorado	51.9	43.1	4.9	100.0
Connecticut	59.8	36.4	3.8	100.0
Delaware	30.0	63.6	6.4	100.0
District of Columbia	83.5	0.0	16.5	100.0
Florida	43.2	49.6	7.2	100.0
Georgia	42.1	51.4	6.5	100.0
Hawaii	2.4	89.2	8.4	100.0
Idaho	30.4	62.7	6.9	100.0
Illinois	64.0	29.4	6.6	100.0
Indiana	46.3	49.2	4.5	100.0
Iowa	47.5	47.8	4.7	100.0
Kansas	35.9	58.2	5.9	100.0
Kentucky	29.4	61.2	9.3	100.0
Louisiana	37.8	51.0	11.2	100.0
Maine	51.7	43.2	5.1	100.0
Maryland	56.5	38.6	5.0	100.0
Massachusetts	54.0	41.2	4.7	100.0
Michigan	29.7	64.4	5.9	100.0
Minnesota	44.9	50.4	4.7	100.0
Mississippi	31.6	54.9	13.4	100.0
Missouri	54.9	38.6	6.5	100.0
Montana	43.9	46.2	9.9	100.0
Nebraska	61.5	32.2	6.3	100.0
Nevada	63.8	31.8	4.4	100.0
New Hampshire	87.4	9.0	3.7	100.0
New Jersey	58.5	38.1	3.5	100.0
New Mexico	14.5	72.3	13.3	100.0
New York	55.0	39.5	5.5	100.0
North Carolina	28.9	64.1	6.9	100.0
North Dakota	49.3	39.0	11.8	100.0
Ohio	53.6	40.8	5.6	100.0
Oklahoma	33.5	57.7	8.8	100.0
Oregon	37.0	56.7	6.3	100.0
Pennsylvania	57.6	36.9	5.5	100.0
Rhode Island	54.5	40.1	5.4	100.0
South Carolina	39.8	52.2	8.0	100.0
South Dakota	54.8	35.5	9.7	100.0
Tennessee	43.8	47.7	8.5	100.0
Texas	49.1	43.4	7.5	100.0
Utah	32.0	60.7	7.3	100.0
Vermont	72.6	23.3	4.1	100.0
Virginia	63.6	31.2	5.2	100.0
Washington	28.1	65.6	6.3	100.0
West Virginia	28.7	62.0	9.3	100.0
Wisconsin	42.2	53.3	4.5	100.0
Wyoming	46.3	47.0	6.7	100.0

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

Total revenues per pupil, in contrast, were higher in the lowest-poverty districts than in the highest poverty districts both before and after cost adjustments—\$8,264 and \$7,149, respectively, before cost adjustments, and \$7,625 and \$7,088 respectively, after cost adjustments. Again there was a weak correlation between total revenues per pupil and percent school-age children in poverty. The correlation between percent school-age children in poverty and total revenues per pupil was -0.08 before cost adjustments and not statistically significant after cost adjustments.

### **Restricted Range Ratio**

The restricted range ratio for unadjusted total revenues per pupil across the United States was 1.05 (table 6-3). Variation across the states ranged from a low of 0.19 in Nevada to a high of 1.40 in Vermont. Four states (Alaska, Illinois, Montana, and Vermont) had a restricted range ratio higher than that for the United States.

When cost adjustments were applied, the restricted range ratio for total revenues per pupil across the United States decreased to 0.90 (table 6-3). Six states exceeded the national variation after cost adjustments: Alaska, Illinois, Missouri, Montana, New Hampshire, and Vermont. Cost adjustments increased the range between the lowest-variation and highest-variation states. After cost adjustments, the restricted range ratio ranged from 0.22 in Florida to 1.56 in Vermont.

### **Coefficient of Variation**

The coefficient of variation for unadjusted total revenues per pupil across the United States was 0.25 (table 6-3). Variation across the states ranged from a low of 0.08 in Kentucky to a high of 0.36 in Alaska. Five states (Alaska, Illinois, Montana, North Dakota, and Vermont) had a coefficient of variation higher than the coefficient for the United States.

When total revenues were adjusted for cost-of-education differences, the coefficient of variation for revenues per pupil across the United States became 0.22 (table 6-4). Nine states exceeded the national coefficient after cost adjustments: Alaska, Illinois, Minnesota, Montana, New Hampshire, North Dakota, Texas, Vermont, and Wyoming. Cost adjustments decreased the range between the lowest-variation and highest-variation states. After cost adjustments, the coefficient of variation ranged from a low of 0.08 in Florida and Kentucky to a high of 0.35 in Montana.

### **Gini Coefficient**

The Gini coefficient for unadjusted total revenues per pupil across the United States was 0.13 (table 6-3). Variation across the states ranged from a low of 0.03 in Nevada to a high of 0.16 in Vermont. Three states (Alaska, Montana, and Vermont) had a Gini coefficient higher than the coefficient for the United States.

Cost-of-education adjustments reduced the Gini coefficient across the United States to 0.11 (table 6-4). Alaska, Montana, and Vermont still exceeded the United States level of variation, and Illinois and New Hampshire joined the group. After adjustments, the Gini coefficient still ranged from a low of 0.03 in Nevada to a high of 0.17 in Vermont.

Table 6-3. Variation in total revenues per pupil (unadjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Average rank	Average quartile
	Value	Rank	Value	Rank	Value	Rank		
United States	1.05	†	0.25	†	0.13	†	†	†
Alabama	0.32	7	0.11	10	0.05	3	6.67	1
Alaska	1.28	48	0.36	49	0.15	48	48.33	4
Arizona	0.76	43	0.19	35	0.08	28	35.33	3
Arkansas	0.45	23	0.11	10	0.05	3	12.00	2
California	0.44	22	0.13	21	0.07	21	21.33	2
Colorado	0.38	12	0.11	10	0.05	3	8.33	1
Connecticut	0.49	26	0.14	23	0.07	21	23.33	2
Delaware	0.46	24	0.09	2	0.05	3	9.67	1
District of Columbia	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Florida	0.26	3	0.09	2	0.05	3	2.67	1
Georgia	0.67	37	0.15	24	0.08	28	29.67	3
Hawaii	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Idaho	0.46	24	0.15	24	0.07	21	23.00	2
Illinois	1.24	47	0.28	46	0.13	46	46.33	4
Indiana	0.43	19	0.12	17	0.07	21	19.00	2
Iowa	0.26	3	0.10	4	0.04	2	3.00	1
Kansas	0.59	31	0.18	32	0.08	28	30.33	3
Kentucky	0.25	2	0.08	1	0.05	3	2.00	1
Louisiana	0.31	6	0.10	4	0.05	3	4.33	1
Maine	0.56	28	0.18	32	0.08	28	29.33	3
Maryland	0.52	27	0.12	17	0.06	13	19.00	2
Massachusetts	0.71	41	0.19	35	0.10	38	38.00	4
Michigan	0.69	39	0.17	30	0.09	35	34.67	3
Minnesota	0.70	40	0.23	43	0.09	35	39.33	4
Mississippi	0.40	14	0.11	10	0.06	13	12.33	2
Missouri	0.96	45	0.23	43	0.12	45	44.33	4
Montana	1.11	46	0.31	47	0.14	47	46.67	4
Nebraska	0.56	28	0.15	24	0.08	28	26.67	3
Nevada	0.19	1	0.10	4	0.03	1	2.00	1
New Hampshire	0.72	42	0.20	38	0.11	43	41.00	4
New Jersey	0.65	34	0.16	28	0.09	35	32.33	3
New Mexico	0.65	34	0.18	32	0.08	28	31.33	3
New York	0.64	33	0.20	38	0.10	38	36.33	4
North Carolina	0.34	8	0.10	4	0.05	3	5.00	1
North Dakota	0.68	38	0.27	45	0.10	38	40.33	4
Ohio	0.66	36	0.20	38	0.11	43	39.00	4
Oklahoma	0.43	19	0.13	21	0.06	13	17.67	2
Oregon	0.35	10	0.12	17	0.06	13	13.33	2
Pennsylvania	0.57	30	0.15	24	0.08	28	27.33	3
Rhode Island	0.27	5	0.10	4	0.05	3	4.00	1
South Carolina	0.39	13	0.11	10	0.06	13	12.00	2
South Dakota	0.43	19	0.17	30	0.07	21	23.33	2
Tennessee	0.40	14	0.11	10	0.06	13	12.33	2
Texas	0.41	16	0.22	41	0.07	21	26.00	3
Utah	0.42	17	0.16	28	0.07	21	22.00	2
Vermont	1.40	49	0.31	47	0.16	49	48.33	4
Virginia	0.62	32	0.19	35	0.10	38	35.00	3
Washington	0.42	17	0.12	17	0.06	13	15.67	2
West Virginia	0.34	8	0.10	4	0.05	3	5.00	1
Wisconsin	0.36	11	0.11	10	0.06	13	11.33	1
Wyoming	0.76	43	0.22	41	0.10	38	40.67	4

†Not applicable.

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

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

Table 6-4. Variation in total revenues per pupil (cost-adjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Average rank	Average quartile
	Value	Rank	Value	Rank	Value	Rank		
United States	0.90	†	0.22	†	0.11	†	†	†
Alabama	0.32	7	0.11	6	0.06	10	7.67	1
Alaska	1.28	47	0.34	47	0.15	47	47.00	4
Arizona	0.75	40	0.21	37	0.09	32	36.33	4
Arkansas	0.34	8	0.10	4	0.05	3	5.00	1
California	0.47	22	0.14	21	0.07	23	22.00	2
Colorado	0.39	15	0.14	21	0.06	10	15.33	2
Connecticut	0.48	23	0.14	21	0.08	26	23.33	2
Delaware	0.45	20	0.09	3	0.05	3	8.67	1
District of Columbia	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Florida	0.22	1	0.08	1	0.04	2	1.33	1
Georgia	0.49	25	0.12	17	0.06	10	17.33	2
Hawaii	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
Idaho	0.57	30	0.16	27	0.08	26	27.67	3
Illinois	1.14	46	0.25	44	0.12	45	45.00	4
Indiana	0.41	19	0.11	6	0.06	10	11.67	2
Iowa	0.29	3	0.12	17	0.05	3	7.67	1
Kansas	0.68	36	0.22	40	0.10	38	38.00	4
Kentucky	0.31	5	0.08	1	0.05	3	3.00	1
Louisiana	0.29	3	0.10	4	0.05	3	3.33	1
Maine	0.75	40	0.20	34	0.09	32	35.33	3
Maryland	0.39	15	0.11	6	0.06	10	10.33	2
Massachusetts	0.68	36	0.19	32	0.10	38	35.33	3
Michigan	0.54	28	0.14	21	0.07	23	24.00	2
Minnesota	0.49	25	0.23	41	0.08	26	30.67	3
Mississippi	0.37	13	0.11	6	0.06	10	9.67	2
Missouri	0.96	45	0.20	34	0.10	38	39.00	4
Montana	1.30	48	0.35	49	0.15	47	48.00	4
Nebraska	0.72	39	0.21	37	0.10	38	38.00	4
Nevada	0.25	2	0.11	6	0.03	1	3.00	1
New Hampshire	0.91	44	0.24	43	0.12	45	44.00	4
New Jersey	0.66	35	0.16	27	0.09	32	31.33	3
New Mexico	0.69	38	0.20	34	0.08	26	32.67	3
New York	0.61	32	0.19	32	0.10	38	34.00	3
North Carolina	0.31	5	0.11	6	0.05	3	4.67	1
North Dakota	0.82	42	0.31	46	0.11	43	43.67	4
Ohio	0.54	28	0.17	29	0.09	32	29.67	3
Oklahoma	0.60	31	0.18	31	0.08	26	29.33	3
Oregon	0.35	10	0.15	25	0.06	10	15.00	2
Pennsylvania	0.48	23	0.12	17	0.06	10	16.67	2
Rhode Island	0.36	11	0.11	6	0.06	10	9.00	1
South Carolina	0.37	13	0.11	6	0.06	10	9.67	2
South Dakota	0.63	33	0.21	37	0.09	32	34.00	3
Tennessee	0.36	11	0.11	6	0.06	10	9.00	1
Texas	0.65	34	0.27	45	0.09	32	37.00	4
Utah	0.46	21	0.17	29	0.07	23	24.33	3
Vermont	1.56	49	0.34	47	0.17	49	48.33	4
Virginia	0.51	27	0.15	25	0.08	26	26.00	3
Washington	0.39	15	0.13	20	0.06	10	15.00	2
West Virginia	0.34	8	0.11	6	0.05	3	5.67	1
Wisconsin	0.39	15	0.11	6	0.06	10	10.33	2
Wyoming	0.85	43	0.23	41	0.11	43	42.33	4

†Not applicable.

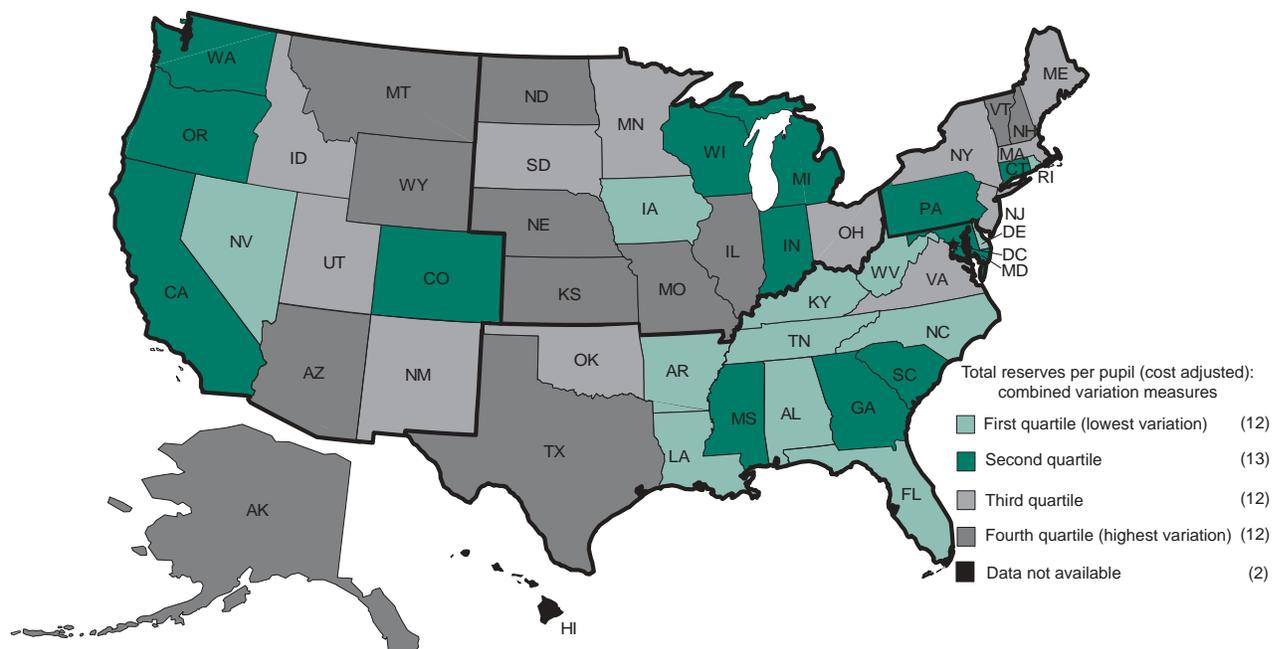
<sup>1</sup>Variation is not measured in the District of Columbia or Hawaii where there is only one school district.

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

## Overall Variation

In a synthesis of the three unadjusted variation measures, the South had the lowest variation, while the Northeast had the highest (figure 6-1). The West had neither high nor low interdistrict variation, with about half the states falling into the two lowest-variation quartiles when ranked with states across the country (table 6-5). Four-fifths (81 percent) of the Southern states fell into the two quartiles with lowest variation, while two-thirds of the Northeastern and Midwestern states (67 percent each) fell into the two quartiles with highest variation after cost adjustments.

Figure 6-1. Synthesis of variation measures of total revenues per pupil (cost-adjusted dollars), by state: 1997–98



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

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

Table 6-5. Variation in total revenues per pupil, by region: 1997–98

Region	Percent of states in quartiles 1 and 2 (low variation)	Percent of states in quartiles 3 and 4 (high variation)
<b>Unadjusted total revenues per pupil</b>		
Northeast	22	78
Midwest	33	67
South	81	19
West	58	42
<b>Cost-adjusted total revenues per pupil</b>		
Northeast	33	67
Midwest	33	67
South	81	19
West	42	58

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

In unadjusted dollars, states with small variation on one measure also demonstrated small variation on the other two measures with three notable exceptions: Arkansas, Delaware, and Texas. Arkansas showed very low variation relative to the other states on the Gini coefficient (ranked 3<sup>rd</sup>) but a mid-level restricted range ratio (ranked 23<sup>rd</sup>). Delaware was similar, with small variation when measured by the coefficient of variation (ranked 2<sup>nd</sup>) and the Gini coefficient (tied with Arkansas for 3<sup>rd</sup> rank), but a rank of 24<sup>th</sup> when the restricted range ratio was used. In Texas, the case was a bit different in that the restricted range ratio was the smallest of the three measures (ranked 16<sup>th</sup>) and similar to the Gini coefficient (ranked 21<sup>st</sup>), but the coefficient of variation was in the lowest quartile (ranked 41<sup>st</sup>). Cost-of-education adjustments reduced these discrepancies in all three states.

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

For the United States as a whole, total revenues per pupil in unadjusted dollars showed a positive relationship with a school district's median household income (+0.30) and its median value owner-occupied housing (+0.29) (table A-24). Similarly, at the state level, owner-occupied housing value was positively related to total revenues per pupil in nearly half of the 40 states with available data; the relationship was strongly positive in 5 states (Florida, Illinois, Maryland, Pennsylvania, and Virginia) (table 6-6). In contrast, median household income was not as strongly related to total revenues per pupil. Twenty-three of the 40 states with available data showed no statistically significant relationship between district income and total revenues per pupil, 8 states showed a moderate negative relationship between income and revenues, and four states showed a moderate positive relationship. In only four states (Louisiana, Maryland, New York, and Virginia) was median household income strongly related to a district's total revenues per pupil.

After cost adjustments, the strength of the relationship between district wealth and total revenues per pupil decreased for the United States as a whole, and the relationship with housing value also changed from positive to negative. The national cost-adjusted correlation with median household income was +0.05; the national cost-adjusted correlation with owner-occupied housing value was -0.03 (table A-25). Adjusted total revenues per pupil continued to show a strong positive relationship with a district's median value owner-occupied housing in only two states (Maryland and Virginia) and a moderate positive relationship in only five other states (Alabama, Illinois, Michigan, Ohio, and Pennsylvania) (figure 6-2). No states showed a strong positive relationship between a district's median household income and adjusted total revenues per pupil, and only seven states (Illinois, Louisiana, Maryland, Michigan, New York, Pennsylvania, and Virginia) showed a moderate positive relationship between these variables. However, in over half the states reporting data (21), there was a moderate negative relationship between median household income and total revenues per pupil (figure 6-3).

Total revenues per pupil showed a weak relationship with minority enrollment for the United States as a whole, both before (+0.08) and after cost adjustments (-0.04) (table 6-6). This was the case in most states as well. Six states (Alaska, Arizona, Massachusetts, Missouri, Ohio, and Utah) showed a strong positive relationship between minority enrollment and total revenues per pupil before cost adjustments and four states (Alaska, Arizona, Massachusetts, and Missouri) showed this relationship after cost adjustments (figure 6-4). New York was the only state to show a strong negative relationship between minority enrollment and total revenues per pupil, and this was after cost adjustments only.

The percent of school-age children in poverty in a district also showed very little relationship with total revenues per pupil, both at the national level and in the states. The national correlation between percent

Table 6-6. Correlations between total revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98

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

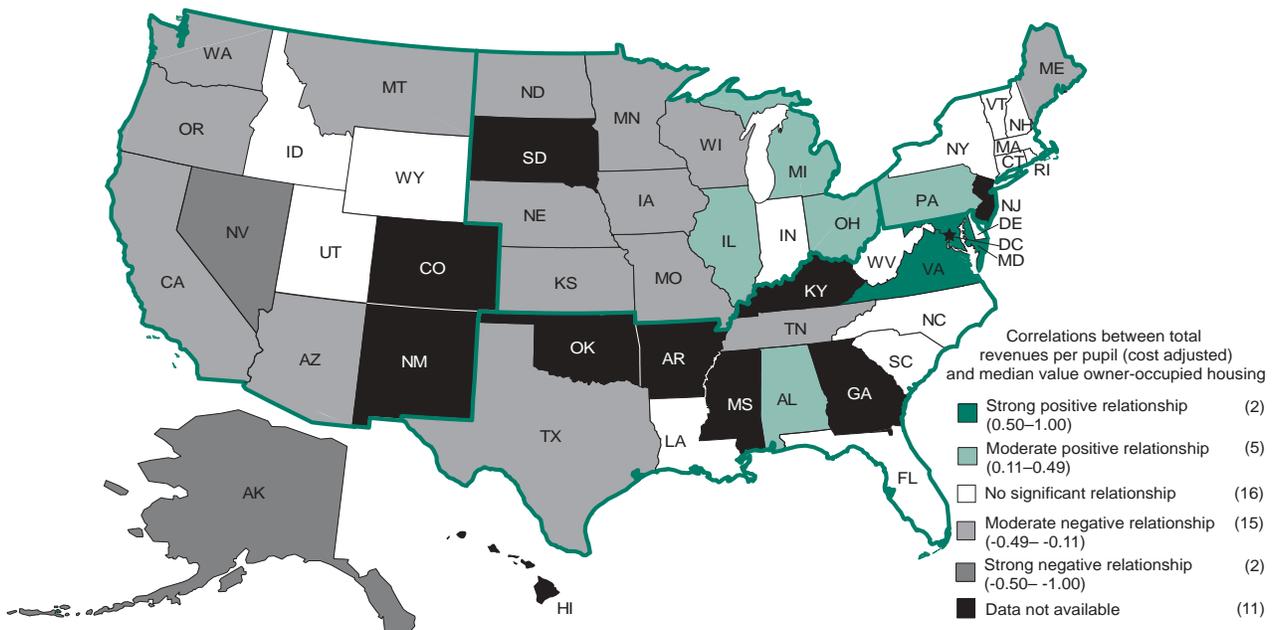
Table 6-6. Correlations between total revenues per pupil and selected fiscal and demographic characteristics, by state: 1997–98—Continued

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

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

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

Figure 6-2. Correlations between total revenues per pupil and median value owner-occupied housing (cost-adjusted dollars), by state: 1997–98

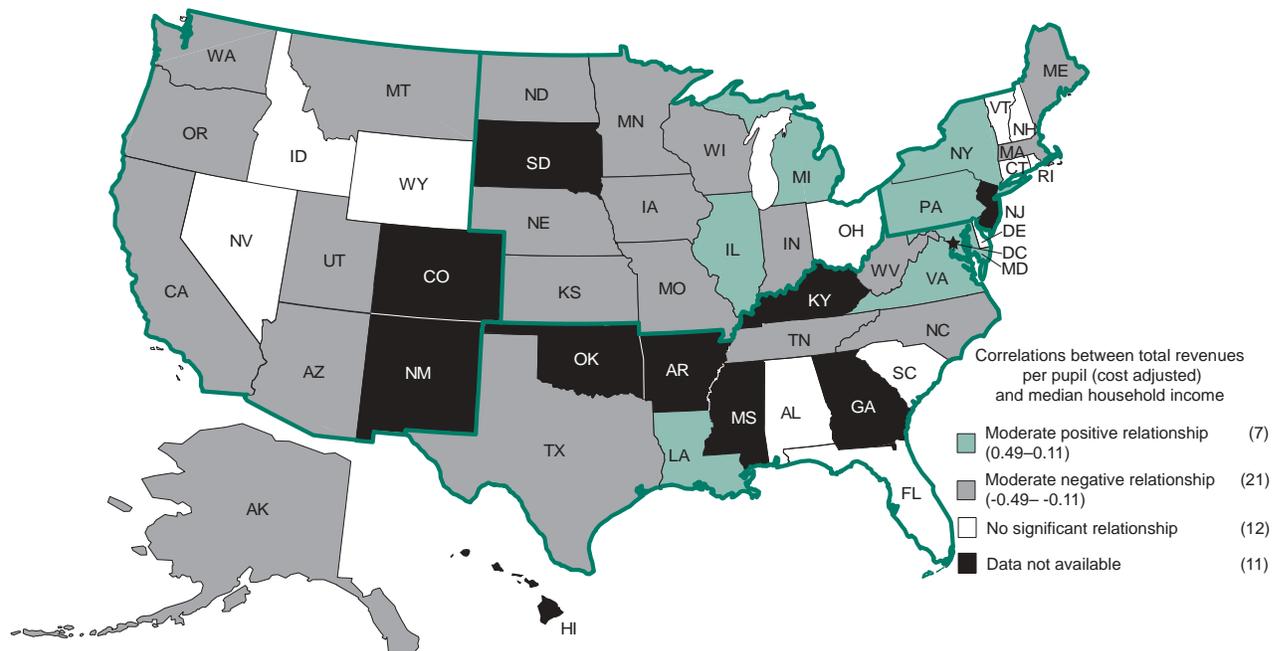


NOTE: No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one district. Nine other states (Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota) were excluded from state-level correlation analysis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

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

school-age children in poverty and total revenues per pupil was  $-0.08$  before cost adjustments and not statistically significant after cost adjustments. Only two states (Alaska and Utah) showed a strong positive relationship between children in poverty and total revenues per pupil before cost adjustments and only three states (Alaska, Missouri, and Utah) showed this relationship after cost adjustments. Again, New York was the only state to show a strong negative relationship between children in poverty and total revenues per pupil, after cost adjustments to revenues (figure 6-5).

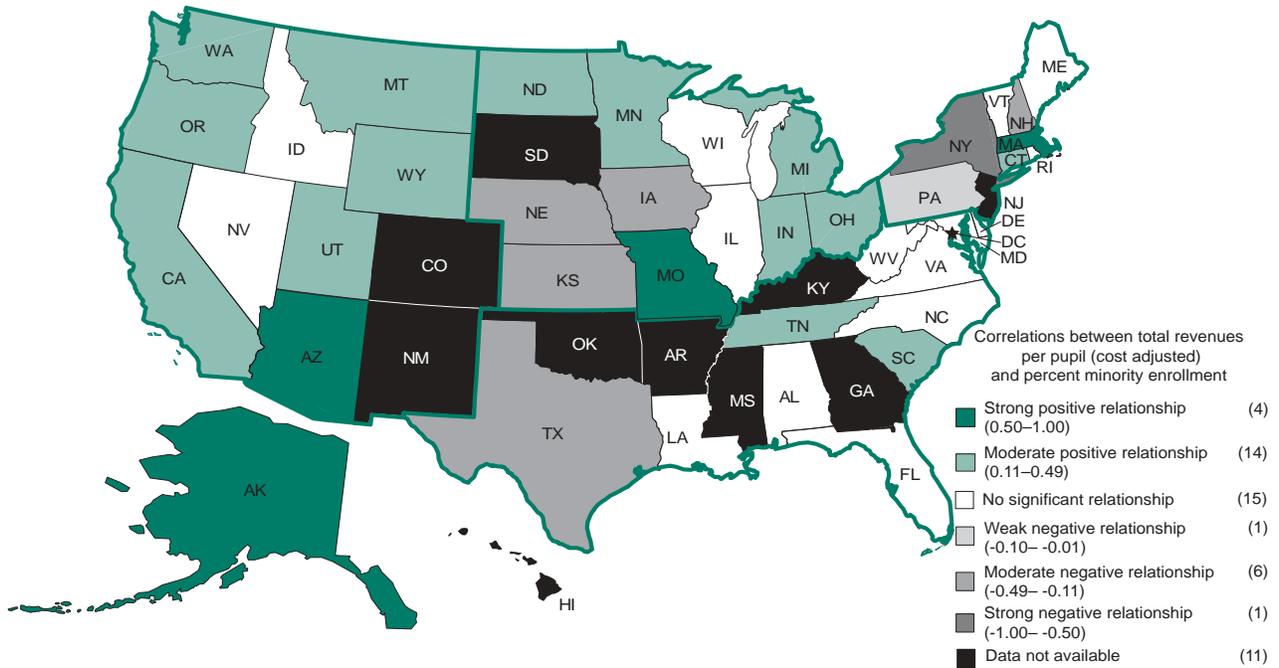
Figure 6-3. Correlations between total revenues per pupil and median household income (cost-adjusted dollars), by state: 1997–98



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

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

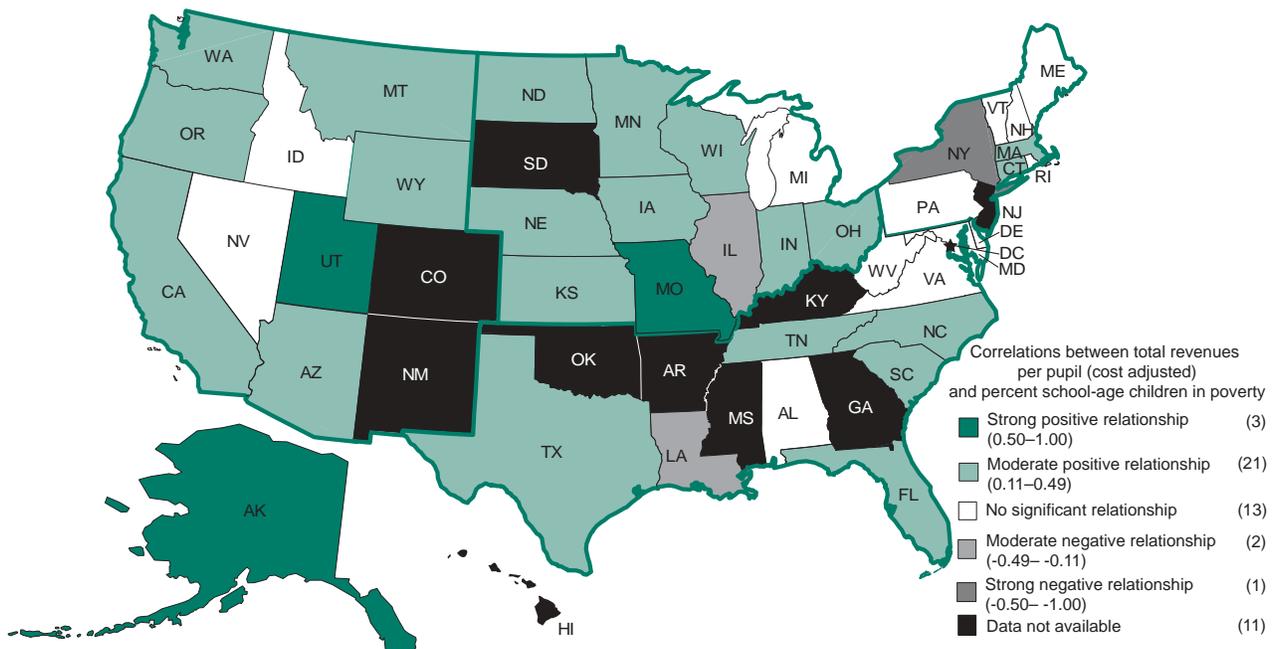
Figure 6-4. Correlations between total revenues per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98



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

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

Figure 6-5. Correlations between total revenues per pupil and percent school-age children in poverty (cost-adjusted dollars), by state: 1997–98



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

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

## Chapter 7: Summary of Findings

This report examined school district revenues for elementary and secondary education during the 1997–98 school year. Separate chapters were devoted to local revenues, state revenues, state and local revenues, federal revenues, and total revenues. This chapter synthesizes the material presented previously and highlights the key findings of the report.

### National Findings about Education Revenues

School district revenues for elementary and secondary education totaled \$321.6 billion in 1997–98 (table 6-1). State governments provided the largest share of total school district revenues—nearly \$155 billion, or 48.1 percent of the total. Local governments provided the second-largest share—nearly \$147 billion, or 45.7 percent of the total. The federal government provided the remainder—about \$20.1 billion, or 6.3 percent of the total.

### Regional Differences in School District Revenues Per Pupil

Local revenues, state and local revenues, and total revenues per pupil in unadjusted dollars were highest in the Northeast, while state revenues per pupil were highest in the West and federal revenues per pupil were highest in the South (table 7-1). State revenues, state and local revenues, and total revenues per pupil were lowest in the South, with local revenues per pupil lowest in the West and federal revenues per pupil lowest in the Midwest.

Table 7-1. Regional differences in school district revenues per pupil: 1997–98

Characteristics	Local revenues per pupil	State revenues per pupil	State and local revenues per pupil	Federal revenues per pupil	Total revenues per pupil
Unadjusted dollars					
Highest region	Northeast	West	Northeast	South	Northeast
Lowest region	West	South	South	Midwest	South
Cost-adjusted dollars					
Highest region	Northeast	Midwest	Northeast	South	Northeast
Lowest region	West	Northeast	West	Northeast	West

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 School District Special Tabulation.

With cost adjustments, local revenues, state and local revenues, and total revenues per pupil were still highest in the Northeast and federal revenues per pupil were highest in the South (table 7-1). However, the Midwest replaced the West as the region with the highest state revenues per pupil. The West remained the region with the lowest local revenues per pupil, but the Northeast replaced the South as the region with the lowest state revenues per pupil and the Midwest as the region with the lowest federal revenues per pupil. The West also replaced the South as the region with the lowest state and local revenues and total revenues per pupil.

## Differences in Revenues Per Pupil in Districts of Different Size

Revenues per pupil were generally highest in small school districts and lowest in large districts (table 7-2). In unadjusted dollars, state revenues, state and local revenues, and total revenues per pupil were highest in districts with fewer than 1,000 students and local revenues per pupil were highest in districts with between 1,000 and 5,000 students. Only, federal revenues per pupil were highest in the largest districts—districts with over 10,000 students. Local revenues, state and local revenues, and total revenues per pupil were lowest in the largest districts, while state and federal revenues per pupil were lowest in districts with between 1,000 and 5,000 students.

Table 7-2. School district revenues per pupil, by district size: 1997–98

Characteristics	Local revenues per pupil	State revenues per pupil	State and local revenues per pupil	Federal revenues per pupil	Total revenues per pupil
Unadjusted dollars					
Highest group	1,000–4,999	0–999	0–999	10,000 and over	0–999
Lowest group	10,000 and over	1,000–4,999	10,000 and over	1,000–4,999	10,000 and over
Cost-adjusted dollars					
Highest group	0–999	0–999	0–999	0–999	0–999
Lowest group	10,000 and over	5,000–9,999	10,000 and over	5,000–9,999	10,000 and over

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.

With cost adjustments, the smallest school districts (those with less than 1,000 students) had the highest revenues per pupil from local, state and federal sources, as well as the highest state and local revenues and total revenues per pupil. Larger school districts, in contrast, tended to have the lowest revenues per pupil. Local revenues, state and local revenues, and total revenues per pupil were lowest in districts with over 10,000 students, while state and federal revenues per pupil were lowest in districts with between 5,000 and 10,000 students.

## Variation in Revenues Per Pupil Across School Districts

Three different statistics were used to measure the extent of variation in revenues per pupil in school districts across the nation: the restricted range ratio, the coefficient of variation, and the Gini coefficient. Table 7-3 summarizes variation in local, state, federal, state and local, and total revenues per pupil in both unadjusted and cost-adjusted dollars on the three measures.

Table 7-3. Variation in school district revenues per pupil: 1997–98

Variation measure	Local revenues per pupil	State revenues per pupil	State and local revenues per pupil	Federal revenues per pupil	Total revenues per pupil
Unadjusted dollars					
Restricted range ratio	6.19	3.37	1.18	7.13	1.05
Coefficient of variation	0.64	0.39	0.27	0.79	0.25
Gini coefficient	0.32	0.21	0.13	0.34	0.13
Cost-adjusted dollars					
Restricted range ratio	5.39	3.79	0.95	7.54	0.90
Coefficient of variation	0.59	0.39	0.23	0.81	0.22
Gini coefficient	0.30	0.21	0.12	0.34	0.11

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.

Of the five major revenue measures examined in this report, federal revenues per pupil showed the greatest variation across school districts, in both unadjusted and cost-adjusted dollars. As shown in table 7-3, the restricted range ratio for unadjusted federal revenues per pupil was 7.13, the coefficient of variation was 0.79, and the Gini coefficient was 0.34. (Federal revenues in the district at the 95<sup>th</sup> percentile were 6.19 times higher than local revenues in the district at the 5<sup>th</sup> percentile, approximately two-thirds of the districts nationally have local revenues per pupil within 64 percent below or above the mean, and revenues are more concentrated among a smaller share of students.) The figures in cost-adjusted dollars were 7.54, 0.81, and 0.34, respectively.

Local revenues per pupil had the second-largest variation. State revenues per pupil showed less variation than federal and local revenues per pupil but varied more than state and local revenues and total revenues per pupil.

Total revenues per pupil showed the smallest variation across school districts. In unadjusted dollars, the restricted range ratio was 1.05, the coefficient of variation was 0.25, and the Gini coefficient was 0.13. In cost-adjusted dollars, the figures were 0.90, 0.22, and 0.11, respectively.

The findings about variation in total and federal revenues per pupil were consistent with expectations, since national average total revenues per pupil (\$7,047) were nearly 16 times higher than average federal revenues per pupil (\$441). However, the small differences in average state and local revenues per pupil (\$3,388 and \$3,219, respectively) demonstrate that school districts vary more in local tax revenues than they do in state funding for education. Local revenues for education are high in some states and low in others.

## Relationship between School District Fiscal and Demographic Characteristics and Revenues Per Pupil

### *School District Wealth*

The two measures of district wealth used in the analysis—median household income and median value of owner-occupied housing—both showed positive relationships with unadjusted local revenues, state and local revenues, and total revenues per pupil and negative relationships with unadjusted state and federal revenues per pupil (table 7-4). Wealthier school districts raised more money per pupil from local sources and received less state and federal revenues per pupil than poorer districts. Although state and federal aid partially offset the local revenue of wealthier school districts, wealthier districts still had higher state and local and total revenues per pupil than poorer districts.

With cost adjustments to revenues school districts with higher incomes and housing values still had higher local revenues per pupil, although the relationships were not as strong as they were with unadjusted local revenues per pupil. There were stronger negative relationships between district income and housing values and state and federal revenues per pupil. As a result, the relationship between district income and state and local revenues per pupil was reduced and the relationship between district income and total revenues per pupil was eliminated. The relationship between district housing values and state and local revenues per pupil also decreased and the relationship between housing values and total revenues per pupil became negative. In other words, with cost adjustments, state and federal aid was greater than the local revenue of wealthier districts, resulting in only a small positive relationship between local wealth and state and local revenues per pupil and no relationship between local wealth and total revenues per pupil for education.

Table 7-4. Correlation between school district revenues per pupil and selected district fiscal and demographic characteristics: 1997–98

School district characteristics	Local revenues per pupil	State revenues per pupil	State and local revenues per pupil	Federal revenues per pupil	Total revenues per pupil
Unadjusted dollars					
Median household income	+0.53	-0.31	+0.39	-0.46	+0.30
Median value owner-occupied housing	+0.35	-0.12	+0.32	-0.15	+0.29
Percent minority enrollment	-0.16	+0.20	-0.04	+0.56	+0.08
Percent children in poverty	-0.39	+0.32	-0.22	+0.66	-0.08
Cost-adjusted dollars					
Median household income	+0.45	-0.44	+0.17	-0.50	+0.05
Median value owner-occupied housing	+0.23	-0.30	+0.03	-0.23	-0.03
Percent minority enrollment	-0.20	+0.10	-0.16	+0.49	-0.04
Percent children in poverty	-0.38	+0.35	-0.16	+0.65	(*)

\*Relationship not significant at the 0.05 level.

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 School District Special Tabulation.

### School District Poverty and Minority Enrollments

The two district demographic characteristics used in this analysis—percent minority enrollment and percent children in poverty—both were negatively related to unadjusted local revenues per pupil and positively related to unadjusted state and federal revenues per pupil (table 7-4). School districts with larger minority and poverty populations raised less money from local sources and received higher state and federal aid per pupil than districts with smaller minority and poverty populations. Since higher state and federal aid were larger for districts with lower local revenues per pupil, there was a weak relationship between minority enrollment and state and local revenues per pupil and a weak positive relationship between minority enrollment and total revenues per pupil. The percent of children in poverty in a district had a negative relationship with both state and local revenues per pupil and total revenues per pupil.

With cost adjustments to revenues, these patterns were generally maintained. School districts with larger minority and poverty populations had lower local revenues per pupil and higher state and federal revenues per pupil. As a result, there was only a weak negative relationship between minority enrollment and both state and local revenues and total revenues per pupil. There a weak negative relationship between district poverty and state and local revenues per pupil and no statistically significant relationship between district poverty and total revenues per pupil.

### State Findings about Education Revenues

In the analyses of variation in per pupil revenues presented in chapters 2 to 6 of the report, the three individual measures of variation in revenues 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 revenues per pupil. The second part of the discussion reviews key findings about the relationship between selected district fiscal and demographic characteristics and revenues per pupil from different sources.

## Interdistrict Variation in Revenues Per Pupil within the States

The 12 states with the greatest interdistrict variation in unadjusted total revenues per pupil based on the integrated measure of variation included: Alaska, Illinois, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New York, North Dakota, Ohio, Vermont, and Wyoming (table 7-5). One state, Illinois, was also in the quartile of states with the greatest interdistrict variation in the other four measures of revenues per pupil. Four other states, Alaska, New York, Vermont, and Wyoming, were in the quartile of states with the greatest interdistrict variation on three other measures of revenues per pupil.

When revenues per pupil were adjusted to reflect cost-of-education differences across school districts, eight states (Alaska, Illinois, Missouri, Montana, New Hampshire, North Dakota, Vermont, and Wyoming) remained in the quartile with the greatest overall variation in total revenues per pupil. However, Arizona, Kansas, Nebraska, and Texas replaced Massachusetts, Minnesota, New York, and Ohio in this group of states with the largest interdistrict variation. Illinois continued to show the greatest variation on the four other measures of revenues per pupil, with Alaska, Kansas, Vermont, and Wyoming showing the greatest variation on three other measures of revenues per pupil.

The 12 states with the smallest interdistrict variation in unadjusted total revenues per pupil included: Alabama, Colorado, Delaware, Florida, Iowa, Kentucky, Louisiana, Nevada, North Carolina, Rhode Island, West Virginia, and Wisconsin (table 7-6). Within this group, two states, Iowa and North Carolina, were also in the quartile of states with the smallest interdistrict variation on the four other measures of revenues per pupil. Three other states, Delaware, Florida, and West Virginia, were in the quartile of states with the smallest interdistrict variation on three other measures of revenues per pupil.

Table 7-5. States with the largest overall variation in revenues per pupil: 1997–98

Local revenues per pupil	State revenues per pupil	State and local revenues per pupil	Federal revenues per pupil	Total revenues per pupil
Unadjusted dollars				
Alaska	Connecticut	Alaska	Alaska	Alaska
Connecticut	Illinois	Illinois	Arizona	Illinois
Idaho	Massachusetts	Kansas	Connecticut	Massachusetts
Illinois	Missouri	Missouri	Illinois	Minnesota
Kansas	New Hampshire	Montana	Kansas	Missouri
Massachusetts	New Jersey	New Hampshire	Michigan	Montana
Michigan	New York	New York	Minnesota	New Hampshire
New Jersey	Ohio	North Dakota	Montana	New York
New York	Rhode Island	Ohio	North Dakota	North Dakota
Texas	Texas	Vermont	Pennsylvania	Ohio
Wyoming	Vermont	Virginia	South Dakota	Vermont
	Wyoming	Wyoming	Vermont	Wyoming
Cost-adjusted dollars				
Alaska	Connecticut	Alaska	Alaska	Alaska
Arizona	Illinois	Illinois	Arizona	Arizona
California	Massachusetts	Kansas	Connecticut	Illinois
Connecticut	Missouri	Montana	Illinois	Kansas
Idaho	New Hampshire	Nebraska	Kansas	Missouri
Illinois	New Jersey	New Hampshire	Michigan	Montana
Kansas	New York	New Mexico	Minnesota	Nebraska
Massachusetts	Texas	New York	Montana	New Hampshire
Michigan	Vermont	North Dakota	North Dakota	North Dakota
New Jersey	Wyoming	Vermont	Pennsylvania	Texas
Texas		Wyoming	South Dakota	Vermont
Wyoming			Vermont	Wyoming

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 7-6. States with the smallest overall variation in revenues per pupil: 1997–98

Local revenues per pupil	State revenues per pupil	State and local revenues per pupil	Federal revenues per pupil	Total revenues per pupil
Unadjusted dollars				
Delaware	Alabama	Colorado	Alabama	Alabama
Florida	Delaware	Delaware	Arkansas	Colorado
Indiana	Georgia	Florida	Florida	Delaware
Iowa	Iowa	Iowa	Iowa	Florida
Nebraska	Louisiana	Kentucky	Kentucky	Iowa
Nevada	Michigan	Nevada	Louisiana	Kentucky
New Hampshire	Mississippi	North Carolina	Mississippi	Louisiana
North Carolina	North Carolina	Oklahoma	Nevada	Nevada
North Dakota	Oregon	Rhode Island	North Carolina	North Carolina
South Carolina	South Carolina	South Dakota	South Carolina	Rhode Island
South Dakota	Utah	West Virginia	Tennessee	West Virginia
West Virginia	Washington	Wisconsin	West Virginia	Wisconsin
Cost-adjusted dollars				
Delaware	Alabama	Arkansas	Alabama	Alabama
Florida	Delaware	Delaware	Arkansas	Arkansas
Indiana	Indiana	Florida	Florida	Delaware
Iowa	Iowa	Indiana	Iowa	Florida
Missouri	Louisiana	Iowa	Kentucky	Iowa
Nevada	Michigan	Kentucky	Louisiana	Kentucky
New Hampshire	Mississippi	Nevada	Mississippi	Louisiana
North Carolina	North Carolina	North Carolina	Nevada	Nevada
North Dakota	South Carolina	South Carolina	North Carolina	North Carolina
South Carolina	Utah	Tennessee	South Carolina	Rhode Island
South Dakota	Washington	West Virginia	Tennessee	Tennessee
Tennessee	West Virginia	Wisconsin	Utah	West Virginia
West Virginia			West Virginia	

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.

With cost adjustments to revenues, 10 states (Alabama, Delaware, Florida, Iowa, Kentucky, Louisiana, Nevada, North Carolina, Rhode Island, and West Virginia) remained in the quartile with the smallest overall variation in total revenues per pupil. However, Arkansas and Tennessee replaced Colorado and Wisconsin in this group of states with the smallest interdistrict variation. Iowa, North Carolina, and West Virginia also showed the smallest variation on the four other measures of revenues per pupil; Delaware, Florida, Nevada, and Tennessee showed the smallest variation on three other measures of revenues per pupil.

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

### District Wealth

For the nation as a whole, the two measures of school district wealth used in this analysis—median household income and median value owner-occupied housing—were positively related to local revenues per pupil and negatively related to state and federal revenues per pupil, in both unadjusted and cost-adjusted dollars. Both measures of district wealth also showed positive relationships with unadjusted state and local revenues per pupil and total revenues per pupil, a moderate positive relationship with cost-adjusted state and local revenues per pupil, but a weak relationship with adjusted total revenues per pupil.

The patterns for the nation were found in most states for which data were available for correlation analysis. Median household income showed a positive relationship with unadjusted local revenues per pupil in 36 of the 40 states with available data, the relationship was strongly positive in 20 of the 36 states (table 7-7). In contrast, household income showed a negative relationship with unadjusted state revenues per pupil in 36 states and with unadjusted federal revenues per pupil in 38 states. With the addition of state and federal revenues, the relationship between household income and revenues for education was reduced substantially. Only 18 states showed a positive relationship between median household income and unadjusted state and local revenues per pupil and only 8 states showed a positive relationship between household income and total revenues per pupil.

Similar results were found for cost-adjusted revenues. Median household income showed a positive relationship with cost-adjusted local revenues per pupil in 34 states and a negative relationship with cost-adjusted state and federal revenues per pupil in 39 states. Again, state and federal revenues compensated for the local revenue advantages of districts with higher household income. With the addition of state funds to local revenues, only 10 states still showed a positive relationship between household income and state and local revenues per pupil. With the addition of federal revenues, only 7 states still showed this positive relationship, while in 21 other states, there was a negative relationship between household income and total revenues per pupil.

District property values, as measured by median value owner-occupied housing, showed similar relationships with district revenues (table 7-8). In unadjusted dollars, median value owner-occupied housing was positively related to local revenues per pupil in 34 of the 40 states with available data, and negatively related to state revenues and federal revenues per pupil in 39 and 33 states, respectively. With the addition of state revenues, median housing values were positively related to state and local revenues per pupil in 26 states and positively related to total revenues per pupil in only 17 states.

In cost-adjusted dollars, median value owner-occupied housing was positively related to local revenues per pupil in 35 states and negatively related to state and federal revenues per pupil in 40 and 34 states, respectively. When state and federal revenues were added to local revenues, the local revenue advan-

Table 7-7. Number of states by the strength of the correlation between median household income and various per pupil revenue measures: 1997–98

Relationship	Total number of states, by per pupil revenue measure				
	Local revenues	State revenues	State and local revenues	Federal revenues	Total revenues
Unadjusted dollars					
Strong positive relationship	20	0	7	0	4
Moderate positive relationship	16	0	11	0	4
Weak positive relationship	0	1	2	0	1
Weak negative relationship	0	1	0	0	0
Moderate negative relationship	0	16	2	12	8
Strong negative relationship	0	20	0	26	0
No significant relationship	4	2	18	2	23
Cost-adjusted dollars					
Strong positive relationship	17	0	2	0	0
Moderate positive relationship	17	0	8	0	7
Weak positive relationship	0	0	0	0	0
Weak negative relationship	0	0	0	0	0
Moderate negative relationship	1	13	9	11	21
Strong negative relationship	0	26	0	28	0
No significant relationship	5	1	21	1	12

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 7-8. Number of states by the strength of the correlation between median value owner-occupied housing and various per pupil revenue measures: 1997–98

Relationship	Total number of states, by per pupil revenue measure				
	Local revenues	State revenues	State and local revenues	Federal revenues	Total revenues
Unadjusted dollars					
Strong positive relationship	20	0	7	0	5
Moderate positive relationship	14	0	19	0	12
Weak positive relationship	0	0	0	1	2
Weak negative relationship	0	0	0	0	0
Moderate negative relationship	1	14	4	17	4
Strong negative relationship	0	25	1	16	2
No significant relationship	5	1	9	6	15
Cost-adjusted dollars					
Strong positive relationship	17	0	3	0	2
Moderate positive relationship	18	0	7	0	5
Weak positive relationship	0	0	0	0	0
Weak negative relationship	0	0	1	0	0
Moderate negative relationship	3	7	8	15	15
Strong negative relationship	0	33	1	19	2
No significant relationship	2	0	20	6	16

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.

tage of districts with higher property values was overcome by larger amounts of state and federal funds in the majority of states with available data. Only 10 states continued to show a positive relationship between median housing values and cost-adjusted state and local revenues per pupil and only 7 states showed a positive relationship between median value owner-occupied housing and total revenues per pupil.

### Minority Enrollment and Children in Poverty

The two district demographic characteristics used in the analysis—percent minority enrollment and percent poverty children—both showed negative relationships with unadjusted local revenues per pupil and positive relationships with unadjusted state and federal revenues per pupil. With the addition of state revenues, there was a negative relationship between children in poverty and state and local revenues per pupil and a negative relationship between percent minority enrollment and state and local revenues per pupil. With the addition of federal revenues, there was a weak negative relationship between poverty and total revenues per pupil, but the relationship between percent minority and total revenues per pupil was now positive, although weak (table 7-4).

These national patterns were reflected in some states. In unadjusted dollars, percent minority enrollment showed a negative relationship with local revenues per pupil in 16 states, a positive relationship with state revenues per pupil in 25 states, and a positive relationship with federal revenues per pupil in 36 states (table 7-9). With the addition of state revenues, there was a negative relationship between percent minority and state and local revenues per pupil in only eight states and a negative relationship with total revenues per pupil in only one state. With state and federal revenues offsetting the disadvan-

Table 7-9. Number of states by the strength of the correlation between percent minority enrollment and various per pupil revenue measures: 1997–98

Relationship	Total number of states, by per pupil revenue measure				
	Local revenues	State revenues	State and local revenues	Federal revenues	Total revenues
Unadjusted dollars					
Strong positive relationship	0	6	3	30	6
Moderate positive relationship	6	19	7	6	14
Weak positive relationship	0	0	0	0	1
Weak negative relationship	0	0	1	0	1
Moderate negative relationship	15	4	8	0	1
Strong negative relationship	1	1	0	0	0
No significant relationship	18	10	21	4	17
Cost-adjusted dollars					
Strong positive relationship	1	4	2	24	4
Moderate positive relationship	2	15	4	12	14
Weak positive relationship	0	0	0	0	0
Weak negative relationship	1	0	0	0	1
Moderate negative relationship	15	8	11	0	5
Strong negative relationship	2	0	1	0	1
No significant relationship	29	13	22	4	15

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.

tage in local revenues per pupil in high-minority districts, state and local revenues per pupil were positively related to percent minority enrollment in 10 states and positively related to total revenues per pupil in 20 states.

The results were generally similar—although not as a strong—using cost-adjusted revenues. Percent minority enrollment showed a negative relationship with cost-adjusted local revenues per pupil in 17 states, a positive relationship with cost-adjusted state and federal revenues per pupil in 19 states and 36 states, respectively, and a positive relationship with cost-adjusted total revenues per pupil in 18 states. With the addition of state revenues, there was a negative relationship between percent minority and state and local revenues per pupil in 12 states, but in 6 states the relationship was positive. With the addition of federal revenues, there was a negative relationship between percent minority enrollment and total revenues per pupil in only 6 states and a positive relationship in 18 states.

School district poverty was strongly associated with differences in revenues across the states (table 7-10). In unadjusted dollars, the percent of children in poverty in a school district showed a negative relationship with local revenues per pupil in 35 states, a positive relationship with state revenues per pupil in 36 states and a positive relationship with federal revenues per pupil in 38 states. With the addition of state and federal revenues, the negative relationship between district poverty and local revenues per pupil was reversed. There was a negative relationship between the percent of children in poverty and state and local revenues per pupil in only nine states and a negative relationship with total revenues per pupil in only five states. On the other hand, the percent of children in poverty in a district was positively related to state and local revenues per pupil in 5 states and to total revenues per pupil in 17 states.

Table 7-10. Number of states by the strength of the correlation between percent poverty children and various per pupil revenue measures: 1997-98

Relationship	Total number of states, by per pupil revenue measure				
	Local revenues	State revenues	State and local revenues	Federal revenues	Total revenues
Unadjusted dollars					
Strong positive relationship	0	16	0	32	2
Moderate positive relationship	0	20	5	6	15
Weak positive relationship	0	0	0	0	1
Weak negative relationship	1	0	1	0	0
Moderate negative relationship	27	0	8	0	5
Strong negative relationship	8	0	1	0	0
No significant relationship	4	4	25	2	17
Cost-adjusted dollars					
Strong positive relationship	0	16	0	32	3
Moderate positive relationship	0	20	8	6	21
Weak positive relationship	0	0	0	0	0
Weak negative relationship	1	0	0	0	0
Moderate negative relationship	25	0	8	0	2
Strong negative relationship	7	0	1	0	1
No significant relationship	7	4	23	2	13

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.

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