

Chapter 3: Current Expenditures

Current Expenditures

Current expenditures include expenditures for salaries and wages, employee benefits, purchased services, supplies, and other miscellaneous expenditures in the following categories: elementary and secondary educational instructional programs in prekindergarten through grade 12 and elementary and secondary noninstructional programs. Instructional programs include instruction and support services. Noninstructional programs include food services, enterprise operations, and other noninstructional activities. Current expenditures for public elementary and secondary education totaled \$274.9 billion in 1997–98 (table 3-1). This was just over 84 percent of total district expenditures (\$326.8 billion) in 1997–98. Nearly 66 percent of current expenditures were spent on salaries and wages (\$181.8 billion), with just over 17 percent on employee benefits (\$47.5 billion), and 17 percent on other current functions (NCES 1998).

Current Expenditures Per Pupil

Current expenditures per pupil in school districts averaged \$6,023 in 1997–98 before cost adjustments (table 3-1). Current expenditures per pupil were highest in the Northeast (\$8,122) and lowest in the West (\$5,352). At \$6,062 per pupil, current expenditures in the Midwest were higher than in the South (\$5,420). Expenditures per pupil in the highest region were 1.5 times greater than those in the lowest region before cost adjustments and 1.4 times greater after adjustments. Further, the difference between these two regions decreased from \$2,770 to \$2,223 after cost adjustments. Cost adjustments did not change regional rankings.

The smallest districts had higher current expenditures per pupil, both before and after cost adjustments. Before cost adjustments, current expenditures per pupil averaged \$6,250 in districts with fewer than 1,000 students, compared to \$5,899 in districts with 10,000 or more students. After cost adjustments, the smallest districts continued to have higher average current expenditures per pupil than larger districts. In addition, the difference between the smallest and the largest districts increased from \$351 to \$1,248 per pupil. Correlation analysis showed a weak negative relationship between district enrollment and current expenditures per pupil, both before (-0.03) and after (-0.08) cost adjustments (tables A-1 and A-2).

Before cost adjustments, current expenditures per pupil showed weak but statistically significant positive relationships with two measures of district wealth—median household income (+0.28) and median housing value (+0.31) (table A-5). School districts with median household income at or above \$35,000 had the highest average current expenditures per pupil (\$6,419) while districts with median household income less than \$20,000 had expenditures per pupil of \$5,757 (table 3-1). Districts with median housing values at or above \$85,000 had the highest average current expenditures of \$6,570 per pupil, while districts with median housing values below \$40,000 had lower current expenditures per pupil of \$5,916.

Table 3-1. Current expenditures, cost-adjusted current expenditures, current expenditures per pupil, and cost-adjusted current expenditures per pupil in public school districts, by region, district enrollment, minority enrollment, district poverty rate, median household income, and median housing value: 1997–98

School district characteristics	Current expenditures (in thousands)	Cost-adjusted current expenditures (in thousands)	Current expenditures per pupil	Cost-adjusted current expenditures per pupil
All districts	\$274,875,479	\$273,058,354	\$6,023	\$6,002
Region				
Northeast	64,419,353	57,870,704	8,122	7,319
Midwest	64,379,572	65,728,464	6,062	6,220
South	89,295,330	95,708,096	5,420	5,809
West	56,781,224	53,751,089	5,352	5,096
District enrollment				
0–999	16,991,273	18,724,004	6,250	6,987
1,000–4,999	79,642,105	80,832,821	6,132	6,252
5,000–9,999	43,289,275	42,388,581	6,135	6,021
10,000 or more	134,952,826	131,112,948	5,899	5,739
Minority enrollment				
Less than 5 percent	67,504,937	69,521,967	5,977	6,159
5 percent–<20 percent	71,585,974	71,022,214	5,965	5,918
20 percent–<50 percent	74,511,861	74,253,693	5,805	5,784
50 percent or more	46,719,849	43,933,204	6,553	6,162
Data missing ¹	14,552,858	14,327,276	—	—
District poverty rate				
Less than 5 percent	36,238,595	33,296,080	7,007	6,446
5 percent–<15 percent	89,874,594	89,320,776	5,804	5,768
15 percent–<25 percent	66,836,666	69,424,080	5,640	5,859
25 percent or more	67,372,766	66,690,141	6,265	6,201
Data missing ¹	14,552,858	14,327,276	—	—
Median household income				
Less than \$20,000	19,924,720	21,883,106	5,757	6,323
\$20,000 –<\$25,000	48,175,832	51,388,704	5,737	6,120
\$25,000–<\$30,000	67,772,898	67,910,223	6,047	6,059
\$30,000–<\$35,000	43,369,419	42,716,395	5,735	5,648
\$35,000 or more	81,079,752	74,832,650	6,419	5,927
Data missing ¹	14,552,858	14,327,276	—	—
Median housing value				
Less than \$40,000	21,645,648	24,037,211	5,916	6,570
\$40,000–<\$55,000	44,126,717	47,585,868	5,637	6,078
\$55,000–<\$85,000	80,719,059	83,139,158	5,587	5,756
\$85,000 or more	113,831,197	103,968,840	6,570	6,002
Data missing ¹	14,552,858	14,327,276	—	—

—Not available.

¹These districts were missing 1990 Census demographic data.

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.

The lowest average current expenditures were found in districts with median household income between \$30,000 and \$35,000 and districts with median housing value between \$55,000 and \$85,000.

After cost adjustments, the correlation with household income was weak (+0.03) and the correlation with housing value was not statistically significant (table A-6). Adjusted current expenditures per pupil were highest in districts with the lowest median household incomes (\$6,323), and lower in districts with the highest incomes (\$5,927). Adjustments also raised current expenditures per pupil in districts with lower median housing values and lowered them in districts with higher housing values.

Before adjustments, school districts with the highest minority enrollments had higher current expenditures per pupil than districts with the lowest minority enrollments, \$6,553 and \$5,977, respectively. However, districts with between 20 and 50 percent minority enrollment had the lowest current expenditures per pupil (\$5,805). After adjustments, the 20–50 percent bracket still had the lowest current

expenditures per pupil, and the difference between the lowest- and highest-expenditure districts was reduced from \$748 to \$378. Although there was a small positive correlation between minority enrollment and current expenditures per pupil before cost adjustments (+0.12), in cost-adjusted dollars there was no significant correlation between these variables.

Current expenditures per pupil were weakly correlated with district poverty rate, both before (-0.03) and after (+0.06) cost adjustments. Current expenditures per pupil were highest in the lowest-poverty districts both before and after cost adjustments (\$7,007 and 6,446, respectively). Districts with poverty rates of 25 percent or greater had the second-highest average current expenditures, \$6,265 before cost adjustments and \$6,201 after adjustments.

Variations in Current Expenditures Per Pupil

Restricted Range Ratio

The restricted range ratio for unadjusted current expenditures per pupil in school districts across the United States was 1.04 (table 3-2). This means current expenditures in the district at the 95th percentile were 1.04 times higher than current expenditures in the district at the 5th percentile. Variation across the states ranged from 0.16 in Nevada to 1.31 in Alaska. Two states (Alaska and Illinois) had a restricted range ratio higher than the United States ratio.

When cost adjustments were applied, the restricted range ratio for current expenditures per pupil across the United States decreased to 0.91 (table 3-3). Three states exceeded the national variation after cost adjustments: Alaska, Illinois, and Montana. The range between the lowest-variation and highest-variation states remained nearly unchanged. After cost adjustments, the restricted range ratio ranged from 0.15 in Nevada to 1.29 in Alaska.

Coefficient of Variation

The coefficient of variation for unadjusted current expenditures per pupil across the United States was 0.25. This means approximately two-thirds of the districts nationally have current expenditures per pupil between \$4,517 and \$7,529, a range that is from 25 percent below the mean to 25 percent above the mean. Variation in the states ranged from 0.05 in West Virginia to 0.36 in Alaska. Three states had a coefficient of variation higher than the United States ratio: Alaska, Illinois, and Montana.

When current expenditures were adjusted for cost-of-education differences, the coefficient of variation for current expenditures per pupil across the United States decreased to 0.21. Four states exceeded the national variation after cost adjustments: Alaska, Illinois, Montana, and North Dakota. Cost adjustments decreased the range between the lowest-variation and highest-variation states. After cost adjustments, the coefficient of variation ranged from 0.06 in Delaware, Florida, and West Virginia to 0.34 in Alaska.

Gini Coefficient

The Gini coefficient for unadjusted current expenditures per pupil across the United States was 0.13. A Gini coefficient of 0 means expenditures are distributed equally; higher values such as 0.13 imply expenditures are more concentrated among a smaller share of students. Variation in the states ranged

Table 3-2. Variation in current expenditures per pupil (unadjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Synthesized measure of variation	
	Value	Rank	Value	Rank	Value	Rank	Average rank	Average quartile
United States	1.04	†	0.25	†	0.13	†	†	†
Alabama	0.34	12	0.09	4	0.05	6	7.33	1
Alaska	1.31	49	0.36	49	0.16	49	49.00	4
Arizona	0.52	27	0.14	25	0.07	26	26.00	3
Arkansas	0.53	29	0.12	18	0.06	14	20.33	2
California	0.28	5	0.10	10	0.05	6	7.00	1
Colorado	0.33	11	0.11	13	0.06	14	12.67	2
Connecticut	0.52	27	0.13	21	0.07	26	24.67	3
Delaware	0.23	3	0.07	2	0.04	3	2.67	1
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	0.23	3	0.07	2	0.04	3	2.67	1
Georgia	0.46	20	0.11	13	0.06	14	15.67	2
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	0.50	25	0.16	33	0.08	31	29.67	3
Illinois	1.18	48	0.26	47	0.13	48	47.67	4
Indiana	0.63	38	0.14	25	0.08	31	31.33	3
Iowa	0.35	14	0.09	4	0.05	6	8.00	1
Kansas	0.61	36	0.14	25	0.07	26	29.00	3
Kentucky	0.32	9	0.09	4	0.05	6	6.33	1
Louisiana	0.31	7	0.09	4	0.05	6	5.67	1
Maine	0.50	25	0.16	33	0.08	31	29.67	3
Maryland	0.36	16	0.10	10	0.05	6	10.67	2
Massachusetts	0.73	45	0.19	42	0.10	43	43.33	4
Michigan	0.58	33	0.16	33	0.09	37	34.33	3
Minnesota	0.69	42	0.20	45	0.08	31	39.33	4
Mississippi	0.41	18	0.11	13	0.06	14	15.00	2
Missouri	0.85	46	0.19	42	0.10	43	43.67	4
Montana	1.02	47	0.28	48	0.12	47	47.33	4
Nebraska	0.47	21	0.15	31	0.07	26	26.00	3
Nevada	0.16	1	0.11	13	0.03	1	5.00	1
New Hampshire	0.64	39	0.16	33	0.09	37	36.33	4
New Jersey	0.64	39	0.15	31	0.08	31	33.67	3
New Mexico	0.57	32	0.14	25	0.06	14	23.67	2
New York	0.69	42	0.19	42	0.09	37	40.33	4
North Carolina	0.30	6	0.09	4	0.05	6	5.33	1
North Dakota	0.61	36	0.24	46	0.09	37	39.67	4
Ohio	0.69	42	0.18	40	0.10	43	41.67	4
Oklahoma	0.43	19	0.13	21	0.06	14	18.00	2
Oregon	0.49	24	0.14	25	0.06	14	21.00	2
Pennsylvania	0.59	34	0.17	37	0.09	37	36.00	4
Rhode Island	0.31	7	0.09	4	0.05	6	5.67	1
South Carolina	0.35	14	0.11	13	0.06	14	13.67	2
South Dakota	0.48	23	0.14	25	0.06	14	20.67	2
Tennessee	0.55	30	0.13	21	0.07	26	25.67	3
Texas	0.37	17	0.12	18	0.06	14	16.33	2
Utah	0.34	12	0.13	21	0.06	14	15.67	2
Vermont	0.64	39	0.17	37	0.10	43	39.67	4
Virginia	0.55	30	0.18	40	0.09	37	35.67	3
Washington	0.32	9	0.10	10	0.04	3	7.33	1
West Virginia	0.17	2	0.05	1	0.03	1	1.33	1
Wisconsin	0.47	21	0.12	18	0.06	14	17.67	2
Wyoming	0.60	35	0.17	37	0.08	31	34.33	3

†Not applicable.

!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 3-3. Variation in current expenditures per pupil (cost-adjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Synthesized measure of variation	
	Value	Rank	Value	Rank	Value	Rank	Average rank	Average quartile
United States	0.91	†	0.21	†	0.11	†	†	†
Alabama	0.32	9	0.09	5	0.05	6	6.67	1
Alaska	1.29	49	0.34	49	0.16	49	49.00	4
Arizona	0.46	23	0.17	33	0.08	29	28.33	3
Arkansas	0.41	19	0.11	12	0.06	11	14.00	2
California	0.34	12	0.12	16	0.06	11	13.00	2
Colorado	0.39	16	0.13	19	0.06	11	15.33	2
Connecticut	0.46	23	0.13	19	0.07	22	21.33	2
Delaware	0.20	2	0.06	1	0.03	1	1.33	1
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	0.23	4	0.06	1	0.03	1	2.00	1
Georgia	0.40	18	0.10	10	0.06	11	13.00	2
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	0.65	38	0.17	33	0.09	38	36.33	4
Illinois	1.00	47	0.23	46	0.11	46	46.33	4
Indiana	0.48	26	0.13	19	0.07	22	22.33	2
Iowa	0.30	8	0.09	5	0.05	6	6.33	1
Kansas	0.78	46	0.18	38	0.09	38	40.67	4
Kentucky	0.34	12	0.09	5	0.05	6	7.67	1
Louisiana	0.28	5	0.09	5	0.05	6	5.33	1
Maine	0.60	34	0.17	33	0.08	29	32.00	3
Maryland	0.28	5	0.08	4	0.04	4	4.33	1
Massachusetts	0.71	41	0.18	38	0.10	44	41.00	4
Michigan	0.49	27	0.13	19	0.07	22	22.67	2
Minnesota	0.50	29	0.20	44	0.08	29	34.00	3
Mississippi	0.42	20	0.10	10	0.06	11	13.67	2
Missouri	0.67	40	0.16	30	0.09	38	36.00	4
Montana	1.16	48	0.32	48	0.14	48	48.00	4
Nebraska	0.73	43	0.20	44	0.09	38	41.67	4
Nevada	0.15	1	0.12	16	0.03	1	6.00	1
New Hampshire	0.76	44	0.19	42	0.10	44	43.33	4
New Jersey	0.53	31	0.14	24	0.08	29	28.00	3
New Mexico	0.58	33	0.17	33	0.07	22	29.33	3
New York	0.50	29	0.16	30	0.08	29	29.33	3
North Carolina	0.29	7	0.09	5	0.05	6	6.00	1
North Dakota	0.77	45	0.28	47	0.11	46	46.00	4
Ohio	0.55	32	0.15	27	0.08	29	29.33	3
Oklahoma	0.66	39	0.18	38	0.08	29	35.33	3
Oregon	0.49	27	0.15	27	0.07	22	25.33	3
Pennsylvania	0.47	25	0.14	24	0.07	22	23.67	3
Rhode Island	0.39	16	0.11	12	0.06	11	13.00	2
South Carolina	0.33	10	0.11	12	0.06	11	11.00	1
South Dakota	0.72	42	0.18	38	0.08	29	36.33	4
Tennessee	0.42	20	0.12	16	0.06	11	15.67	2
Texas	0.60	34	0.17	33	0.08	29	32.00	3
Utah	0.37	14	0.15	27	0.06	11	17.33	2
Vermont	0.61	36	0.16	30	0.09	38	34.67	3
Virginia	0.44	22	0.14	24	0.07	22	22.67	2
Washington	0.33	10	0.13	19	0.06	11	13.33	2
West Virginia	0.21	3	0.06	1	0.04	4	2.67	1
Wisconsin	0.37	14	0.11	12	0.06	11	12.33	1
Wyoming	0.64	37	0.19	42	0.09	38	39.00	4

†Not applicable.

!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."

from 0.03 in Nevada and West Virginia to 0.16 in Alaska. Only Alaska had a Gini coefficient higher than the United States coefficient.

Cost-of-education adjustments reduced the Gini coefficient to 0.11. After cost adjustment, Alaska and Montana exceeded the United States level of variation, and the range of variation remained unchanged. After adjustments, the Gini coefficient ranged from 0.03 in Delaware, Florida, and Nevada to 0.16 in Alaska.

Overall Variation

In a synthesis of the three variation measures, the South (88 percent) had the highest percentage of states in the two quartiles with low variation in current expenditures per pupil, while the Northeast (89 percent) had the highest percentage in the two quartiles with high variation (table 3-4 and figure 3-1). After cost adjustments, 88 percent of Southern states were in the two quartiles with low variation compared with 78 percent of Northeastern states in the two quartiles with high variation.

States with small variation on one measure also demonstrated small variation on the other two measures. In particular, Delaware, Florida, and West Virginia had the lowest variation overall both before and after cost adjustments.

Table 3-4. Variation in current expenditures per pupil, by region: 1997–98

Region	Percent of states in quartiles 1 and 2 (low variation)	Percent of states in quartiles 3 and 4 (high variation)
Unadjusted current expenditures per pupil		
Northeast	11	89
Midwest	25	75
South	88	13
West	58	42
Cost-adjusted current expenditures per pupil		
Northeast	22	78
Midwest	33	67
South	88	13
West	42	58

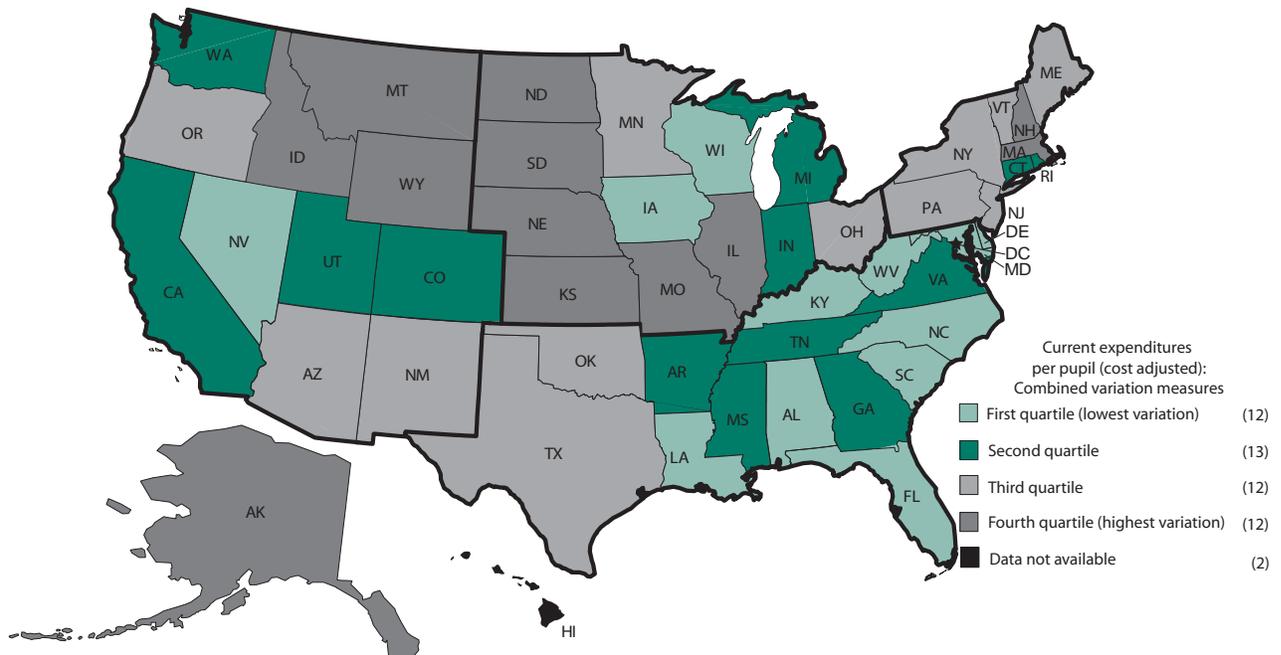
NOTE: Detail may not sum to totals because of rounding.

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

Relationship Between Current Expenditures Per Pupil and Selected District Fiscal and Demographic Characteristics

For the United States as a whole, current expenditures per pupil in unadjusted dollars showed a moderate positive relationship with a school district's median household income (+0.28) and its median housing value (+0.31) (table A-5). Similarly, at the state level, median housing value was positively related to current expenditures per pupil in 19 of the 40 states with available data, and negatively related to current expenditures per pupil in 11 of the 40 states (table 3-5). Four states (Delaware, Maryland, Pennsylvania, and Virginia) showed a strong positive relationship between median housing value and current expenditures, while one state (Alaska) showed a strong negative relationship. Ten states had no statistically significant relationship between current expenditures per pupil and median housing value. In contrast, 17 states showed no statistically significant relationship between median household income and current expenditures per pupil, 8 states showed a positive relationship, and 15 states showed a negative relationship.

Figure 3-1. Synthesis of variation measures of current expenditures per pupil (cost-adjusted dollars), by state: 1997–98



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

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

After cost adjustments, the relationship between district wealth and current expenditures per pupil weakened for the United States as a whole (table A-6). After cost adjustments, slightly more than half of states in the South showed no relationship between current expenditures per pupil and median housing value (figure 3-2). Only one state (Virginia) showed a strong positive relationship and only five states (Alaska, Iowa, Montana, Nebraska, and West Virginia) showed a strong negative relationship. Similarly, no state had a strong positive relationship between a district's median household income and adjusted current expenditures per pupil and only five states showed a strong negative relationship (figure 3-3).

Current expenditures per pupil showed a moderate positive relationship (+0.12) with minority enrollment for the United States as a whole, before cost adjustments (table A-5). Eleven states (Alaska, Arizona, Indiana, Iowa, Massachusetts, Minnesota, Missouri, Ohio, Oregon, Utah, and Wisconsin) showed a strong positive relationship between minority enrollment and current expenditures per pupil before cost adjustments while only four states (Alaska, Arizona, Massachusetts, and South Carolina) showed this relationship after cost adjustments (table 3-4). No state showed a strong negative relationship between minority enrollment and current expenditures per pupil, either before or after cost adjustments.

District poverty rate showed a weak relationship with current expenditures per pupil at the national level, both before (-0.03) and after (+0.06) cost adjustments. Only three states (Alaska, Indiana, and Utah) showed a strong positive relationship between district poverty rate and current expenditures per pupil but seven states (Alaska, Arizona, Florida, Indiana, Minnesota, Missouri, and Utah) showed this relationship after cost adjustments (figure 3-5).

Table 3-5. Correlations between current expenditures per pupil and selected fiscal and demographic characteristics, by state: 1997–98

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

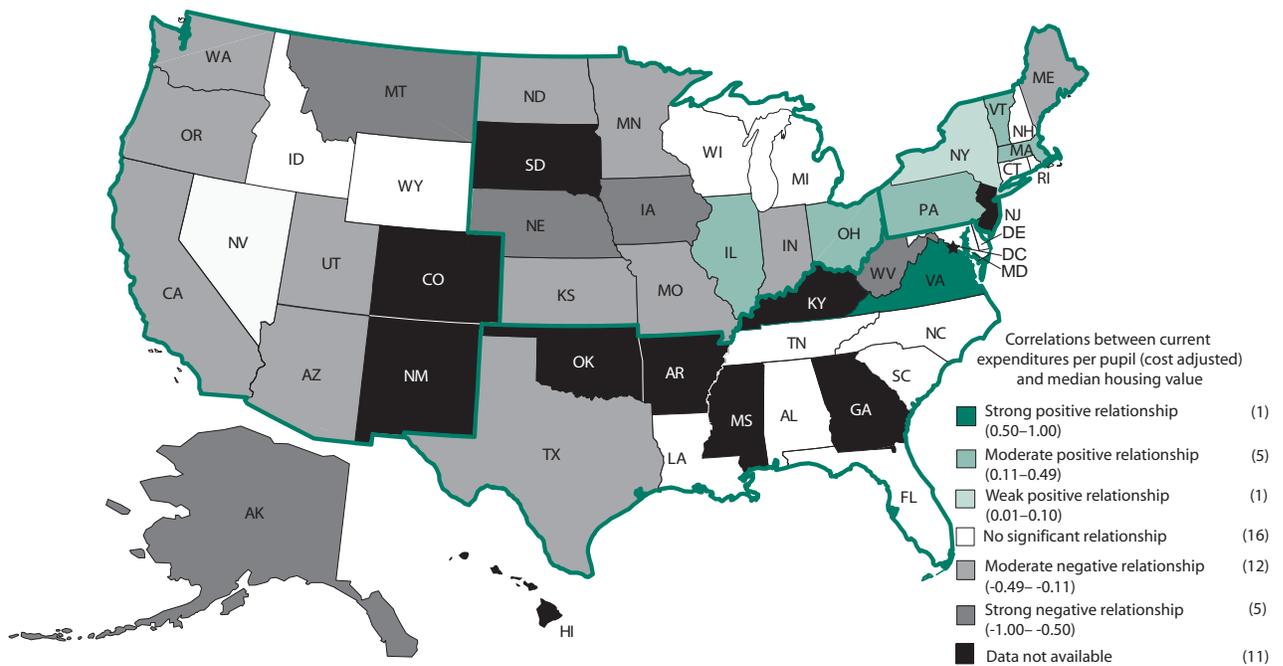
Table 3-5. Correlations between current expenditures per pupil and selected fiscal and demographic characteristics, by state: 1997–98—Continued

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

¹State 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.

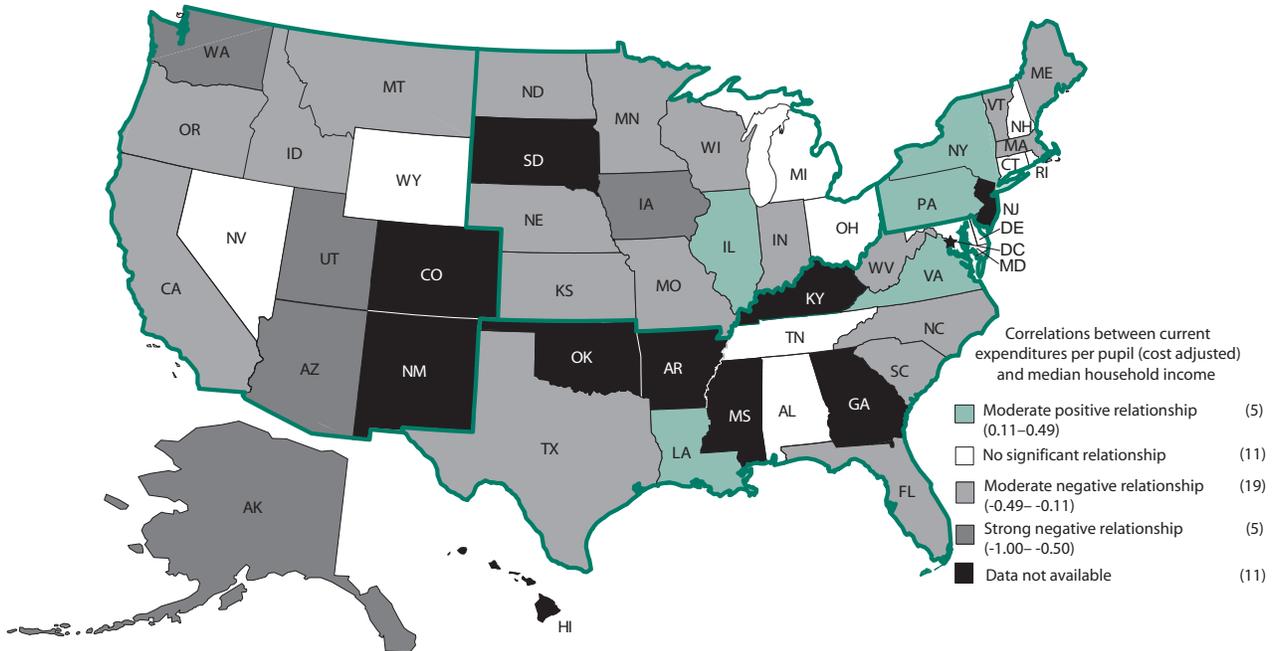
Figure 3-2. Correlations between current expenditures per pupil and median housing value (cost-adjusted dollars), by state: 1997–98



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 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.

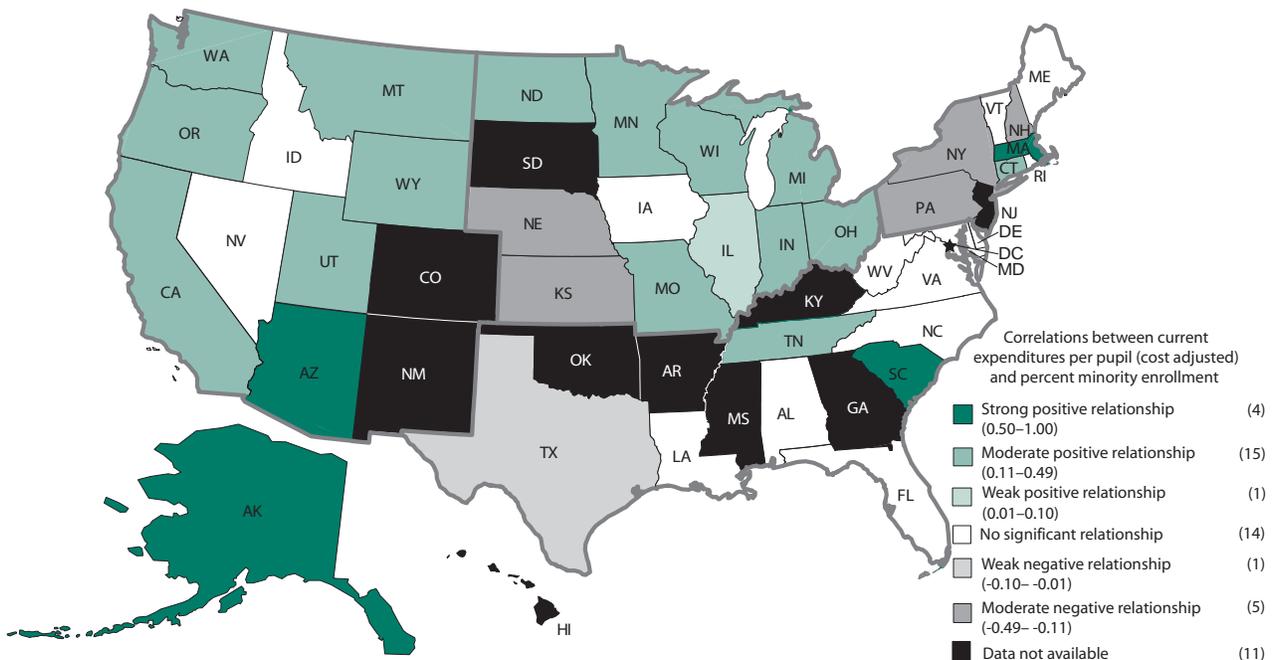
Figure 3-3. Correlations between current expenditures per pupil and median household income (cost-adjusted dollars), by state: 1997–98



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 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.

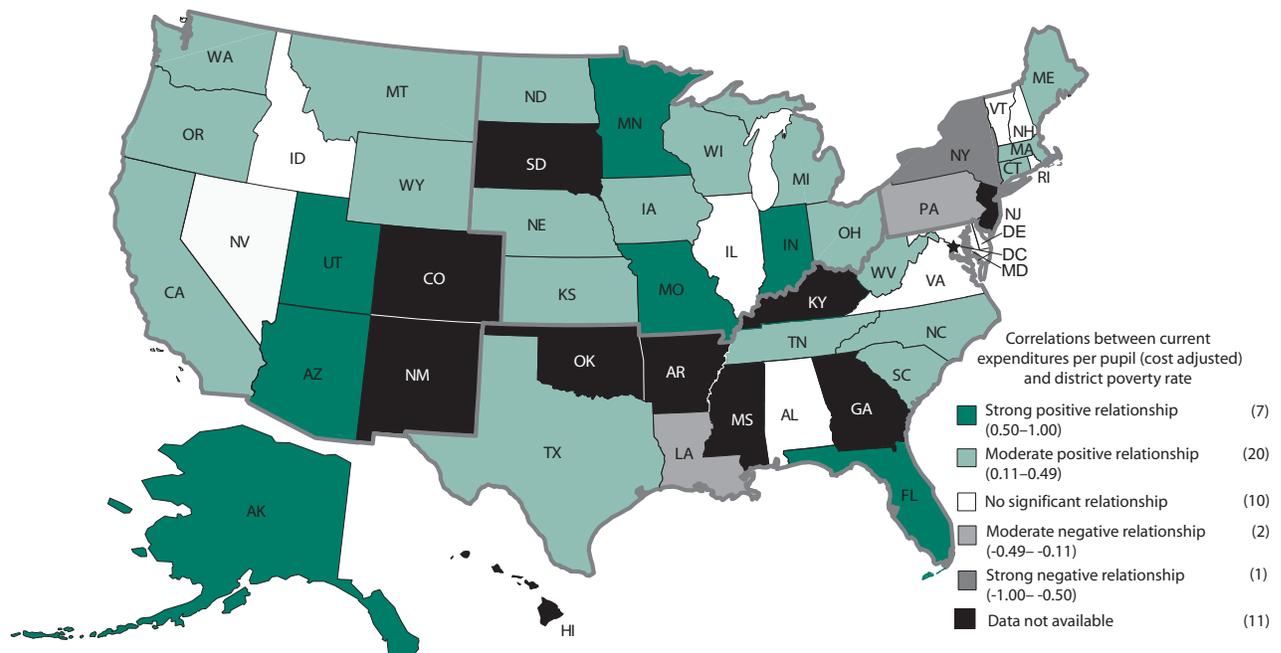
Figure 3-4. Correlations between current expenditures per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98



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 were missing Census data. Regions are delineated in gray; Alaska and Hawaii are part of the Western Region.

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

Figure 3-5. Correlations between current expenditures per pupil and district poverty rate (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 were missing Census data. Regions are delineated in gray; Alaska and Hawaii are part of the Western Region.

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

Salaries

School district spending on salaries for public elementary and secondary education totaled \$181.8 billion in 1997–98 before cost adjustments (table 3-6). This was nearly 66 percent of current expenditures (\$274.9 billion) in 1997–98.

Salary Expenditures Per Pupil

Expenditures per pupil for salaries in the United States averaged \$3,985 in 1997–98 before cost adjustments (table 3-6). Expenditures per pupil for salaries were highest in the Northeast (\$5,338) and lowest in the West (\$3,543). At \$3,973 per pupil, expenditures per pupil for salaries in the Midwest were higher than in the South (\$3,625). Expenditures per pupil in the highest region were 1.5 times greater than those in the lowest region before cost adjustments and 1.4 times greater after adjustments. Further, the difference between these two regions decreased from \$1,795 to \$1,441 after cost adjustments. The Northeast (\$4,808) remained the region with the highest per pupil expenditures, and the West (\$3,367) remained the region with lowest expenditures per pupil for salaries.

Before cost adjustments, mid-sized districts had higher expenditures per pupil for salaries than small and large districts. Expenditures per pupil averaged \$4,035 in districts with 1,000–4,999 students and \$4,091 in districts with 5,000–9,999 students, compared to \$3,935 in districts with fewer than 1,000 students and \$3,929 in districts with 10,000 or more students. After cost adjustments, districts with fewer than 1,000 students had the highest average salary expenditures per pupil (\$4,417). In addition, the difference between the smallest and the largest districts increased from \$162 to \$594 per pupil.

Table 3-6. Salary expenditures, cost-adjusted salary expenditures, salary expenditures per pupil, and cost-adjusted salary expenditures per pupil in public school districts, by region, district enrollment, minority enrollment, district poverty rate, median household income, and median housing value: 1997–98

School district characteristics	Salary expenditures (in thousands)	Cost-adjusted salary expenditures (in thousands)	Salary expenditures per pupil	Cost-adjusted salary expenditures per pupil
All districts	\$181,843,622	\$180,591,621	\$3,985	\$3,969
Region				
Northeast	42,339,640	38,016,011	5,338	4,808
Midwest	42,199,621	43,079,923	3,973	4,077
South	59,720,016	63,980,727	3,625	3,883
West	37,584,345	35,514,959	3,543	3,367
District enrollment				
0–999	10,698,680	11,837,126	3,935	4,417
1,000–4,999	52,402,829	53,149,216	4,035	4,111
5,000–9,999	28,864,876	28,248,499	4,091	4,012
10,000 or more	89,877,237	87,356,779	3,929	3,823
Minority enrollment				
Less than 5 percent	44,170,530	45,418,175	3,911	4,024
5 percent–<20 percent	47,836,092	47,424,249	3,986	3,952
20 percent–<50 percent	49,921,440	49,739,325	3,889	3,875
50 percent or more	30,458,491	28,669,632	4,272	4,021
Data missing ¹	9,457,069	9,340,239	—	—
District poverty rate				
Less than 5 percent	24,417,526	22,410,475	4,721	4,338
5 percent–<15 percent	59,852,176	59,429,559	3,865	3,838
15 percent–<25 percent	43,966,285	45,656,329	3,710	3,853
25 percent or more	44,150,566	43,755,019	4,105	4,068
Data missing ¹	9,457,069	9,340,239	—	—
Median household income				
Less than \$20,000	13,042,206	14,323,739	3,768	4,139
\$20,000–<\$25,000	31,514,660	33,636,727	3,753	4,006
\$25,000–<\$30,000	44,330,201	44,463,381	3,955	3,967
\$30,000–<\$35,000	28,911,824	28,468,444	3,823	3,764
\$35,000 or more	54,587,662	50,359,091	4,321	3,989
Data missing ¹	9,457,069	9,340,239	—	—
Median housing value				
Less than \$40,000	14,125,712	15,680,700	3,861	4,286
\$40,000–<\$55,000	28,787,456	31,068,883	3,677	3,969
\$55,000–<\$85,000	53,698,904	55,291,574	3,717	3,828
\$85,000 or more	75,774,481	69,210,226	4,374	3,995
Data missing ¹	9,457,069	9,340,239	—	—

—Not available.

¹These districts were missing 1990 Census demographic data.

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.

Correlation analysis, however, found no significant relationship between district enrollment and salary expenditures per pupil before cost adjustments, and a weak negative relationship (-0.07) after cost adjustments (tables A-1 and A-2).

Before cost adjustments, salary expenditures per pupil showed a weak positive relationship with two measures of district wealth—median household income (+0.33) and median housing value (+0.33) (table A-7). School districts with median household income at or above \$35,000 had the highest average expenditures per pupil (\$4,321), while districts with median income between \$20,000 and \$25,000 had the lowest expenditures per pupil (\$3,753). Similarly, districts with median housing values at or above \$85,000 had the highest average salary expenditures per pupil (\$4,374), while districts with median housing values between \$40,000 and \$55,000 had the lowest expenditures per pupil (\$3,677).

After cost adjustments, districts with median household income less than \$20,000 replaced districts with median household income at or above \$35,000 as the districts with the highest salary expenditures per pupil (\$4,139). Adjustments also raised salary expenditures per pupil in districts with the lowest median housing values (\$4,286) and lowered them in districts with the highest housing values (\$3,995). Correlation measures were weakened by cost adjustments; the relationship between adjusted expenditures and household income was +0.09, while the relationship with housing value was +0.02 (table A-8).

Salary expenditures per pupil showed a moderate positive relationship with minority enrollment before cost adjustments (+0.11), but the relationship was not statistically significant after cost adjustments. Salary expenditures per pupil showed a weak relationship with district poverty rate, both before (-0.07) and after (+0.02) cost adjustments. Expenditures per pupil were higher in the lowest-poverty districts than in the highest-poverty districts both before cost adjustments (\$4,721 and \$4,105, respectively) and after cost adjustments (\$4,338 and \$4,068, respectively).

Variations in Salary Expenditures Per Pupil

The restricted range ratio for unadjusted salary expenditures ranged from 0.10 in Nevada to 1.2 in Illinois (table 3-7). The United States ratio was 1.08, with only Illinois exceeding the national measure. Cost adjustments decreased the range between the lowest-variation and the highest-variation states. After cost adjustments, the restricted range ratio ranged from 0.12 in Nevada to 1.05 in Illinois. The cost-adjusted United States ratio was 0.90, with only 2 states (Montana and Illinois) exceeding the national measure (table 3-8).

The coefficient of variation for unadjusted salary expenditures ranged from 0.05 in West Virginia to 0.28 in Alaska. Alaska and Illinois exceeded the national variation of 0.26. After cost adjustments, the coefficient of variation ranged from 0.06 in West Virginia to 0.27 in Montana. The cost-adjusted United States coefficient was 0.21 with four states (Alaska, Illinois, Montana, and North Dakota) exceeding the national measure.

Before cost adjustments, the Gini coefficient for salary expenditures ranged from 0.02 in Nevada to 0.13 in Illinois. The unadjusted coefficient for the United States was 0.13. Cost adjustments decreased the range between the highest- and lowest-variation states. After cost adjustments, the coefficient ranged from 0.02 in Nevada to 0.12 in Illinois and Montana. The adjusted national Gini coefficient was 0.11. Only Illinois and Montana had higher Gini coefficients than the national measure.

Relationship Between Salary Expenditures Per Pupil and Selected District Fiscal and Demographic Characteristics

For the United States as a whole and for many states, salary expenditures per pupil showed a positive relationship with two measures of district fiscal capacity—median housing value (+0.33) and median household income (+0.33)—before cost adjustments (table A-7). After cost adjustments, the national relationships were weak (+0.09 with household income, +0.02 with housing value) (table A-8). Before cost adjustments, 20 of the states with sufficient data showed a positive relationship with median housing value (table 3-9). After cost adjustments, 8 of these states showed a positive relationship, while 16 showed a negative relationship.

Table 3-7. Variation in salary expenditures per pupil (unadjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Synthesized measure of variation	
	Value	Rank	Value	Rank	Value	Rank	Average rank	Average quartile
United States	1.08	†	0.26	†	0.13	†	†	†
Alabama	0.38	15	0.10	10	0.05	5	10.00	2
Alaska	0.85	47	0.28	49	0.12	48	48.00	4
Arizona	0.50	28	0.13	21	0.07	22	23.67	3
Arkansas	0.55	33	0.14	29	0.07	22	28.00	3
California	0.32	9	0.11	15	0.06	16	13.33	2
Colorado	0.35	10	0.10	10	0.05	5	8.33	1
Connecticut	0.46	23	0.13	21	0.07	22	22.00	2
Delaware	0.26	3	0.08	2	0.05	5	3.33	1
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	0.37	14	0.09	3	0.05	5	7.33	1
Georgia	0.46	23	0.11	15	0.06	16	18.00	2
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	0.49	27	0.14	29	0.07	22	26.00	3
Illinois	1.20	49	0.27	48	0.13	49	48.67	4
Indiana	0.61	36	0.14	29	0.08	33	32.67	3
Iowa	0.40	17	0.09	3	0.05	5	8.33	1
Kansas	0.54	32	0.14	29	0.08	33	31.33	3
Kentucky	0.29	6	0.09	3	0.05	5	4.67	1
Louisiana	0.26	3	0.09	3	0.05	5	3.67	1
Maine	0.50	28	0.13	21	0.07	22	23.67	3
Maryland	0.46	23	0.13	21	0.07	22	22.00	2
Massachusetts	0.61	36	0.16	35	0.08	33	34.67	3
Michigan	0.62	38	0.18	38	0.10	41	39.00	4
Minnesota	0.74	44	0.20	43	0.09	37	41.33	4
Mississippi	0.45	22	0.12	19	0.07	22	21.00	2
Missouri	0.68	39	0.18	38	0.10	41	39.33	4
Montana	0.85	47	0.24	47	0.11	46	46.67	4
Nebraska	0.43	19	0.13	21	0.07	22	20.67	2
Nevada	0.10	1	0.09	3	0.02	1	1.67	1
New Hampshire	0.76	45	0.16	35	0.09	37	39.00	4
New Jersey	0.71	43	0.16	35	0.09	37	38.33	4
New Mexico	0.48	26	0.13	21	0.06	16	21.00	2
New York	0.70	41	0.21	46	0.10	41	42.67	4
North Carolina	0.30	8	0.09	3	0.05	5	5.33	1
North Dakota	0.59	35	0.20	43	0.08	33	37.00	3
Ohio	0.77	46	0.20	43	0.11	46	45.00	4
Oklahoma	0.41	18	0.13	21	0.06	16	18.33	2
Oregon	0.35	10	0.10	10	0.05	5	8.33	1
Pennsylvania	0.70	41	0.18	38	0.10	41	40.00	4
Rhode Island	0.35	10	0.10	10	0.05	5	8.33	1
South Carolina	0.39	16	0.11	15	0.06	16	15.67	2
South Dakota	0.44	20	0.14	29	0.07	22	23.67	3
Tennessee	0.57	34	0.14	29	0.07	22	28.33	3
Texas	0.36	13	0.11	15	0.05	5	11.00	2
Utah	0.27	5	0.10	10	0.04	3	6.00	1
Vermont	0.68	39	0.18	38	0.10	41	39.33	4
Virginia	0.53	31	0.19	42	0.09	37	36.67	3
Washington	0.29	6	0.09	3	0.04	3	4.00	1
West Virginia	0.16	2	0.05	1	0.03	2	1.67	1
Wisconsin	0.52	30	0.12	19	0.06	16	21.67	2
Wyoming	0.44	20	0.13	21	0.07	22	21.00	2

†Not applicable.

!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 3-8. Variation in salary expenditures per pupil (cost-adjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Synthesized measure of variation	
	Value	Rank	Value	Rank	Value	Rank	Average rank	Average quartile
United States	0.90	†	0.21	†	0.11	†	†	†
Alabama	0.31	10	0.09	4	0.05	5	6.33	1
Alaska	0.85	46	0.26	48	0.11	47	47.00	4
Arizona	0.50	27	0.15	31	0.08	33	30.33	3
Arkansas	0.42	19	0.11	12	0.06	14	15.00	2
California	0.41	18	0.12	17	0.06	14	16.33	2
Colorado	0.29	7	0.10	10	0.05	5	7.33	1
Connecticut	0.43	20	0.12	17	0.07	23	20.00	2
Delaware	0.18	2	0.08	2	0.04	3	2.33	1
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	0.26	5	0.08	2	0.04	3	3.33	1
Georgia	0.32	12	0.09	4	0.05	5	7.00	1
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	0.60	39	0.15	31	0.08	33	34.33	3
Illinois	1.05	49	0.23	46	0.12	48	47.67	4
Indiana	0.46	25	0.13	24	0.07	23	24.00	3
Iowa	0.30	8	0.09	4	0.05	5	5.67	1
Kansas	0.74	45	0.18	42	0.09	41	42.67	4
Kentucky	0.33	13	0.09	4	0.05	5	7.33	1
Louisiana	0.25	4	0.09	4	0.05	5	4.33	1
Maine	0.50	27	0.14	26	0.07	23	25.33	3
Maryland	0.39	16	0.11	12	0.06	14	14.00	2
Massachusetts	0.56	35	0.16	36	0.08	33	34.67	4
Michigan	0.50	27	0.13	24	0.07	23	24.67	3
Minnesota	0.48	26	0.19	44	0.07	23	31.00	3
Mississippi	0.45	24	0.11	12	0.06	14	16.67	2
Missouri	0.50	27	0.14	26	0.08	33	28.67	3
Montana	1.00	48	0.27	49	0.12	48	48.33	4
Nebraska	0.56	35	0.17	40	0.08	33	36.00	4
Nevada	0.12	1	0.10	10	0.02	1	4.00	1
New Hampshire	0.87	47	0.18	42	0.10	45	44.67	4
New Jersey	0.58	37	0.14	26	0.08	33	32.00	3
New Mexico	0.50	27	0.14	26	0.06	14	22.33	2
New York	0.63	43	0.19	44	0.10	45	44.00	4
North Carolina	0.28	6	0.09	4	0.05	5	5.00	1
North Dakota	0.65	44	0.23	46	0.09	41	43.67	4
Ohio	0.61	40	0.16	36	0.09	41	39.00	4
Oklahoma	0.61	40	0.17	40	0.08	33	37.67	4
Oregon	0.36	15	0.12	17	0.05	5	12.33	2
Pennsylvania	0.53	34	0.15	31	0.08	33	32.67	3
Rhode Island	0.43	20	0.12	17	0.07	23	20.00	2
South Carolina	0.39	16	0.11	12	0.06	14	14.00	2
South Dakota	0.59	38	0.16	36	0.07	23	32.33	3
Tennessee	0.43	20	0.12	17	0.06	14	17.00	2
Texas	0.50	27	0.15	31	0.07	23	27.00	3
Utah	0.31	10	0.12	17	0.05	5	10.67	1
Vermont	0.61	40	0.16	36	0.09	41	39.00	4
Virginia	0.35	14	0.14	26	0.07	23	21.00	2
Washington	0.30	8	0.12	17	0.06	14	13.00	2
West Virginia	0.21	3	0.06	1	0.03	2	2.00	1
Wisconsin	0.43	20	0.11	12	0.06	14	15.33	2
Wyoming	0.51	33	0.15	31	0.07	23	29.00	3

†Not applicable.

!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 3-9. Correlations between salary expenditures per pupil and selected fiscal and demographic characteristics, by state: 1997–98

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

Table 3-9. Correlations between salary expenditures per pupil and selected fiscal and demographic characteristics, by state: 1997–98—Continued

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

¹State 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.

Ten states showed a strong or moderate positive relationship between salary expenditures per pupil and median household income. Another 10 states demonstrated a strong or moderate negative relationship. After cost adjustments, seven states (Illinois, Louisiana, Maryland, Michigan, New York, Pennsylvania, and Virginia) had a strong or moderate positive relationship between expenditures per pupil and household income. Twenty-one states had a strong or moderate negative relationship.

For the United States as a whole, a moderate positive relationship was found between salary expenditures per pupil and minority enrollment before cost adjustments (+0.11). Twenty-seven states, scattered throughout the country, showed a strong or moderate positive relationship between these variables, 11 states showed no significant relationship, and 1 state (New York) showed a moderate negative relationship. After cost adjustments were applied, the correlation at the United States level was no longer significant. Twenty states showed a strong or moderate positive relationship, and seven states (Florida, Illinois, New Hampshire, Texas, Vermont, West Virginia, and Wisconsin) joined the states with no significant relationship between expenditures per pupil and minority enrollment. Five states (Kansas, Louisiana, Nebraska, Pennsylvania, and New York) demonstrated a strong or moderate negative relationship between cost-adjusted expenditures per pupil and minority enrollment.

In contrast, district poverty rate showed a weak correlation with salary expenditures per pupil, both before (-0.07) and after (+0.02) cost adjustments. Before cost adjustments, three states (Alaska, Indiana, and Utah) showed a strong positive relationship, and one state (New York) showed a strong negative relationship. After cost adjustments, Alaska, Indiana, and Utah continued to show a strong positive relationship, while New York retained a strong negative relationship.

Expenditures for Salaries and Benefits

Salary and benefit expenditures for public elementary and secondary education totaled \$229.4 billion in 1997–98 (table 3-10). This was just over 83 percent of current expenditures (\$274.9 billion) in 1997–98.

Table 3-10. Salaries and benefits expenditures, cost-adjusted salaries and benefits expenditures, salaries and benefits expenditures per pupil, and cost-adjusted salaries and benefits expenditures per pupil in public school districts, by region, district enrollment, minority enrollment, district poverty rate, median household income, and median housing value: 1997–98

School district characteristics	Salaries and benefits expenditures (in thousands)	Cost-adjusted salaries and benefits expenditures (in thousands)	Salaries and benefits expenditures per pupil	Cost-adjusted salaries and benefits expenditures per pupil
All districts	\$229,359,397	\$227,668,197	\$5,026	\$5,004
Region				
Northeast	53,463,830	48,033,708	6,741	6,075
Midwest	53,793,481	54,908,016	5,065	5,196
South	74,301,073	79,551,954	4,510	4,828
West	47,801,013	45,174,519	4,506	4,283
District enrollment				
0–999	13,294,179	14,686,919	4,890	5,481
1,000–4,999	65,850,292	66,789,386	5,070	5,166
5,000–9,999	36,379,151	35,602,536	5,156	5,057
10,000 or more	113,835,775	110,589,356	4,976	4,840
Minority enrollment				
Less than 5 percent	56,215,856	57,810,367	4,978	5,121
5 percent–<20 percent	60,139,730	59,608,183	5,011	4,967
20 percent–<50 percent	62,667,322	62,364,281	4,882	4,858
50 percent or more	38,626,270	36,328,537	5,418	5,096
Data missing ¹	11,710,219	11,556,829	—	—
District poverty rate				
Less than 5 percent	30,551,637	28,051,830	5,907	5,430
5 percent–<15 percent	75,710,505	75,163,695	4,889	4,854
15 percent–<25 percent	55,873,760	57,968,032	4,715	4,892
25 percent or more	55,513,276	54,927,812	5,162	5,107
Data missing ¹	11,710,219	11,556,829	—	—
Median household income				
Less than \$20,000	16,275,087	17,852,592	4,703	5,158
\$20,000–<\$25,000	39,838,574	42,462,814	4,744	5,057
\$25,000–<\$30,000	56,306,546	56,449,343	5,024	5,036
\$30,000–<\$35,000	36,551,591	35,985,481	4,833	4,758
\$35,000 or more	68,677,380	63,361,140	5,437	5,018
Data missing ¹	11,710,219	11,556,829	—	—
Median housing value				
Less than \$40,000	17,638,926	19,540,137	4,821	5,340
\$40,000–<\$55,000	36,469,096	39,314,786	4,658	5,022
\$55,000–<\$85,000	67,500,476	69,516,314	4,672	4,813
\$85,000 or more	96,040,680	87,740,133	5,543	5,065
Data missing ¹	11,710,219	11,556,829	—	—

—Not available.

¹These districts were missing 1990 Census demographic data.

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.

Salary and Benefit Expenditures Per Pupil

Salary and benefit expenditures per pupil in the United States averaged \$5,026 in 1997–98 before cost adjustments (table 3-10). Salary and benefit expenditures per pupil were highest in the Northeast (\$6,741) and lowest in the West (\$4,506). At \$5,065 per pupil, salary and benefit expenditures in the Midwest were higher than in the South (\$4,510). Expenditures per pupil in the highest region were 1.5 times greater than those in the lowest region before cost adjustments and 1.4 times greater after adjustments. Further, the difference between these two regions decreased from \$2,235 to \$1,792 after cost adjustments. The Northeast (\$6,075) remained the region with the highest per pupil expenditures, and the West (\$4,283) remained the region with the lowest salary and benefit expenditures per pupil.

Salary and benefit expenditures per pupil showed a positive relationship with the two measures of district wealth—median household income (+0.31) and median housing value (+0.34)—before cost adjustments (table A-9). School districts with median household income at or above \$35,000 had the highest average expenditures per pupil (\$5,437) before cost adjustments, while districts with median household incomes below \$20,000 had the lowest expenditures per pupil (\$4,703). After cost adjustments, the figures were \$5,018 and \$5,158, respectively. Similarly, districts with median housing values at or above \$85,000 had average current salary and benefit expenditures of \$5,543 per pupil, while districts with median housing values below \$40,000 had expenditures per pupil of \$4,821 before cost adjustments. After cost adjustments, the figures were \$5,065 and \$5,340, respectively. After cost adjustments, there was a weak positive correlation between salaries and benefits expenditures per pupil and district wealth (+0.08 with household income, +0.03 with housing value) (table A-10).

Salary and benefit expenditures per pupil showed a weak relationship with both district poverty rate (-0.07) and minority enrollment (+0.10) across the United States before cost adjustments, and no statistically significant relationship after. Average unadjusted expenditures per pupil were lowest in districts with poverty rates between 15 and 25 percent (\$4,715) and highest in districts with rates less than 5 percent (\$5,907). After cost adjustments, districts with poverty rates between 5 and 15 percent had the lowest expenditures per pupil (\$4,854) and districts with poverty rates below 5 percent maintained the highest expenditures per pupil (\$5,430). Districts with the highest minority levels also had the highest expenditures per pupil before cost adjustments (\$5,418) while districts with the lowest minority enrollments had the highest expenditures per pupil after cost adjustments (\$5,121).

Variations in Salary and Benefit Expenditures Per Pupil

Restricted Range Ratio

The restricted range ratio for unadjusted salaries and benefits expenditures per pupil across the United States was 1.10 (table 3-11). This means salaries and benefits expenditures in the district at the 95th percentile were 1.10 times higher than salaries and benefits expenditures in the district at the 5th percentile. Variation across the states ranged from 0.11 in Nevada to 1.17 in Illinois. Only one state (Illinois) had a restricted range ratio higher than the United States ratio.

When cost adjustments were applied, the restricted range ratio for current expenditures per pupil across the United States decreased to 0.91 (table 3-12). Two states exceeded the national variation after cost adjustments: Illinois and Montana. Cost adjustments also reduced the range between the lowest-variation and highest-variation states. After cost adjustments, the restricted range ratio ranged from 0.13 in Nevada to 0.98 in Illinois and Montana.

Coefficient of Variation

The coefficient of variation for unadjusted salaries and benefits expenditures per pupil across the United States was 0.26. This means approximately two-thirds of the districts nationally have salaries and benefits expenditures per pupil between \$3,719 and \$6,333, a range that is from 26 percent below the mean to 26 percent above the mean. Variation in the states ranged from 0.05 in West Virginia to 0.28 in Alaska. Two states had a coefficient of variation higher than the United States coefficient: Alaska and Illinois.

Table 3-11. Variation in salaries and benefits expenditures per pupil (unadjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Synthesized measure of variation	
	Value	Rank	Value	Rank	Value	Rank	Average rank	Average quartile
United States	1.10	†	0.26	†	0.13	†	†	†
Alabama	0.37	15	0.10	10	0.05	4	9.67	2
Alaska	0.87	47	0.28	49	0.12	48	48.00	4
Arizona	0.51	27	0.13	22	0.07	22	23.67	3
Arkansas	0.61	33	0.14	27	0.08	29	29.67	3
California	0.30	9	0.10	10	0.05	4	7.67	1
Colorado	0.30	9	0.09	2	0.05	4	5.00	1
Connecticut	0.53	29	0.14	27	0.08	29	28.33	3
Delaware	0.28	4	0.09	2	0.05	4	3.33	1
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	0.36	12	0.09	2	0.05	4	6.00	1
Georgia	0.48	22	0.11	15	0.06	15	17.33	2
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	0.50	25	0.15	32	0.08	29	28.67	3
Illinois	1.17	49	0.27	48	0.13	49	48.67	4
Indiana	0.66	38	0.15	32	0.09	36	35.33	3
Iowa	0.46	21	0.11	15	0.06	15	17.00	2
Kansas	0.60	32	0.14	27	0.08	29	29.33	3
Kentucky	0.28	4	0.09	2	0.05	4	3.33	1
Louisiana	0.28	4	0.09	2	0.05	4	3.33	1
Maine	0.50	25	0.13	22	0.07	22	23.00	3
Maryland	0.48	22	0.13	22	0.07	22	22.00	2
Massachusetts	0.62	36	0.17	36	0.09	36	36.00	3
Michigan	0.61	33	0.18	39	0.10	42	38.00	4
Minnesota	0.77	46	0.21	46	0.09	36	42.67	4
Mississippi	0.45	20	0.12	19	0.07	22	20.33	2
Missouri	0.76	45	0.19	41	0.10	42	42.67	4
Montana	0.93	48	0.24	47	0.11	46	47.00	4
Nebraska	0.48	22	0.13	22	0.07	22	22.00	2
Nevada	0.11	1	0.09	2	0.02	1	1.33	1
New Hampshire	0.69	40	0.17	36	0.09	36	37.33	4
New Jersey	0.69	40	0.15	32	0.08	29	33.67	3
New Mexico	0.51	27	0.13	22	0.06	15	21.33	2
New York	0.67	39	0.19	41	0.09	36	38.67	4
North Carolina	0.29	8	0.09	2	0.05	4	4.67	1
North Dakota	0.61	33	0.20	44	0.08	29	35.33	3
Ohio	0.69	40	0.20	44	0.11	46	43.33	4
Oklahoma	0.36	12	0.12	19	0.06	15	15.33	2
Oregon	0.34	11	0.10	10	0.05	4	8.33	1
Pennsylvania	0.69	40	0.17	36	0.09	36	37.33	4
Rhode Island	0.36	12	0.10	10	0.05	4	8.67	2
South Carolina	0.37	15	0.11	15	0.06	15	15.00	2
South Dakota	0.40	18	0.14	27	0.07	22	22.33	2
Tennessee	0.65	37	0.15	32	0.08	29	32.67	3
Texas	0.39	17	0.11	15	0.06	15	15.67	2
Utah	0.24	3	0.10	10	0.05	4	5.67	1
Vermont	0.71	44	0.18	39	0.10	42	41.67	4
Virginia	0.56	31	0.19	41	0.10	42	38.00	4
Washington	0.28	4	0.09	2	0.04	3	3.00	1
West Virginia	0.17	2	0.05	1	0.03	2	1.67	1
Wisconsin	0.53	29	0.12	19	0.07	22	23.33	3
Wyoming	0.40	18	0.14	27	0.06	15	20.00	2

†Not applicable.

!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 3-12. Variation in salaries and benefits expenditures per pupil (cost-adjusted dollars), by state: 1997–98

State	Restricted range ratio		Coefficient of variation		Gini coefficient		Synthesized measure of variation	
	Value	Rank	Value	Rank	Value	Rank	Average rank	Average quartile
United States	0.91	†	0.21	†	0.11	†	†	†
Alabama	0.31	8	0.09	4	0.05	5	5.67	1
Alaska	0.87	46	0.26	48	0.11	47	47.00	4
Arizona	0.49	28	0.15	30	0.07	22	26.67	3
Arkansas	0.48	25	0.12	16	0.06	13	18.00	2
California	0.39	16	0.12	16	0.06	13	15.00	2
Colorado	0.29	6	0.11	11	0.05	5	7.33	1
Connecticut	0.47	23	0.13	21	0.07	22	22.00	2
Delaware	0.20	2	0.08	2	0.04	3	2.33	1
District of Columbia	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Florida	0.25	4	0.08	2	0.04	3	3.00	1
Georgia	0.35	12	0.09	4	0.05	5	7.00	1
Hawaii	(!)	(!)	(!)	(!)	(!)	(!)	(!)	(!)
Idaho	0.59	41	0.16	35	0.08	31	35.67	3
Illinois	0.98	48	0.24	47	0.12	48	47.67	4
Indiana	0.51	29	0.13	21	0.08	31	27.00	3
Iowa	0.35	12	0.10	9	0.05	5	8.67	1
Kansas	0.75	45	0.18	42	0.09	40	42.33	4
Kentucky	0.34	11	0.09	4	0.05	5	6.67	1
Louisiana	0.25	4	0.09	4	0.05	5	4.33	1
Maine	0.48	25	0.14	26	0.08	31	27.33	3
Maryland	0.39	16	0.11	11	0.06	13	13.33	2
Massachusetts	0.61	42	0.17	40	0.09	40	40.67	4
Michigan	0.47	23	0.13	21	0.07	22	22.00	2
Minnesota	0.52	32	0.19	45	0.08	31	36.00	4
Mississippi	0.46	22	0.11	11	0.07	22	18.33	2
Missouri	0.56	35	0.15	30	0.08	31	32.00	3
Montana	0.98	48	0.28	49	0.12	48	48.33	4
Nebraska	0.58	38	0.17	40	0.08	31	36.33	4
Nevada	0.13	1	0.10	9	0.02	1	3.67	1
New Hampshire	0.87	46	0.18	42	0.10	46	44.67	4
New Jersey	0.56	35	0.14	26	0.08	31	30.67	3
New Mexico	0.52	32	0.14	26	0.06	13	23.67	2
New York	0.57	37	0.18	42	0.09	40	39.67	4
North Carolina	0.29	6	0.09	4	0.05	5	5.00	1
North Dakota	0.69	44	0.23	46	0.09	40	43.33	4
Ohio	0.58	38	0.16	35	0.09	40	37.67	4
Oklahoma	0.53	34	0.16	35	0.08	31	33.33	3
Oregon	0.36	14	0.13	21	0.06	13	16.00	2
Pennsylvania	0.51	29	0.14	26	0.07	22	25.67	3
Rhode Island	0.43	19	0.12	16	0.06	13	16.00	2
South Carolina	0.38	15	0.11	11	0.06	13	13.00	2
South Dakota	0.58	38	0.16	35	0.07	22	31.67	3
Tennessee	0.48	25	0.13	21	0.07	22	22.67	2
Texas	0.51	29	0.15	30	0.07	22	27.00	3
Utah	0.31	8	0.12	16	0.05	5	9.67	1
Vermont	0.61	42	0.16	35	0.09	40	39.00	4
Virginia	0.41	18	0.15	30	0.08	31	26.33	3
Washington	0.31	8	0.12	16	0.06	13	12.33	2
West Virginia	0.22	3	0.06	1	0.03	2	2.00	1
Wisconsin	0.44	21	0.11	11	0.06	13	15.00	2
Wyoming	0.43	19	0.15	30	0.07	22	23.67	2

†Not applicable.

!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."

When salaries and benefits expenditures were adjusted for cost-of-education differences, the coefficient of variation for expenditures per pupil across the United States decreased to 0.21. Four states exceeded the national variation after cost adjustments: Alaska, Illinois, Montana, and North Dakota. Cost adjustments decreased the range between the lowest-variation and highest-variation states. After cost adjustments, the coefficient of variation ranged from 0.06 in West Virginia to 0.28 in Montana.

Gini Coefficient

The Gini coefficient for unadjusted salary and benefits expenditures per pupil across the United States was 0.13. A Gini coefficient of 0 means expenditures are distributed equally; higher values such as 0.13 imply expenditures are more concentrated among fewer students. Variation in the states ranged from 0.02 in Nevada to 0.13 in Illinois.

Cost-of-education adjustments reduced the Gini coefficient to 0.11. After cost adjustments, Illinois and Montana exceeded the United States level of variation, and the range of variation remained almost unchanged. After adjustments, the Gini coefficient ranged from 0.02 in Nevada to 0.12 in Illinois and Montana.

Overall Variation

In a synthesis of the three variation measures, Southern and Western states had the highest percentage of states in the two quartiles with the lowest variation in salaries and benefits expenditures per pupil (table 3-13 and figure 3-6). After cost adjustments, 81 percent of Southern states and 67 percent of Western states were in these two quartiles. In contrast, 78 percent of Northeastern and 75 percent of Midwestern states were in the two high-variation quartiles.

Table 3-13. Variation in salaries and benefits expenditures per pupil, by region: 1997–98

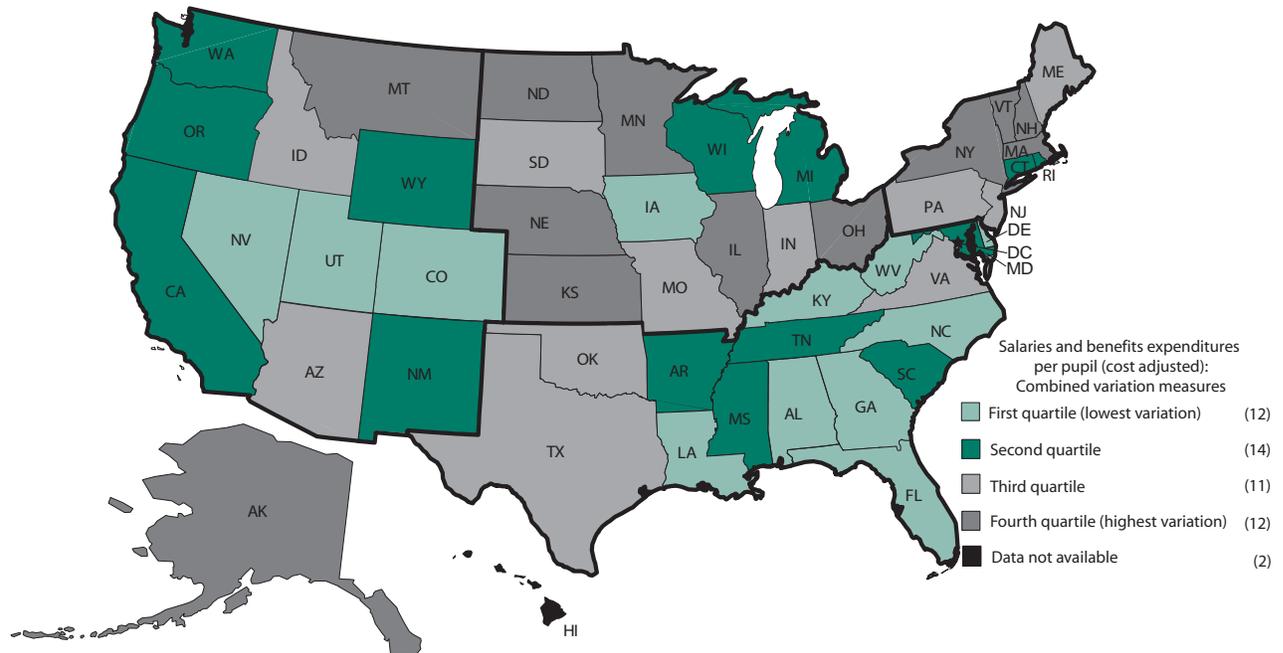
Region	Percent of states in quartiles 1 and 2 (low variation)	Percent of states in quartiles 3 and 4 (high variation)
Unadjusted salaries and benefits expenditures per pupil		
Northeast	11	89
Midwest	25	75
South	81	19
West	67	33
Cost-adjusted salaries and benefits expenditures per pupil		
Northeast	22	78
Midwest	25	75
South	81	19
West	67	33

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

Relationship Between Salaries and Benefits Expenditures Per Pupil and Selected District Fiscal and Demographic Characteristics

For the United States as a whole, salaries and benefits expenditures per pupil in unadjusted dollars showed a positive relationship with a school district's median household income (+0.31) and median housing value (+0.34) (table A-9). Similarly, median housing value was positively related to salaries and benefits expenditures per pupil in 21 of the 40 states with available data, and negatively to salaries

Figure 3-6. Synthesis of variation measures of salaries and benefits expenditures per pupil (cost-adjusted dollars), by state: 1997–98



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

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

and benefits expenditures per pupil in 9 of the 40 states (table 3-14). Six of these were strongly related. Median household income was related to salaries and benefits expenditures per pupil in fewer states. Nineteen states showed no statistically significant relationship between district income and expenditures per pupil, 9 states showed a positive relationship between income and expenditures, and 12 states showed a negative relationship.

After cost adjustments, the positive relationships between district wealth and salaries and benefits expenditures per pupil became weak for the United States as a whole (+0.08 with household income, +0.03 with housing value) (table A-10). After cost adjustments, a majority of states in the South showed no relationship between salaries and benefits expenditures per pupil and median housing value (figure 3-7). Two states (Maryland and Virginia) showed a strong positive relationship. Three states (Alaska, Montana, and West Virginia) showed a strong negative relationship. Two states (Maryland and New York) showed a strong positive relationship between a district's median household income and adjusted expenditures per pupil and five states showed a moderate positive relationship between these variables. Twenty states showed a moderate negative relationship and two states showed a strong negative relationship (figure 3-8).

Salary and benefits expenditures per pupil showed a weak positive relationship with minority enrollment for the United States as a whole before cost adjustments (+0.10) and no statistically significant relationship after adjustments. Nine states (Alaska, Indiana, Iowa, Massachusetts, Minnesota, Missouri, Ohio, Oregon, and Utah) showed a strong positive relationship between minority enrollment and salary and benefits expenditures per pupil before cost adjustments and only two states (Alaska and Ohio) showed this relationship after cost adjustments (figure 3-9). No state showed a strong negative

Table 3-14. Correlations between salaries and benefits expenditures per pupil and selected fiscal and demographic characteristics, by state: 1997–98

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

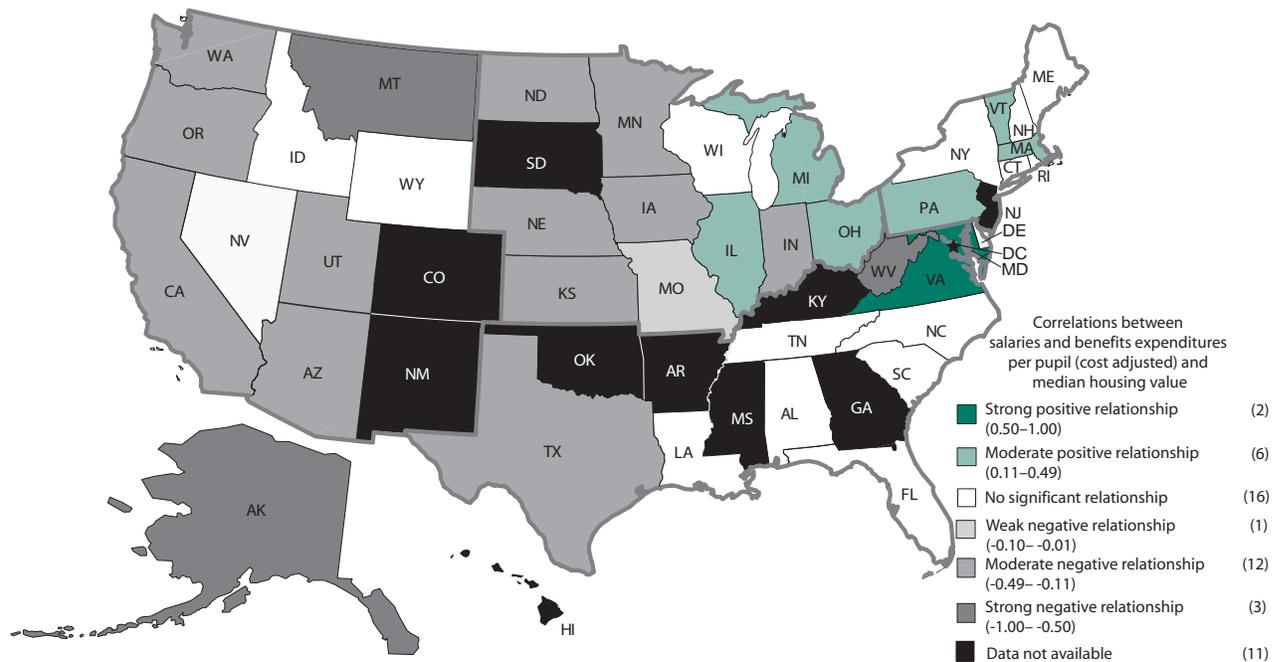
Table 3-14. Correlations between salaries and benefits expenditures per pupil and selected fiscal and demographic characteristics, by state: 1997–98—Continued

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

¹State 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.

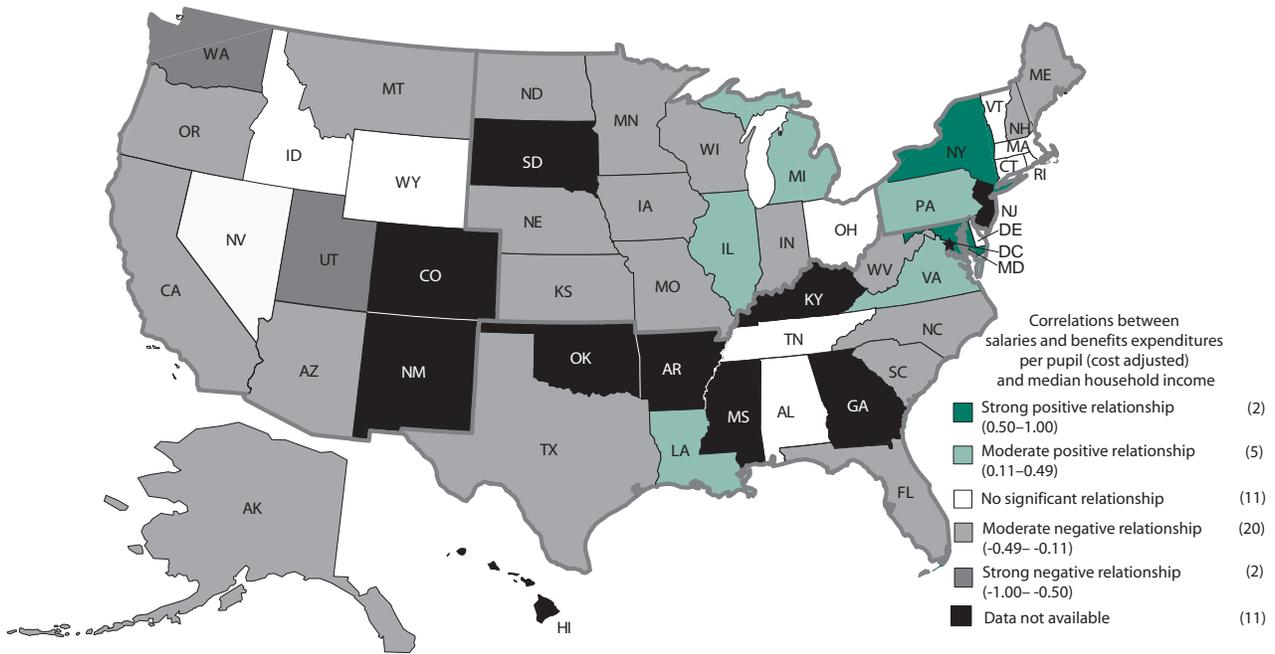
Figure 3-7. Correlations between salaries and benefits expenditures per pupil and median housing value (cost-adjusted dollars), by state: 1997–98



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 were missing Census data. Regions are delineated in gray; Alaska and Hawaii are part of the Western Region.

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

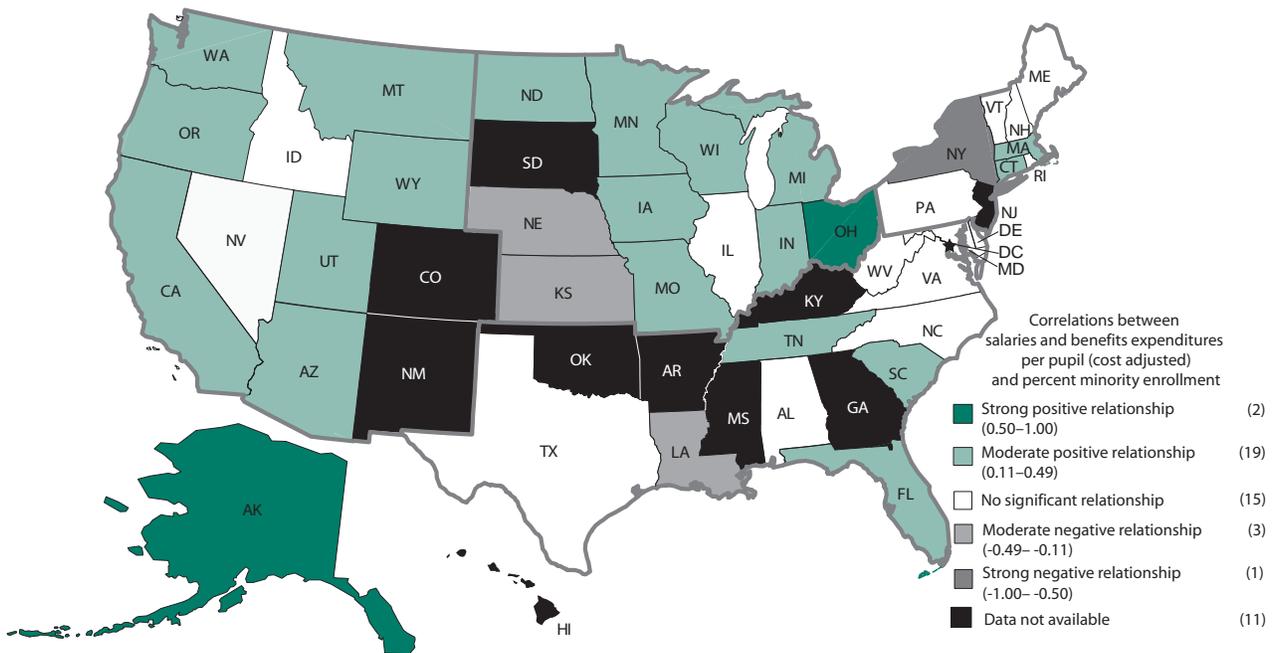
Figure 3-8. Correlations between salaries and benefits expenditures per pupil and median household income (cost-adjusted dollars), by state: 1997–98



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 were missing Census data. Regions are delineated in gray; Alaska and Hawaii are part of the Western Region.

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

Figure 3-9. Correlations between salaries and benefits expenditures per pupil and percent minority enrollment (cost-adjusted dollars), by state: 1997–98



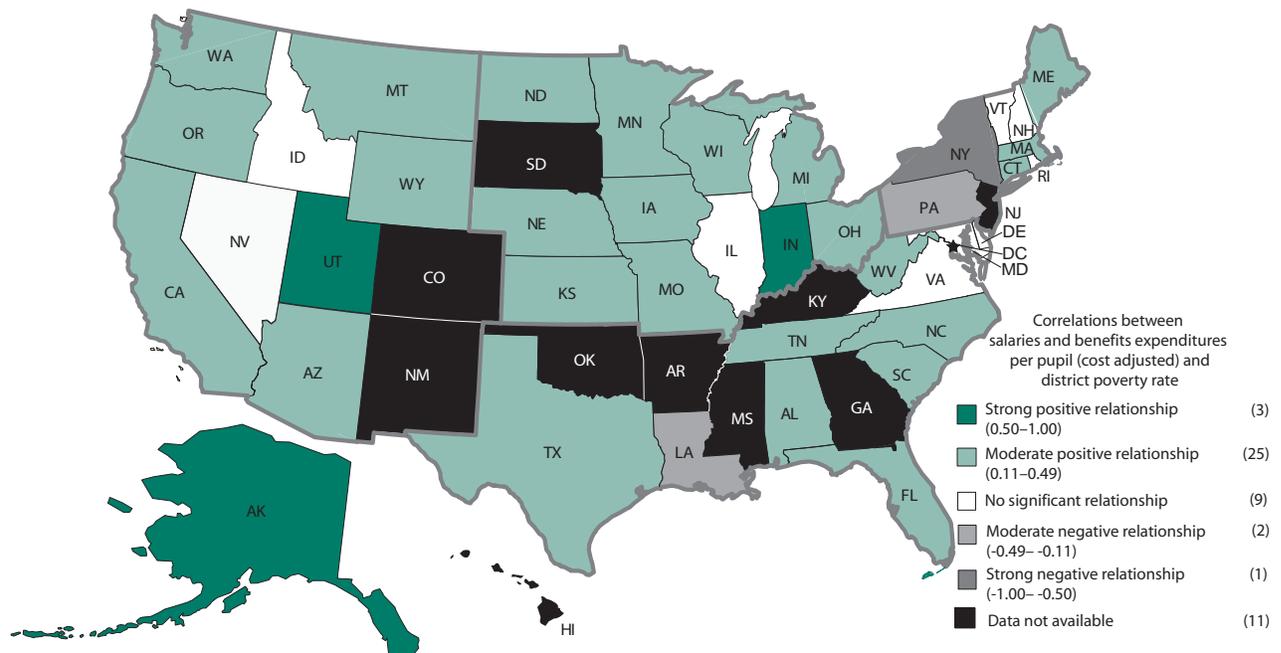
NOTE: No state-level correlation analysis was possible for the District of Columbia or Hawaii since they only have one district. Nine other states (Arkansas, Colorado, Georgia, Kentucky, Mississippi, New Jersey, New Mexico, Oklahoma, and South Dakota) were excluded from state-level correlation analysis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

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

relationship between salaries and benefits expenditures per pupil and minority enrollment before cost adjustments. Only one state (New York) showed a strong negative relationship after cost adjustments.

District poverty rate also showed a weak relationship with salaries and benefits expenditures per pupil at the national level before cost adjustments (-0.07) and no statistically significant relationship after. Only three states (Alaska, Indiana, and Utah) showed a strong positive relationship between district poverty rate and salaries and benefits expenditures per pupil, both before and after cost adjustments. Only one state (New York) showed a strong negative relationship between district poverty rate and salaries and benefits expenditures per pupil, both before and after cost adjustments (figure 3-10).

Figure 3-10. Correlations between salaries and benefits expenditures per pupil and district poverty rate (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 were missing Census data. Regions are delineated in gray; Alaska and Hawaii are part of the Western Region.

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

