

# S/P/R

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## IN THIS ISSUE

### **Gee Whiz Data: Education**

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## TABLE OF CONTENTS

Gee Whiz Data: Education	2
Technical Notes	8

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## GEE WHIZ DATA: EDUCATION

Registering more than 900 pages, the latest *Digest of Education Statistics 2017*, released in January by the National Center for Education Statistics, is not exactly a quick read. It does, however, contain scores of state-specific tables that document trends ranging from population to enrollment to spending to homelessness to bullying to teacher pay.

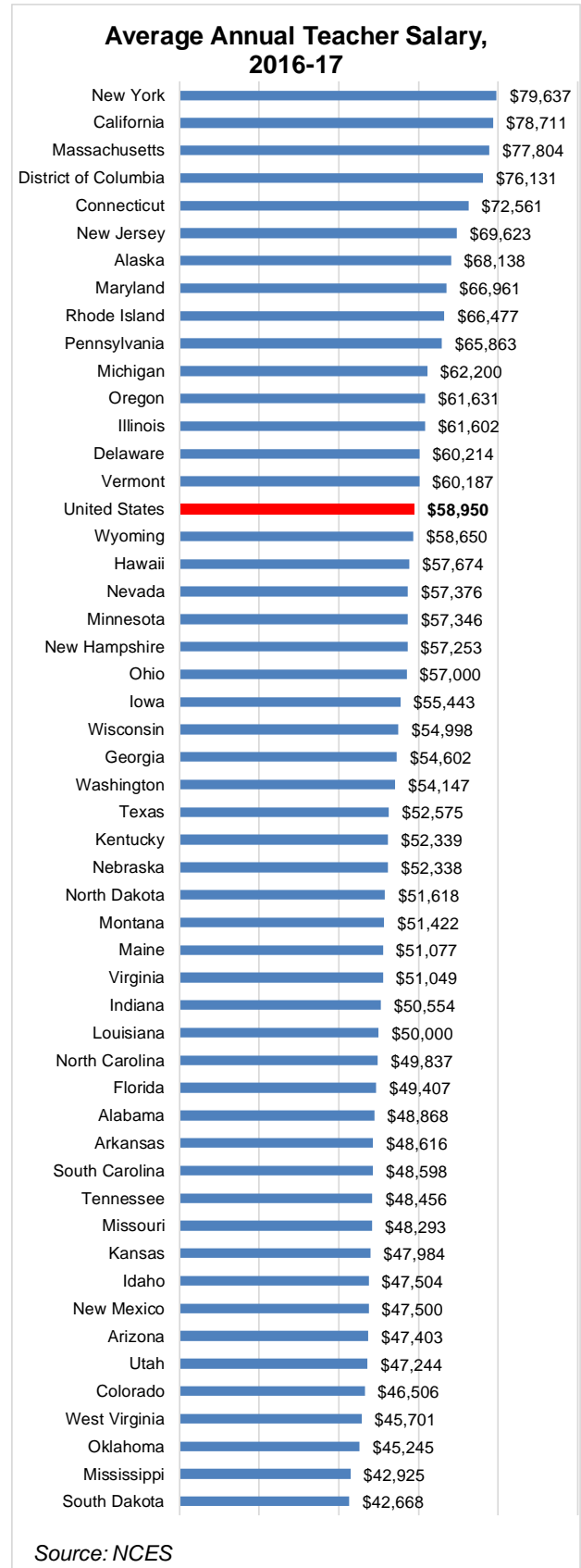
*Reports* has selected some of the more interesting fiscal trends to highlight.

### TEACHER PAY

Last year saw a host of statewide teacher strikes and walkouts over pay or related compensation issues in states including **Arizona, Kentucky, Oklahoma, and West Virginia**. These states lack collective bargaining for teachers, but the statewide nature of the job actions forced state officials to address the grievances and negotiate a resolution. This year has seen additional, localized actions in Denver, **Colorado**, and Los Angeles and Oakland, **California**.

The chart on the right displays average teacher salaries by state for the 2016-17 school year. Teacher pay averaged \$58,950 and ranged from almost \$80,000 in **New York** to less than \$43,000 in **South Dakota** and **Mississippi**. Three of the states that saw statewide job actions last year—**Oklahoma, West Virginia, and Arizona**—have among the 10 lowest average salaries in the nation.

While such comparisons are telling, they can be more instructive when viewed in the context of different costs of living among the states. *Reports* used the figures on the chart and adjusted them by the 2016 “regional price parity index,” a statistic developed by the U.S. Bureau of Economic Analysis (BEA) that assigns a cost-of-living adjustment to each state. The unadjusted and adjusted figures are listed on the next page, as are changes in state rank due to the adjustment.



## 2016-17 Average Annual Teacher Salary, Adjusted and Unadjusted

State	Unadjusted	Rank	Adjusted	Rank	Change in Rank
Massachusetts	\$77,804	3	\$71,735	1	2
California	78,711	2	67,377	2	0
New York	79,637	1	67,214	3	-2
Pennsylvania	65,863	10	66,917	4	6
Rhode Island	66,477	9	66,743	5	4
Michigan	62,200	11	66,367	6	5
Connecticut	72,561	5	66,248	7	-2
Alaska	68,138	7	64,459	8	-1
District of Columbia	76,131	4	64,026	9	-5
Ohio	57,000	21	63,099	10	11
Illinois	61,602	13	62,280	11	2
Oregon	61,631	12	61,754	12	0
Iowa	55,443	22	60,876	13	9
Maryland	66,961	8	60,600	14	-6
Wyoming	58,650	16	60,585	15	1
New Jersey	69,623	6	60,433	16	-10
Delaware	60,214	14	60,094	17	-3
Vermont	60,187	15	59,224	18	-3
Wisconsin	54,998	23	58,958	19	4
Georgia	54,602	24	58,916	20	4
Nevada	57,376	18	58,868	21	-3
Minnesota	57,346	19	58,780	22	-3
Kentucky	52,339	27	58,724	23	4
Nebraska	52,338	28	57,310	24	4
North Dakota	51,618	29	56,006	25	4
Indiana	50,554	33	55,458	26	7
Alabama	48,868	37	55,416	27	10
Arkansas	48,616	38	54,985	28	10
Louisiana	50,000	34	54,800	29	5
Montana	51,422	30	54,456	30	0
North Carolina	49,837	35	54,372	31	4
Texas	52,575	26	54,205	32	-6
New Hampshire	57,253	20	53,875	33	-13
Missouri	48,293	41	53,364	34	7
South Carolina	48,598	39	53,312	35	4
Tennessee	48,456	40	53,205	36	4
Kansas	47,984	42	52,542	37	5
Maine	51,077	31	51,894	38	-7
West Virginia	45,701	48	51,368	39	9
Washington	54,147	25	51,169	40	-15
Idaho	47,504	43	50,829	41	2
New Mexico	47,500	44	50,540	42	2
Oklahoma	45,245	49	50,222	43	6
Virginia	51,049	32	49,875	44	-12
Florida	49,407	36	49,555	45	-9
Arizona	47,403	45	49,347	46	-1
Mississippi	42,925	50	48,763	47	3
Utah	47,244	46	48,520	48	-2
South Dakota	42,668	51	47,660	49	2
Hawaii	57,674	17	47,062	50	-33
Colorado	46,506	47	45,111	51	-4

Sources: NCES, BEA

Accounting for differences in the cost of living makes a small difference in many states and a big difference in some. Six of the 10 jurisdictions with the highest unadjusted salaries fall in rank once the adjustment is made: **New Jersey, Maryland, District of Columbia, Connecticut, New York, and Alaska.** **Pennsylvania** fares the best among this group, rising from #10 to #4 because of below-average living costs.

For the 10 states with the lowest average salaries, seven see their ranks increase with the adjustment: **West Virginia, Oklahoma, Kansas, Mississippi, Idaho, New Mexico, and South Dakota.** **Arizona, Utah, and Colorado** fall in rank, even though the first two have below-average costs of living.

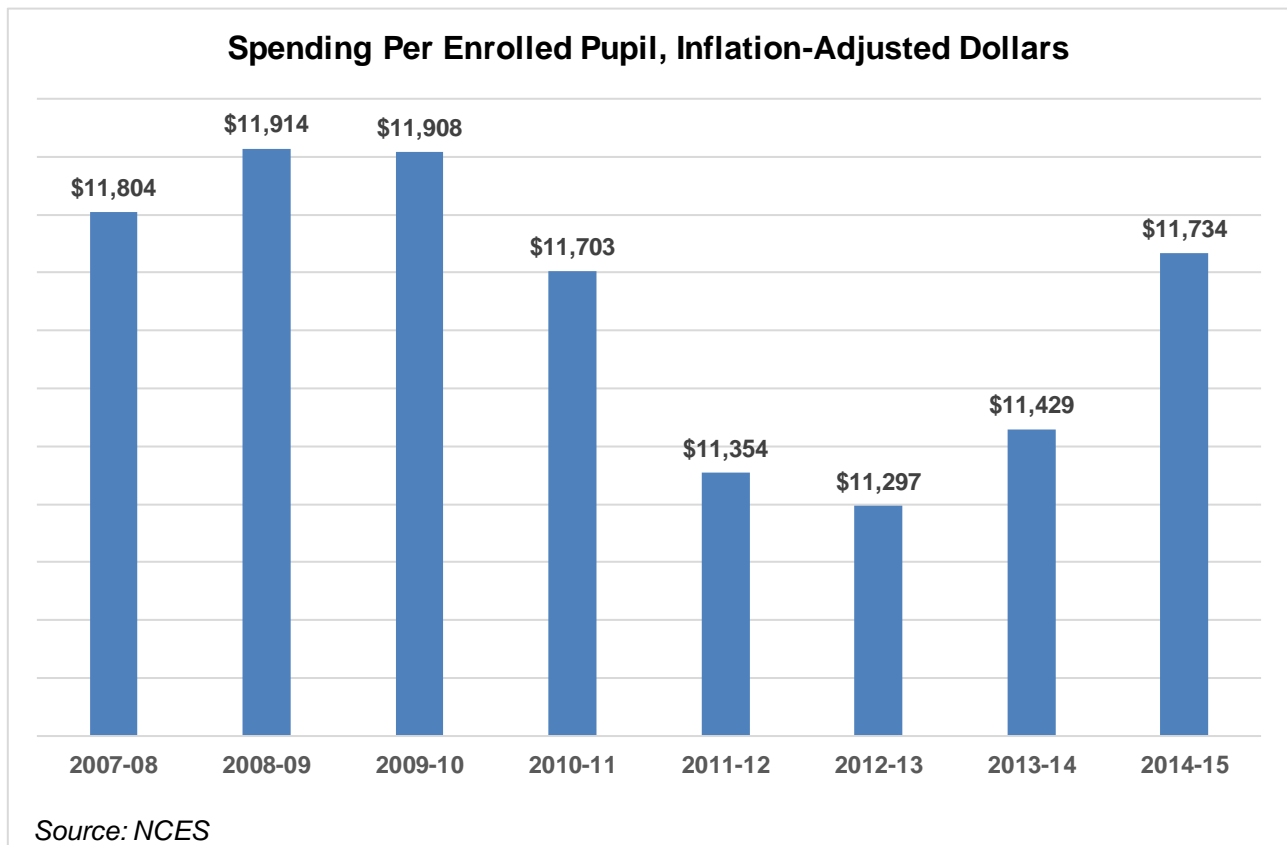
Once adjusted for costs, **Massachusetts** has the highest average teacher salary, moving up from #3, the position **New York** slips into with the adjustment. **Colorado** has the lowest adjusted average salary, dropping to #51 from #47.

Three states—**Ohio, Alabama, and Arkansas**—see their rankings improve by double digits based on the cost-of-living adjustments. In Ohio's case, a low cost of living makes its middle-of-the-pack salary rise to #10. In contrast, five states with relatively high costs of living see double-digit declines in rank, with **Hawaii** dropping from #17 to #50. It is joined by **Washington, New Hampshire, Virginia, and New Jersey.**

This adjustment also narrows the range of salaries by almost \$10,000. Unadjusted salaries registered a range of \$36,969 between the highest and lowest amounts, while adjusted salaries had a range of \$26,624.

### SPENDING

The chart below displays average per pupil spending in recent years, adjusted for inflation. It shows spending peaking in the 2008-09 school year and holding steady for another year, before falling in the wake of the Great Recession. The American Recovery and Reinvestment Act (ARRA),



enacted in 2009, provided substantial supplemental education aid to states for fiscal years (FYs) 2009-2011. The loss of that supplemental funding explains some of the steep decline in per pupil spending in the 2011-12 school year.

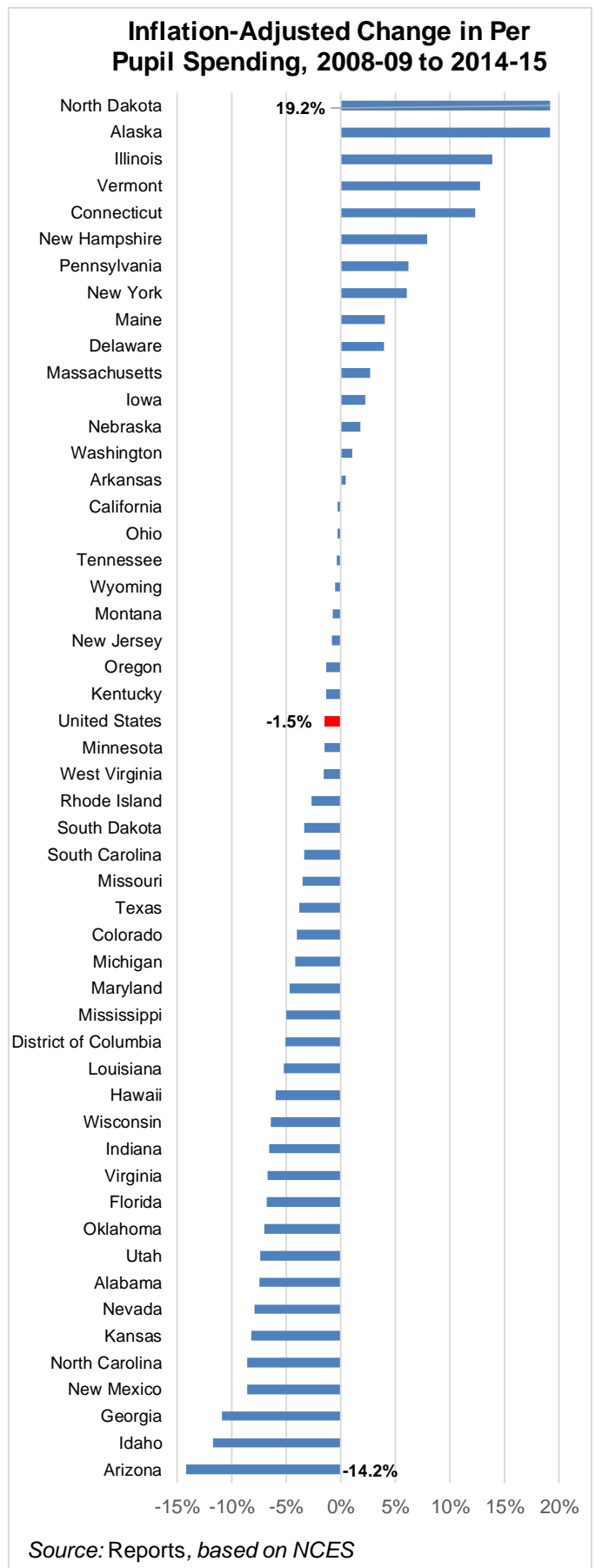
Even though these data are not current, it's noteworthy that several years after the official end of the Great Recession, per pupil spending was still below its peak. It highlights both the degree to which states cut their budgets to meet balanced budget requirements and the dominant role funding for K-12 spending plays in state budgets. Put differently, it would have been impossible to lean heavily on spending cuts while holding K-12 education harmless.

The chart on the right displays inflation-adjusted, state-specific changes in per pupil spending between 2008-09 to 2014-15. Nationally, spending changed -1.5% over the period. Thirty-five states and the District of Columbia were still spending less in 2014-15 than six years earlier, while only 15 states were spending more.

**North Dakota** registered the largest increase, 19.2%. The Great Recession years coincided with a booming North Dakota economy, which generated resources for increased K-12 spending. The state also had strong population growth during these years, which likely contributed to its increase. More recent years have seen a softer state economy, which may be reflected in the K-12 spending data for these years.

The state with the largest decline in spending also can point to the Great Recession as a cause of it. **Arizona** was one of the first states to enter the recession, based largely on the collapse of its housing industry. (It frequently is cited along with **California**, **Florida**, and **Nevada** as the states most adversely affected by the housing collapse.)

Since K-12 education is financed primarily by state aid and local property taxes, the stage was set for K-12 education to take an especially hard hit from the Great Recession's housing collapse. As



foreclosures spiked and housing values tanked, K-12 systems faced funding cuts from both directions.

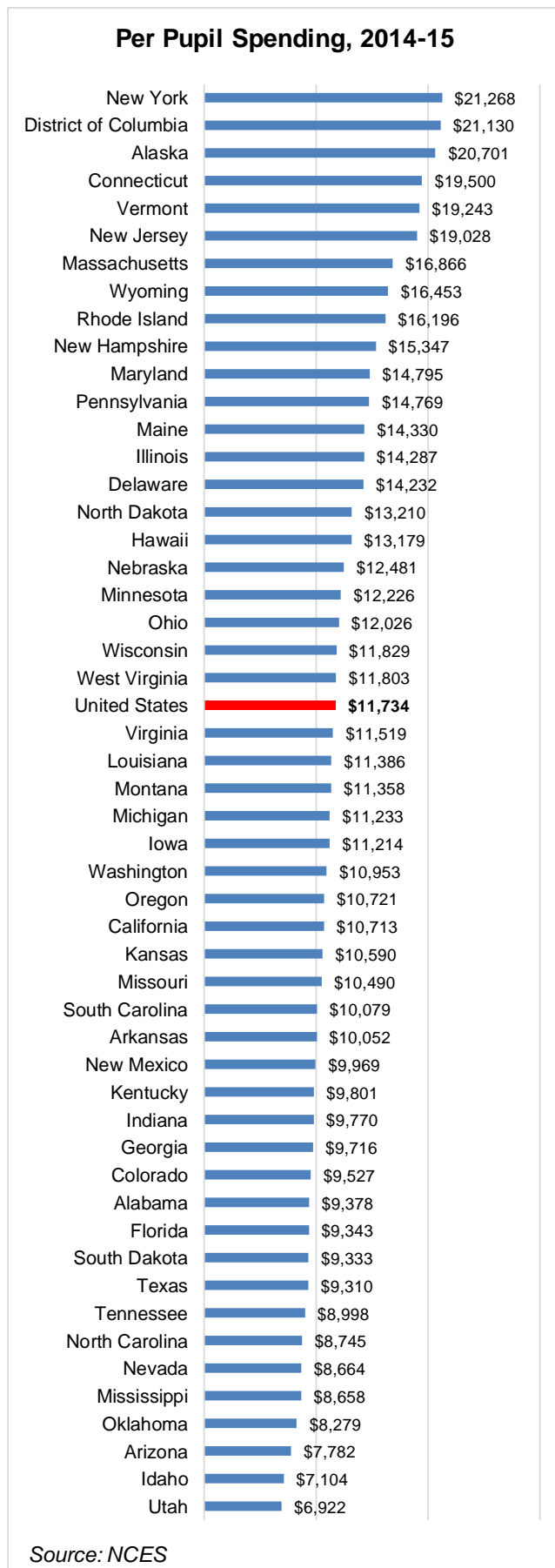
Two regional trends stand out. First, states in the Northeast are well-represented among those that increased per pupil spending and are absent from the list of states making the largest cuts. Second, southern states are largely absent from the list of states that increased spending. Only **Delaware** and **Arkansas** are among the Census-defined southern states that raised per pupil spending.

So where do things stand? The chart on the right lists the most recent per student spending by state. It averages \$11,734 and ranges from \$21,268 in **New York** to about one-third that amount, \$6,922, in **Utah**. States in the Northeast tend to spend the most, while states in the South and West spend the least. Midwestern states are scattered throughout the list, ranging from #14 **Illinois** to #42 **South Dakota**.

As with teacher salaries, many of the states with the highest spending also have relatively high costs of living, which mean their spending doesn't go as far as it does in lower-cost states. Accordingly, adjusting these figures by the price parity index has the same effect it had on teacher salaries: it pulls down the highest figures, boosts the lowest figures, and narrows the spending range. The chart on the next page shows the detail.

After adjusting for cost differentials, **Alaska** becomes the highest-spending state, but its dollar amount goes down because of above-average living costs. **Utah** remains the lowest-spending state, but its dollar amount increases because of below-average living costs. The spending range is narrowed by 13%, from a difference of \$14,346 between the highest and lowest states based on unadjusted spending to \$12,474 post-adjustment.

While adjusting for prices narrows the range of spending, it doesn't have much impact on regional patterns. Northeastern states still spend the most,



southern and western states still spend the least, and midwestern states are still more widely dispersed.

Several low-population states are well-represented among the states with above-average spending. **Alaska, Vermont, Wyoming, Rhode Island, Maine, New Hampshire, North Dakota, and Delaware** are examples. This partly stems from the high sunk costs of K-12 education and the economies of scale available to larger states. For example, school buildings and school bureaucracies are expensive, so being able to spread those costs out over a larger student population helps to reduce per pupil spending. Put another way, it increases the denominator without changing the numerator.

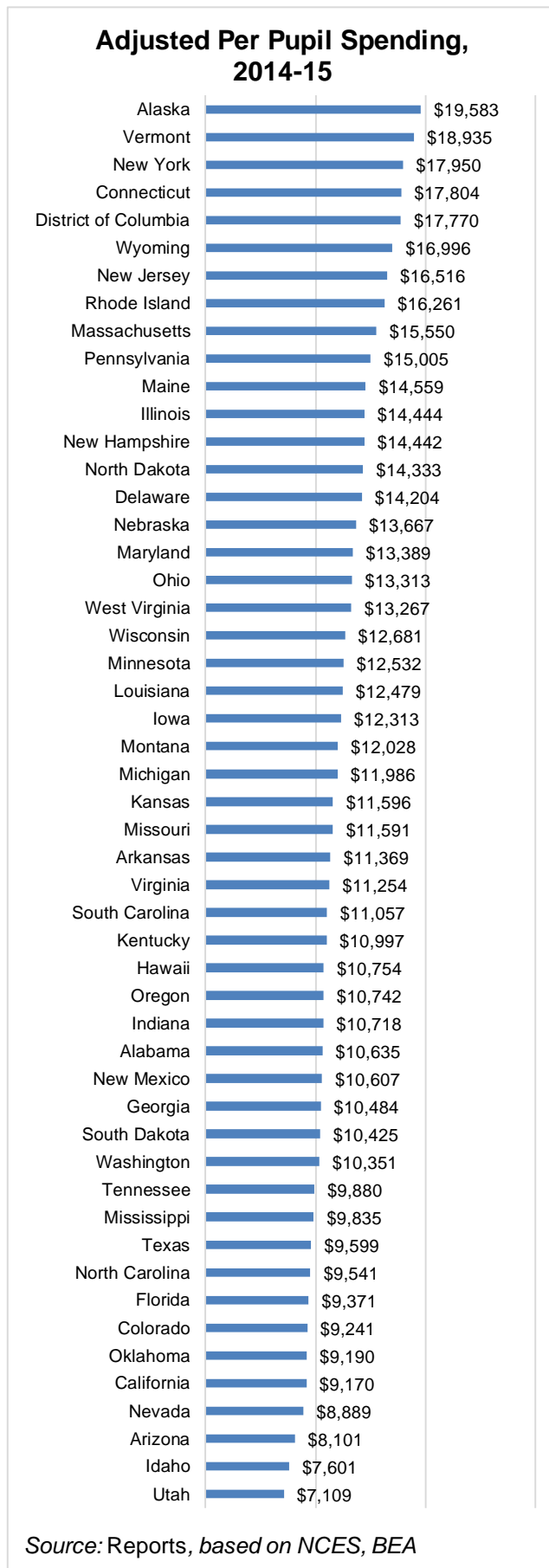
The 10 most-populous states are widely distributed. Based on the adjusted spending shown on the right, two of the 10 most-populated states are among the highest spenders (**New York** and **Pennsylvania**) and four are among the lowest (**California, Florida, North Carolina, and Texas**).

### BACK TO THE PRESENT

Although the NCES data are not very current, they are instructive. State budget cuts in the wake of the Great Recession were big, and this largest of state-funded programs did not escape them, not by a long shot. Even after six years, per pupil spending had not returned to its peak level in 35 states.

Teacher salaries undoubtedly took a hit, but others things probably did too, such as retirement and other benefits, class sizes, non-teaching supports, and non-wage aspects of K-12 education that affected teachers.

It is now about 10 years since the recession. While states have enjoyed only a few “boom-like” years in that period, state finances are now widely viewed as strong. Accordingly, for teachers and K-12 systems in some states and districts, it seems to be pay-back time.



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## TECHNICAL NOTES

### Education statistics:

<https://nces.ed.gov/pubs2018/2018070.pdf>.

### Regional price parities:

<https://www.bea.gov/news/2018/real-personal-income-states-and-metropolitan-areas-2016>.

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