




A Punishing Decade for School Funding

REPORT | NOVEMBER 29, 2017 | BY MICHAEL LEACHMAN, KATHLEEN MASTERSON, AND ERIC FIGUEROA

Public investment in K-12 schools — crucial for communities to thrive and the U.S. economy to offer broad opportunity — has declined dramatically in a number of states over the last decade. Worse, some of the deepest-cutting states have also cut income tax rates, weakening their main revenue source for supporting schools.

PUBLIC INVESTMENT IN K-12 SCHOOLS HAS DECLINED DRAMATICALLY IN A NUMBER OF STATES OVER THE LAST DECADE. 

Most states cut school funding after the recession hit, and it took years for states to restore their funding to pre-recession levels. In 2015, the latest year for which comprehensive spending data are available from the U.S. Census Bureau, 29 states were still providing less total school funding per student than they were in 2008.

In most states, school funding has gradually improved since 2015, but some states that cut very deeply after the recession hit are still providing much less support. As of the current 2017-18 school year, at least 12 states have cut “general” or “formula” funding — the primary form of state support for elementary and secondary schools — by 7 percent or more per student over the last decade, according to a survey we conducted using state budget documents. (See Appendix.) Seven of those 12 — Arizona, Idaho, Kansas, Michigan, Mississippi, North Carolina, and Oklahoma — enacted income tax rate cuts costing tens or hundreds of millions of dollars each year rather than restore education funding. One of these — Kansas — repealed some of the tax cuts earlier this year and increased school funding, but not enough to restore previous funding levels or satisfy the state’s Supreme Court, which recently ruled that the funding is unconstitutionally inadequate.^[1]

Our country’s future depends heavily on the quality of its schools. Increasing financial support can help K-12 schools implement proven reforms such as hiring and retaining excellent teachers, reducing class sizes, and expanding the availability of high-quality early education. So it’s problematic that some states have headed sharply in the opposite direction over the last decade. These cuts risk undermining schools’ capacity to develop the intelligence and creativity of the next generation of workers and entrepreneurs.

Our analysis of the most recent Census data available on state and local funding for schools also indicates that, after adjusting for inflation:

- Twenty-nine states provided less *overall* state funding per student in the 2015 school year (the most recent year available) than in the 2008 school year, before the recession took hold.
- In 19 states, local government funding per student fell over the same period, adding to the damage from state funding cuts. In states where local funding rose, those increases usually did not make up for cuts in state support.

As common sense suggests — and academic research confirms — money matters for educational outcomes. For instance, poor children who attend better-funded schools are more likely to complete high school and have higher earnings and lower poverty rates in adulthood.^[2]

States cut K-12 funding — and a range of other areas, including higher education, health care, and human services — as a result of the 2007-09 recession, which sharply reduced state revenue. Emergency fiscal aid from the federal government prevented even deeper cuts but ran out before the economy recovered, and states chose to address their budget shortfalls disproportionately through spending cuts rather than a more balanced mix of service cuts and revenue increases. Some states have worsened their revenue shortfalls by cutting taxes.

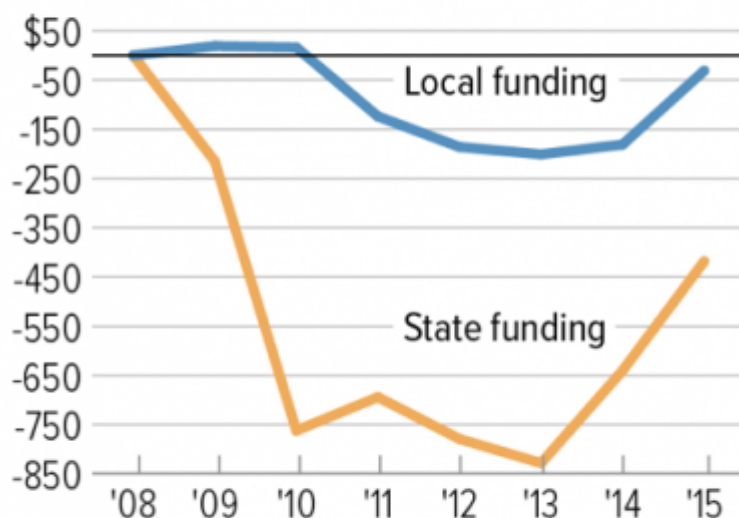
Restoring school funding should be an urgent priority. Steep state-level K-12 spending cuts have serious consequences:

- Weakening a key funding source for school districts.** Some 47 percent of K-12 spending nationally comes from state funds (the share varies by state).^[3] Cuts at the state level force local school districts to scale back educational services, raise more local revenue to cover the gap, or both. And because property values fell sharply after the recession hit, it was particularly difficult for local school districts to raise significant additional revenue through local property taxes without raising tax rates, a politically challenging task even in good times. (See Figure 1.)
- Slowing the economy's recovery from the recession.** School districts began cutting teachers and other employees in mid-2008 when the first round of budget cuts took effect, federal employment data show. By mid-2012, local school districts had cut 351,000 jobs. Since then some of the jobs have been restored, but the number is still down 135,000 jobs compared with 2008.^[4] These job losses reduced the purchasing power of workers' families, weakening overall economic consumption and thus slowing the recovery.
- Impeding reforms widely acknowledged to boost student achievement.** Many states and school districts have identified as a priority reforms to prepare children better for the future, such as improving teacher quality, reducing class sizes, and increasing student learning time. Deep funding cuts hamper states' and districts' ability to implement many of these reforms. For example, while the number of public K-12 teachers and other school workers has fallen by 135,000 since 2008, the number of students has *risen* by 1,419,000. At a time when producing workers with high-level technical and analytical skills is increasingly important to a country's prosperity, large cuts in funding for basic education could cause lasting harm.

FIGURE 1

K-12 Funding Fell Sharply After Recession Hit

Change in funding per pupil compared to 2008, inflation adjusted



Note: Excludes Hawaii and Indiana due to lack of data.

Source: CBPP analysis of U.S. Census Bureau, "Public Education Finances: 2015."

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

These trends are very concerning to the country's future prospects. The health of the nation's economy and our quality of life will depend crucially on the creativity and intellectual capacity of our people. If we neglect our schools, we diminish our future.

State Funding Fell Sharply, and Local Funding Didn't Make Up the Difference

K-12 schools in every state rely heavily on state aid. On average, 47 percent of school revenues in the United States come from state funds. Local governments provide another 45 percent; the rest comes from the federal government. (See Figure 2.)

States typically distribute most of their funding through a formula that allocates money to school districts. Each state uses its own formula. Many states, for instance, target at least some funds to districts with greater student need (e.g., more students from low-income families) and less ability to raise funds from property taxes and other local revenues. However, this targeting often doesn't fully equalize educational spending across wealthy and poor school districts.^[5]

In addition to this "general" or "formula" funding, states typically provide revenue for other, more specific purposes, such as bus transportation, contributions to school employee pension plans, and teacher training. States vary in what they include in their general funding formula and what they fund outside the formula.

Because schools rely so heavily on state aid, cuts to state funding (especially formula funding) generally force local school districts to scale back educational services, raise more revenue to cover the gap, or both.

When the Great Recession hit, however, property values fell sharply, making it hard for school districts to raise local property taxes — schools' primary local funding source — without raising rates, which is politically challenging even in good times. Raising rates was particularly difficult during a severe recession with steep declines in housing values in many areas.

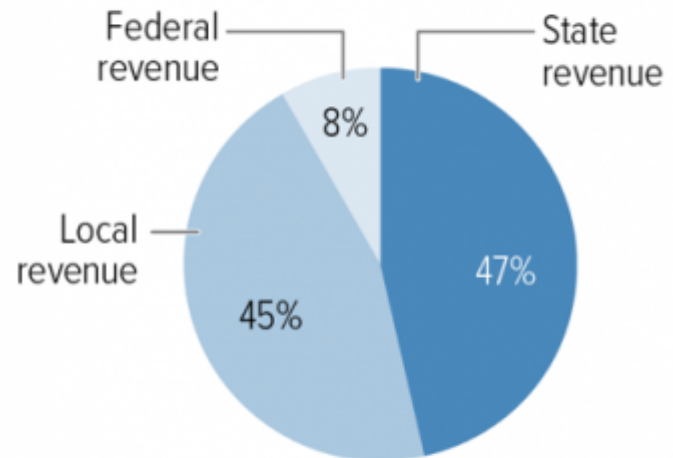
As a result, local funding for schools fell after the recession took hold, exacerbating the even steeper fall in state funding. Local funding still hadn't fully recovered in 2015, leaving total state and local K-12 funding per student still well below pre-recession levels as of that school year, the latest for which these data are available in most states. Our analysis of the latest Census data (which includes data from 48 states^[6]) finds that, after adjusting for inflation:

- In 29 states, total state funding per student was lower in the 2015 school year than in the 2008 school year, before the recession took hold. (See Figure 3.)
- In 17 states, the cut was 10 percent or more.^[7]
- In 19 states, *local* funding per student fell over the same period. In the other 29 states for which we have data, local funding rose, but those increases usually did not make up for cuts in state support.

FIGURE 2

States Provide Nearly Half of School Funding

Share of total K-12 education funding, 2015



Source: Census Bureau, "Public Elementary-Secondary Education Finance Report, 2015 Data," June 2017.

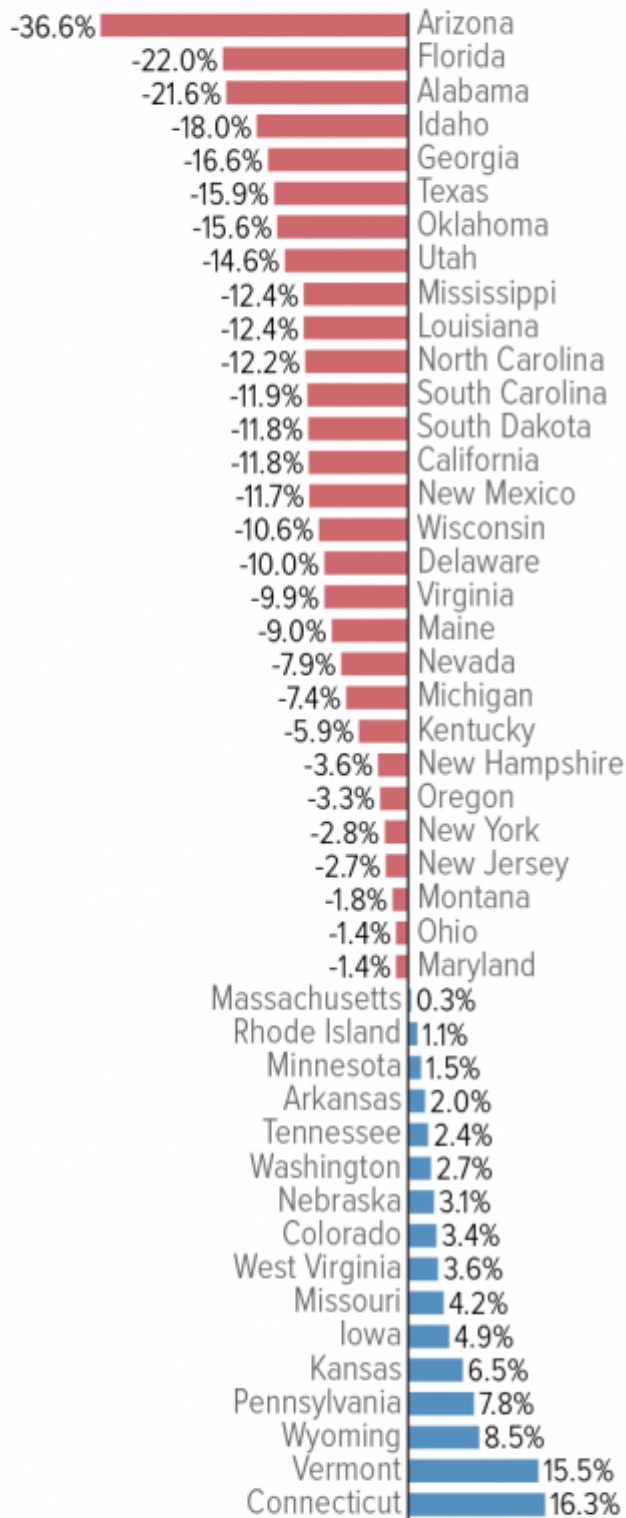
CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

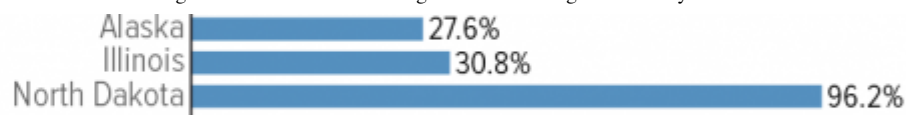
- In 29 states, total state and local funding *combined* fell between the 2008 and 2015 school years. (See Figure 8 in the Appendix for state-by-state figures.)

FIGURE 3

Total State K-12 Funding Below 2008 Levels in Most States

Percent change in total state funding per student, inflation adjusted, fiscal years 2008-2015





Note: Hawaii and Indiana are excluded because the data necessary to make a valid comparison are not available. Iowa and Wisconsin shifted funds from the local to the state level during the 2008-2015 period. We counted these funds as state funds in 2008 for an apples-to-apples comparison across the period.

Source: CBPP analysis of Census Bureau's Public Elementary-Secondary Education 2015 Data and National Center for Education Statistics enrollment estimates.

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

Current-Year Data Show General Formula Funding Still Way Down in Most of the Deepest-Cutting States

Data on total state and local school funding aren't yet available for the current (2018) school year in most states. However, the necessary data are available to compare *general formula funding* — the primary state funding source for schools — this year with funding before the recession took hold.^[8] We reviewed these data for 12 states that our research last year showed had cut formula funding most deeply.^[9]

This survey found that, after adjusting for inflation:

- Each of the 12 states is still providing at least 7 percent less general aid per student this year than in 2008 (see Figure 4).
- In eight of those 12 states, the cuts are 10 percent or more, and Kansas' cut is only slightly smaller, at 9.9 percent.

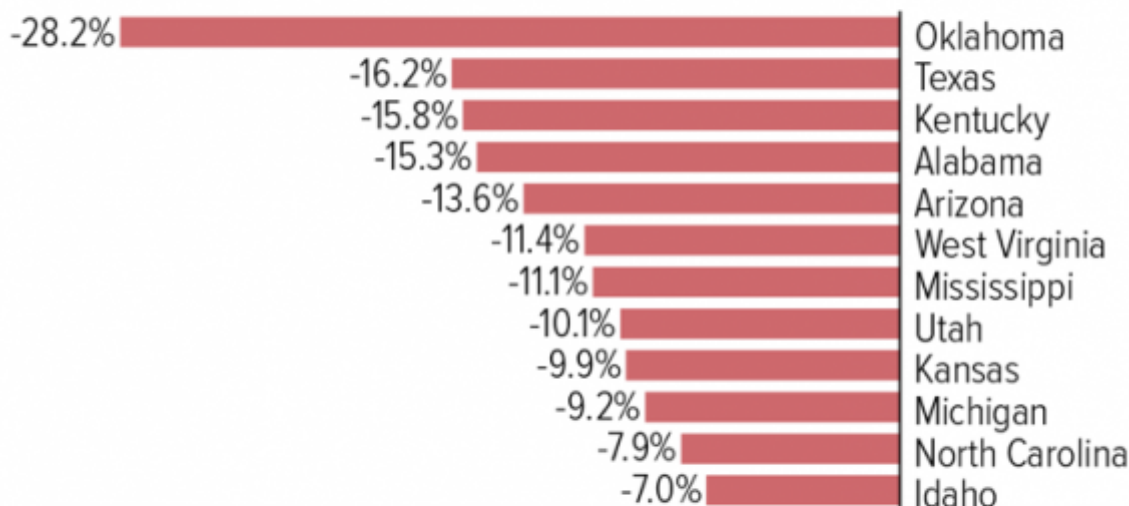
Almost half of these states raised per-pupil general formula funding in the last year (see Figure 5), but those increases weren't enough to offset earlier cuts.

- Five of the 12 states raised general funding per student in 2018, after adjusting for inflation.
- None of those states raised funding enough in the last year to make up for cuts in earlier years. For example, Oklahoma's \$2-per-pupil increase this year was far from enough to offset the state's \$1,058-per-pupil cut over the previous nine years.
- Seven of the 12 states — Alabama, Arizona, Kentucky, Michigan, Mississippi, Texas, and West Virginia — *cut* per-student funding even further this year.

FIGURE 4

State General Funding Per Student Still Far Below 2008 in at Least 12 States

Percent change in state formula funding* per student, inflation adjusted, fiscal years 2008-2018



*General or formula funding is the primary form of state K-12 funding. States also typically provide revenue for other, more specific purposes, such as bus transportation and contributions to school employees and pension plans.

Source: CBPP budget and enrollment analysis.

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

Why Have States Cut Funding So Deeply?

States' large K-12 cuts reflect a combination of outside factors, such as weak revenues and rising education costs, and state policy choices, such as relying on spending cuts to close budget shortfalls and enacting recent tax cuts.

- **States relied heavily on spending cuts after the recession hit.** States disproportionately relied on spending cuts to close their large budget shortfalls after the recession hit, rather than a more balanced mix of spending cuts and revenue increases. Between fiscal years 2008 and 2012, states closed 45 percent of their budget gaps through spending cuts and only 16 percent through taxes and fees. (They closed the rest with federal aid, reserves, and various other measures.)^[10]
- **State revenues have been hurt this year and last by a variety of factors,** including falling oil prices, delayed sales of capital, and sluggish sales tax growth. Oklahoma, Texas, and West Virginia, for example, have been hurt by declines in prices for oil and other natural resources. In addition, some states have seen weaker-than-projected growth in income tax revenue as investors held off on selling capital in anticipation of a federal capital gains tax cut. And sales tax growth has been slow, as well, as consumers have remained cautious long after the end of the Great Recession and untaxed Internet sales have continued to grow.^[11]
- **Some states cut taxes deeply.** Not only did many states avoid raising new revenue after the recession hit, but some enacted large tax *cuts*, further reducing revenues. Seven of the 12 states with the biggest cuts in general

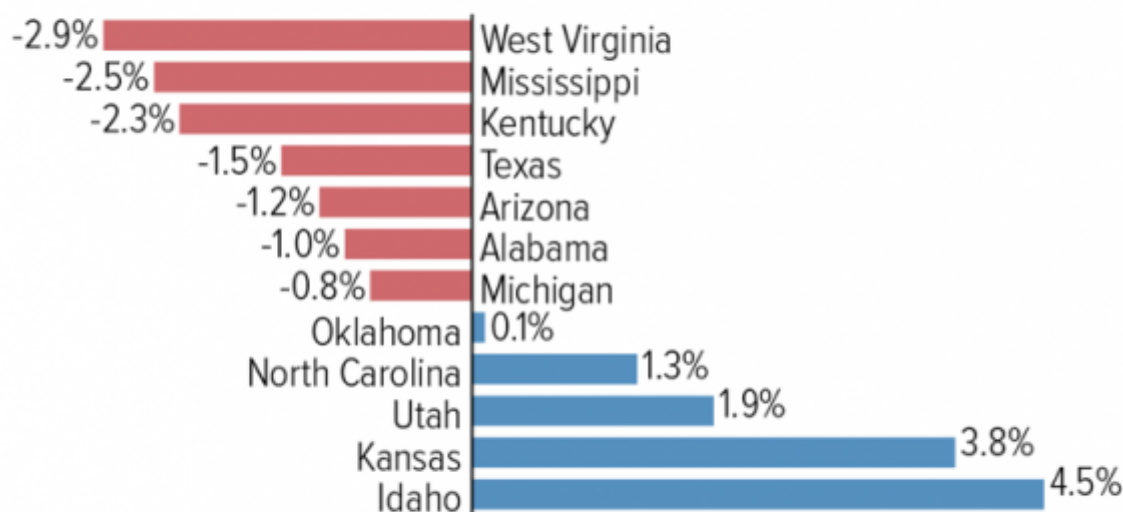
school funding since 2008 — Arizona, Idaho, Kansas, Michigan, Mississippi, North Carolina, and Oklahoma — have also cut income tax rates in recent years.^[12] (See Figure 6.)

- **Costs are rising.** Costs of state-funded services have risen since the recession due to inflation, demographic changes, and rising needs. For example, there are about 1.4 million more K-12 students and 1.3 million more public college and university students now than in 2008, the U.S. Department of Education estimates.^[13]
- **Federal funding for most forms of state and local aid has fallen.** Federal policymakers have cut ongoing federal funding for states and localities — outside of Medicaid — in recent years, thereby worsening state fiscal conditions. The part of the federal budget that includes most forms of funding for states and localities outside of Medicaid, known as non-defense “discretionary” funding (that is, funding that is annually appropriated by Congress), is near record lows as a share of the economy.^[14] Federal spending for Title I — the major federal assistance program for high-poverty schools — is down 6.2 percent since 2008, after adjusting for inflation.^[15]

FIGURE 5

Seven of the Deepest-Cutting States in the Last Decade Also Cut General Funding Per Student This Year

Percent change in state formula funding* per student, inflation adjusted, fiscal years 2017-2018



*General or formula funding is the primary form of state K-12 funding. States also typically provide revenue for other, more specific purposes, such as bus transportation and contributions to school employees and pension plans.

Source: CBPP budget and enrollment analysis

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

K-12 Cuts Have Serious Consequences

Local school districts typically struggle to make up for major state funding cuts on their own, so the cuts have led to job losses, which deepened the recession and slowed the economy’s recovery. They also have impeded important state education reform initiatives at a time when producing workers with high-level technical and analytical skills is increasingly important to the country’s prosperity.

A study on the impact of school financing reforms beginning in the 1970s highlighted the importance of adequate funding for the success of children — especially *low-income* children — in school and later in the workplace.

Examining data on more than 15,000 children born between 1955 and 1985, the study found that poor children whose schools received an estimated 10 percent increase in per-pupil spending (adjusted for inflation) before they began public school, and maintained that increase over their 12 years of school, were 10 percentage points more likely to complete high school than other poor children. They also had 10 percent higher earnings as adults and were 6 percentage points less likely as adults to be poor.^[16]

FIGURE 6

Seven of Twelve States With Deepest K-12 Cuts Also Cut Income Taxes

States with deepest formula funding cuts,*
2008-2018



*General or formula funding is the primary form of state K-12 funding. States also typically provide revenue for other, more specific purposes, such as bus transportation and contributions to school employees and pension plans.

Note: Mississippi's tax cut first takes effect in calendar year 2018.

Source: CBPP budget and enrollment analysis

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

Local School Districts Hard Pressed to Replace Lost State Funding

Property values fell sharply after the recession hit, making it difficult for local school districts to raise significant additional revenue through the property tax to make up for state funding cuts. Property values later improved, but the impact on property tax revenues was delayed. (There's generally a significant time lag between when home prices rise and when property tax assessments register the increase.)^[17] Local school districts can seek to raise property tax *rates*, but those increases are usually politically difficult and sometimes legally restricted.

For these reasons, property tax revenue growth nationwide has been modest over the last decade. While revenues initially surged as property taxes caught up with the rapid growth in home prices associated with the pre-recession housing bubble, they fell sharply once home prices plummeted, and then rose only slowly. The overall result: after the recession hit at the end of 2007, property tax revenue growth nationally averaged only about 1.7 percent above inflation annually through 2016 — far from enough to make up for declining state support and rising student enrollment.^[18]

Beyond raising local revenues, school districts have few options for preserving investments in education. Some localities could divert funds from other services to shore up school budgets, but this could impair other critical services, like police and fire protection.

Capital Spending to Build and Renovate Schools Also Down

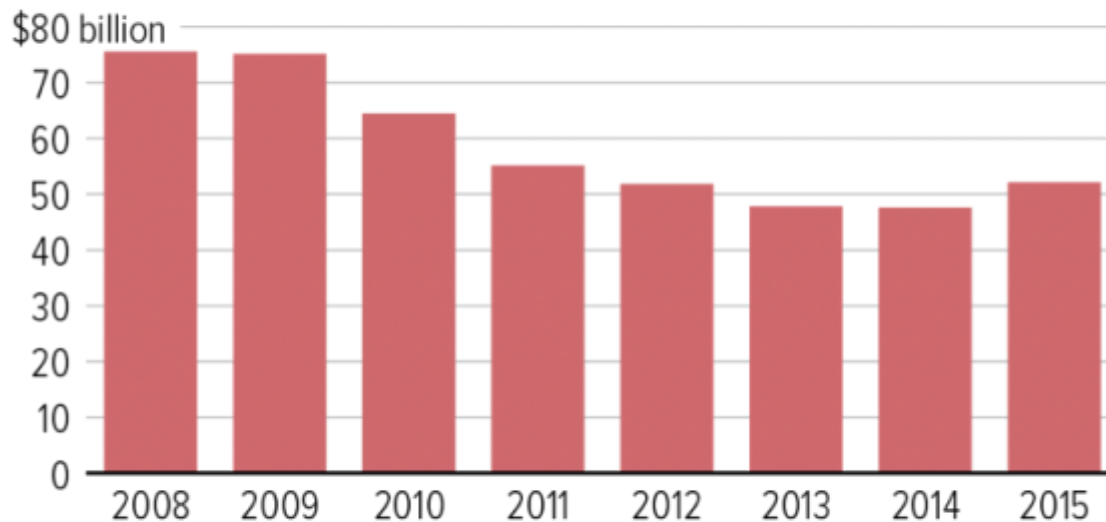
States and localities use capital spending to build new schools, renovate and expand facilities, and equip schools with more modern technologies. In most states, capital spending fell sharply after the recession hit, as did the non-capital school funding discussed in this paper.

Elementary and high schools nationally cut capital spending by \$23 billion or 31 percent between fiscal years 2008 and 2015 (the latest year available), after adjusting for inflation. (See chart.)

Thirty-seven states cut capital spending relative to inflation over this period, in many cases drastically. Six states cut capital spending by more than half. Nevada, the state with the sharpest reductions, cut capital spending by 82 percent.

Capital Spending for K-12 Schools Well Below 2008 Levels

Total capital spending, public school systems, inflation adjusted



Note: Capital spending covers costs such as building and renovating schools and upgrading school technology.

Source: CBPP analysis of U.S. Census Bureau "Annual Survey of School System Finance" data, August 2017.

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

Cuts Undermine Education Reforms

Many states have undertaken education reforms such as supporting professional development to improve teacher quality, improving interventions for young children to heighten school readiness, and turning around the lowest-achieving schools. Deep cuts in state K-12 spending can undermine those reforms by limiting the funds generally available to improve schools and by terminating or undercutting specific reform initiatives. Reforms endangered by funding cuts include:

- Improving teacher quality.** Research suggests that teacher quality is the most important school-based determinant of student success.^[19] Recruiting, developing, and retaining high-quality teachers are therefore essential to improving student achievement. School budget cuts make these tasks far more difficult. Teacher salaries make up a large share of public education spending, so funding cuts inevitably restrict districts' ability to expand teaching staffs and supplement wages. In 39 states, the average teacher's salary declined relative to inflation between the 2010 and 2016 school years (the latest year with comparable data for all states).^[20] And low teacher pay is a key factor behind shortages of qualified teachers in many schools.^[21]
- Trimming class size.** Evidence suggests that smaller class sizes can boost achievement, especially in the early grades and for low-income students.^[22] Yet small class sizes are difficult to sustain when schools cut spending

and enrollment rises. In Nevada, for example, the student-to-teacher ratio rose from 18.3 to 21.2 between the 2008 and 2015 school years.^[23] The United States as a whole has about 1,419,000 more K-12 students this school year than in 2008 but 135,000 fewer teachers and other school workers.^[24]

- **Expanding learning time.** Many experts believe that more student learning time can improve achievement.^[25] Budget cuts make it more difficult to extend instructional opportunities because extending learning time generally adds costs. Some states have even *cut* student learning time due to budget cuts. When Arizona eliminated funding for full-day kindergarten, for example, some school districts responded by offering only a half-day program or by requiring parents to pay a fee for a full-day program, likely reducing the number of children who can attend.^[26]
- **Providing high-quality early education.** A number of studies conclude that pre-kindergarten or preschool programs can improve cognitive skills, especially for disadvantaged children,^[27] but many states cut funding for those programs after the recession hit. By 2016, the average state had restored preschool funding per enrolled child, but some states were still providing significantly less. For example, between 2008 and 2016, Nevada reduced per-pupil state funding for pre-K by 39.5 percent or \$1,448 after adjusting for inflation.^[28]

Cuts Slowed the Economy and Can Inhibit Long-Term Growth

State K-12 cuts slowed the economic recovery by reducing overall economic activity after the recession officially ended in mid-2009. They forced school districts to lay off teachers and other employees, reduce pay for the remaining workers, and cancel contracts with suppliers and other businesses. These steps removed consumer demand from the economy, which in turn discouraged businesses from making new investments and hiring.

Federal employment data show that school districts began cutting teachers and other employees in mid-2008, when the first round of budget cuts began taking effect. By 2012, local school districts had cut about 351,000 jobs. They've since added back some of the jobs, but the number is still down 135,000 compared with 2008.^[29] (See Figure 7.)

FIGURE 7

In addition, education spending cuts have cost an unknown but likely significant number of private-sector jobs as school districts canceled or scaled back purchases and contracts (for instance, buying fewer textbooks). These job losses shrink the purchasing power of workers' families, which in turn affects local businesses and slows recovery.

In the long term, the budgetary savings from recent K-12 funding cuts may cost states much more in diminished economic growth. To prosper, businesses require a well-educated workforce. Deep education funding cuts weaken that future workforce by diminishing the quality of elementary and high schools. At a time when the nation is trying to

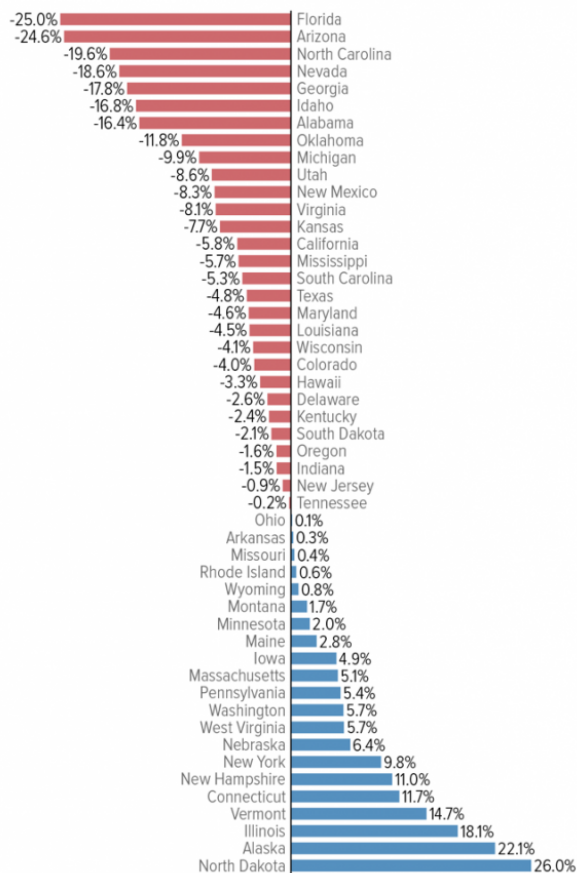
produce workers with the skills to master new technologies and adapt to the complexities of a global economy, large cuts in funding for basic education undermine a crucial building block for future prosperity.

Appendix: Total State and Local Funding

FIGURE 8

Combined State and Local School Funding Per Student Below 2008 Levels in Most States

Percent change, inflation adjusted, fiscal years 2008-2015

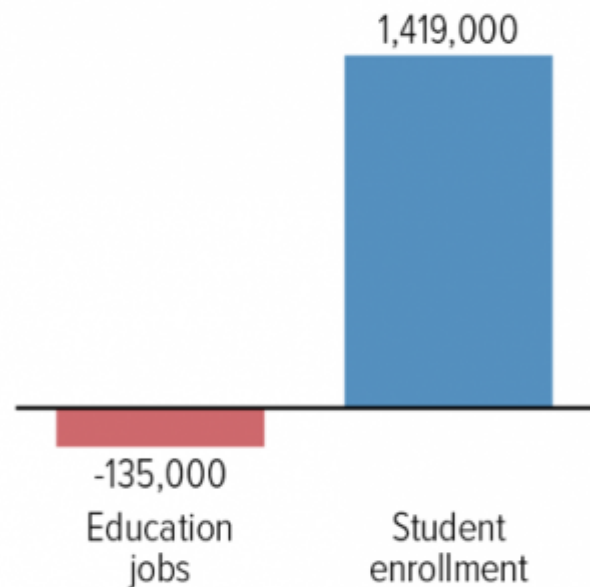


Source: CBPP analysis of Census Bureau's Public Elementary-Secondary Education 2015 Data and National Center for Education Statistics enrollment estimates.

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

K-12 Education Jobs Have Fallen as Enrollment Has Grown

Change, fall 2008 to fall 2017



Source: CBPP analysis of data from Bureau of Labor Statistics and National Center for Education Statistics

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

Appendix: Methodology

The data in this paper on state "formula" funding for K-12 education through the current school year come from a review of state budget documents CBPP conducted in the summer of 2017. An education funding expert in each state, often a budget expert with the state's education department, reviewed our figures and edited them when necessary.

The figures on both total state and local education funding reflect all state and local revenues dedicated to K-12 education, as reported by the U.S. Census Bureau. The enrollment figures used to analyze total state and total local

education funding were taken from the National Center for Education Statistics. Additional adjustments were made to reflect the following state-specific policies or data limitations:

- **Hawaii** and **Indiana** were excluded from the total state funding analysis because the necessary data to make a valid comparison are not available.
- In **Illinois**, payments made by the state government into the state's public school retirement systems on behalf of Illinois school districts are included in state total funding.
- In **Iowa**, a 1-cent local option sales tax for school infrastructure, known as the Secure and Advanced Vision for Education (SAVE) tax, became a statewide sales tax in 2009. We included the SAVE tax as a state revenue source in 2008 for an accurate comparison across years.
- In **Wisconsin** in 2013, the Census Bureau began treating revenue from Wisconsin's School Levy Tax Credit property tax relief program as revenue from state sources rather than as local property taxes. To create an apples-to-apples comparison across years, we included the School Levy Tax Credit as a state revenue source in years prior to fiscal year 2013.

When possible, the enrollment figures used to calculate general formula funding were collected directly from state agencies. The general education funding totals reflect the funding distributed through states' major education funding formulas. The figures do not include local property tax revenue or any other source of local funding. Figures for the current fiscal year are based on the amounts states budgeted for the 2017-18 fiscal year when they wrote their budgets earlier this year. Additional adjustments were made to reflect the following state-specific policies or data limitations:

- **Arizona** voters approved a plan to settle a lawsuit regarding inflation adjustments for K-12 education in May 2016. The plan increased the distribution of state land trust funds over a ten-year period beginning with fiscal year 2016. The result is an increase of approximately \$173 million per year through fiscal year 2025. These appropriations are included in Arizona's funding analysis.
- In **Idaho**, funds for Idaho Educational Services for the Deaf and Blind were removed from recent appropriations to make general formula education allocations comparable across years.
- In **Kansas**, a block grant replaced the previous K-12 funding formula starting in fiscal year 2015 and ending in fiscal year 2017. For this reason, certain K-12 funding categories were excluded from the formula funding analysis in fiscal year 2008 and fiscal year 2018 to ensure a valid comparison across years.
- **Kentucky** had \$10.38 million in unexpected funds from its Support Education Excellence in Kentucky program in fiscal year 2017, which was carried forward into fiscal year 2018 to be used for pupil transportation. Kentucky's end-of-year state financial report was not available at the time of publication, but the Center on Budget and Policy Priorities confirmed these amounts with officials in the state Department of Education.
- In order to accurately compare past and current education spending, **North Carolina's** numbers do not include funding for one-time bonuses and increases for salaries and benefits for education personnel.

End Notes

[1] Hunter Woodall and Katy Bergen, “Kansas Supreme Court rules new school finance formula is unconstitutional,” *Kansas City Star*, October 2, 2017, <http://www.kansascity.com/news/politics-government/article176606731.html>.

[2] C. Kirabo Jackson, Rucker C. Johnson, and Claudia Persico, “The Effects of School Spending on Educational and Economic Outcomes: Evidence from School Finance Reforms,” *Quarterly Journal of Economics*, October 1, 2015. See also Bruce Baker, “Does Money Matter in Education?” second edition, Albert Shanker Institute, 2016, <http://www.shankerinstitute.org/resource/does-money-matter-second-edition>.

[3] U.S. Census Bureau, Public Elementary-Secondary Education Finance Data.

[4] CBPP analysis of Bureau of Labor Statistics data.

[5] See Bruce Baker, David Sciarra, and Danielle Farrie, “Is School Funding Fair? A National Report Card,” sixth edition, Education Law Center, January 2017, <https://drive.google.com/file/d/0BxtYmwryVI00VDhjRGIDOUh3VE0/view>; Richard Coley and Bruce Baker, “Poverty and Education: Finding the Way Forward,” ETS Center for Research on Human Capital and Education, July 2013, pp. 36-37, http://www.ets.org/s/research/pdf/poverty_and_education_report.pdf.

[6] Hawaii and Indiana are excluded. Hawaii does not distinguish between state and local funding, as it contains just one school district. Indiana shifted a large share of school funding in 2009 from local governments to the state; that shift is the primary reason why it’s not possible to accurately compare state funding in 2008 to funding in recent years.

[7] Count includes Delaware, where the cut equaled 9.95 percent.

[8] Hawaii and Wyoming were omitted due to insufficient data. Indiana was excluded because changes in its education formulas between fiscal years 2008 and 2017 prevent meaningful comparisons across years.

[9] This analysis examines the 12 states with the deepest cuts in “formula” or general K-12 education funding as identified in CBPP’s 2016 paper “After a Nearly a Decade, School Investments Still Way Down in Some States.” These states are Alabama, Arizona, Idaho, Kansas, Kentucky, Michigan, Mississippi, North Carolina, Oklahoma, Texas, Utah, and West Virginia. While Wisconsin appeared among the 12 deepest-cutting states in our 2016 paper, that state has been providing school districts with an increasingly large amount of general funding outside of the state formula. Including this non-formula general aid, Wisconsin’s cuts since 2007-08 are not in the top 12.

[10] CBPP calculations based on our survey of state budget documents, in-state experts, and other materials. See Elizabeth McNichol, “Out of Balance: Cuts in Services Have Been States’ Primary Response to Budget Gaps, Harming the Nation’s Economy,” Center on Budget and Policy Priorities, April 18, 2012, <http://www.cbpp.org/research/out-of-balance>.

[11] Elizabeth McNichol and Samantha Waxman, “States Faced Revenue Shortfalls in 2017 Despite Growing Economy,” Center on Budget and Policy Priorities, October 4, 2017, <https://www.cbpp.org/research/state-budget-and-tax/states-faced-revenue-shortfalls-in-2017-despite-growing-economy>.

[12] Mississippi’s rate cuts will first take effect in 2018.

[13] National Center for Education Statistics, Table 6; and *Digest of Education Statistics: 2016*, Tables 203.20 and 303.10.

[14] Richard Kogan, "House Budget Would Cut Non-Defense Programs to Historic Lows," Center on Budget and Policy Priorities, July 19, 2017, <https://www.cbpp.org/blog/house-budget-would-cut-non-defense-programs-to....>

[15] CBPP analysis of data from the Office of Management and Budget. These cuts include the automatic, across-the-board cuts known as sequestration, as well as other cuts also resulting from the 2011 Budget Control Act.

[16] Jackson, Johnson, and Persico.

[17] Recent research suggests it generally takes about three years for property tax revenues to reflect increased property values. See Byron F. Lutz, "The Connection Between House Price Appreciation and Property Tax Revenues," Federal Reserve Board of Governors, September 12, 2008, <http://www.federalreserve.gov/pubs/feds/2008/200848/200848pap.pdf>.

[18] CBPP analysis of data from the U.S. Census Bureau's Quarterly Summary of State and Local Taxes, extracted on August 15, 2016.

[19] See for example, "Empowering Effective Teachers: Readiness for Reform," Bill and Melinda Gates Foundation Research Brief, February 2010, <http://www.gatesfoundation.org/united-states/Documents/empowering-effective-teachers-readiness-for-reform.pdf>.

[20] National Center for Education Statistics, "Estimated average annual salary of teachers in public elementary schools, by state: Selected years, 1969-70 through 2015-16," Table 211.60, https://nces.ed.gov/programs/digest/d16/tables/dt16_211.60.asp.

[21] See Linda Darling-Hammond, "Where Have All the Teachers Gone?" Learning Policy Institute, September 20, 2017, <https://learningpolicyinstitute.org/blog/where-have-all-teachers-gone>.

[22] See Diane Whitmore Schanzenbach, "Does Class Size Matter?" National Education Policy Center, February 2014, <http://nepc.colorado.edu/publication/does-class-size-matter>. See also Matthew M. Chingos and Grover J. "Russ" Whitehurst, "What Research Says and What it Means for State Policy," Brookings Institution, May 11, 2011, <http://www.brookings.edu/research/papers/2011/05/11-class-size-whitehurst-chingos>.

[23] National Center for Education Statistics data, "Public elementary and secondary teachers, enrollment, and pupil/teacher ratios, by state or jurisdiction," Table 208.40, 2016, https://nces.ed.gov/programs/digest/d16/tables/dt16_208.40.asp.

[24] National Center for Education Statistics and Bureau of Labor Statistics data.

[25] See for example, Center for American Progress, "Expanded Learning Time By the Numbers," April 22, 2010, http://cdn.americanprogress.org/wp-content/uploads/issues/2010/04/pdf/elt_by_the_numbers.pdf.

[26] See for example, Paul Rhoden, "Local School Districts Return to Fee-Based, All-Day Kindergarten," *Daily Courier*, April 3, 2010, <http://www.dcourier.com/news/2010/apr/03/local-school-districts-return-to-fee-based-all-da/>.

[27] Julia Isaacs, "Research Brief #1: State Pre-Kindergarten," Brookings Institution, September 2008, https://www.brookings.edu/wp-content/uploads/2016/07/09_early_programs_brief1.pdf.

[28] W. S. Barnett et al., "The state of preschool 2016: State preschool yearbook," National Institute for Early Education Research, 2017, p. 7.

[29] Bureau of Labor Statistics data.

