# Is School Funding Fair?

## A National Report Card

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For more information and to download copies of this report, go to **www.schoolfundingfairness.org**.

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# I. Introduction

## School Funding and the National Recession

When the Great Recession hit in 2007, public school districts across the country braced for an impending fiscal crisis. The housing bubble burst, plunging home prices to record lows. State and local governments experienced a steep decline in property tax revenue, the mainstay of public school finance in many states. The massive job losses, combined with deterioration of the local and state labor markets, triggered a substantial decline in income and sales taxes and other sources of state revenue.

Public school districts found themselves in a perfect storm of unprecedented revenue shortfalls from the two primary sources used by states to fund public education: state and local revenue.

In 2009, to prevent major layoffs of teachers and cuts in essential education programs and services, the federal government allocated $100 billion in stimulus funds to public schools through the American Recovery and Reinvestment Act (ARRA). The goals of the ARRA program were to restore aid through states' primary school funding formulas; to implement any previously enacted increases or equity and adequacy adjustments in those formulas; and to maintain a level of overall state support above 2006 levels. This infusion of federal dollars directly into the states' school finance systems did prevent drastic education cuts in 2009 and 2010.

The federal stimulus funding was a short-term stop gap. The depletion of stimulus funds after 2010, however, has had longer-term effects in many states. When states exhausted their allocations, many faced sudden and substantial shortfalls in education budgets. Despite improvements in the economy and housing market, many states still have not restored state education aid to pre-recession levels. As the Center on Budget and Policy Priorities has documented, at least 34 states were providing less in state aid per student in 2013–14 than in 2007–08.[1]

While the ARRA stimulus funds prevented drastic cuts to public education in 2009 and 2010, many states used the short-term funds to create long-term holes in their state budgets, temporarily filled with federal funds. States, in effect, used the temporary federal funds to replace state education aid, creating another fiscal cliff for the nation's public schools.[2] By 2011, many states had exhausted their ARRA funds and were faced with the challenge of whether or not to restore state aid to address the significant budget shortfalls that occurred in the absence of federal stimulus funds.[3]

The third edition of the National Report Card examines the condition of states' finance systems as the country emerges from the Great Recession, but is still wrestling with its consequences.

As in prior editions, this Third Edition of the National Report Card continues to make the case for states to take immediate and longer-term action to improve the fairness of their school finance systems. The Report builds on previous analyses to highlight the repercussions of the financial crisis on the fairness of states' school funding systems. This Edition also presents some additional indicators that exemplify how school finance policies affect the distribution of resources across districts.

[1] Leachman, Michael and Chris Mai, 2013. "Most States Funding Schools Less Than Before the Recession." Center on Budget and Policy Priorities. Washington, D.C.

[2] See Sciarra, David, Danielle Farrie, and Bruce Baker, 2010. "Filling Budget Holes: Evaluating the Impact of ARRA Fiscal Stabilization Funds on State Funding Formulas." Working Paper. The Campaign for Educational Equity. New York.

[3] See, for example, Chakrabarti, R. and M. Livingston, 2013, "Waiting for Recovery: New York Schools and the Aftermath of the Great Recession." Federal Reserve Bank of New York. New York; and Chakrabarti, R. and M. Livingston, 2013, "Catching Up or Falling Behind? New Jersey Schools in the Aftermath of the Great Recession." Federal Reserve Bank of New York. New York.

This data further illustrates the importance of fair school funding as the essential precondition for the delivery of a high-quality education throughout the states. To meet the pressing national imperative to improve educational outcomes, the states must develop finance systems designed to provide a sufficient level of funding that is fairly distributed so that all students, no matter where they live, have the opportunity to learn.

## The State K–12 Systems: Decentralized, With Concentrated Poverty

Two predominant characteristics of the U.S. education system highlight the importance of systems of school funding that are built on the principles of fairness: decentralization and concentrated poverty.

The U.S. system of schooling is highly decentralized and funding is distributed through a non-uniform system for states, districts and schools. The 50 states and the District of Columbia each operate separate education systems often characterized by a complex system of fractured and segregated districts.

Second, there is a large and growing population of poor students who are concentrated in high-poverty school districts. In 2011, 21% of school-aged children in the U.S. were living below the federal poverty level (approximately $23,000 for a family of four), a 30% increase over levels in 2007. That translates to almost two and a half million more children living in poverty over this four-year period. In fact, every state in the country experienced increasing child poverty.[4]

Compounding the challenges of extremely high levels of poverty, these students are increasingly concentrated in schools with other poor children. The percentage of U.S. students in high-poverty schools (poverty rates greater than 30%) doubled from 7% in 2007 to 16% in 2011. Decades of research demonstrates that concentrated poverty is a significant barrier to educational progress. The increasing isolation of poor students in schools and districts presents what may be the most daunting challenge currently facing American public education.

[4] All references to poverty in this report refer to the Census definition, not free and reduced lunch eligibility (FRL), which is the metric commonly used when discussing school poverty rates. The FRL threshold is 185% of the standard Census definition; therefore, FRL rates are much higher than Census poverty rates. See Appendix A for a crosswalk between Census and FRL rates for each state.

## Table 1. Concentrated Student Poverty in U.S. School Districts

| State | Under 10% | | | 10% to 20% | | | 20% to 30% | | | 30% and Over | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Districts | Enrollment | % Enrollment | Districts | Enrollment | % Enrollment | Districts | Enrollment | % Enrollment | Districts | Enrollment | % Enrollment |
| Alabama | 4 | 24,518 | 3% | 17 | 212,915 | 26% | 60 | 409,230 | 50% | 53 | 176,575 | 21% |
| Alaska | 10 | 11,782 | 9% | 22 | 108,732 | 81% | 15 | 9,174 | 7% | 6 | 4,210 | 3% |
| Arizona | 8 | 41,562 | 4% | 41 | 425,313 | 36% | 70 | 295,026 | 25% | 96 | 410,913 | 35% |
| Arkansas | | | | 39 | 148,305 | 29% | 117 | 217,792 | 42% | 83 | 148,032 | 29% |
| California | 158 | 946,422 | 14% | 329 | 2,168,223 | 32% | 278 | 2,774,766 | 41% | 196 | 843,617 | 13% |
| Colorado | 23 | 223,879 | 25% | 82 | 393,705 | 44% | 52 | 238,329 | 27% | 21 | 32,021 | 4% |
| Connecticut | 122 | 321,131 | 53% | 32 | 149,100 | 25% | 8 | 61,757 | 10% | 4 | 74,230 | 12% |
| Delaware | 1 | 12,454 | 8% | 11 | 110,886 | 74% | 3 | 21,400 | 14% | 1 | 4,199 | 3% |
| District of Columbia | | | | | | | | | | 1 | 69,171 | 100% |
| Florida | | | | 11 | 640,942 | 22% | 41 | 2,191,054 | 75% | 15 | 87,593 | 3% |
| Georgia | 4 | 96,452 | 5% | 24 | 666,285 | 37% | 55 | 518,955 | 29% | 100 | 524,715 | 29% |
| Hawaii | | | | 1 | 216,099 | 100% | | | | | | |
| Idaho | | | | 54 | 193,500 | 63% | 50 | 104,334 | 34% | 11 | 10,946 | 4% |
| Illinois | 196 | 570,694 | 25% | 415 | 706,902 | 31% | 185 | 358,039 | 16% | 69 | 634,254 | 28% |
| Indiana | 36 | 177,347 | 15% | 161 | 473,643 | 41% | 75 | 346,509 | 30% | 19 | 170,227 | 15% |
| Iowa | 94 | 144,643 | 28% | 212 | 242,526 | 46% | 42 | 136,871 | 26% | 3 | 977 | 0% |
| Kansas | 49 | 179,257 | 34% | 177 | 164,512 | 32% | 59 | 153,937 | 30% | 1 | 22,561 | 4% |
| Kentucky | 3 | 17,503 | 2% | 27 | 192,479 | 26% | 68 | 358,514 | 48% | 78 | 171,295 | 23% |
| Louisiana | | | | 10 | 159,652 | 20% | 33 | 400,937 | 50% | 26 | 240,824 | 30% |
| Maine | 30 | 44,470 | 22% | 103 | 99,051 | 49% | 74 | 55,454 | 28% | 29 | 2,550 | 1% |
| Maryland | 7 | 439,613 | 45% | 11 | 408,781 | 42% | 4 | 37,454 | 4% | 2 | 94,634 | 10% |
| Massachusetts | 184 | 507,289 | 49% | 91 | 276,923 | 27% | 19 | 124,374 | 12% | 7 | 130,778 | 13% |
| Michigan | 59 | 311,555 | 18% | 236 | 660,631 | 39% | 172 | 340,752 | 20% | 84 | 398,484 | 23% |
| Minnesota | 86 | 374,936 | 41% | 200 | 395,382 | 43% | 42 | 149,687 | 16% | 9 | 5,259 | 1% |
| Mississippi | | | | 9 | 102,883 | 19% | 53 | 189,410 | 35% | 87 | 248,696 | 46% |
| Missouri | 32 | 224,369 | 22% | 186 | 338,782 | 33% | 201 | 295,880 | 29% | 101 | 168,797 | 16% |
| Montana | 54 | 10,488 | 7% | 173 | 90,441 | 56% | 116 | 44,971 | 28% | 74 | 14,686 | 9% |
| Nebraska | 55 | 78,783 | 24% | 150 | 167,828 | 51% | 39 | 79,864 | 24% | 6 | 2,118 | 1% |
| Nevada | | | | 12 | 118,571 | 25% | 5 | 358,764 | 75% | | | |
| New Hampshire | 93 | 113,242 | 53% | 62 | 89,833 | 42% | 15 | 7,776 | 4% | 6 | 1,483 | 1% |
| New Jersey | 354 | 862,137 | 57% | 152 | 291,713 | 19% | 38 | 172,861 | 11% | 17 | 180,210 | 12% |
| New Mexico | 1 | 3,332 | 1% | 14 | 45,520 | 12% | 39 | 217,772 | 58% | 35 | 107,047 | 29% |
| New York | 225 | 817,819 | 26% | 268 | 544,113 | 17% | 149 | 1,536,863 | 49% | 42 | 223,620 | 7% |
| North Carolina | | | | 20 | 476,186 | 29% | 63 | 994,484 | 60% | 35 | 187,132 | 11% |
| North Dakota | 73 | 45,988 | 43% | 80 | 52,620 | 50% | 21 | 2,807 | 3% | 8 | 4,692 | 4% |
| Ohio | 106 | 455,582 | 23% | 292 | 665,503 | 34% | 153 | 411,927 | 21% | 62 | 449,709 | 23% |
| Oklahoma | 14 | 70,720 | 11% | 180 | 204,519 | 31% | 249 | 282,715 | 42% | 81 | 111,790 | 17% |
| Oregon | 7 | 25,378 | 4% | 68 | 297,996 | 48% | 87 | 257,863 | 41% | 35 | 45,902 | 7% |
| Pennsylvania | 132 | 686,838 | 34% | 253 | 698,943 | 34% | 90 | 280,234 | 14% | 25 | 371,258 | 18% |
| Rhode Island | 15 | 45,121 | 28% | 16 | 64,878 | 40% | 2 | 14,069 | 9% | 3 | 39,424 | 24% |
| South Carolina | 1 | 11,058 | 1% | 12 | 140,144 | 18% | 37 | 469,174 | 60% | 36 | 157,509 | 20% |
| South Dakota | 36 | 24,437 | 17% | 84 | 97,398 | 68% | 18 | 8,341 | 6% | 14 | 13,389 | 9% |
| Tennessee | 1 | 37,797 | 3% | 14 | 270,410 | 25% | 76 | 542,428 | 50% | 45 | 236,484 | 22% |
| Texas | 55 | 535,169 | 11% | 347 | 1,464,248 | 29% | 390 | 1,423,836 | 28% | 239 | 1,577,877 | 32% |
| Utah | 6 | 175,166 | 28% | 23 | 261,291 | 42% | 12 | 181,731 | 29% | | | |
| Vermont | 86 | 41,772 | 44% | 131 | 39,114 | 41% | 43 | 11,669 | 12% | 14 | 2,292 | 2% |
| Virginia | 23 | 550,690 | 41% | 51 | 459,553 | 34% | 55 | 283,599 | 21% | 9 | 49,517 | 4% |
| Washington | 30 | 228,703 | 20% | 135 | 569,984 | 50% | 89 | 266,674 | 23% | 41 | 72,791 | 6% |
| West Virginia | | | | 9 | 67,863 | 24% | 38 | 187,860 | 67% | 8 | 25,615 | 9% |
| Wisconsin | 120 | 271,226 | 28% | 222 | 494,060 | 51% | 73 | 82,031 | 8% | 9 | 124,309 | 13% |
| Wyoming | 9 | 16,313 | 17% | 33 | 74,101 | 78% | 6 | 4,933 | 5% | | | |

## Existing Measures of State School Finance

Several reports analyze state school funding systems, but fail to adequately or accurately capture the differences in spending levels and the distribution of funds within states.

The National Center for Education Statistics (NCES) publishes the most commonly used metric for state school funding: state and local revenue per pupil. This is a fairly straightforward measure, but one that ignores the complexity of comparing funding levels between states. Without any adjustments for the characteristics of the students served or for differences in regional purchasing power, this measure is unsatisfactory for making comparisons between states.

*Education Week* publishes state school finance data and publishes four indicators measuring "Equity" and four indicators measuring "Spending." *Education Week* does make adjustments for student characteristics by "weighting" student enrollments to account for student need and adjusts for regional cost differences.[5] These eight measures are combined and each state is given an overall grade.

Education Trust, a Washington, D.C.-based advocacy group, has published multiple reports addressing funding gaps between high- and low-poverty districts and high- and low-minority districts. Their analysis adjusts for student poverty, regional cost differences, and students with disabilities.[6] Education Trust last published this report in 2006.[7]

The U.S. Education Department (ED) recently began publishing a measure of funding equity in its "Education Dashboard." The ED measure shows the difference in per-pupil spending in the highest and lowest quartile districts by poverty. Users can select their own "preferred" weighted adjustment for student poverty in 10% increments from 0–100%.

## Limitations

These existing measures have serious shortcomings that limit their utility and accuracy in assessing the current condition of school funding across the country. First, any measure that simply presents statewide estimates of funding per pupil and does not address the differences in funding levels within states ignores one of the main challenges to fair funding — the equitable distribution of funds between districts within states. Second, any measure that does not take into account the variations in student demographics and the subsequent variations in the costs of delivering an equal educational opportunity to all students is inadequate. Though some of the measures discussed do apply "weighting" mechanisms to address these differences in student need, the lack of consistency on the level of those weights exposes their inaccuracy. Without actual data from the states or research on what it would actually cost to close achievement gaps between poor and non-poor children, these weighting procedures are simply hypothetical and fail to adequately compare spending levels between districts. The imprecise measures used by *Education Week*, Education Trust, and ED's Dashboard produce strikingly different and inconsistent state rankings among these measures.[8]

[5] A "weighting" is an adjustment to per-pupil revenue or expenditure data designed to address differences in needs and costs. In the *Education Week* analysis, students in poverty are assigned a weight of 1.2 and students in special education a weight of 1.9.

[6] Education Trust assigns a weight of 1.4 to students in poverty, and 1.6 and 1.9 to English Language Learners and special education students, respectively.

[7] A 2008 version of the report was retracted for data errors and never republished.

[8] The correlations between *Education Week*'s restricted range, Education Trust's funding gaps, and the ED Dashboard range between .14 and .71 (Epstein, D. 2011, "Measuring Inequity in School Funding." The Center for American Progress, Washington, D.C.).

# A Better Measure: Analyzing School Funding Fairness

Before one can effectively analyze how well states fund public education, one critical question must be answered: What is fair school funding? ***In this report, "fair" school funding is defined as a state finance system that ensures equal educational opportunity by providing a sufficient level of funding distributed to districts within the state to account for additional needs generated by student poverty.***

The third edition of *Is School Funding Fair? A National Report Card* examines school funding fairness at the crucial time when school districts are feeling the lagged effects of the Great Recession. In this report, we track trends over the five-year period from 2007, the year of the inaugural report, through 2011.

The National Report Card measures the fairness of the school finance systems in all 50 states and the District of Columbia according to the definition above. The central purpose of the Report Card is to evaluate the extent to which state systems ensure equality of educational opportunity for all children, regardless of background, family income, where they live, or where they attend school. Equal educational opportunity means that all children and all schools have access to the resources and services needed to provide them with the "opportunity to learn."

## The Fairness Principles

The Report Card is built on the following core principles:

- Varying levels of funding are required to provide equal educational opportunities to children with different needs.
- The costs of education vary based on geographic location, regional differences in teacher salaries, school district size, population density, and various student characteristics. It is critical to account for as many of these variables as possible, given the availability of reliable data.
- The level of funding should increase relative to the level of concentrated student poverty — that is, state finance systems should provide more funding to districts serving larger shares of students in poverty. Economists often evaluate systems as "progressive" or "regressive." As used in this report, a "progressive" finance system allocates more funding to districts with high levels of student poverty; a "regressive" system allocates less to those districts; and a "flat" system allocates roughly the same amount of funding across districts with varying needs.
- Student poverty — especially concentrated student poverty — is the most critical variable affecting funding levels. Student and school poverty correlates with, and is a proxy for, a multitude of factors that increase the costs of providing equal educational opportunity — most notably, gaps in educational achievement, school district racial composition, English-language proficiency, and student mobility. State finance systems should deliver greater levels of funding to higher-poverty versus lower-poverty settings, while controlling for differences in other cost factors.[9]

[9] Current data do not permit inclusion of measures for additional student characteristics, particularly students with disabilities and limited English proficiency, without compromising the relationship between school funding and poverty, the main focus of this analysis. For more information, see the "Research Method" section of this report.

- While the distribution of funding to account for student need is crucial, the overall funding level in states is also a significant element to fair school funding. Without a sufficient base, even a progressively funded system will be unable to provide equitable educational opportunities.

- The sufficiency of the overall level of funding in any state can be assessed based on comparisons to other states with similar conditions and similar characteristics. Using available national data, average differences in state and local revenues between states, as well as within states, can be projected and indexed to compare expected state and local revenues per pupil under a given set of conditions. These expected values are derived from a statistical model that predicts funding levels while controlling for various school district characteristics. These predicted funding levels allow for more direct comparisons of districts having similar characteristics across states.

## Why Measure Fairness?

Based on these core principles, the data and measures presented in the National Report Card focus on the central question concerning the 50 state school finance systems: Do they support equal educational opportunity for all students and, in particular, for low-income students in school districts with concentrated poverty? Put simply, do the states provide fair school funding?

Without a nationwide commitment to the principles of fair school funding and states that address funding inequities through progressive finance systems, educational policies that seek to improve overall achievement while also reducing gaps between the lowest- and highest-performing students will falter. Only when states develop strong systems of public education, building upon sufficient funding, distributed progressively, will they be able to implement and sustain the initiatives necessary to boost student achievement. Policymakers, educators, business leaders, parents — and the public at large — urgently need better and more reliable information to understand the fairness of our existing finance systems, identify problems with those systems, and devise and implement policy solutions to advance school funding fairness.

## The Fairness Measures

The Report Card consists of four separate but interrelated fairness measures. The four measures are:

- *Funding Level* – This measures the overall level of state and local revenue provided to school districts, and compares each state's average per-pupil revenue with that of other states. To recognize the variety of interstate differences, each state's revenue level is adjusted to reflect differences in regional wages, poverty, economies of scale, and population density.

- *Funding Distribution* – This measures the distribution of funding across local districts within a state, relative to student poverty. The measure shows whether a state provides more or less funding to schools based on their poverty concentration, using simulations ranging from 0% to 30% child poverty.

- *Effort* – This measures differences in state spending for education relative to state fiscal capacity. "Effort" is defined as the ratio of state spending to state gross domestic product (GDP).

- *Coverage* – This measures the proportion of school-age children attending the state's public schools, as compared with those not attending the state's public schools (primarily parochial and private schools, but also home schooling). The share of the state's students in public schools, and the median household income of those students, is an important indicator of the distribution of funding relative to student poverty (especially where more affluent households simply opt out of public schooling), and the overall effort to provide fair school funding.

It is important to note that not all of these fairness measures are entirely within the control of state policymakers. For example, the level of funding is a function of both the state's effort and wealth. When evaluating a state's funding level, it is important to consider whether the funding level is a function of effort, wealth (that is, fiscal capacity), or a combination of the two. In addition, the extent to which children attend public schools is not entirely a function of the quality of the public system. Some states historically have a "culture" of private schooling and a larger supply of private schools. However, numerous empirical studies do validate that the quality of a state's public education system can influence coverage.[10]

## Research Method

The fairness measures use a combination of simple descriptive and more complex statistical modeling methods. Effort and Coverage are straightforward descriptive measures. State-level indicators are calculated from available descriptive data, allowing states to be graded and ranked from most to least fair.

Funding Level and Funding Distribution require more advanced statistical techniques. The purpose of these measures is to compare school funding both across and within states. Because education costs vary based on a number of factors — for example, regional differences in teacher salaries, school district size, population density, and various student characteristics — a research method is needed that 1) simulates comparable conditions, or holds variables constant, across states to ensure a fair comparison, and 2) characterizes the relationship between revenue (funding) and poverty within states, while controlling for variations in other cost-affecting conditions.

A regression analysis achieves these goals by predicting an outcome — in this case, school funding levels — based on relevant variables such as student poverty, regional wage variation, and school district size and density. The regression model provides an estimate that quantifies the relationship between the outcome and each variable in the model. The model also allows for an examination of pertinent issues, such as changes in spending in relation to student poverty or changes in relation to school district size. It is important to note, however, that additional measures of student characteristics, such as disability rates and limited English proficiency, are not included in the statistical model. The current measures of these characteristics are weak and irregular across states, and they complicate the interpretation of the poverty effect within states, a critical focus of the model.[11]

Funding Level: The regression model predicts an average per-pupil funding level for each state, while holding all other factors constant. The model eliminates the variation in funding associated with characteristics that vary between districts and across states, and determines average funding at the state level under a hypothetical, yet meaningful, set of conditions. The model simulates

[10] See, for example, Downes, T. and D. Schoeman (1998), "School Finance Reform and Private School Enrollment: Evidence from California." *Journal of Public Economics, 43(3), 418–443.*

[11] It is also important to note that this regression model is only able to compare revenue differences across similar settings, and cannot fully control for the "costs" of achieving "comparable outcomes." A true education cost model requires a common outcome measure across all settings in the model, and such outcome measures are not currently available for all school districts nationally.

average revenue levels for each state by assigning the national averages for each of the variables in the model. This yields a determination of spending differences among states, and removes the expected variation resulting from differences in labor costs, district size, student characteristics, etc.

It is important to note that the state averages, while calculated from actual revenue levels, are predictions based on a hypothetical set of conditions necessary to make meaningful comparisons among states; therefore, they will vary from the average spending levels reported in the NCES measure.

Funding Distribution: The same regression model is used for predicting the distribution of funding within each state, relative to poverty. The model is used to estimate the relationship between student poverty and school funding for each state. Funding levels are predicted at three levels of poverty — 0%, 10% and 30% — under the average conditions within each state. The model estimates, on average, whether funding levels increase or decrease as district poverty increases.

A separate technical report is available for more detail on the statistical analyses used in this report.

## Research Framework

The key elements of the research used to construct the fairness measures are:

- Districts as the unit of analysis: This level of data is used because a) districts are the primary organizational units charged with managing and operating schools; b) districts are the locus of the most significant disparities in school funding; c) students remain highly sorted and segregated between districts, more so than within districts; and d) many states allow districts to retain a significant degree of fiscal independence to raise revenues via local property taxes. This district focus also sheds light on claims that funding differences and disparities are caused primarily by district misallocation among schools within districts, rather than the overall level and distribution of state and local revenues authorized by states through their respective finance systems.
- State and local revenue: These data, rather than current operating expenditures, allow for a more precise focus on the state's school finance policy, reliance on local property taxes, and the distribution of state aid to local districts. Current operating expenditures include other revenue sources, such as federal funding. The only federal-source funds included are those intended by federal policy to offset lost state or local revenue — in other words, federal impact aid and Indian schools aid, both of which are relatively small for most states.
- Funding distribution relative to poverty: These data allow for an in-depth examination of the relationship between funding generated by the state finance systems and student poverty. Using census data on children in poverty, ages 5 to 17 residing in local districts, allows for an analysis of the extent to which higher-poverty districts have systematically more or less state and local revenue per pupil than lower-poverty districts. No assumptions are made about how much additional funding should be provided to students in poverty. Rather, the fairness measures calculate the relationship between funding and poverty to ascertain whether the state finance system results in a more fair ("progressive"), less fair ("regressive"), or flat pattern of funding distribution among districts within the state.
- Cost variation: These data not only account for regional variation in competitive wages using a Comparable Wage Index, but also compensate for differences in economies of scale and population density.[12]

[12] This report originally used the NCES Comparable Wage Index. Because that index has not been updated since 2005, in this edition we rely on an updated version of the NCES index computed by Lori Taylor available here: http://bush.tamu.edu/research/faculty/Taylor_CWI.

- Longitudinal data: The regression models used to predict funding level and funding distribution use three years of the most recently available data. This approach limits the effect of occasional capital projects, one-time revenue bumps, and other kinds of funding aberrations, thereby "smoothing out" the final results. When comparisons are made between previous years' data, those analyses rely on overlapping data samples. So, for example, the 2011 indicators are based on a pooled sample from 2009, 2010, and 2011. This necessarily lends some stability to the model and minimizes year-to-year changes. While this stability is intentional, it also means that drastic one-year cuts, such as might have been observed at the start of the national recession, will not be as prominent as if a single year's data had been used.

# II. The Four Fairness Measures

## Evaluating the States

Each state is evaluated on all four fairness measures. The evaluations are comparative in nature, analyzing how an individual state compares with other states in the nation and region. States are *not* evaluated using specific thresholds of education cost and school funding that might be considered "adequate" or "equitable" if applied nationally or regionally. This type of evaluation would require positing hard definitions of education cost and student need based on the complex conditions in each state. Such an exercise is beyond the scope of this report.[13]

States are evaluated by two methods — a grading curve and rank. Funding Distribution and Effort, the two measures over which states have direct control, are given letter grades that are based on a typical grading "curve" and range from "A" to "F." A standardized score (z-score) is calculated as the state's difference from the mean on the indicator of interest, expressed in standard deviations. The standardized scores are then collapsed into grades.[14]

On the Funding Level and Coverage measures, the states are ranked, not graded, because these measures are influenced not only by state policy but by other historic and contextual factors. States are ranked from highest to lowest based on their Funding Level. The Coverage measure is ranked using two factors: the proportion of students educated in the public system, with greater percentages ranked higher; and the private/public income ratio, with small ratios receiving a higher ranking. Standardized scores for these two elements are averaged to create a final score upon which states are ranked.

It is important to note that, because the evaluations are comparative, when a state receives a high grade or rank on an indicator, it does not mean that its funding system is perfect or without room for improvement. Rather, it simply means that the state is doing better than other states in the nation. Even those states positioned at the top can do more to improve funding fairness.

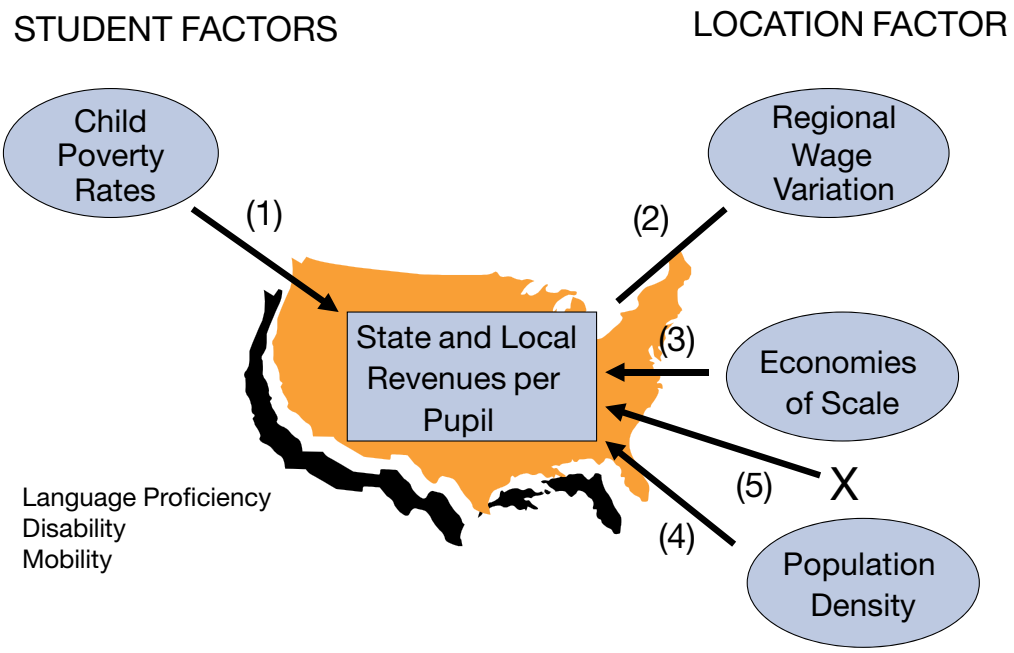
[13] As previously noted, the United States has no established outcome measures for the 50 states. In addition, no national uniform program or input standards have been adopted that would allow for measuring the "cost" of providing equal educational opportunities across all states. Thus, it is not feasible at present to compare current funding levels with a research-based measure of the cost of educating all students in U.S. public schools to achieve accepted national outcomes.

[14] Grades are as follows: A = 2/3 standard deviation above the mean ($z > 0.67$); B = between 1/3 and 2/3 standard deviations above the mean ($.33 < z < .67$); C = between 1/3 standard deviation below and 1/3 standard deviation above the mean ($-.33 < z < .33$); D = between 1/3 and 2/3 standard deviations below the mean ($-.33 > z > -.67$); F = 2/3 standard deviation below the mean ($z < -.67$). In some cases, the tables show states that have the same numerical score but different letter grades because their unrounded scores place them on opposite sides of the grading cutoffs.

## Fairness Measure #1: Funding Level

The first fairness measure provides an adjusted per pupil funding estimate for each state that is a more suitable measure for between-state comparisons. As noted, there are several major factors that influence the level of state and local revenue both within and between states. These are: 1) student poverty, 2) regional wage variation, 3) economies of scale, 4) population density, and 5) the interplay between population density and economies of scale. The factors are illustrated in Figure 1.

### Figure 1. Factors Influencing State and Local Education Costs




To measure funding level, state and local revenues are adjusted by the national average for these factors.[15] For coherence between indicators, the estimates adjust student poverty to 20%, just below the national average (21%).[16] This adjusted per-pupil funding level puts all states onto a more equal footing by controlling for a variety of factors outside of the state's control. Three years of adjusted funding levels are presented and states are ranked by the fairness of the per-pupil funding level, using the predicted per-pupil amount to rank states with higher spending levels as more fair than states with low per-pupil revenues.

Table 2 shows the predicted funding levels from 2007 through 2011. This allows an examination of longer and shorter trends since the initial publication of the Report Card. It is important to remember that each year's predicted values are based on a pooled three-year sample with the intention of maintaining a degree of stability for cross-year comparisons. The model works to "smooth out" the data and limits the impact of one-time funding aberrations. With this in mind, a general consistency of rankings is expected from one year to the next.

[15] Other modeling options were considered, particularly allowing the effect of the various "cost" factors to be estimated for each state individually. These resulted in adding a level of complexity to the model without significantly changing the results. We attempted to control for the grade range configuration of districts (i.e., unified, elementary, and secondary), but this also did not substantively change the results.

[16] The national child poverty rate has steadily increased since the first edition of this report. The funding level estimates presented here adjust to 20% poverty for all years. The predicted levels from previous years, therefore, will vary slightly from those presented in earlier editions.

In 2011, funding disparities between states remained very wide. The highest-spending state, Wyoming ($17,397) had over two and a half times per-pupil funding of the lowest-spending state, Idaho ($6,753). While funding levels are generally up from 2007, the average change across states from 2010 to 2011 was flat. Twenty-six states show declining per pupil revenues since 2010, most notably Wyoming ($2,135), Vermont ($1,423), North Carolina ($1,316), and New Jersey ($1,313). A smaller but still significant number of states had funding levels in 2011 that were lower or on par with 2007. Fourteen states are funding schools at an average per-pupil level that is below levels from five years prior, even without adjusting for inflation. New Jersey, previously one of the fairest states, now falls $2,619 below its funding level in 2007.[17] Vermont, though it still remains at the top in terms of overall funding, has reduced spending by an average of $2,502. Florida, once about average in its spending, has reduced funding by an average of nearly $1,488 per student and is now at the bottom in terms of overall funding. These three states have all reduced funding levels by about 16% since 2007.

Though the impact of the recession was felt by states at different times, it is clear that in 2010, school funding levels experienced a precipitous decline. In 2008, most states' education funding systems were insulated from the effects of the recession. By 2009, funding levels declined in 20 states, and by 2010, 36 states lowered their average funding levels from the prior year. In 2011, some states began making up ground, but about half had lower funding levels than 2010.

Despite the poor economy, a few states did increase education funding. Over the five-year period from 2007 through 2011, New Hampshire, Illinois, and North Dakota all increased funding by over 20%.

[17] These findings are consistent with the severe cuts in school funding documented in the Federal Reserve Bank of New York's report on the impact of the recession on school funding in New Jersey (Chakrabarti, R. and M. Livingston, 2013, "Catching Up or Falling Behind? New Jersey Schools in the Aftermath of the Great Recession." Federal Reserve Bank of New York. New York).

## Table 2. Fairness Measure #1: Funding Level

| State | 2007 | | 2008 | | | 2009 | | | 2010 | | | 2011 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Predicted State & Local Revenue | Rank | Predicted State & Local Revenue | Rank | One-Year Change | Predicted State & Local Revenue | Rank | One-Year Change | Predicted State & Local Revenue | Rank | One-Year Change | Predicted State & Local Revenue | Rank | Change from 2007 | One-Year Change |
| Wyoming | $17,126 | 2 | $19,021 | 2 | $1,895 | $19,877 | 2 | $856 | $19,532 | 1 | -$345 | $17,397 | 1 | $271 | -$2,135 |
| New York | $14,920 | 5 | $15,882 | 5 | $962 | $17,055 | 4 | $1,173 | $16,894 | 2 | -$161 | $16,752 | 2 | $1,833 | -$142 |
| Alaska | $17,314 | 1 | $20,936 | 1 | $3,622 | $20,989 | 1 | $52 | $16,479 | 3 | -$4,510 | $16,339 | 3 | -$975 | -$139 |
| Connecticut | $14,375 | 6 | $15,214 | 6 | $839 | $16,019 | 5 | $804 | $14,965 | 5 | -$1,053 | $14,706 | 4 | $331 | -$259 |
| New Jersey | $16,845 | 3 | $17,316 | 3 | $471 | $17,626 | 3 | $311 | $15,539 | 4 | -$2,088 | $14,226 | 5 | -$2,619 | -$1,313 |
| Massachusetts | $13,658 | 7 | $14,266 | 7 | $609 | $14,496 | 7 | $230 | $14,553 | 6 | $57 | $13,274 | 6 | -$383 | -$1,279 |
| Vermont | $15,495 | 4 | $16,265 | 4 | $769 | $15,052 | 6 | -$1,213 | $14,416 | 7 | -$636 | $12,993 | 7 | -$2,502 | -$1,423 |
| Pennsylvania | $11,362 | 12 | $12,203 | 11 | $840 | $12,778 | 11 | $576 | $12,874 | 10 | $95 | $12,939 | 8 | $1,577 | $66 |
| Maryland | $11,417 | 11 | $13,110 | 9 | $1,694 | $13,485 | 8 | $375 | $12,971 | 8 | -$514 | $12,695 | 9 | $1,278 | -$276 |
| Minnesota | $11,646 | 10 | $12,127 | 12 | $482 | $11,948 | 12 | -$179 | $11,138 | 16 | -$810 | $12,462 | 10 | $817 | $1,324 |
| Rhode Island | $12,285 | 9 | $13,109 | 10 | $824 | $13,066 | 10 | -$44 | $12,905 | 9 | -$160 | $12,388 | 11 | $103 | -$518 |
| Delaware | $12,546 | 8 | $13,408 | 8 | $862 | $13,271 | 9 | -$137 | $12,476 | 11 | -$795 | $12,309 | 12 | -$236 | -$166 |
| New Hampshire | $9,745 | 18 | $10,408 | 18 | $664 | $11,799 | 14 | $1,391 | $11,736 | 14 | -$63 | $12,293 | 13 | $2,548 | $557 |
| Wisconsin | $10,513 | 15 | $10,967 | 15 | $453 | $10,762 | 18 | -$204 | $11,269 | 15 | $507 | $11,979 | 14 | $1,466 | $710 |
| Maine | $11,279 | 13 | $11,656 | 13 | $377 | $11,934 | 13 | $278 | $12,362 | 12 | $428 | $11,884 | 15 | $605 | -$477 |
| Illinois | $8,816 | 31 | $9,374 | 33 | $558 | $9,501 | 29 | $126 | $10,027 | 20 | $526 | $11,330 | 16 | $2,514 | $1,303 |
| Iowa | $10,014 | 16 | $10,471 | 17 | $457 | $10,748 | 19 | $277 | $9,925 | 21 | -$824 | $10,853 | 17 | $839 | $928 |
| Indiana | $9,471 | 24 | $10,331 | 19 | $860 | $11,313 | 15 | $982 | $12,122 | 13 | $809 | $10,852 | 18 | $1,380 | -$1,270 |
| Ohio | $10,816 | 14 | $11,268 | 14 | $452 | $11,082 | 17 | -$186 | $11,070 | 17 | -$12 | $10,828 | 19 | $12 | -$242 |
| West Virginia | $9,373 | 25 | $9,678 | 27 | $305 | $10,018 | 24 | $341 | $9,752 | 25 | -$267 | $10,716 | 20 | $1,344 | $965 |
| Nebraska | $9,545 | 23 | $9,999 | 23 | $455 | $10,511 | 20 | $512 | $10,111 | 18 | -$400 | $10,195 | 21 | $650 | $83 |
| Kansas | $9,754 | 17 | $10,613 | 16 | $859 | $11,085 | 16 | $472 | $10,045 | 19 | -$1,039 | $10,115 | 22 | $361 | $70 |
| North Dakota | $8,241 | 41 | $8,859 | 38 | $618 | $9,254 | 32 | $395 | $9,674 | 26 | $420 | $10,016 | 23 | $1,775 | $342 |
| Michigan | $9,580 | 21 | $9,663 | 28 | $83 | $9,520 | 28 | -$143 | $9,373 | 30 | -$147 | $9,926 | 24 | $346 | $552 |
| Virginia | $9,590 | 20 | $9,983 | 24 | $393 | $10,467 | 21 | $483 | $9,773 | 23 | -$693 | $9,571 | 25 | -$19 | -$202 |
| Louisiana | $8,970 | 29 | $9,813 | 26 | $844 | $10,277 | 22 | $464 | $9,772 | 24 | -$505 | $9,555 | 26 | $585 | -$218 |
| Washington | $8,863 | 30 | $9,391 | 32 | $528 | $9,636 | 26 | $245 | $9,545 | 27 | -$91 | $9,546 | 27 | $683 | $1 |
| South Carolina | $9,188 | 26 | $9,891 | 25 | $703 | $9,652 | 25 | -$240 | $9,256 | 33 | -$395 | $9,272 | 28 | $83 | $15 |
| New Mexico | $9,060 | 28 | $10,013 | 21 | $952 | $10,200 | 23 | $187 | $9,214 | 34 | -$985 | $9,249 | 29 | $189 | $35 |
| Arkansas | $8,332 | 39 | $8,694 | 41 | $362 | $8,859 | 40 | $165 | $9,094 | 35 | $235 | $9,166 | 30 | $834 | $72 |
| Montana | $8,733 | 33 | $9,420 | 31 | $687 | $9,492 | 30 | $72 | $9,314 | 32 | -$178 | $9,122 | 31 | $388 | -$192 |
| South Dakota | $8,712 | 35 | $9,031 | 36 | $319 | $8,784 | 41 | -$246 | $9,480 | 28 | $695 | $9,095 | 32 | $383 | -$385 |
| Kentucky | $8,724 | 34 | $9,053 | 35 | $329 | $9,026 | 35 | -$27 | $8,719 | 38 | -$307 | $9,041 | 33 | $317 | $323 |
| Missouri | $8,244 | 40 | $8,723 | 40 | $479 | $8,988 | 37 | $265 | $8,430 | 40 | -$559 | $9,030 | 34 | $786 | $601 |
| Colorado | $8,623 | 37 | $9,003 | 37 | $380 | $9,126 | 34 | $122 | $9,378 | 29 | $252 | $8,997 | 35 | $374 | -$381 |
| Georgia | $9,703 | 19 | $10,148 | 20 | $445 | $9,555 | 27 | -$593 | $8,750 | 37 | -$805 | $8,997 | 36 | -$706 | $247 |
| Nevada | $8,146 | 42 | $8,836 | 39 | $690 | $8,757 | 43 | -$79 | $9,329 | 31 | $572 | $8,719 | 37 | $573 | -$610 |
| Alabama | $8,764 | 32 | $9,626 | 29 | $862 | $8,918 | 38 | -$707 | $8,408 | 41 | -$510 | $8,646 | 38 | -$118 | $238 |
| Texas | $8,350 | 38 | $8,607 | 42 | $257 | $8,782 | 42 | $176 | $8,543 | 39 | -$239 | $8,515 | 39 | $165 | -$28 |
| North Carolina | $8,126 | 43 | $8,581 | 43 | $455 | $9,438 | 31 | $857 | $9,822 | 22 | $384 | $8,506 | 40 | $381 | -$1,316 |
| Oregon | $8,666 | 36 | $9,362 | 34 | $696 | $9,165 | 33 | -$196 | $8,986 | 36 | -$179 | $8,444 | 41 | -$221 | -$542 |
| California | $9,069 | 27 | $9,426 | 30 | $357 | $9,024 | 36 | -$402 | $7,942 | 43 | -$1,082 | $8,378 | 42 | -$691 | $436 |
| Florida | $9,562 | 22 | $10,010 | 22 | $448 | $8,864 | 39 | -$1,146 | $8,193 | 42 | -$672 | $8,075 | 43 | -$1,488 | -$118 |
| Tennessee | $6,946 | 48 | $7,502 | 47 | $555 | $7,420 | 48 | -$82 | $7,479 | 45 | $59 | $7,494 | 44 | $548 | $16 |
| Mississippi | $7,403 | 46 | $7,920 | 45 | $516 | $7,891 | 44 | -$29 | $7,475 | 46 | -$416 | $7,461 | 45 | $58 | -$14 |
| Oklahoma | $6,964 | 47 | $7,329 | 49 | $366 | $7,489 | 47 | $159 | $7,097 | 48 | -$391 | $7,406 | 46 | $442 | $308 |
| Arizona | $8,012 | 44 | $8,318 | 44 | $306 | $7,872 | 45 | -$445 | $7,505 | 44 | -$368 | $7,363 | 47 | -$649 | -$142 |
| Utah | $7,503 | 45 | $7,899 | 46 | $396 | $7,851 | 46 | -$47 | $7,097 | 47 | -$755 | $6,844 | 48 | -$659 | -$253 |
| Idaho | $6,873 | 49 | $7,337 | 48 | $464 | $7,420 | 49 | $83 | $6,555 | 49 | -$865 | $6,753 | 49 | -$121 | $198 |

## Fairness Measure #2: Funding Distribution

The second funding measure examines the distribution of funding to districts within states relative to student poverty. This measure addresses the key question of whether states' funding systems recognize the additional resources required to provide an equal educational opportunity in settings of concentrated student poverty.

Table 3 presents results for 2007 through 2011. Hawaii and the District of Columbia are not included because they are single-district systems.[18] For 2011, the predicted per-pupil funding amounts are presented across the poverty slope, simulated at 10% intervals from 0% to 30%. For all years, the variation in within-state funding distribution is presented as a ratio between the highest poverty simulation and the lowest. A state with a high ratio between high- and low-poverty districts is a progressively funded state because poor districts receive more funding than wealthy districts. A state with a low ratio is a regressively funded state — poor districts receive less funding than wealthy districts.

The funding distribution patterns are also presented in Figure 2. The blue bars indicate states where a district with 30% student poverty is expected to receive more than 5% more state and local revenue per pupil than a district with 0% poverty. These states are deemed "progressive." The red-shaded bars are those where a district with 30% poverty is expected to receive more than 5% less than a district with 0% poverty. These states are deemed "regressive." The grey bars indicate states where there is no substantial increase or decrease in spending in relation to poverty, though this can mean that all districts are funded at similar levels, or that there is variation in spending, but that variation is not related to poverty. The light grey, light blue and light red bars represent states where there is a nonsystematic, or statistically insignificant, relationship. Though the high-poverty districts are predicted to get more (light blue) or less (light red) than districts with 0% poverty, there is too much variation among individual districts to suggest a definitive pattern. Figure 3 presents national trends in funding distribution across years.

The funding distribution measure takes on even greater importance in the context of declining revenues and school aid cuts. As the previous measure showed, many states have had declining resources in the past few years that have resulted in lower average funding levels. State policy plays a significant role in how these cuts will be distributed across school districts. Cuts that target high-poverty districts will make the overall funding system more regressive, but cuts can also be structured in a way to maintain progressiveness or at least to prevent a shift toward a regressive system.

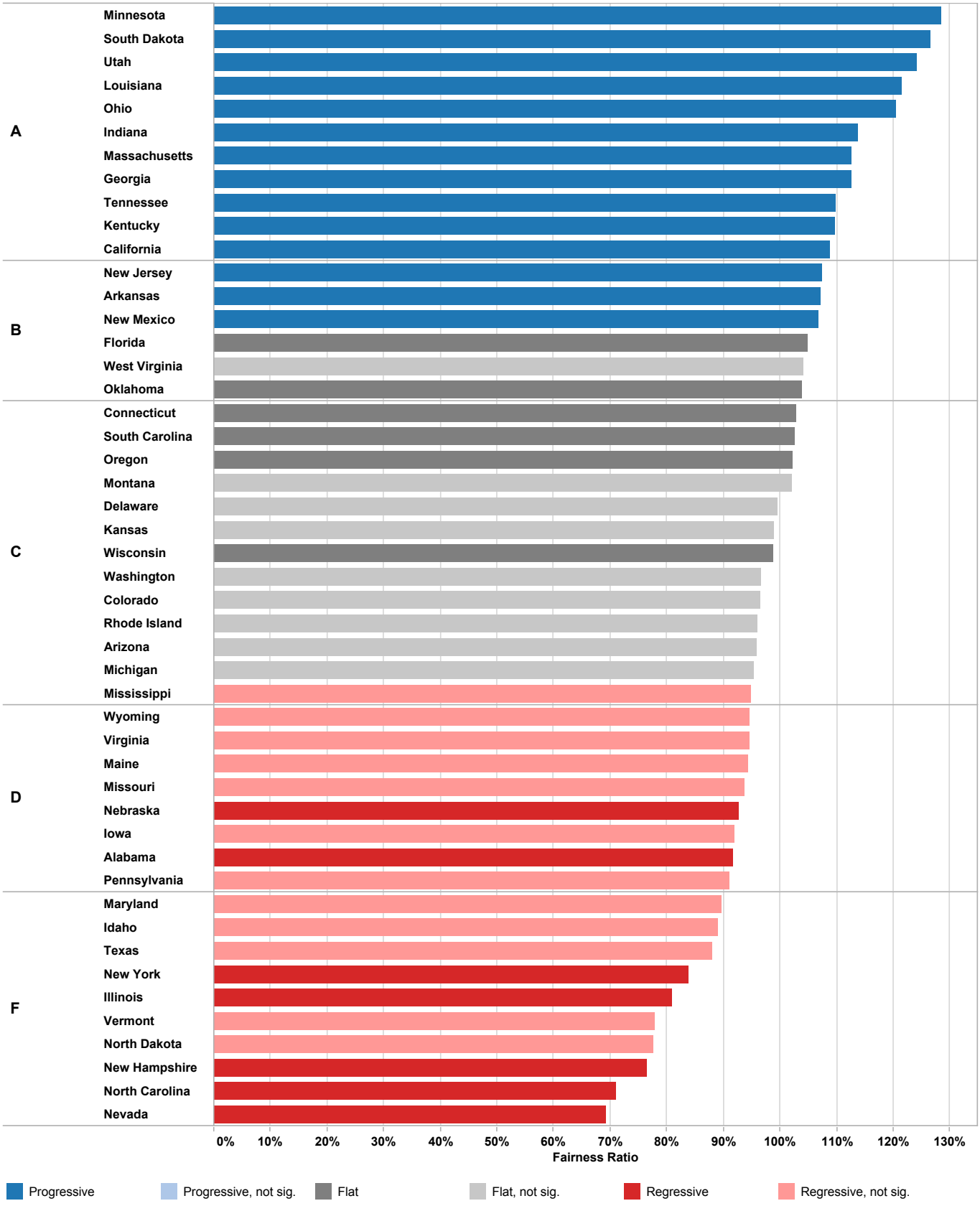
[18] In this and previous reports, we do not present the results for Alaska on the funding distribution measure. The state's unique geography and sparse population, being so highly correlated with poverty, result in inconsistent estimates of within-state resource distribution. However, in previous years we included Alaska's results in the calculation of the funding distribution grades. For consistency and clarity, we now also exclude Alaska's scores from these calculations. The previous years' grades as presented here have also been modified to exclude Alaska.

## Table 3. Fairness Measure #2: Funding Distribution

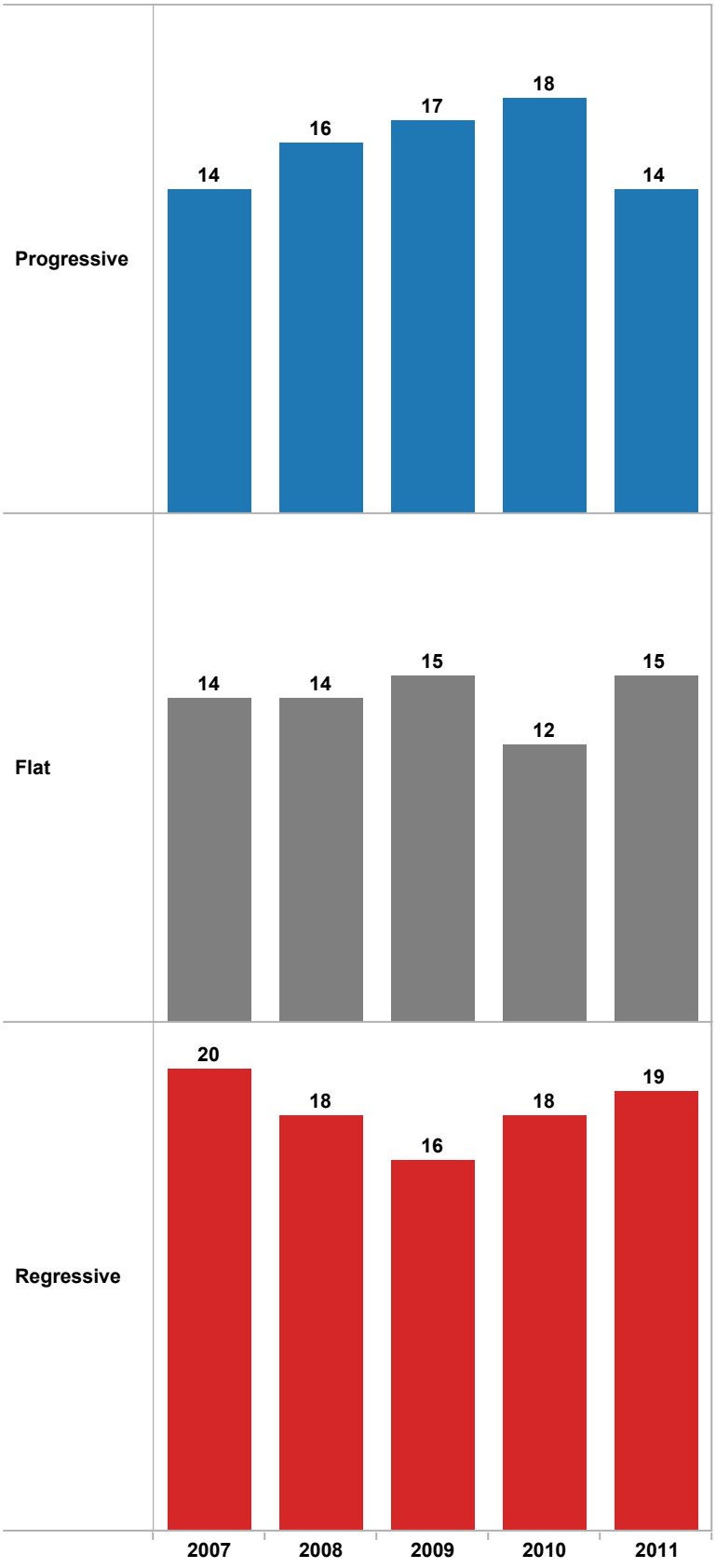
| State | 2007 | | 2008 | | 2009 | | 2010 | | 2011 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | High/ Low | Grade | High/ Low | Grade | High/ Low | Grade | High/ Low | Grade | At 0% Poverty | At 10% Poverty | At 20% Poverty | At 30% Poverty | High/ Low | Grade |
| Minnesota | 138% | A | 135% | A | 130% | A | 131% | A | $10,546 | $11,464 | $12,462 | $13,547 | 128%* | A |
| South Dakota | 126% | A | 124% | A | 120% | A | 126% | A | $7,771 | $8,407 | $9,095 | $9,839 | 127%* | A |
| Utah | 151% | A | 152% | A | 159% | A | 140% | A | $5,928 | $6,370 | $6,844 | $7,353 | 124%* | A |
| Louisiana | 91% | D | 97% | C | 99% | C | 115% | A | $8,398 | $8,957 | $9,555 | $10,192 | 121%* | A |
| Ohio | 131% | A | 136% | A | 137% | A | 135% | A | $9,569 | $10,179 | $10,828 | $11,518 | 120%* | A |
| Indiana | 117% | A | 120% | A | 118% | A | 116% | A | $9,954 | $10,393 | $10,852 | $11,331 | 114%* | A |
| Georgia | 103% | C | 105% | C | 108% | C | 114% | A | $8,313 | $8,648 | $8,997 | $9,360 | 113%* | A |
| Massachusetts | 119% | A | 123% | A | 123% | A | 120% | A | $12,265 | $12,760 | $13,274 | $13,810 | 113%* | A |
| Kentucky | 103% | C | 106% | C | 108% | B | 114% | A | $8,502 | $8,768 | $9,041 | $9,324 | 110%* | A |
| Tennessee | 112% | A | 113% | B | 112% | B | 112% | A | $7,035 | $7,261 | $7,494 | $7,735 | 110%* | A |
| California | 103% | C | 108% | B | 111% | B | 109% | B | $7,919 | $8,146 | $8,378 | $8,618 | 109%* | A |
| Arkansas | 104% | C | 102% | C | 104% | C | 107% | B | $8,755 | $8,958 | $9,166 | $9,378 | 107%* | B |
| New Jersey | 140% | A | 139% | A | 142% | A | 125% | A | $13,564 | $13,891 | $14,226 | $14,569 | 107%* | B |
| New Mexico | 114% | A | 107% | C | 107% | C | 106% | C | $8,859 | $9,052 | $9,249 | $9,451 | 107%* | B |
| Florida | 91% | D | 88% | F | 91% | F | 109% | B | $7,816 | $7,945 | $8,075 | $8,207 | 105%* | B |
| Oklahoma | 107% | B | 105% | C | 104% | C | 104% | C | $7,222 | $7,313 | $7,406 | $7,499 | 104%* | B |
| West Virginia | 100% | C | 103% | C | 102% | C | 100% | C | $10,430 | $10,572 | $10,716 | $10,863 | 104% | B |
| Connecticut | 114% | A | 115% | A | 117% | A | 111% | B | $14,423 | $14,564 | $14,706 | $14,850 | 103%* | C |
| South Carolina | 102% | C | 102% | C | 100% | C | 104% | C | $9,117 | $9,194 | $9,272 | $9,350 | 103%* | C |
| Montana | 117% | A | 119% | A | 116% | A | 105% | C | $9,005 | $9,063 | $9,122 | $9,180 | 102% | C |
| Oregon | 109% | B | 105% | C | 103% | C | 98% | C | $8,316 | $8,380 | $8,444 | $8,510 | 102%* | C |
| Delaware | 89% | F | 114% | A | 115% | A | 106% | C | $12,341 | $12,325 | $12,309 | $12,294 | 100% | C |
| Kansas | 92% | D | 98% | C | 102% | C | 100% | C | $10,193 | $10,154 | $10,115 | $10,076 | 99% | C |
| Wisconsin | 96% | C | 96% | D | 97% | D | 97% | C | $12,087 | $12,033 | $11,979 | $11,926 | 99%* | C |
| Washington | 96% | C | 97% | C | 96% | D | 98% | C | $9,768 | $9,657 | $9,546 | $9,437 | 97% | C |
| Arizona | 104% | C | 100% | C | 98% | C | 96% | D | $7,570 | $7,466 | $7,363 | $7,262 | 96% | C |
| Colorado | 92% | D | 94% | D | 94% | D | 97% | C | $9,214 | $9,105 | $8,997 | $8,890 | 96% | C |
| Rhode Island | 102% | C | 102% | C | 101% | C | 99% | C | $12,725 | $12,555 | $12,388 | $12,222 | 96% | C |
| Michigan | 93% | D | 92% | D | 93% | D | 94% | D | $10,242 | $10,083 | $9,926 | $9,771 | 95% | C |
| Mississippi | 96% | C | 95% | D | 96% | D | 95% | D | $7,732 | $7,595 | $7,461 | $7,329 | 95% | C |
| Virginia | 84% | F | 86% | F | 90% | F | 97% | C | $9,935 | $9,751 | $9,571 | $9,395 | 95% | D |
| Wyoming | 108% | B | 112% | B | 114% | A | 110% | B | $18,056 | $17,724 | $17,397 | $17,076 | 95% | D |
| Maine | 85% | F | 86% | F | 89% | F | 95% | D | $12,357 | $12,119 | $11,884 | $11,655 | 94% | D |
| Missouri | 88% | F | 86% | F | 87% | F | 93% | D | $9,428 | $9,227 | $9,030 | $8,837 | 94% | D |
| Nebraska | 99% | C | 104% | C | 108% | C | 92% | D | $10,723 | $10,455 | $10,195 | $9,940 | 93%* | D |
| Alabama | 89% | D | 87% | F | 88% | F | 91% | F | $9,160 | $8,899 | $8,646 | $8,400 | 92%* | D |
| Iowa | 105% | C | 101% | C | 99% | C | 93% | D | $11,477 | $11,160 | $10,853 | $10,554 | 92% | D |
| Pennsylvania | 84% | F | 86% | F | 89% | F | 92% | D | $13,776 | $13,351 | $12,939 | $12,541 | 91% | D |
| Maryland | 89% | D | 94% | D | 99% | C | 93% | D | $13,656 | $13,167 | $12,695 | $12,240 | 90% | F |
| Idaho | 88% | F | 91% | D | 92% | D | 92% | D | $7,292 | $7,017 | $6,753 | $6,499 | 89% | F |
| Texas | 93% | D | 94% | D | 94% | D | 89% | F | $9,271 | $8,885 | $8,515 | $8,160 | 88% | F |
| New York | 82% | F | 84% | F | 87% | F | 89% | F | $18,843 | $17,767 | $16,752 | $15,796 | 84%* | F |
| Illinois | 78% | F | 79% | F | 77% | F | 78% | F | $13,032 | $12,151 | $11,330 | $10,564 | 81%* | F |
| North Dakota | 82% | F | 79% | F | 80% | F | 82% | F | $11,851 | $10,895 | $10,016 | $9,208 | 78% | F |
| Vermont | 97% | C | 98% | C | 102% | C | 91% | F | $15,340 | $14,118 | $12,993 | $11,958 | 78% | F |
| New Hampshire | 64% | F | 65% | F | 78% | F | 73% | F | $14,696 | $13,441 | $12,293 | $11,243 | 77%* | F |
| North Carolina | 84% | F | 88% | F | 78% | F | 68% | F | $10,676 | $9,530 | $8,506 | $7,593 | 71%* | F |
| Nevada | 74% | F | 80% | F | 76% | F | 69% | F | $11,145 | $9,857 | $8,719 | $7,712 | 69%* | F |

* Relationship is statistically significant at p<.05.

## Figure 2. State Funding Distribution



## Figure 3. Funding Distribution Trends by Category



In 2011, only 14 states exhibit progressive funding patterns. This marks a retreat from a previous pattern of slow progress towards greater equity. The number of states considered progressive increased every year from 2007 through 2010. But, in 2011, the number declined to 2007 levels. Nineteen states have regressive funding systems, though the pattern is not significant in 12 states.

Over the five-year period from 2007 through 2011, there was significant movement in some states. For example, New Jersey's fairness ratio dropped 33 points, from an "A" to a "B"; Utah dropped 27 points, but managed to maintain an "A" grade; and Vermont dropped 19 points, moving from a "C" to an "F." On a more positive note, other states seemed to make significant improvements over this five-year period. Louisiana gained 30 points and moved from a "D" to an "A"; New Hampshire gained 12 points, though remained an "F"; and Delaware gained 11 points and moved from an "F" to a "C."[19]

The shift in funding distribution was especially severe from 2010 to 2011. In that year, 27 states lost ground and reduced funding fairness, while only 12 managed to improve. Approximately half of New Jersey and Utah's declines occurred during this period. Comparatively, the states that made improvements saw less dramatic shifts in this period. For many states, this juncture corresponds with the loss of federal stimulus funds. To the extent that the state put more of that federal aid into poorer districts, the struggle to make up for those lost funds will fall harder on those poor districts. For example, New Jersey managed to maintain the implementation of its school funding formula through 2010 with the use of ARRA funds, but in 2011 faced a major revenue shortfall. The state cut each district's budget in 2011, though the cuts fell harder on the state's poorest districts that are more reliant on state aid. The result is a significant shift away from equity.[20]

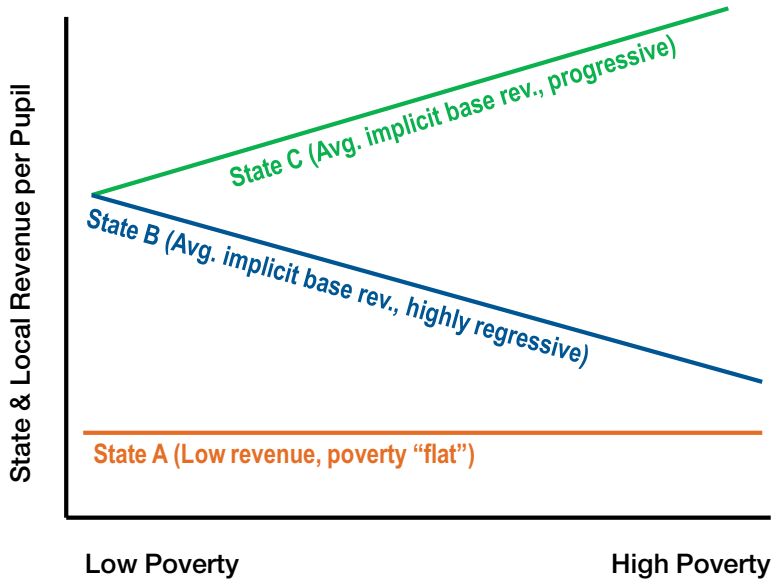
## The State Fairness Profiles

To capture the importance of the interplay between funding level and funding fairness, we present fairness profiles for each state. The fairness profile for three hypothetical states is presented in Figure 4. State A is a low-funded, "flat" state distributing low revenue at the same level to districts regardless of poverty. State B and State C share a common level of funding for districts with 0% poverty, the implicit base funding per pupil for these states. But State B has a downward or "regressive" funding distribution, while State C has an upward or "progressive" distribution, resulting in markedly different funding levels for high-poverty districts in each state.

[19] The increased progressiveness in Louisiana appears to be largely the result of an influx of school aid into the New Orleans Recovery School District at the same time that enrollment declined as a result of displacement from Hurricane Katrina.

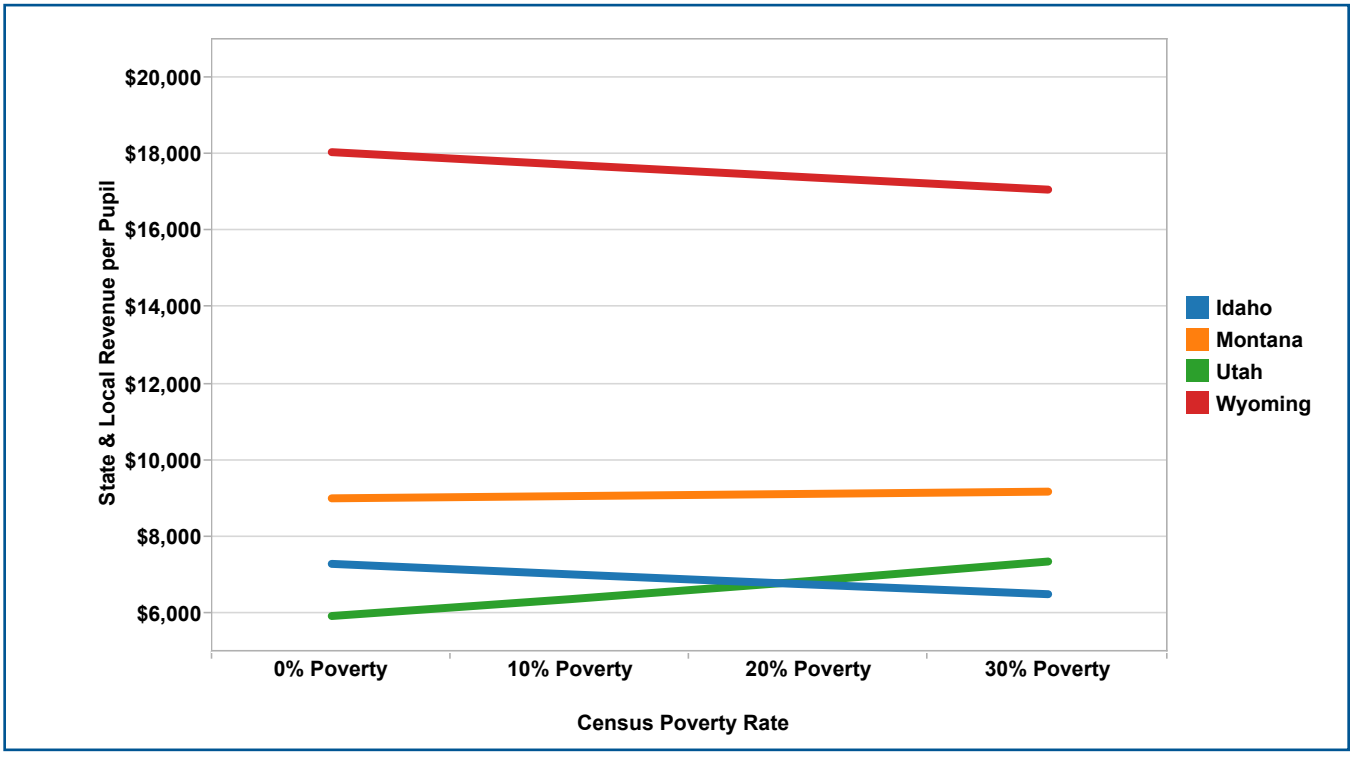
[20] New Jersey is likely to see some of its equity restored in 2012. A Supreme Court decision in the Abbott v. Burke school finance case required the state to restore approximately $500 million in state aid to a group of low-wealth urban districts.

## Figure 4. State Fairness Profiles



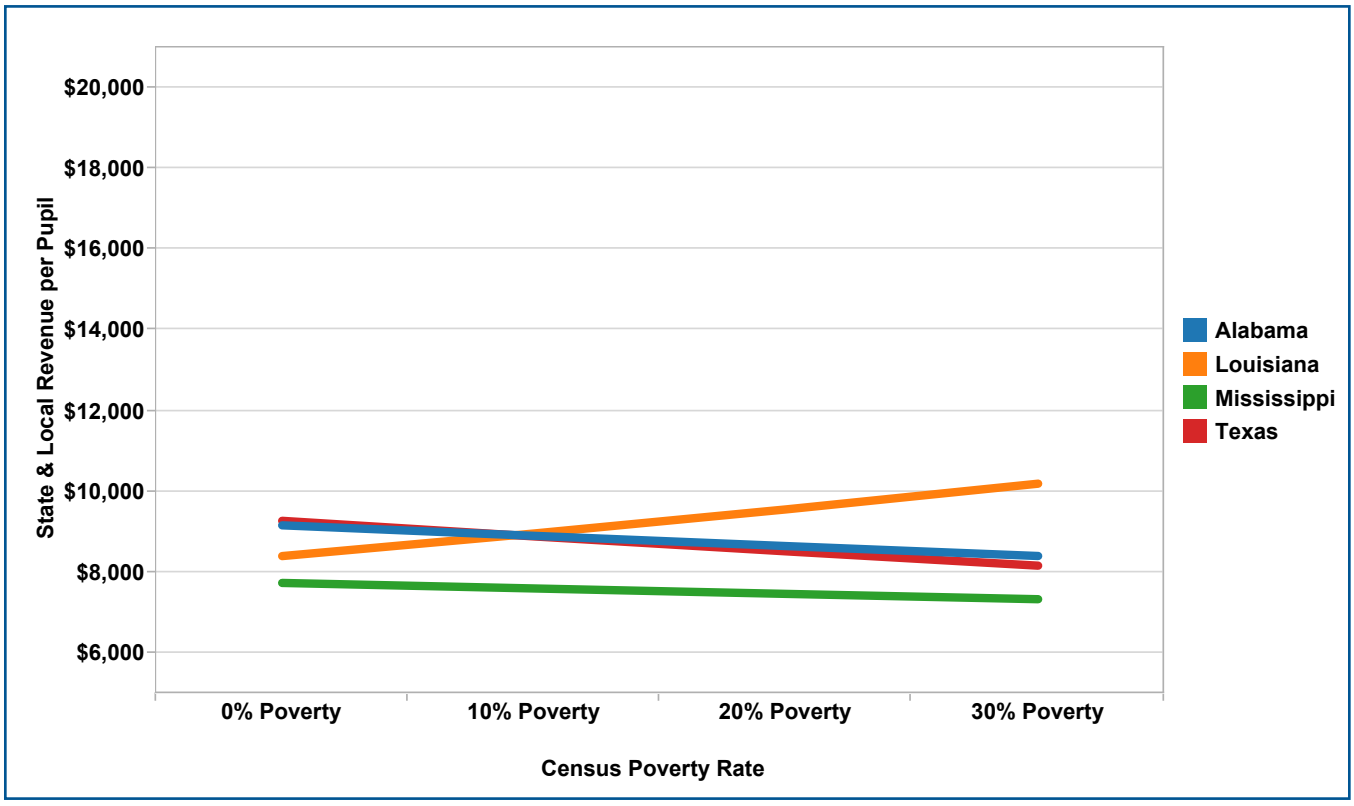

Regional funding profiles are presented in the figures below.[21] Each profile allows for a comparison of both funding level and funding distribution among a set of geographically similar states. These regional groupings allow for a more accurate comparison of states that have similar characteristics, such as poverty rates and variations in cost.

## Figure 5. Big Sky

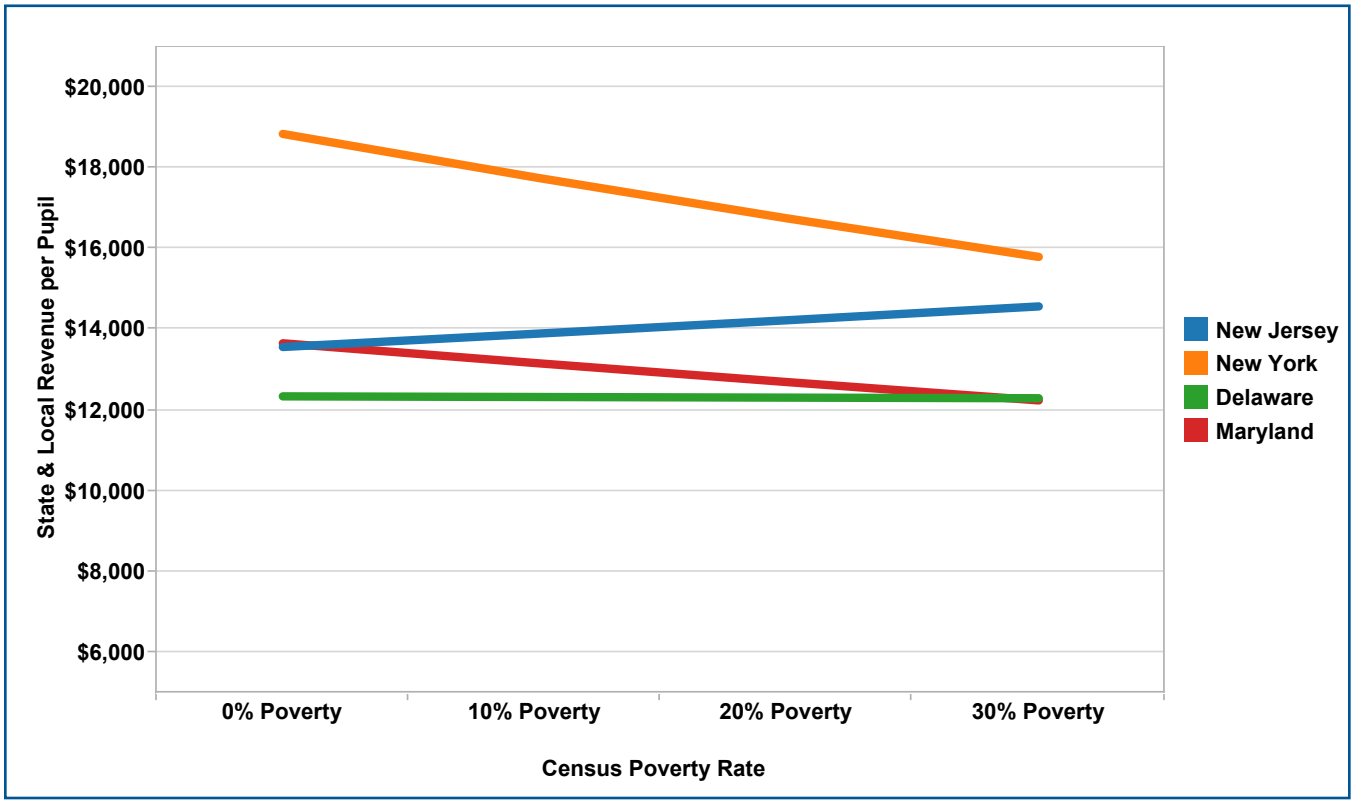



[21] The regional groupings are borrowed from Nate Silver's electoral analysis. These categories group states based not only on geography, but also in terms of other social and economic characteristics (**www.fivethirtyeight.com**).

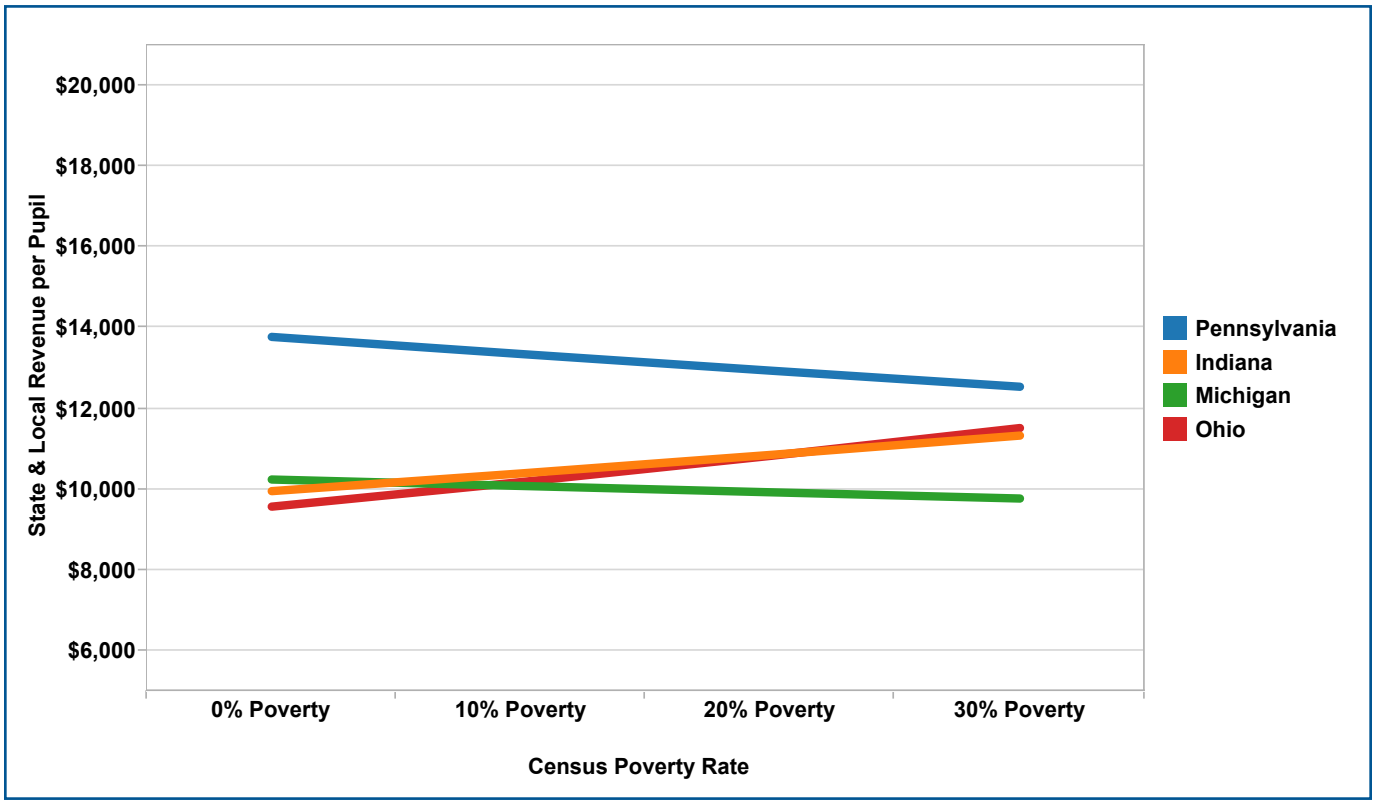
## Figure 6. Gulf Coast



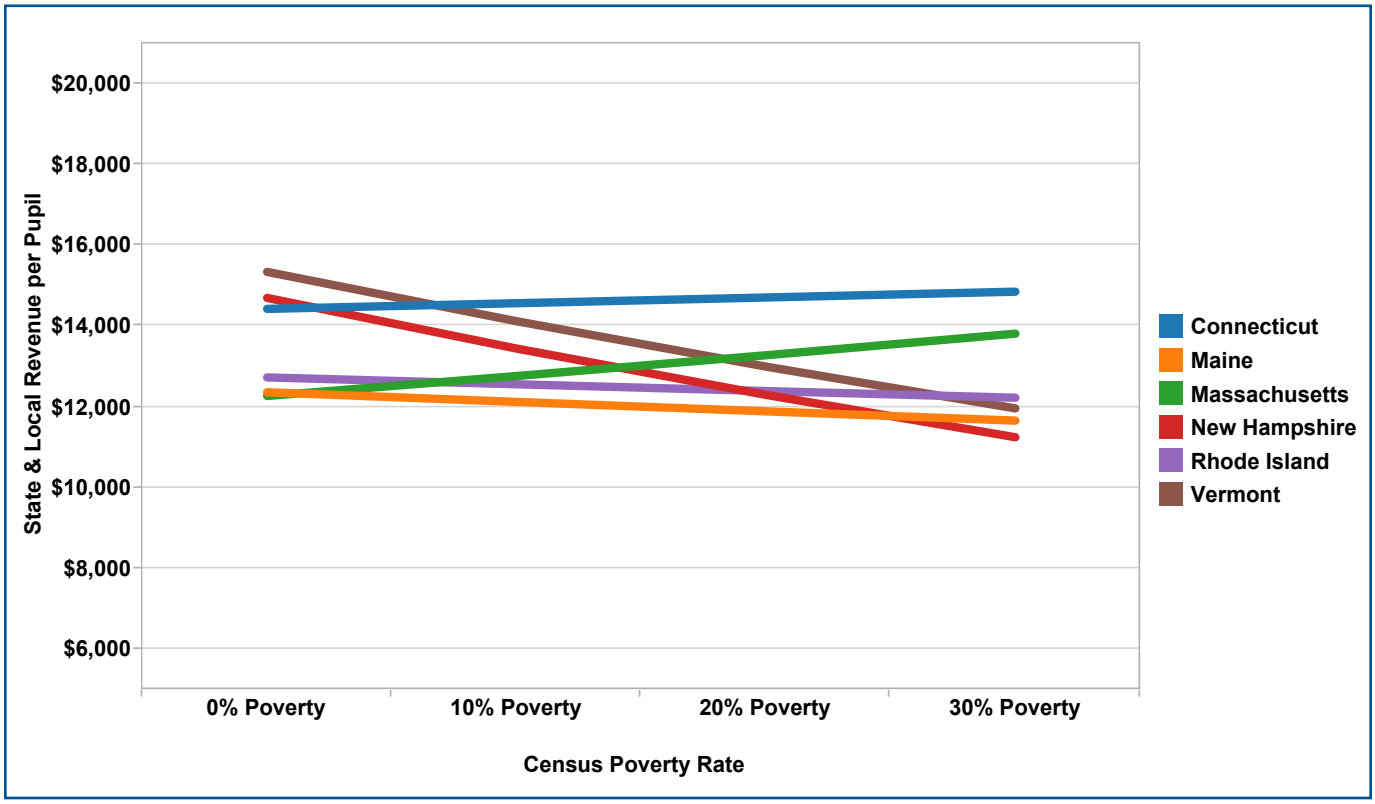

## Figure 7. Mid-Atlantic



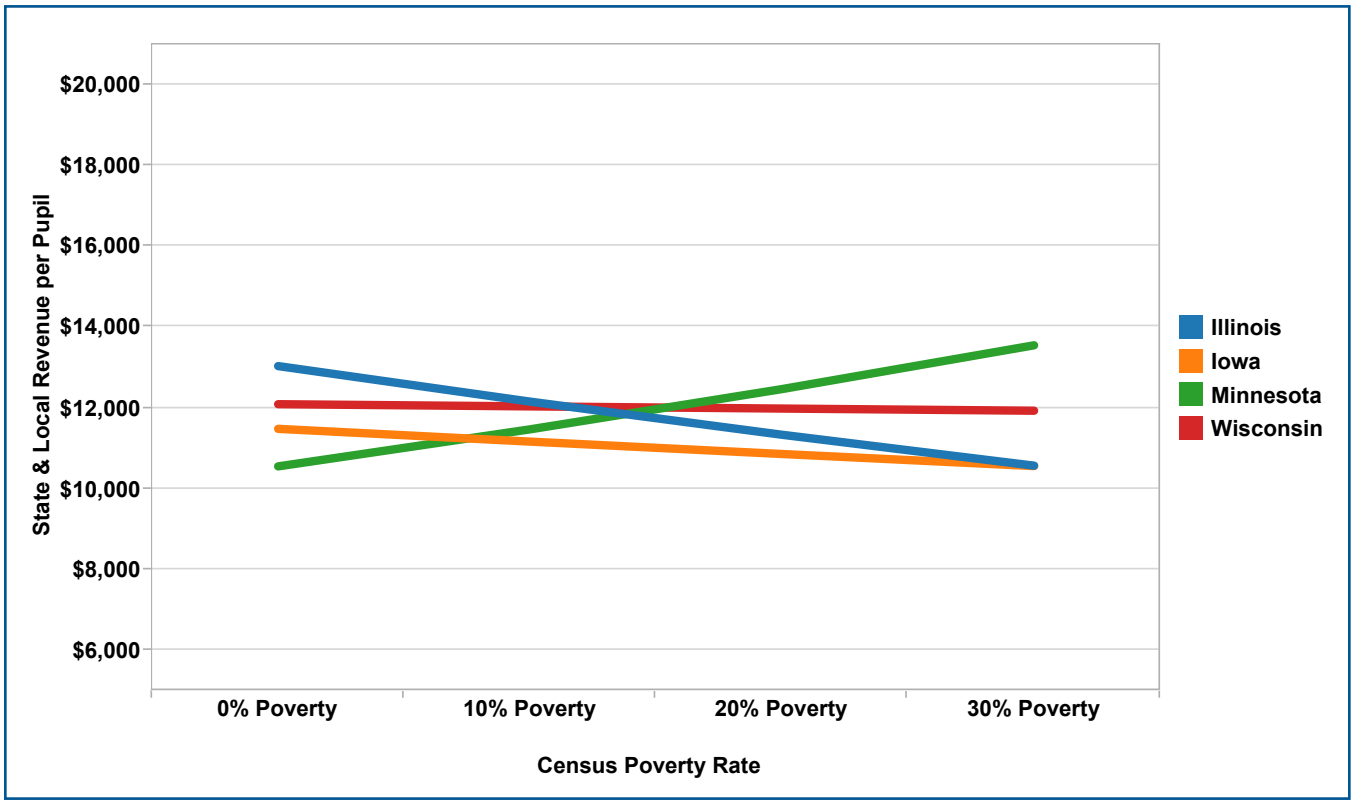
## Figure 8. Midwest



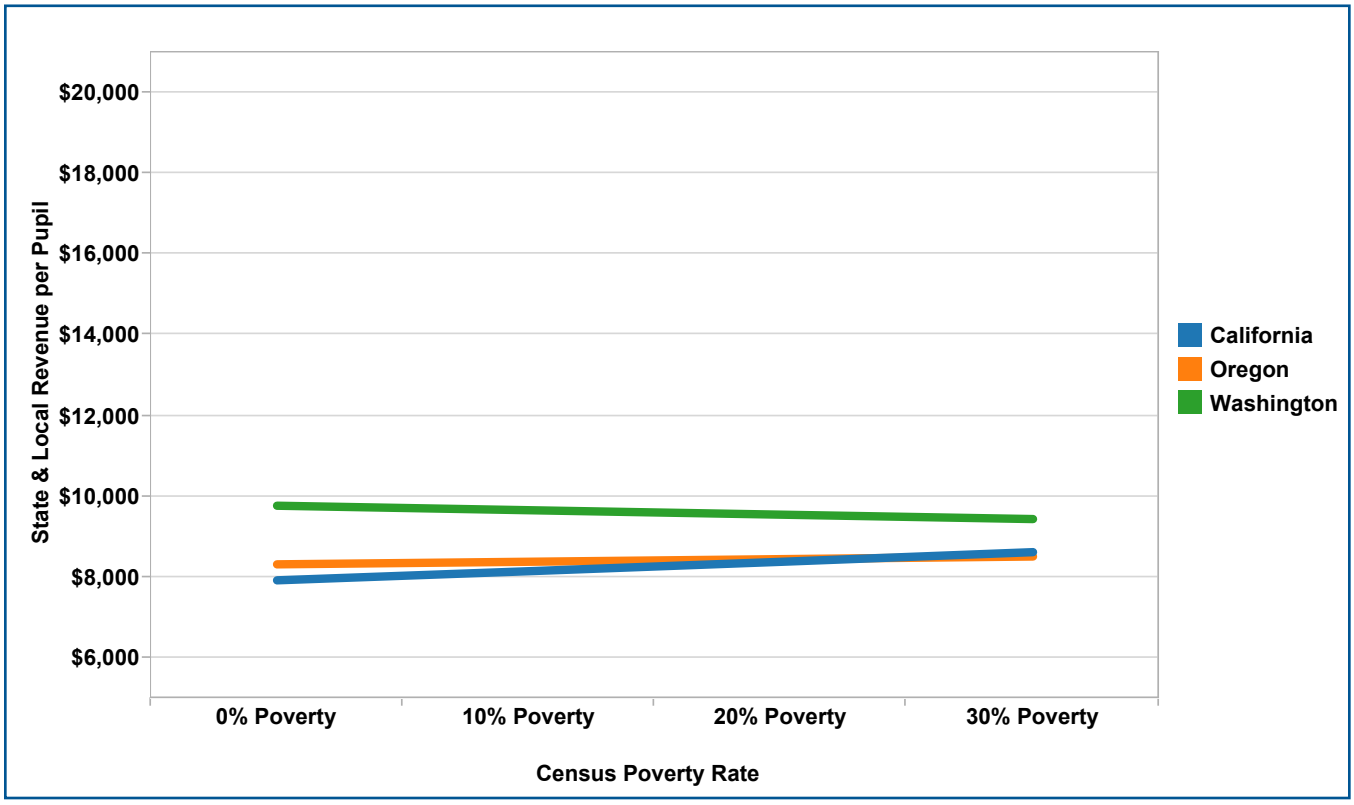

## Figure 9. New England



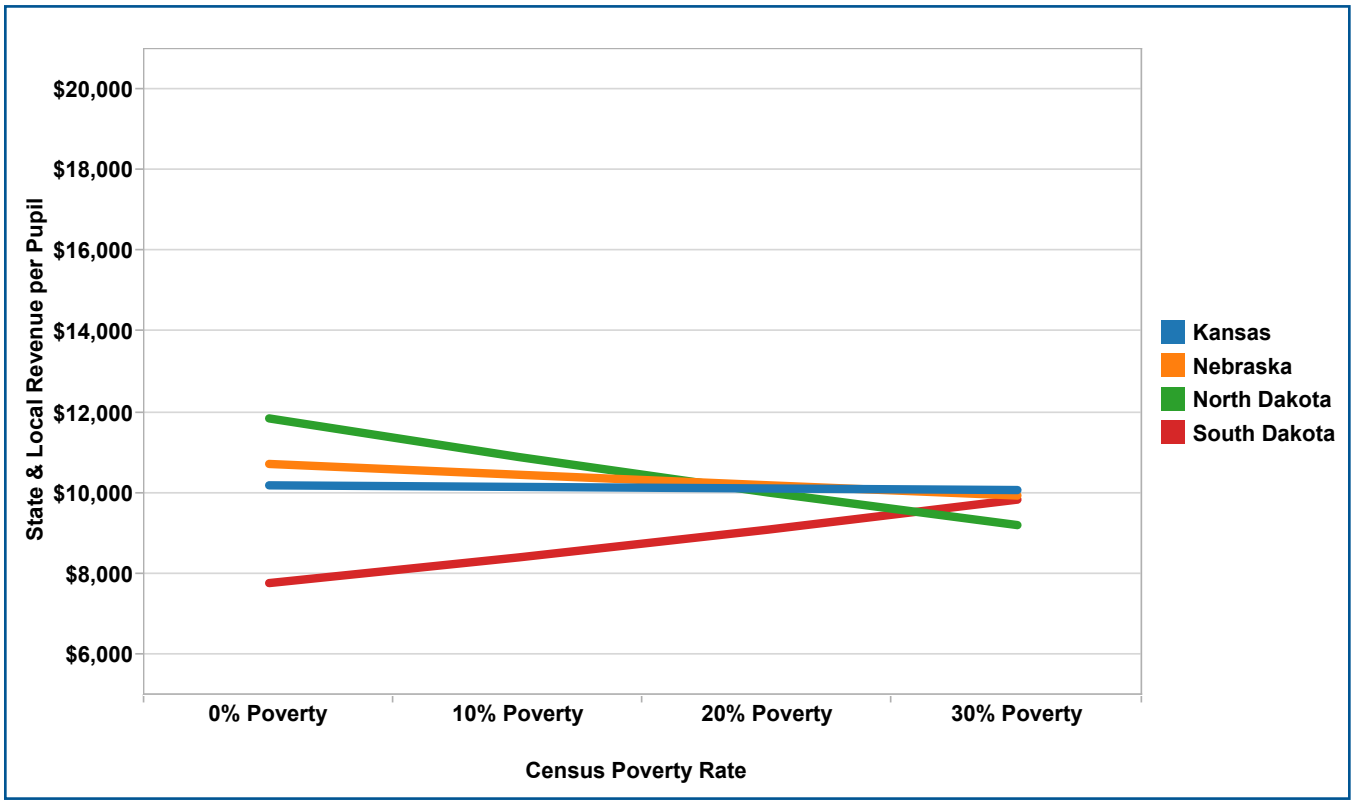
## Figure 10. North Central



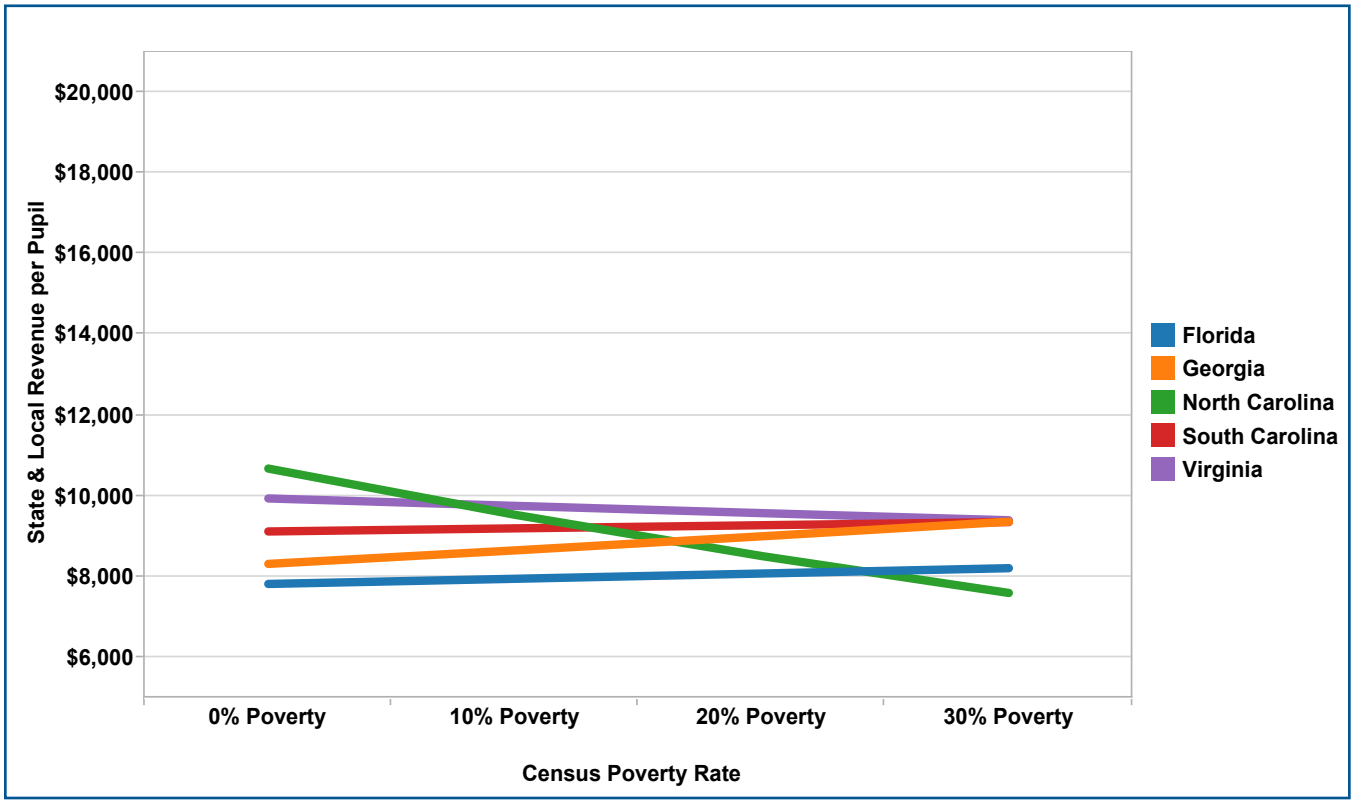

## Figure 11. Pacific



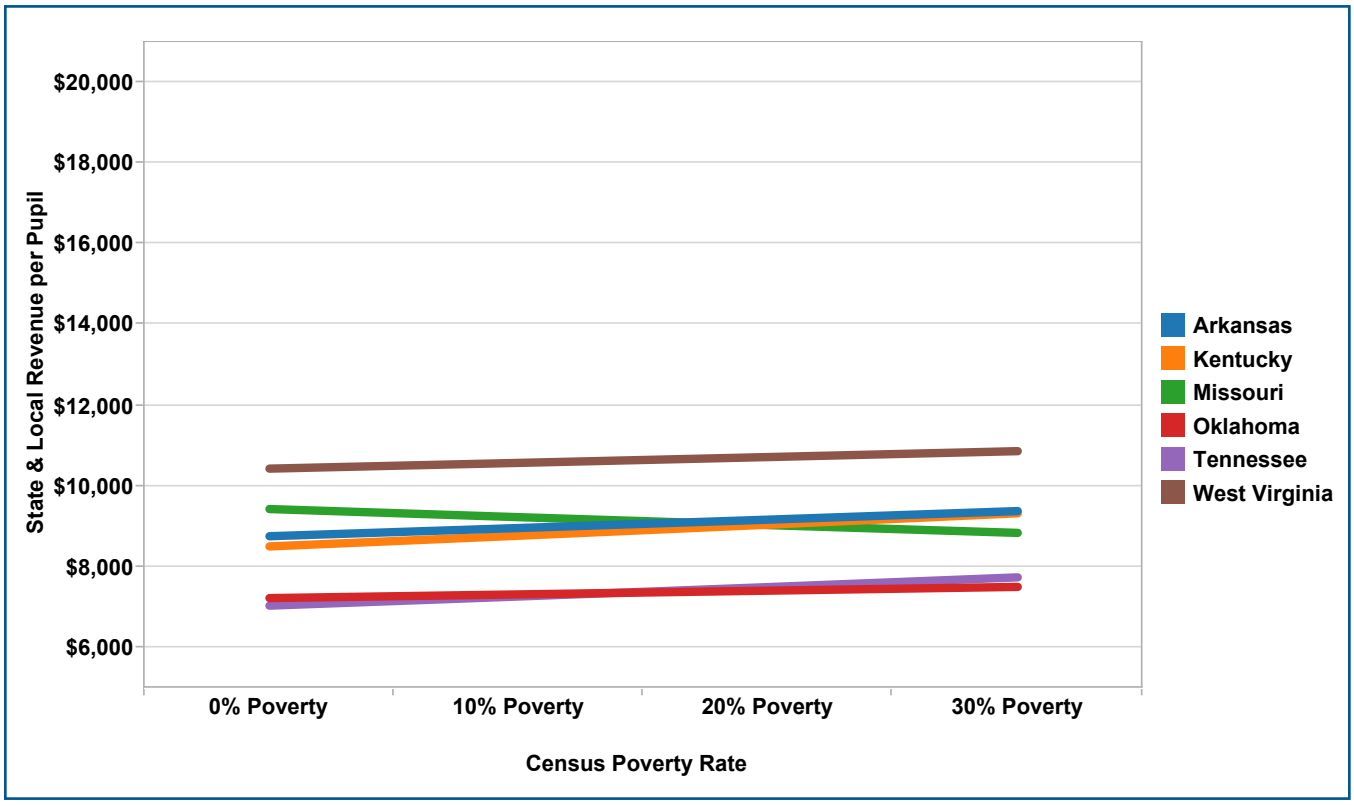
## Figure 12. Prairie



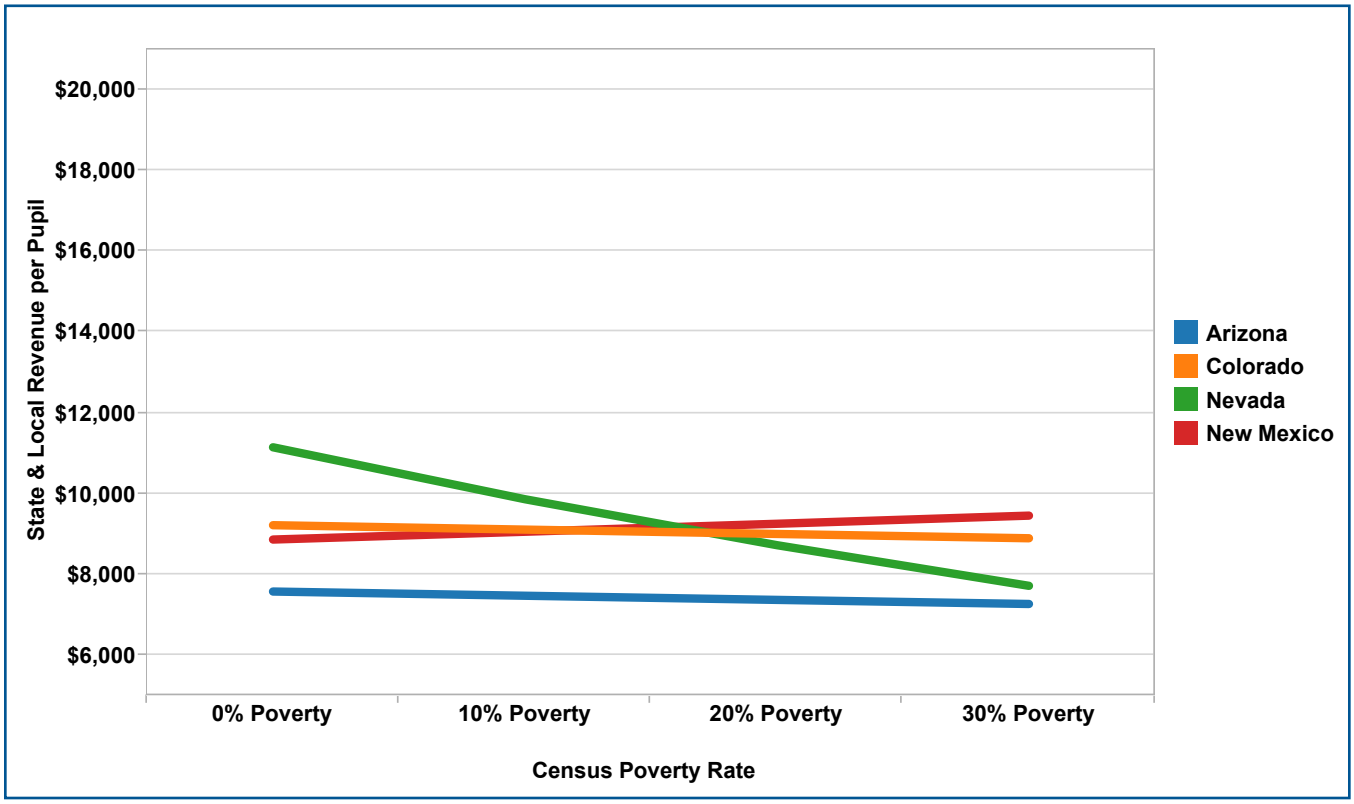

## Figure 13. South Coast



## Figure 14. Southeast




## Figure 15. Southwest



## Fairness Measure #3: Effort

The third funding measure of fairness addresses the state's effort to fund its public schools based on the percentage of the state's Gross Domestic Product (GDP) allocated to education. The state GDP represents the value added in production by labor and capital located within the state. In concept, state GDP is the state counterpart of the nation's GDP, the measure of U.S. output.

The fairness measure considers how each state uses its state fiscal capacity, or GDP, to support the public education system. In other words, what effort is the state making to fairly fund its public schools? State effort is calculated by dividing the sum of state and local revenue by the state GDP. This indicator, shown in Table 4, is essentially a measure of the percent of state-level economic productivity allocated to or spent on public education.

The state GPD figures also offer a glimpse of the fiscal conditions of the states during the recession. Between 2007 and 2008, per capita GDP declined for 38 states by an average of 1.1%. Delaware (6.4%), Michigan (5.5%), Nevada (5.1%), and Florida (4.4%) experienced the steepest declines. Between 2008 and 2009, 43 states saw a decline at an average of 3%. Nine states experienced per capita GDP declines greater than 5%. Recovery in states' fiscal conditions began in 2010 and 2011, with the majority of states seeing their economic productivity improve, though per capita GDP matched or exceeded 2007 levels in only 15 states.

In 2011, the Effort index ranges from .022 in Delaware to .055 in Vermont. Of course, effort levels must be understood in the overall context of the state's economy. Delaware maintains the lowest effort, but has the highest level of economic productivity at nearly $62,000 per capita GDP, and therefore generates a relatively high funding level. Vermont, on the other hand, ranks highest in effort, but has half the fiscal capacity on which to draw. However, in general, the relationship between fiscal capacity and effort is not strong. Many wealthier states, like New Jersey and New York, still maintain high effort levels, while many poorer states, like Florida and Arizona, also have low effort.

In the context of the poor economy and the slow recovery from the recession, it is not surprising that most states have reduced the effort made towards funding education. In fact, effort has declined or remained flat since 2007 in all but six states. The largest percentage declines were seen in Maine (30%), Hawaii (27%), and Florida (19%). The effect of this on the actual amount of money directed towards schools differs by state and depends on the interplay of effort, GDP, and other factors. For example, with a dramatic decline in effort in both states, funding levels in Florida are down considerably, while Maine has remained relatively stable. And even a state like New Jersey, whose effort level did not change drastically, saw a significant drop in funding levels due to declining GDP.

## Table 4. Fairness Measure #3: State Effort[22]

| State | 2007 | | | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Per capita real GDP (in 2005 dollars) | Effort Index | Grade | Per capita real GDP (in 2005 dollars) | Effort Index | Grade | One-Year Change | Per capita real GDP (in 2005 dollars) | Effort Index | Grade | One-Year Change | Per capita real GDP (in 2005 dollars) | Effort Index | Grade | One-Year Change | Per capita real GDP (in 2005 dollars) | Effort Index | Grade | One-Year Change | Change from 2007 |
| Vermont | $36,603 | 0.063 | A | $36,485 | 0.064 | A | 0.001 | $35,383 | 0.057 | A | -0.007 | $37,291 | 0.057 | A | 0.000 | $37,736 | 0.055 | A | -0.002 | -0.008 |
| New Jersey | $51,111 | 0.050 | A | $50,950 | 0.050 | A | 0.000 | $48,526 | 0.050 | A | 0.001 | $49,026 | 0.048 | A | -0.002 | $49,020 | 0.049 | A | 0.001 | -0.001 |
| New York | $52,771 | 0.043 | A | $51,396 | 0.044 | A | 0.001 | $50,452 | 0.049 | A | 0.005 | $52,242 | 0.048 | A | -0.001 | $52,657 | 0.045 | A | -0.002 | 0.002 |
| West Virginia | $28,465 | 0.044 | A | $28,034 | 0.043 | A | -0.001 | $28,078 | 0.044 | A | 0.001 | $28,891 | 0.043 | A | -0.001 | $29,427 | 0.044 | A | 0.001 | 0.000 |
| New Hampshire | $41,766 | 0.042 | A | $41,383 | 0.043 | A | 0.001 | $40,631 | 0.045 | A | 0.002 | $41,951 | 0.046 | A | 0.001 | $42,818 | 0.043 | A | -0.003 | 0.001 |
| Wisconsin | $39,885 | 0.041 | B | $38,788 | 0.041 | B | 0.000 | $37,499 | 0.041 | B | -0.001 | $38,491 | 0.042 | A | 0.002 | $38,845 | 0.042 | A | -0.001 | 0.001 |
| Arkansas | $32,054 | 0.041 | B | $31,872 | 0.041 | B | 0.000 | $30,991 | 0.041 | B | 0.000 | $31,516 | 0.042 | A | 0.001 | $31,547 | 0.040 | A | -0.001 | 0.000 |
| Maryland | $45,168 | 0.042 | B | $45,511 | 0.045 | A | 0.004 | $44,632 | 0.044 | A | -0.001 | $45,685 | 0.043 | A | 0.000 | $46,054 | 0.040 | A | -0.003 | -0.001 |
| Ohio | $38,331 | 0.042 | B | $37,350 | 0.042 | B | 0.000 | $35,171 | 0.042 | A | 0.001 | $35,881 | 0.042 | A | -0.001 | $36,892 | 0.040 | A | -0.002 | -0.001 |
| Pennsylvania | $39,586 | 0.041 | B | $39,503 | 0.041 | B | 0.000 | $38,105 | 0.042 | B | 0.001 | $38,806 | 0.042 | A | 0.000 | $39,455 | 0.040 | A | -0.002 | -0.001 |
| South Carolina | $33,293 | 0.042 | A | $32,273 | 0.045 | A | 0.003 | $30,483 | 0.044 | A | -0.001 | $30,926 | 0.042 | A | -0.002 | $31,345 | 0.040 | A | -0.003 | -0.003 |
| Wyoming | $55,748 | 0.043 | A | $57,447 | 0.043 | A | -0.001 | $57,942 | 0.042 | B | -0.001 | $56,689 | 0.043 | A | 0.001 | $54,969 | 0.040 | A | -0.003 | -0.004 |
| Indiana | $38,876 | 0.038 | C | $37,653 | 0.041 | B | 0.002 | $35,202 | 0.045 | A | 0.004 | $37,273 | 0.048 | A | 0.004 | $37,935 | 0.039 | A | -0.009 | 0.001 |
| Michigan | $36,762 | 0.043 | A | $34,745 | 0.042 | B | -0.001 | $31,738 | 0.043 | A | 0.000 | $33,391 | 0.041 | A | -0.001 | $34,547 | 0.039 | B | -0.003 | -0.004 |
| Rhode Island | $42,025 | 0.041 | B | $41,160 | 0.042 | A | 0.001 | $40,565 | 0.041 | B | -0.001 | $41,000 | 0.041 | B | 0.000 | $41,061 | 0.039 | A | -0.002 | -0.002 |
| Alaska | $59,817 | 0.034 | D | $59,697 | 0.039 | C | 0.006 | $63,264 | 0.040 | C | 0.000 | $60,873 | 0.040 | B | 0.000 | $61,202 | 0.038 | B | -0.002 | 0.004 |
| Connecticut | $59,211 | 0.039 | C | $57,106 | 0.040 | B | 0.001 | $54,814 | 0.041 | B | 0.001 | $55,269 | 0.039 | B | -0.002 | $55,143 | 0.038 | B | -0.002 | -0.001 |
| Illinois | $46,362 | 0.034 | D | $45,557 | 0.036 | C | 0.001 | $43,851 | 0.037 | C | 0.001 | $44,481 | 0.038 | C | 0.001 | $45,306 | 0.038 | B | 0.000 | 0.004 |
| Georgia | $40,374 | 0.041 | B | $39,334 | 0.043 | A | 0.002 | $36,776 | 0.041 | B | -0.002 | $36,948 | 0.039 | C | -0.003 | $37,324 | 0.037 | B | -0.001 | -0.004 |
| Kansas | $40,676 | 0.040 | B | $40,641 | 0.041 | B | 0.001 | $38,980 | 0.042 | A | 0.001 | $39,636 | 0.038 | C | -0.004 | $40,716 | 0.037 | B | -0.001 | -0.003 |
| New Mexico | $35,008 | 0.038 | C | $34,340 | 0.039 | C | 0.001 | $34,485 | 0.043 | A | 0.004 | $34,263 | 0.039 | C | -0.004 | $33,872 | 0.037 | B | -0.002 | 0.000 |
| Alabama | $33,253 | 0.039 | C | $33,036 | 0.041 | B | 0.002 | $31,493 | 0.038 | C | -0.003 | $32,148 | 0.036 | C | -0.002 | $32,354 | 0.036 | C | 0.000 | -0.002 |
| Iowa | $42,280 | 0.037 | C | $40,998 | 0.037 | C | 0.001 | $40,141 | 0.039 | C | 0.001 | $40,657 | 0.036 | C | -0.002 | $41,404 | 0.036 | C | 0.000 | 0.000 |
| Kentucky | $33,181 | 0.036 | C | $32,794 | 0.038 | C | 0.002 | $31,313 | 0.039 | C | 0.001 | $32,659 | 0.038 | C | -0.001 | $33,135 | 0.036 | C | -0.002 | 0.000 |
| Mississippi | $29,353 | 0.040 | B | $29,557 | 0.041 | B | 0.001 | $28,289 | 0.039 | C | -0.002 | $28,741 | 0.037 | C | -0.002 | $28,337 | 0.036 | C | -0.001 | -0.004 |
| Massachusetts | $51,826 | 0.037 | C | $51,911 | 0.037 | C | -0.001 | $50,285 | 0.037 | C | 0.001 | $51,889 | 0.039 | C | 0.001 | $52,517 | 0.035 | C | -0.004 | -0.003 |
| Montana | $33,336 | 0.037 | C | $32,718 | 0.038 | C | 0.001 | $31,780 | 0.039 | C | 0.001 | $32,209 | 0.038 | C | -0.001 | $32,742 | 0.035 | C | -0.002 | -0.001 |
| Maine | $34,791 | 0.048 | A | $34,251 | 0.048 | A | 0.000 | $33,672 | 0.035 | D | -0.013 | $34,326 | 0.035 | C | 0.000 | $34,455 | 0.034 | C | -0.001 | -0.014 |
| Minnesota | $45,793 | 0.035 | D | $46,148 | 0.035 | D | 0.000 | $44,262 | 0.036 | C | 0.001 | $45,271 | 0.034 | D | -0.002 | $45,708 | 0.034 | C | 0.000 | -0.001 |
| Missouri | $37,246 | 0.034 | D | $37,505 | 0.035 | D | 0.000 | $35,663 | 0.035 | D | 0.001 | $36,139 | 0.033 | D | -0.002 | $36,169 | 0.033 | C | 0.000 | -0.001 |
| Nebraska | $43,097 | 0.035 | D | $43,255 | 0.035 | D | 0.000 | $42,823 | 0.036 | C | 0.001 | $44,061 | 0.037 | C | 0.000 | $44,594 | 0.033 | C | -0.003 | -0.001 |
| Texas | $44,964 | 0.035 | D | $44,310 | 0.034 | D | -0.001 | $43,221 | 0.038 | C | 0.004 | $44,203 | 0.037 | C | -0.001 | $45,025 | 0.033 | C | -0.004 | -0.002 |
| Hawaii | $45,261 | 0.044 | A | $45,112 | 0.035 | D | -0.009 | $42,995 | 0.035 | D | 0.000 | $43,769 | 0.033 | D | -0.002 | $44,296 | 0.032 | D | -0.001 | -0.012 |
| Idaho | $34,168 | 0.034 | D | $33,481 | 0.037 | C | 0.002 | $32,133 | 0.036 | C | 0.000 | $32,292 | 0.032 | F | -0.004 | $32,025 | 0.031 | D | -0.001 | -0.004 |
| Oklahoma | $35,713 | 0.033 | F | $36,633 | 0.032 | F | 0.000 | $35,523 | 0.031 | F | -0.001 | $35,349 | 0.029 | F | -0.002 | $35,726 | 0.031 | D | 0.002 | -0.001 |
| Virginia | $47,329 | 0.034 | D | $46,779 | 0.035 | D | 0.001 | $45,891 | 0.035 | D | 0.000 | $47,042 | 0.033 | D | -0.002 | $47,118 | 0.031 | D | -0.002 | -0.004 |
| Colorado | $47,480 | 0.030 | F | $47,239 | 0.030 | F | 0.000 | $45,450 | 0.031 | F | 0.001 | $45,759 | 0.032 | F | 0.001 | $45,913 | 0.029 | F | -0.003 | -0.001 |
| Florida | $38,907 | 0.036 | C | $37,212 | 0.037 | C | 0.001 | $34,775 | 0.033 | F | -0.004 | $34,519 | 0.030 | F | -0.002 | $34,440 | 0.029 | F | -0.001 | -0.007 |
| Washington | $47,315 | 0.031 | F | $46,963 | 0.031 | F | 0.001 | $45,113 | 0.031 | F | 0.000 | $45,631 | 0.031 | F | 0.000 | $45,942 | 0.029 | F | -0.002 | -0.002 |
| California | $48,646 | 0.034 | D | $47,976 | 0.033 | F | 0.000 | $45,105 | 0.031 | F | -0.002 | $44,793 | 0.028 | F | -0.003 | $44,898 | 0.028 | F | 0.001 | -0.005 |
| Nevada | $47,565 | 0.029 | F | $45,155 | 0.031 | F | 0.002 | $40,974 | 0.032 | F | 0.001 | $40,532 | 0.031 | F | -0.001 | $40,970 | 0.028 | F | -0.003 | 0.000 |
| North Carolina | $41,546 | 0.030 | F | $40,590 | 0.031 | F | 0.000 | $39,390 | 0.035 | D | 0.004 | $39,821 | 0.037 | C | 0.002 | $39,627 | 0.028 | F | -0.009 | -0.002 |
| Tennessee | $37,275 | 0.028 | F | $36,942 | 0.029 | F | 0.001 | $35,189 | 0.030 | F | 0.001 | $35,763 | 0.030 | F | 0.000 | $36,370 | 0.028 | F | -0.002 | 0.000 |
| Arizona | $39,553 | 0.031 | F | $38,395 | 0.033 | F | 0.002 | $34,905 | 0.030 | F | -0.003 | $34,463 | 0.028 | F | -0.002 | $34,676 | 0.027 | F | -0.001 | -0.004 |
| Utah | $38,995 | 0.031 | F | $39,001 | 0.035 | D | 0.003 | $37,770 | 0.033 | F | -0.002 | $37,903 | 0.030 | F | -0.002 | $38,373 | 0.027 | F | -0.003 | -0.004 |
| Louisiana | $42,658 | 0.028 | F | $41,493 | 0.028 | F | 0.001 | $42,268 | 0.032 | F | 0.003 | $44,209 | 0.030 | F | -0.001 | $42,764 | 0.026 | F | -0.005 | -0.002 |
| North Dakota | $40,436 | 0.029 | F | $43,530 | 0.029 | F | 0.000 | $44,359 | 0.029 | F | 0.000 | $46,867 | 0.030 | F | 0.001 | $49,847 | 0.026 | F | -0.004 | -0.004 |
| Oregon | $43,759 | 0.030 | F | $45,156 | 0.032 | F | 0.002 | $43,247 | 0.031 | F | -0.001 | $45,375 | 0.030 | F | -0.001 | $46,573 | 0.025 | F | -0.005 | -0.005 |
| South Dakota | $41,455 | 0.027 | F | $42,925 | 0.027 | F | 0.000 | $42,567 | 0.026 | F | -0.001 | $42,090 | 0.026 | F | 0.000 | $43,561 | 0.025 | F | -0.001 | -0.002 |
| Delaware | $64,900 | 0.024 | F | $60,747 | 0.024 | F | 0.000 | $62,072 | 0.025 | F | 0.001 | $61,677 | 0.024 | F | -0.001 | $61,737 | 0.022 | F | -0.002 | -0.002 |

[22] Note that while this table includes the inflation-adjusted per capita GDP for each state, the effort calculation was based on actual GDP by state, and actual state and local revenues for public education.

## Fairness Measure #4: Coverage

Coverage is an indicator that measures both the extent to which school-aged children attend public schools and the degree to which there is economic disparity between those within and outside of the public education system. While state policymakers have a somewhat limited ability to influence families in their schooling decisions, the consequences of these decisions are important to the functioning of the state's funding system. The share and economic status of the children in the public system affects the effort necessary to fairly fund the public schools. A higher percentage of students who enroll in public schools require that a greater effort be made to fund those schools. Further, a higher concentration of poor students in the public system not only requires more effort, but also greater attention to a fair distribution of funds. More broadly, a high share of private-school students from higher-income households affects the public and political will necessary to generate fair funding through the state's finance system.

The Coverage measure is presented in Table 5 and shows data on the percentage of school-aged children enrolled in public schools and the ratio of household income between public and nonpublic students. States are ranked on a combined index of these two measures.

Coverage rates range between 78% (Hawaii) and 94% (Utah). The income ratios between private and public students range from 104% in Alaska, where there are essentially no economic differences between the two groups, and 367% in Washington, D.C., where the median household income of children in nonpublic schools is $232,817 compared to only $63,422 for children in public schools.

The Coverage data should be considered in the context of the state fairness profiles. In states where there is low coverage and a high income gap between public and nonpublic students, like Louisiana and Delaware, the fairness profiles do not capture the 20% of students who are not in the public system. Because these children are also from higher-income families, the poverty rates in some districts may be understated, potentially biasing the analysis.[23]

The Coverage rankings remain fairly consistent from year to year, partly because they are based on multiyear Census data. However, it is interesting to note that private-school attendance is increasing in nearly all states, though only by an average of 1%.

[23] Recall that the Census poverty rates used in this report include all school-aged children within the school district boundaries, not just students attending the public schools.

## Table 5. Fairness Measure #4: Coverage

| State | 2007 | | | 2009 | | | 2011 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | % 6- to 16-Year-Olds in Public School | Private/ Public Income Ratio | Rank | % 6- to 16-Year-Olds in Public School | Private/ Public Income Ratio | Rank | % 6- to 16-Year-Olds in Public School | Median Household Income (Public School) | Median Household Income (Private School) | Private/ Public Income Ratio | Rank |
| Wyoming | 94% | 126% | 1 | 93% | 118% | 1 | 93% | $79,211 | $84,960 | 107% | 1 |
| Utah | 93% | 131% | 2 | 93% | 134% | 2 | 94% | $79,221 | $108,438 | 137% | 2 |
| Alaska | 90% | 130% | 5 | 90% | 123% | 3 | 90% | $88,156 | $91,421 | 104% | 3 |
| Vermont | 90% | 142% | 9 | 89% | 149% | 12 | 91% | $79,597 | $97,311 | 122% | 4 |
| Idaho | 91% | 132% | 4 | 90% | 129% | 4 | 91% | $68,125 | $87,929 | 129% | 5 |
| Montana | 89% | 135% | 7 | 89% | 125% | 6 | 88% | $68,719 | $73,393 | 107% | 6 |
| West Virginia | 91% | 159% | 8 | 91% | 162% | 9 | 92% | $62,074 | $94,028 | 151% | 7 |
| Arizona | 91% | 152% | 6 | 91% | 156% | 7 | 92% | $67,909 | $103,436 | 152% | 8 |
| New Hampshire | 88% | 125% | 10 | 88% | 127% | 8 | 89% | $96,236 | $118,757 | 123% | 9 |
| Colorado | 89% | 141% | 12 | 89% | 144% | 11 | 90% | $84,569 | $124,665 | 147% | 10 |
| Maine | 90% | 112% | 3 | 89% | 128% | 5 | 89% | $68,265 | $89,024 | 130% | 11 |
| Nevada | 92% | 195% | 15 | 92% | 201% | 17 | 92% | $68,988 | $121,141 | 176% | 12 |
| Iowa | 88% | 134% | 11 | 88% | 133% | 10 | 88% | $75,046 | $99,360 | 132% | 13 |
| Kansas | 88% | 155% | 19 | 88% | 153% | 18 | 89% | $74,406 | $105,852 | 142% | 14 |
| Oregon | 88% | 150% | 17 | 88% | 152% | 16 | 89% | $69,327 | $106,783 | 154% | 15 |
| Oklahoma | 90% | 185% | 23 | 90% | 182% | 20 | 91% | $62,186 | $108,196 | 174% | 16 |
| Michigan | 88% | 152% | 16 | 88% | 152% | 15 | 88% | $70,819 | $103,803 | 147% | 17 |
| New Jersey | 85% | 131% | 21 | 85% | 135% | 21 | 87% | $108,993 | $147,482 | 135% | 18 |
| Arkansas | 90% | 194% | 30 | 90% | 184% | 27 | 91% | $58,475 | $104,486 | 179% | 19 |
| Texas | 91% | 200% | 26 | 91% | 199% | 22 | 92% | $69,016 | $135,215 | 196% | 20 |
| Minnesota | 87% | 146% | 20 | 86% | 148% | 26 | 87% | $87,174 | $123,728 | 142% | 21 |
| New Mexico | 90% | 172% | 18 | 89% | 173% | 19 | 90% | $57,909 | $101,355 | 175% | 22 |
| South Carolina | 87% | 171% | 34 | 87% | 171% | 32 | 90% | $60,297 | $103,956 | 172% | 23 |
| Washington | 88% | 169% | 27 | 88% | 169% | 24 | 89% | $80,844 | $128,228 | 159% | 24 |
| South Dakota | 88% | 133% | 13 | 88% | 143% | 14 | 90% | $72,495 | $126,053 | 174% | 25 |
| Virginia | 88% | 166% | 28 | 88% | 162% | 25 | 88% | $91,390 | $143,865 | 157% | 26 |
| Massachusetts | 87% | 149% | 22 | 87% | 150% | 23 | 88% | $102,716 | $154,709 | 151% | 27 |
| North Dakota | 88% | 149% | 14 | 88% | 145% | 13 | 87% | $81,633 | $116,066 | 142% | 28 |
| Wisconsin | 84% | 137% | 35 | 84% | 132% | 30 | 85% | $77,536 | $92,688 | 120% | 29 |
| Nebraska | 86% | 139% | 24 | 85% | 147% | 31 | 87% | $73,217 | $107,562 | 147% | 30 |
| Indiana | 86% | 150% | 29 | 86% | 151% | 29 | 87% | $67,688 | $103,448 | 153% | 31 |
| Alabama | 86% | 177% | 38 | 87% | 178% | 38 | 88% | $61,947 | $102,526 | 166% | 32 |
| Connecticut | 88% | 164% | 25 | 88% | 169% | 28 | 88% | $111,974 | $188,105 | 168% | 33 |
| California | 89% | 188% | 32 | 89% | 189% | 33 | 90% | $78,287 | $148,658 | 190% | 34 |
| Illinois | 86% | 155% | 33 | 86% | 158% | 34 | 87% | $80,816 | $131,563 | 163% | 35 |
| North Carolina | 89% | 185% | 31 | 89% | 188% | 35 | 89% | $65,607 | $118,579 | 181% | 36 |
| Georgia | 88% | 196% | 39 | 88% | 198% | 39 | 89% | $66,759 | $122,954 | 184% | 37 |
| Rhode Island | 86% | 162% | 37 | 85% | 157% | 36 | 87% | $79,796 | $134,441 | 168% | 38 |
| Ohio | 84% | 150% | 36 | 85% | 151% | 37 | 85% | $69,274 | $101,240 | 146% | 39 |
| Kentucky | 86% | 178% | 41 | 86% | 183% | 40 | 88% | $61,009 | $109,549 | 180% | 40 |
| Pennsylvania | 83% | 145% | 43 | 83% | 146% | 41 | 84% | $78,514 | $114,554 | 146% | 41 |
| Missouri | 83% | 158% | 44 | 83% | 157% | 42 | 85% | $69,479 | $107,486 | 155% | 42 |
| Florida | 86% | 194% | 46 | 86% | 194% | 45 | 87% | $66,526 | $121,552 | 183% | 43 |
| Mississippi | 88% | 193% | 40 | 87% | 202% | 43 | 87% | $51,771 | $97,362 | 188% | 44 |
| New York | 84% | 155% | 42 | 83% | 160% | 44 | 84% | $85,835 | $139,531 | 163% | 45 |
| Maryland | 81% | 162% | 47 | 82% | 162% | 47 | 84% | $98,565 | $158,741 | 161% | 46 |
| Tennessee | 87% | 203% | 45 | 87% | 204% | 46 | 87% | $61,468 | $119,902 | 195% | 47 |
| Delaware | 79% | 185% | 50 | 80% | 186% | 49 | 81% | $71,543 | $133,740 | 187% | 48 |
| Hawaii | 80% | 153% | 48 | 79% | 157% | 48 | 78% | $83,578 | $134,460 | 161% | 49 |
| Louisiana | 81% | 199% | 49 | 81% | 200% | 50 | 81% | $58,704 | $116,732 | 199% | 50 |
| District of Columbia | 78% | 357% | 51 | 78% | 349% | 51 | 79% | $63,422 | $232,817 | 367% | 51 |

# III. The National Report Card: Third Edition

The National Report Card seeks to evaluate whether states are fairly funding their public schools based on four indicators: funding level, funding distribution, effort, and coverage. While providing objective data on each of the four measures, the report also ranks or grades states from highest to lowest performing. While it makes no assumptions about thresholds at which states could be said to be "fair" or "unfair," these comparative evaluations offer some indication of whether a state is making the necessary effort to develop a fair funding system. Further, using the five years of data that are now available, it is possible to determine whether states are heading in the right or wrong direction.

While each of these indicators is important on its own, the complexity of each state's finance system is best addressed by considering the interaction of all four indictors together. For example, a state may have high funding levels, but distribute that funding regressively, like New York. Or, a state may have a progressive funding distribution, but very low funding levels, like Utah. Some states may have high effort scores, but their lack of fiscal capacity may still result in low overall funding levels, like Arkansas. Only by examining all four indicators will the complexities, and sometimes inconsistencies, in a state's funding system become clear.

Of course, each state's finance system is embedded in a complicated and complex political and economic context. This report cannot address these complicated histories for all states. As such, the Report Card's results should be approached with caution, understanding that each state has a unique story. The hope, however, is that these findings can start a conversation about how states can work toward a fair system of school funding that recognizes the needs of its students.

Table 6 presents the ratings for all four indicators. Changes in the state's scores on these indicators from 2007 are noted by the arrows. Upward green arrows means the state improved, red arrows down signify a decline, and a sideways yellow arrow indicates no change. Note that these arrows refer to absolute changes in the indicators, not to the relative position as indicated by the grades and ranks.

Some general findings to consider:

- Only three states are positioned relatively well on all four indicators, receiving at least a "C" in Distribution and Effort and ranking in the top half of states in Funding Level and Coverage. These states are Minnesota, New Jersey, and West Virginia, though all of them have areas in which they could improve. Minnesota is just above average in funding level and only gets a "C" in Effort. As noted previously, though still performing better than many others, New Jersey has recently become less progressive. And while Minnesota receives an "A" in Distribution, it hovers just around average for all other indicators.

- Two states, North Carolina and Missouri, received low ratings in each of the four indicators. These are low-effort, regressive states with low funding levels and low coverage. Without significant improvements to their funding systems, there is little chance that they are providing their students, especially those who are low-income, a meaningful education.

- The majority of states have funding systems with "flat" or "regressive" distribution patterns that ignore the need for additional funding in high-poverty districts.

- The trend over the past years demonstrates how vulnerable school funding systems are to economic downturns. Not only did most states see a declining financial base from which to fund schools, most states have actually reduced the share that is spent on education. Funding levels are stagnant or down, and many states shifted toward more regressive, or less progressive, distribution of funds to districts.

## Table 6. The National Report Card

| | Funding Distribution | | Effort | | Funding Level | | Coverage | |
|---|---|---|---|---|---|---|---|---|
| State | Grade | Change from 2007 | Grade | Change from 2007 | Rank | Change from 2007 | Rank | Change from 2007 |
| Alabama | D | ↑ | C | ↓ | 38 | ↓ | 32 | ↑ |
| Alaska | | | B | ↑ | 3 | ↓ | 3 | ↑ |
| Arizona | C | ↓ | F | ↓ | 47 | ↓ | 8 | ↓ |
| Arkansas | B | ↑ | A | ↓ | 30 | ↑ | 19 | ↑ |
| California | A | ↑ | F | ↓ | 42 | ↓ | 34 | ↓ |
| Colorado | C | ↑ | F | ↓ | 35 | ↑ | 10 | ↑ |
| Connecticut | C | ↓ | B | ↓ | 4 | ↑ | 33 | ↓ |
| Delaware | C | ↑ | F | ↓ | 12 | ↓ | 48 | ↑ |
| District of Columbia | | | | | | | 51 | ↓ |
| Florida | B | ↑ | F | ↓ | 43 | ↓ | 43 | ↑ |
| Georgia | A | ↑ | B | ↓ | 36 | ↓ | 37 | ↑ |
| Hawaii | | | D | ↓ | | | 49 | ↓ |
| Idaho | F | ↑ | D | ↓ | 49 | ↓ | 5 | ↓ |
| Illinois | F | ↑ | B | ↑ | 16 | ↑ | 35 | ↑ |
| Indiana | A | ↓ | A | ↑ | 18 | ↑ | 31 | ↓ |
| Iowa | D | ↓ | C | ↓ | 17 | ↑ | 13 | ↓ |
| Kansas | C | ↑ | B | ↓ | 22 | ↑ | 14 | ↑ |
| Kentucky | A | ↑ | C | → | 33 | ↑ | 40 | ↑ |
| Louisiana | A | ↑ | F | ↓ | 26 | ↑ | 50 | ↓ |
| Maine | D | ↑ | C | ↓ | 15 | ↑ | 11 | ↓ |
| Maryland | F | ↑ | A | ↓ | 9 | ↑ | 46 | ↑ |
| Massachusetts | A | ↓ | C | ↓ | 6 | ↓ | 27 | ↓ |
| Michigan | C | ↑ | B | ↓ | 24 | ↑ | 17 | ↓ |
| Minnesota | A | ↓ | C | ↓ | 10 | ↑ | 21 | ↓ |
| Mississippi | C | ↓ | C | ↓ | 45 | ↑ | 44 | ↓ |
| Missouri | D | ↑ | C | ↓ | 34 | ↑ | 42 | ↑ |
| Montana | C | ↓ | C | ↓ | 31 | ↑ | 6 | ↑ |
| Nebraska | D | ↓ | C | ↓ | 21 | ↑ | 30 | ↓ |
| Nevada | F | ↓ | F | ↓ | 37 | ↑ | 12 | ↑ |
| New Hampshire | F | ↑ | A | ↑ | 13 | ↑ | 9 | ↓ |
| New Jersey | B | ↓ | A | ↓ | 5 | ↓ | 18 | ↑ |
| New Mexico | B | ↓ | B | ↓ | 29 | ↑ | 22 | ↓ |
| New York | F | ↑ | A | ↑ | 2 | ↑ | 45 | ↓ |
| North Carolina | F | ↓ | F | ↓ | 40 | ↑ | 36 | ↓ |
| North Dakota | F | ↓ | F | ↓ | 23 | ↑ | 28 | ↓ |
| Ohio | A | ↓ | A | ↓ | 19 | ↑ | 39 | ↓ |
| Oklahoma | B | ↓ | D | ↓ | 46 | ↑ | 16 | ↑ |
| Oregon | C | ↓ | F | ↓ | 41 | ↓ | 15 | ↑ |
| Pennsylvania | D | ↑ | A | ↓ | 8 | ↑ | 41 | ↑ |
| Rhode Island | C | ↓ | A | ↓ | 11 | ↑ | 38 | ↑ |
| South Carolina | C | ↑ | A | ↓ | 28 | ↑ | 23 | ↑ |
| South Dakota | A | ↑ | F | ↓ | 32 | ↑ | 25 | ↓ |
| Tennessee | A | ↓ | F | → | 44 | ↑ | 47 | ↓ |
| Texas | F | ↓ | C | ↓ | 39 | ↑ | 20 | ↑ |
| Utah | A | ↓ | F | ↓ | 48 | ↓ | 2 | ↓ |
| Vermont | F | ↓ | A | ↓ | 7 | ↓ | 4 | ↑ |
| Virginia | D | ↑ | D | ↓ | 25 | ↓ | 26 | ↑ |
| Washington | C | ↑ | F | ↓ | 27 | ↑ | 24 | ↑ |
| West Virginia | B | ↑ | A | → | 20 | ↑ | 7 | ↑ |
| Wisconsin | C | ↑ | A | ↑ | 14 | ↑ | 29 | ↑ |
| Wyoming | D | ↓ | A | ↓ | 1 | ↑ | 1 | ↑ |

# IV. Fair School Funding and Resource Allocation

While the four main fairness indicators provide a picture of the condition of school funding across the nation, in this section we explore some of the real consequences of funding fairness, both positive and negative, for schools and students. Decisions at the state level about how to fund education necessarily trickle down to the resources available for schools, staff, and the families that they serve. We present here three additional indicators that address how funding fairness impacts the actual distribution of resources on the ground.

## Early Childhood Education

Access to preschool is one of the most universally accepted ways in which to level the playing field for poor students. Research has shown that access to high-quality preschool programs boosts achievement, lowers grade retention, and reduces the need for special education services. Preschool has also demonstrated long-term benefits for participants including greater high school graduation and college attendance rates, higher earnings, and lower unemployment.[24] Providing access to high-quality preschool is one of the most effective ways to reduce the achievement gap, and one recently advocated and promoted by the Obama administration.

The early childhood indicator uses Census data from the American Community Survey (3-Year Estimates) to determine the proportion of a state's 3- and 4-year-olds enrolled in school. Enrollment rates are examined by income level, with low income defined as families at 185% or below the Federal poverty level.[25] Children can be enrolled in either public or private programs, and there are no restrictions on the number of days per week or hours per day that the student attends. Consequently, the results should be taken with some caution, as there is no check on the quality or duration of the educational component of these programs.

Results show that total school enrollment for 3- and 4-year-olds is 47% nationally, ranging from a low of 29% in Nevada to a high of 65% in the District of Columbia. The enrollment rate for low-income children is lower at only 38% nationally. Nevada is also the state with the lowest enrollment rates among low-income children and New Jersey has the highest rates at 56%. All states, except North Dakota, have enrollment rates that are lower for low-income children. Montana and South Dakota have relatively equal enrollment rates by income, but low overall participation. The largest enrollment gaps between low-income children and others are in the District of Columbia (54% vs. 75%), New Hampshire (33% vs. 54%), and North Carolina (35% vs. 54%).

Developing and funding a high-quality preschool program, one that especially targets low-income children, is one way that states committed to fair school funding can provide an equal educational opportunity for all children. Even though the preschool participation rates presented here include privately and publicly funded programs and are affected by other factors, they do correlate with other measures of funding fairness. For example, many of the 10 states with the lowest preschool enrollment rates for low-income children also appear in the bottom 10 in Funding Level (Arizona, Utah, Idaho), Funding Distribution (Nevada, Idaho, North Dakota), and Effort (Nevada, Arizona, South Dakota, North Dakota). Conversely, many states that rank well on early childhood also appear at the top of other fairness indicators (e.g., Massachusetts, New Jersey, Maryland). The relationship between Effort and Early Childhood Enrollment among low-income students is presented in Figure 16. States that have high effort levels are more likely to have a greater percentage of their low-income 3- and 4-year-olds enrolled in school.

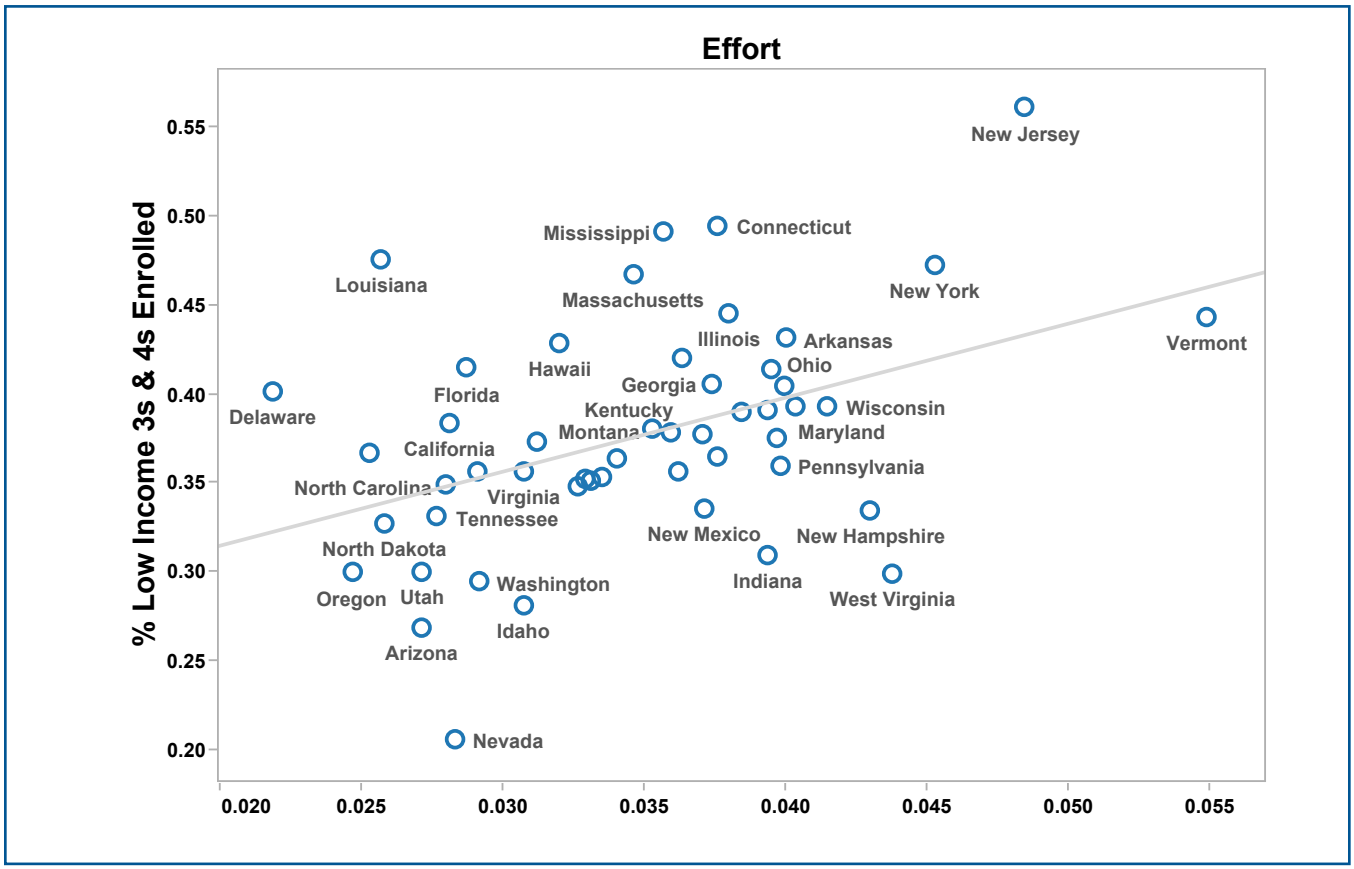
[24] For a review, see Barnett, W. S. (2011), "Effectiveness of early educational intervention." *Science*, 333, 975–978.

[25] This is the level at which children qualify for "free" or "reduced-price" lunch under the national school lunch program.

## Table 7. School Enrollment for 3- and 4-Year-Olds by Income Level

| State | Total | >185% Federal Poverty Line | <185% Federal Poverty Line | Attendance Gap by Income |
|---|---|---|---|---|
| Alabama | 44% | 52% | 36% | -17% |
| Alaska | 40% | 42% | 36% | -6% |
| Arizona | 34% | 42% | 27% | -15% |
| Arkansas | 47% | 51% | 43% | -8% |
| California | 47% | 53% | 38% | -15% |
| Colorado | 45% | 50% | 36% | -15% |
| Connecticut | 60% | 63% | 49% | -14% |
| Delaware | 49% | 54% | 40% | -14% |
| District of Columbia | 65% | 75% | 54% | -20% |
| Florida | 50% | 57% | 41% | -16% |
| Georgia | 50% | 57% | 40% | -17% |
| Hawaii | 52% | 56% | 43% | -13% |
| Idaho | 34% | 39% | 28% | -11% |
| Illinois | 52% | 56% | 44% | -12% |
| Indiana | 39% | 44% | 31% | -13% |
| Iowa | 45% | 47% | 42% | -5% |
| Kansas | 45% | 51% | 38% | -13% |
| Kentucky | 42% | 47% | 38% | -9% |
| Louisiana | 52% | 57% | 47% | -9% |
| Maine | 41% | 45% | 35% | -10% |
| Maryland | 50% | 55% | 39% | -15% |
| Massachusetts | 58% | 62% | 47% | -15% |
| Michigan | 47% | 52% | 39% | -13% |
| Minnesota | 45% | 48% | 36% | -12% |
| Mississippi | 51% | 53% | 49% | -4% |
| Missouri | 44% | 50% | 35% | -15% |
| Montana | 38% | 39% | 38% | -1% |
| Nebraska | 42% | 47% | 35% | -12% |
| Nevada | 29% | 35% | 21% | -15% |
| New Hampshire | 49% | 54% | 33% | -20% |
| New Jersey | 63% | 66% | 56% | -10% |
| New Mexico | 37% | 42% | 33% | -9% |
| New York | 55% | 60% | 47% | -13% |
| North Carolina | 45% | 54% | 35% | -19% |
| North Dakota | 32% | 32% | 33% | 0% |
| Ohio | 45% | 49% | 40% | -8% |
| Oklahoma | 41% | 45% | 37% | -8% |
| Oregon | 40% | 47% | 30% | -17% |
| Pennsylvania | 46% | 52% | 36% | -16% |
| Rhode Island | 48% | 54% | 39% | -15% |
| South Carolina | 49% | 56% | 41% | -15% |
| South Dakota | 37% | 38% | 37% | -2% |
| Tennessee | 40% | 47% | 33% | -14% |
| Texas | 42% | 49% | 35% | -14% |
| Utah | 39% | 45% | 30% | -15% |
| Vermont | 49% | 52% | 44% | -8% |
| Virginia | 48% | 54% | 36% | -18% |
| Washington | 40% | 46% | 29% | -17% |
| West Virginia | 34% | 39% | 30% | -9% |
| Wisconsin | 42% | 44% | 39% | -5% |
| Wyoming | 42% | 44% | 37% | -7% |

## Figure 16. State Effort and Early Childhood Coverage




# Pupil-to-Teacher Ratios

Salaries and benefits of teachers and other staff dominate district budgets. As a result, the fairness with which a state distributes funding directly impacts districts' ability to appropriately staff their schools. A fair funding system would allow high-poverty districts to hire greater numbers of staff relative to their student population in order to provide the extra resources and supports to meet greater student needs. Multiple experimental-design research studies have shown that students who are assigned to smaller classes have better academic outcomes.[26] In fact, students from disadvantaged backgrounds, both racial and economic, experience larger gains from smaller class sizes than middle-class white students. High-poverty schools may also require a larger staff for instructional coaches, math and literacy specialists, and other resources in and out of the classroom. Therefore, one way to investigate the real impact of the fairness of states' funding systems, or lack thereof, is to examine the disparities in pupil-to-teacher ratios between high- and low-poverty districts.

To determine the adequacy of staffing levels and whether there are disparities by poverty, we use district-level pupil-to-teacher ratios (PTR) from the National Center for Education Statistics to create a PTR fairness measure. Similar to the Funding Distribution measure, a regression equation is modeled to estimate the relationship between PTR and poverty levels.[27] In this case, a fair system would be one in which PTR estimates are lower in high-poverty districts (fewer students per

[26] See, for example, Mosteller, F. (1995), "The Tennessee Study of Class Size in the Early School Grades." *The Future of Children, 5*(2).

[27] In the regression, PTR is the dependent variable; independent variables include size, sparsity, poverty, and an interaction term for state by poverty. These estimates are used to generate a PTR profile similar to Funding Distribution in which PTR is simulated at varying levels of poverty from 0% to 30%.

teacher) than in low-poverty districts. The PTR Fairness Ratio is calculated as the predicted PTR at 0% poverty over the PTR at 30% poverty. Consistent with the Distribution measure, a higher ratio indicates greater fairness.

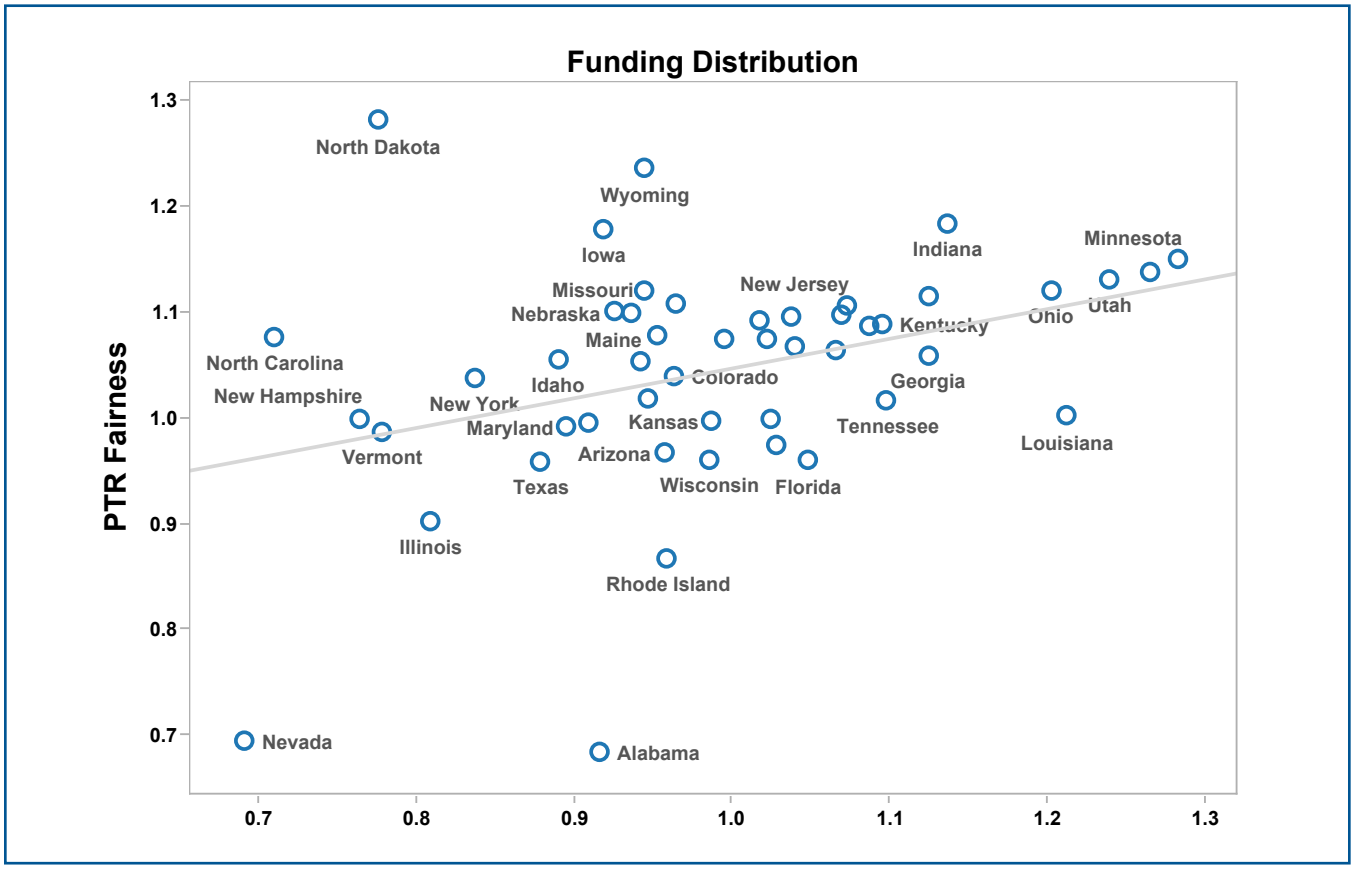
The average pupil-to-teacher ratio — at 20% poverty and controlling for other district characteristics — ranges from 13 in New York to a striking 23 in Utah. The PTR Fairness Ratio ranges from 128% in North Dakota to 68% in Alabama. Practically, this means that low-poverty (0%) districts in North Dakota average 15 students per teacher, while there are only 12 students per teacher in the highest-poverty districts. In contrast, in Alabama, a high-poverty district averages 19 students per teacher compared to only 13 in the lowest-poverty districts. Thirty-two states have PTR Fairness Ratios that suggest that greater staffing resources are provided to higher-poverty districts, though for many states the differences are minimal. As expected, the recession's impact can be observed on the staffing levels in schools. Pupil-to-teacher ratios increased in 34 states between 2009 and 2011, and became less fair in 32 states.

Not surprisingly, there is also a correlation between the states' distributions of both funding and staffing resources by poverty (see Figure 17). States that are progressively funded are able to leverage those funds to provide greater staffing resources to address the needs of students in high-poverty districts. For example, Minnesota, Utah, and South Dakota are progressively funded and have a fair distribution of teaching staff (though Utah's low funding levels result in high pupil-to-teacher ratios overall). Nevada, Alabama, and Illinois are regressively funded and have larger PTRs in their higher-poverty districts.

## Table 8. PTR Fairness Ratio

| State | 2009 | | | | | 2011 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0% | 10% | 20% | 30% | PTR Fairness | 0% | 10% | 20% | 30% | PTR Fairness |
| North Dakota | 15 | 14 | 13 | 12 | 127% | 15 | 14 | 13 | 12 | 128% |
| Wyoming | 14 | 13 | 13 | 12 | 120% | 16 | 15 | 14 | 13 | 123% |
| Indiana | 20 | 18 | 17 | 16 | 125% | 21 | 20 | 19 | 18 | 118% |
| Iowa | 16 | 15 | 14 | 14 | 114% | 16 | 16 | 15 | 14 | 118% |
| Minnesota | 18 | 17 | 16 | 15 | 122% | 18 | 17 | 16 | 16 | 115% |
| South Dakota | 17 | 16 | 15 | 15 | 113% | 16 | 15 | 15 | 14 | 114% |
| Utah | 26 | 24 | 22 | 20 | 133% | 25 | 24 | 23 | 22 | 113% |
| Ohio | 19 | 18 | 17 | 16 | 112% | 19 | 18 | 18 | 17 | 112% |
| Virginia | 18 | 18 | 17 | 17 | 109% | 18 | 18 | 17 | 16 | 112% |
| Massachusetts | 15 | 14 | 14 | 13 | 116% | 15 | 14 | 14 | 13 | 111% |
| Washington | 21 | 20 | 19 | 18 | 111% | 21 | 21 | 20 | 19 | 111% |
| Missouri | 16 | 15 | 15 | 14 | 113% | 16 | 15 | 15 | 15 | 110% |
| Nebraska | 15 | 15 | 14 | 13 | 116% | 15 | 15 | 14 | 14 | 110% |
| New Jersey | 14 | 13 | 12 | 12 | 118% | 15 | 15 | 14 | 14 | 110% |
| Arkansas | 16 | 15 | 14 | 13 | 118% | 16 | 15 | 15 | 14 | 109% |
| Kentucky | 17 | 16 | 16 | 15 | 111% | 17 | 17 | 16 | 16 | 109% |
| Montana | 18 | 17 | 16 | 15 | 113% | 17 | 17 | 16 | 16 | 109% |
| Oklahoma | 18 | 17 | 16 | 16 | 110% | 18 | 18 | 17 | 17 | 109% |
| California | 23 | 22 | 22 | 21 | 107% | 24 | 24 | 23 | 22 | 108% |
| Michigan | 19 | 19 | 18 | 18 | 107% | 20 | 19 | 19 | 18 | 108% |
| Delaware | 17 | 16 | 15 | 14 | 124% | 16 | 15 | 15 | 14 | 107% |
| North Carolina | 15 | 15 | 15 | 14 | 106% | 16 | 16 | 15 | 15 | 107% |
| Oregon | 22 | 20 | 19 | 18 | 123% | 22 | 22 | 21 | 21 | 107% |
| West Virginia | 15 | 15 | 14 | 14 | 108% | 15 | 14 | 14 | 14 | 107% |
| Georgia | 14 | 14 | 14 | 14 | 101% | 16 | 15 | 15 | 15 | 106% |
| New Mexico | 15 | 15 | 15 | 15 | 101% | 16 | 16 | 16 | 15 | 106% |
| Idaho | 20 | 19 | 18 | 18 | 112% | 18 | 18 | 18 | 18 | 105% |
| Maine | 14 | 14 | 13 | 13 | 105% | 13 | 13 | 13 | 13 | 105% |
| Colorado | 17 | 17 | 17 | 17 | 101% | 18 | 18 | 18 | 18 | 104% |
| New York | 13 | 13 | 13 | 13 | 97% | 13 | 13 | 13 | 13 | 104% |
| Mississippi | 15 | 15 | 15 | 15 | 102% | 16 | 16 | 16 | 16 | 102% |
| Tennessee | 15 | 15 | 15 | 15 | 102% | 16 | 16 | 15 | 15 | 101% |
| Kansas | 15 | 15 | 14 | 14 | 111% | 15 | 15 | 15 | 15 | 100% |
| Louisiana | 13 | 14 | 14 | 14 | 93% | 15 | 15 | 15 | 15 | 100% |
| New Hampshire | 15 | 14 | 14 | 13 | 121% | 13 | 13 | 13 | 13 | 100% |
| South Carolina | 15 | 15 | 15 | 15 | 101% | 16 | 16 | 16 | 16 | 100% |
| Maryland | 15 | 14 | 14 | 14 | 109% | 14 | 14 | 14 | 15 | 99% |
| Pennsylvania | 15 | 15 | 15 | 14 | 104% | 14 | 14 | 14 | 14 | 99% |
| Vermont | 14 | 14 | 14 | 13 | 102% | 13 | 13 | 13 | 13 | 98% |
| Arizona | 19 | 19 | 18 | 18 | 105% | 19 | 20 | 20 | 20 | 97% |
| Connecticut | 12 | 12 | 12 | 12 | 101% | 13 | 13 | 13 | 14 | 97% |
| Florida | 15 | 14 | 14 | 14 | 105% | 15 | 15 | 16 | 16 | 96% |
| Texas | 15 | 15 | 15 | 15 | 99% | 14 | 15 | 15 | 15 | 96% |
| Wisconsin | 15 | 15 | 16 | 16 | 93% | 15 | 16 | 16 | 16 | 96% |
| Alaska | 21 | 19 | 16 | 13 | 169% | 18 | 18 | 18 | 19 | 93% |
| Illinois | 15 | 16 | 17 | 18 | 83% | 16 | 16 | 17 | 17 | 90% |
| Rhode Island | 12 | 13 | 13 | 14 | 88% | 12 | 13 | 13 | 14 | 86% |
| Nevada | 17 | 19 | 21 | 23 | 73% | 15 | 17 | 19 | 21 | 69% |
| Alabama | 15 | 15 | 16 | 16 | 93% | 13 | 15 | 17 | 19 | 68% |

## Figure 17. PTR Fairness and Funding Distribution




# Wage Competitiveness

It is universally accepted that high-quality teachers are a fundamental component of an equitable and successful school system. The role that teacher salaries play in developing a high-quality workforce is a more controversial issue. Putting aside the contentious issues of merit pay and salary schedules, the more fundamental question is whether schools can attract and retain high-quality teachers by offering competitive salaries. Not only do districts compete among themselves for quality teaching staff, but the profession itself must compete with other more lucrative career paths. Teacher pay is increasingly uncompetitive with the salaries offered by other professions. And research shows that teachers' overall wages and relative wages affect the quality of those who choose that career path, and that in turn affects student outcomes.[28]

A fair school funding system should provide districts with the opportunity to attract and retain the best teaching talent. To achieve this goal, districts must be able to offer a competitive salary, and to offer competitive salaries districts must be fairly funded.

To measure whether states are offering salaries that keep pace with other professional opportunities, we devised a wage competitiveness index. The index is calculated using wage data from the Census' American Community Survey (3-Year Estimates). The sample is limited to persons age 25

[28] See, for example, Murnane, R. J. and R. Olsen (1989), "The effects of salaries and opportunity costs on length of stay in teaching. Evidence from Michigan." *Review of Economics and Statistics 71*(2) 347–352; Loeb, S. and M. Page (2000), "Examining the Link Between Teacher Wages and Student Outcomes: The Importance of Alternative Labor Market Opportunities and Non-Pecuniary Variation." *Review of Economics and Statistics 82*(3) 393–408; Ferguson, Ronald (1991), "Paying for Public Education: New Evidence on How and Why Money Matters." *Harvard Journal on Legislation*. 28(2) 465–498.

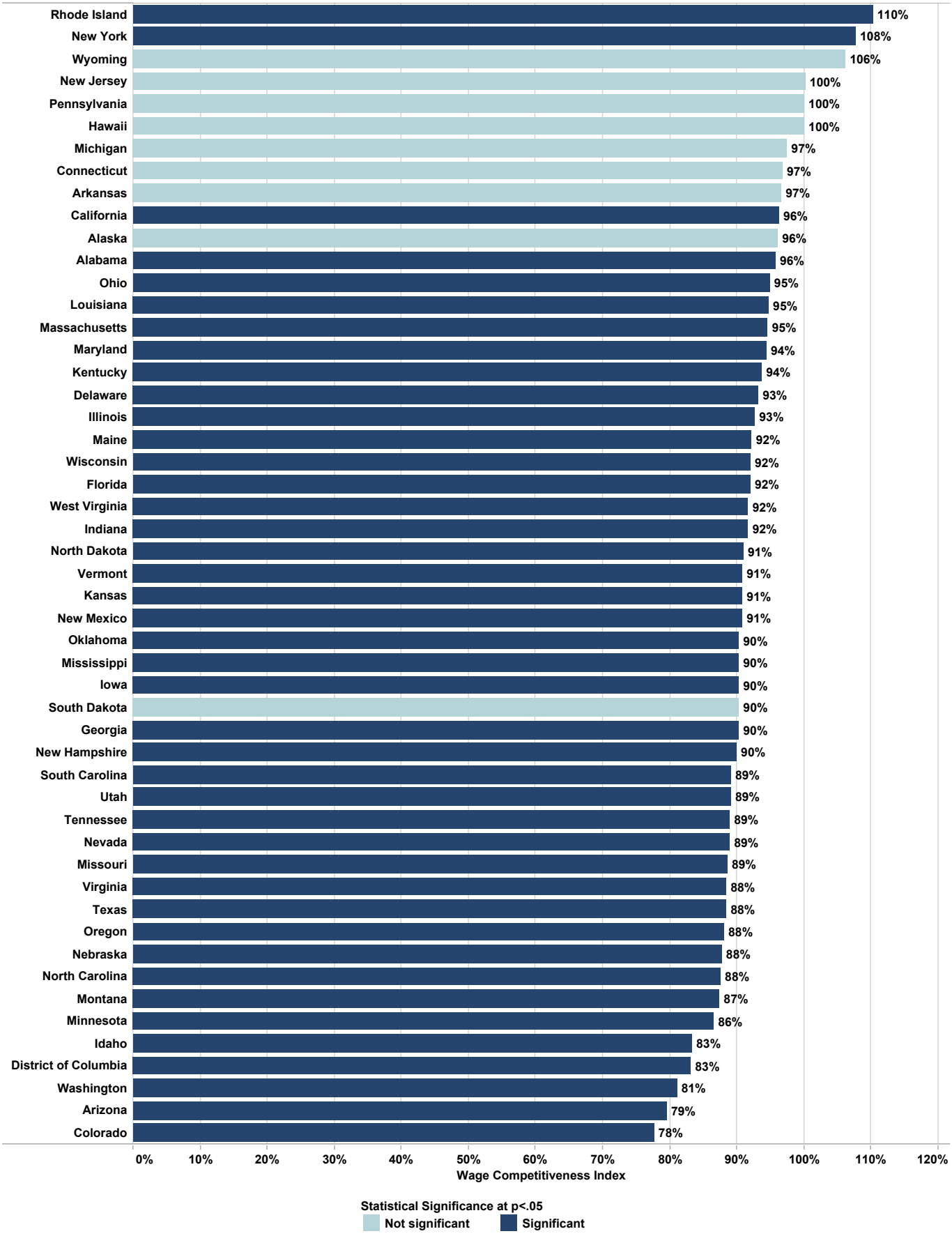
to 39 to indicate the desirability of teaching for incoming professionals. By controlling for hours and weeks worked, age, degree level, and the labor market of their place of work, it allows a comparison between the annual wages of teachers and similar workers in each state.[29]

Results show that most states have teacher salaries that are below those of their non-teacher counterparts, controlling for age, education, and hours/weeks worked. In fact, only three states — Rhode Island, Wyoming, and New York — have teacher wages that outpace those of comparable workers. The worst states are Colorado, Arizona, Washington, the District of Columbia, and Idaho, where teachers can expect to make less than 85% of the wages of similar professionals.

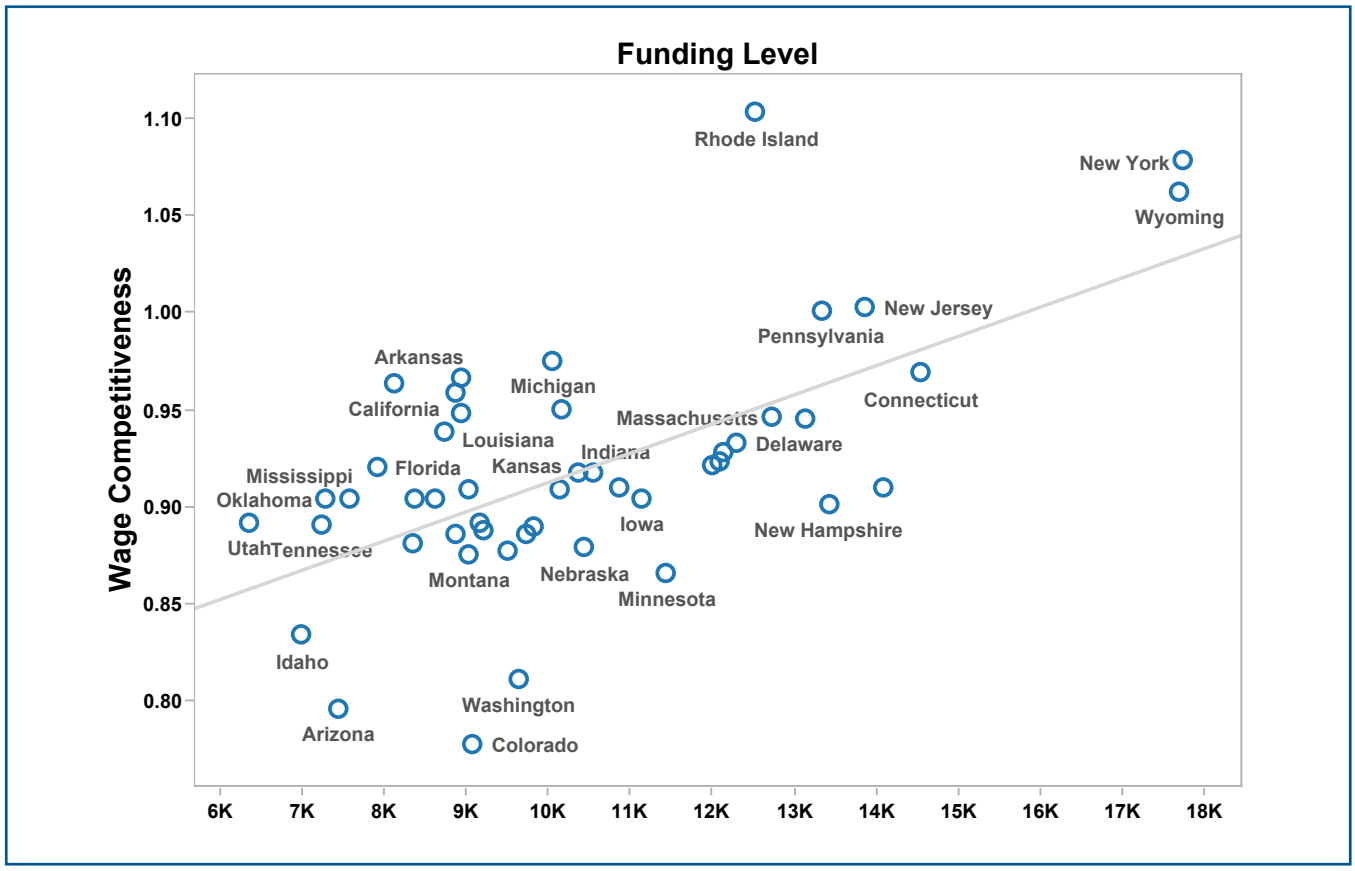
As expected, states that have higher overall funding levels are able to offer teachers more competitive salaries, like New York and Wyoming. The strong correlation between funding level and wage competitiveness is shown in Figure 19.

[29] These results may differ from other similar analyses because the wage comparisons are between workers within a state, not within a metropolitan area or labor market. Other models are typically performed at the labor market level, so will compare workers across state boundaries, and will therefore lead to different findings.

## Figure 18. Wage Competitiveness



## Figure 19. Wage Competitiveness and Funding Level



# V. Conclusion

The National Report Card focuses on a critical question: Are states making a concerted effort to provide a fair system of school funding to deliver the resources necessary for all children to achieve rigorous academic standards? This year's Report Card shows the extent to which states respond to that challenge during a period of national economic hardship.

The Report Card shows how the declining revenues and tight budgets of the Great Recession led states to reduce revenue and resources for the nation's public schools.

States, when faced with a fiscal crisis, must carefully consider the effect their response will have on public education, especially for districts and schools serving poor children. Further, the response must carefully consider its future implications. As this Report Card demonstrates, the federal government's infusion of substantial amounts of short-term fiscal stabilization funds under ARRA into state finance formulas is having longer-term negative consequences in many states. The federal government must reshape its policies in providing education funding to include mechanisms that will prevent states from using federal funds to fill their own budget holes, to cut their own funds when the federal monies expire, or to otherwise subsidize their unfair school finance systems.

In fact, the federal government has recently demonstrated an interest in encouraging states to improve the condition of their school finance systems with the creation of the Equity and Excellence Commission. Charged with reviewing the state of education finance nationally, the Commission's final report offers many recommendations to guide states in creating funding systems that link educational costs with standards-based reform. For more information on the Equity Commission, see Appendix B.

The unfair condition of school funding in far too many states demonstrates again the importance of sustained advocacy to convince elected officials and policymakers to undertake meaningful and enduring school finance reform. And, in the face of a recession, advocates in even those states with a demonstrated track record on fair school funding must redouble their efforts to prevent backsliding and retreat from fairness and equity.

The consequences of a failure to design, implement, and sustain fair systems of school funding are felt directly in the everyday classroom experiences of students across the country. States that prioritize and invest in their public education systems have the ability to attract high-quality teachers, realize the importance of early childhood education, and are better able to provide small class sizes and the staffing resources to meet the needs of all children. These fair funding states have also demonstrated stronger academic performance when compared to states with flat or regressive funding. Simply put, states with unfair school funding have fewer resources in classrooms and schools to support teachers and students and lag in educational performance. These states and regions are an educational drag on the entire nation.

We hope this Report Card will sound a clarion call to elevate fair school funding to the top of the education reform agenda in state capitols and in Washington, D.C.

# Appendix A: National Child and Student Poverty Rates

| State | Census SAIPE Poverty Rate | Predicted Free/ Reduced Lunch at 10% Census Poverty | Predicted Free/ Reduced Lunch at 20% Census Poverty | Predicted Free/ Reduced Lunch at 30% Census Poverty |
|---|---|---|---|---|
| Alabama | 25% | 32% | 52% | 72% |
| Alaska | 13% | 30% | 42% | 55% |
| Arizona | 25% | 27% | 43% | 60% |
| Arkansas | 25% | 41% | 60% | 79% |
| California | 21% | 26% | 49% | 71% |
| Colorado | 16% | 26% | 50% | 74% |
| Connecticut | 13% | 22% | 48% | 75% |
| Delaware | 17% | 33% | 55% | 76% |
| District of Columbia | 30% | -2% | 27% | 55% |
| Florida | 23% | 31% | 53% | 74% |
| Georgia | 24% | 33% | 52% | 71% |
| Hawaii | 16% | 32% | 52% | 72% |
| Idaho | 19% | 35% | 55% | 74% |
| Illinois | 20% | 20% | 41% | 63% |
| Indiana | 20% | 31% | 49% | 67% |
| Iowa | 15% | 32% | 55% | 78% |
| Kansas | 16% | 37% | 61% | 85% |
| Kentucky | 24% | 36% | 53% | 70% |
| Louisiana | 27% | 47% | 63% | 79% |
| Maine | 16% | 33% | 55% | 78% |
| Maryland | 12% | 29% | 52% | 76% |
| Massachusetts | 14% | 21% | 45% | 70% |
| Michigan | 22% | 29% | 44% | 59% |
| Minnesota | 13% | 29% | 48% | 67% |
| Mississippi | 30% | 45% | 61% | 78% |
| Missouri | 20% | 31% | 48% | 65% |
| Montana | 18% | 29% | 47% | 66% |
| Nebraska | 15% | 34% | 61% | 88% |
| Nevada | 20% | 30% | 41% | 53% |
| New Hampshire | 10% | 23% | 47% | 70% |
| New Jersey | 13% | 20% | 42% | 63% |
| New Mexico | 27% | 43% | 60% | 76% |
| New York | 21% | 21% | 43% | 64% |
| North Carolina | 23% | 25% | 44% | 63% |
| North Dakota | 12% | 31% | 47% | 64% |
| Ohio | 21% | 24% | 41% | 58% |
| Oklahoma | 21% | 43% | 65% | 88% |
| Oregon | 21% | 32% | 50% | 68% |
| Pennsylvania | 17% | 24% | 44% | 64% |
| Rhode Island | 19% | 22% | 44% | 66% |
| South Carolina | 25% | 32% | 52% | 72% |
| South Dakota | 16% | 33% | 51% | 69% |
| Tennessee | 24% | 34% | 51% | 68% |
| Texas | 25% | 40% | 47% | 54% |
| Utah | 15% | 31% | 54% | 76% |
| Vermont | 13% | 29% | 48% | 67% |
| Virginia | 14% | 26% | 47% | 67% |
| Washington | 16% | 25% | 45% | 66% |
| West Virginia | 23% | 40% | 52% | 63% |
| Wisconsin | 16% | 26% | 44% | 62% |
| Wyoming | 13% | 32% | 49% | 67% |

# Appendix B: Federal Equity Commission Report

Authorized by Congress in 2011, a 26-member Equity and Excellence Commission (Equity Commission) conducted the first federal-level review of state education finance since 1972, when President Richard Nixon's Commission on School Finance documented the deep inequities resulting from state over-reliance on the property tax to fund public education. In February 2013, the Equity Commission released its final report, *For Each and Every Child: A Strategy for Education Equity and Excellence.*[30] Like the Nixon Commission, the Equity Commission finds state reliance on local property taxes remains heavy, perpetuating the same disparities in funding between low-wealth, high-poverty and high-wealth, low-poverty communities that figured so prominently four decades ago.

In calling for school finance reform, the Equity Commission emphasizes:

> With few exceptions, states continue to finance public education through methods that have no demonstrable link to the cost of delivering rigorous academic standards and that can produce high achievement in all students, including but not limited to low income students, English-language learners, students with disabilities, students in high poverty and students who live in remote schools and districts. Few states have rationally determined the cost of enabling all students to achieve established content and performance standards, including the cost of achieving those standards across diverse student populations and geographic locations. Most states do not properly ensure the efficient use of resources to attain high achievement for all students. A meaningful educational opportunity requires that states make sure all students receive the resources to achieve rigorous academic standards and obtain the skills to compete in the economy and participate capably as citizens in a democratic society. (p.17)

The Equity Commission makes specific recommendations to guide states in developing finance systems in which funding levels are driven by the actual cost of delivering rigorous standards to all students. First, the Commission recommends that states begin by identifying the teaching staff, programs, and services necessary to provide all students the opportunity to meet rigorous academic standards and to determine and report the actual cost of those essential resources. Second, the Commission recommends that states adopt and implement a school finance system designed to provide "equitable and sufficient funding for all students to achieve state content and performance standards" (p.18). Third, the states must also ensure that these new finance systems are supported by stable and predictable sources of revenue to give all students a meaningful opportunity to meet the requisite academic standards and reach high levels of achievement. Fourth, the Commission recommends that states periodically review and update their finance systems in order to maintain the opportunity for student achievement of rigorous academic standards. Finally, the Equity Commission emphasizes the pivotal point that standards-linked finance systems must move past the confines of the typical formula — namely, determining the level and distribution of funding to districts and schools. Rather, these systems must also include companion mechanisms to ensure the effective and efficient use of all education funding at the local level to enable students to meet state academic standards, regardless of the governance structure.

The Equity Commission also proposes a greater federal role in financing K–12 education. The Commission recommends utilizing federal funds to provide appropriate incentives for states to adopt standards-linked finance systems and to demonstrate progress in the implementation of these systems. The Commission also calls on Congress to enact new "Equity and Excellence" legislation to provide significant new federal funding targeted to high-poverty schools with achievement gaps and to offer incentives to states to enhance their own funding of such schools. The legislation should also include mechanisms to enable the federal government to "monitor and enforce the ongoing performance of its new equity and excellence investments to make sure those investments are, in fact, enhancing student achievement" (p.19).

[30] U.S. Department of Education, *For Each and Every Child: A Strategy for Education Equity and Excellence*. Washington, D.C., 2013.

These Equity Commission recommendations represent a paradigm shift in federal education policy, built on addressing the foundational elements necessary to strengthen standards-based education in the states. The Commission recognizes that content and performance standards alone will not ensure any substantive level of education delivery and student achievement; that making gains in student achievement also depends on the sufficiency of teaching staff, programs, services, and other educational resources; and that, in the standards-based context, fair funding demands that states demonstrate a concrete linkage between funding and the actual cost of delivering those standards to students with differing needs and in diverse school and district settings.

# Notes

# Notes