

## Is School Funding Fair? A National Report Card Sixth Edition (January 2017)

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The National Report Card (NRC) evaluates and compares the extent to which state finance systems ensure equality of educational opportunity for all children, regardless of background, family income, place of residence, or school location. It is designed to provide policymakers, educators, business leaders, parents, and the public at large with information to better understand the fairness of existing state school finance systems and how resources are allocated so problems can be identified and solutions developed.

### Major Findings 2017

- School funding levels continue to be characterized by wide disparities among states, ranging from a high of \$18,165 per pupil in New York to a low of \$5,838 in Idaho, when adjusted for regional differences.
- Many of the lowest funded states, such as Arizona, Idaho, Nevada, North Carolina and Texas, allocate a very low percentage of their states' economic capacity to fund public education.
- Twenty-one states, up from 14 last year, are regressive, providing less funding to school districts with higher concentrations of low-income students.
- Only a handful of states - Delaware, Minnesota, New Jersey, and Massachusetts - have generally high funding levels and also provide significantly more funding to districts where student poverty is highest.
- Low rankings on school funding fairness correlate to poor state performance on key resource indicators, including less access to early childhood education, non-competitive wages for teachers, and higher teacher-to-pupil ratios.

The NRC is unique among comparative school funding reports because it goes beyond simple per pupil calculations. To capture the complex differences among states, the NRC constructs four interrelated fairness measures – Funding Level, Funding Distribution, Effort and Coverage — that allow for comparisons that control for regional differences.

The data for this sixth abridged edition of the NRC, published annually since 2008, comes from the 2013 and 2014 U.S. Census Bureau Elementary-Secondary Education Finance Survey, the most recent data available.

**The NRC is built on the following core fairness principles:**

- 1) Varying levels of funding are required to provide equal educational opportunities to children with different needs.
- 2) The costs of education vary based on geographic location, regional differences in teacher salaries, school district size, population density, and various student characteristics.
- 3) State finance systems should provide more funding to districts serving larger shares of students in poverty.
- 4) The overall funding level in states is also a significant element in fair school funding. Without a sufficient base, even a progressively funded system will be unable to provide equitable educational opportunities.
- 5) The sufficiency of the overall level of school funding in any state can be assessed based on comparisons to other states with similar conditions and similar characteristics.

## The Fairness Measures

- *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 gross state product (GSP).<sup>2</sup>
- *Coverage* – This measures the proportion of school-aged 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 schooled). 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.

For information on data sources and a more detailed methodology, see Appendix A. Detailed, longitudinal data tables for all indicators can be found in Appendix B.

The four fairness measures are comparative in nature, demonstrating how an individual state compares to other states in the nation. States are *not* evaluated using specific thresholds of education cost and school funding that might be “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.<sup>3</sup>

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 the typical grading “curve” and range from “A” to “F.”<sup>4</sup> Funding Level and Coverage are ranked because these measures are influenced not only by state policy, but also by other historical and contextual factors. (For a summary of state scores on all four indicators, see Table 1 on page 12-13.)

When analyzing the evaluations of states in the next sections, it is important to take into consideration two points. First, because the evaluations are comparative and not benchmarked to a defined outcome, high grades or rankings are not indicative of having met some obligation or having outperformed expectations. They simply demonstrate that some states are doing better than others; it does not mean there is no room for improvement. Second, the fairness measures are interrelated and complex. It is important to consider the interplay among measures, understand how they interact, and appreciate the complex moving parts. The goal of this report is to use approachable data to encourage a more sophisticated and nuanced discussion of fair school funding.

### **Fairness Measure #1: Funding Level**

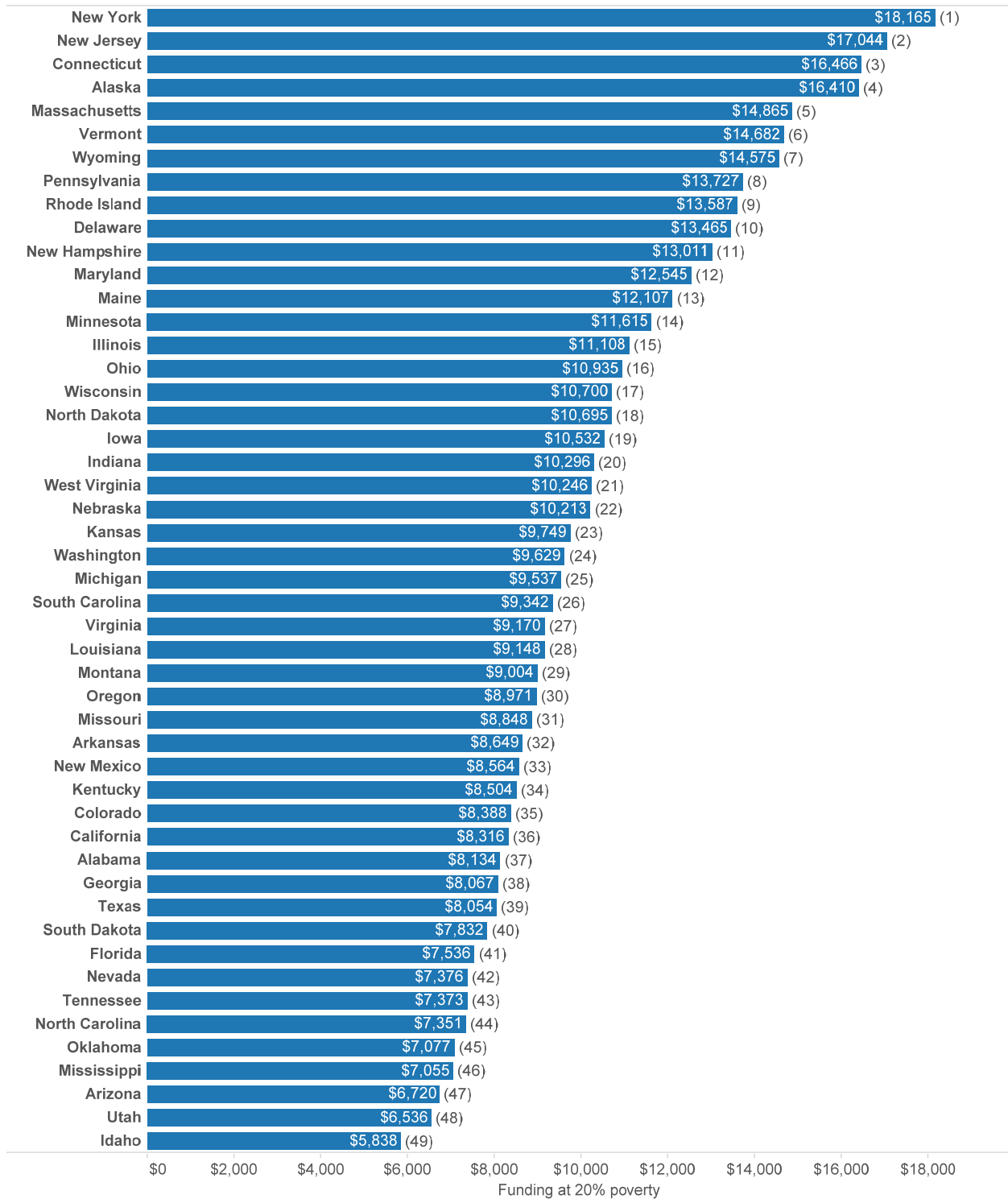
While some analyses rely on straight per pupil funding calculations to compare spending by state, such a simple analysis disregards the complex differences among states and districts that affect education costs. In order to put states on a more equal footing, we construct a model of school funding that predicts average funding levels while controlling for the following: student poverty, regional wage variation, and school district size and density. By removing the variability in funding associated with these factors, we have a better sense of how states compare. The funding levels presented are those predicted by the model at a 20% poverty rate, close to the national average.

*Without a nationwide commitment to the principles of fair school funding and the implementation of progressive finance systems, education policies that seek to improve overall achievement, while also reducing gaps between the lowest- and highest-performing students, will ultimately fail.*

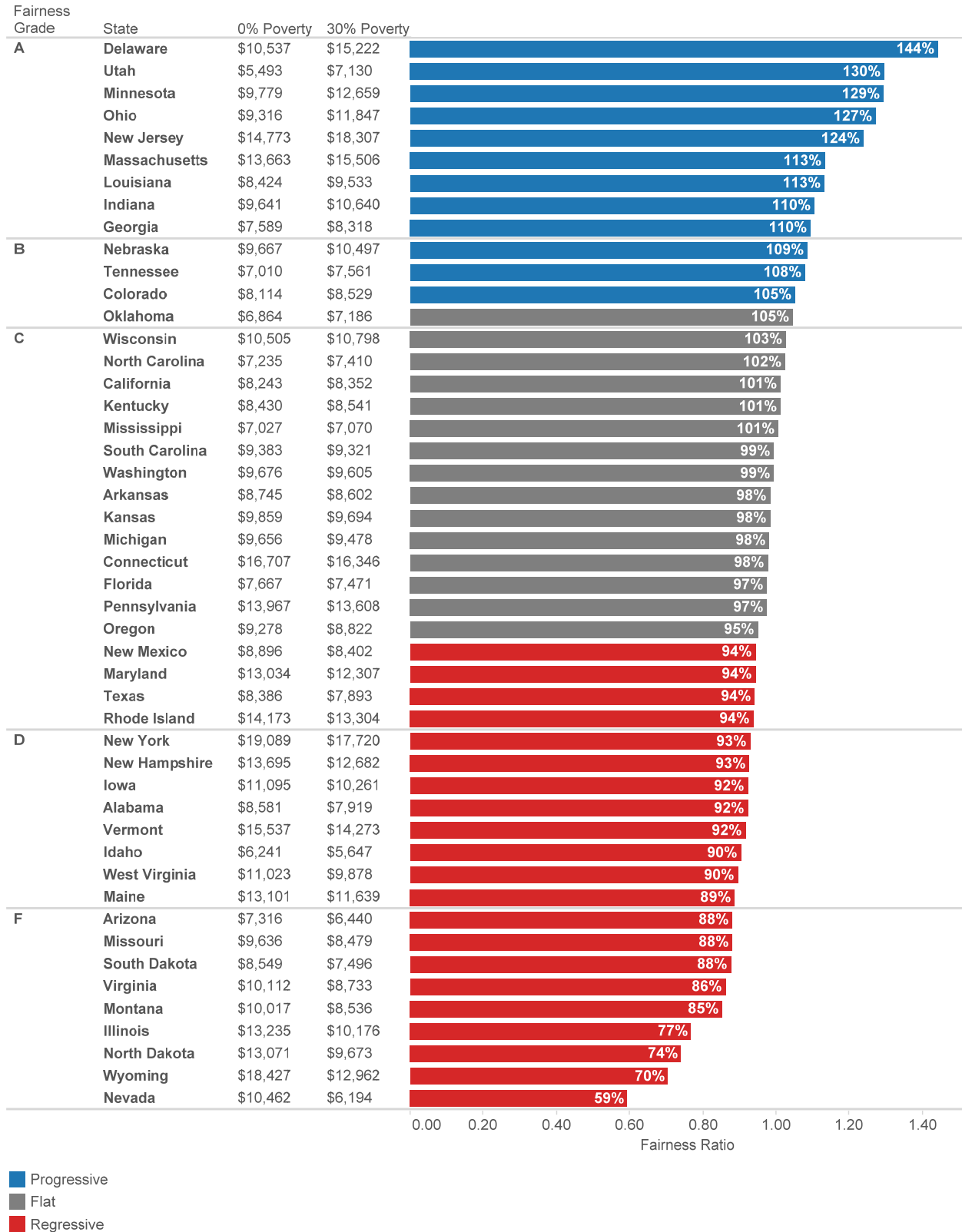
Similar to previous years, funding levels continue to be characterized by wide disparities among states. In 2014, funding levels ranged from a high of \$18,165 in New York, to a low of \$5,838 in Idaho (See Figure 1). This means that, on average, students in Idaho had access to less than one-third of the funding available to students with similar needs and circumstances in New York. These disparities suggest wide variation in the degree to which states are providing the resources required to deliver equitable opportunities for all students.

Relative funding rankings have remained largely consistent over time. Despite recent fluctuations in the economy and attendant variations in spending, with only a few exceptions the lowest ranking states tend to remain in the bottom, and high spending states tend to remain at the top.

**Figure 1. Predicted Funding Level, 2014**



**Figure 2. State Funding Distribution, 2014**



## **Fairness Measure #2: Funding Distribution**

The funding distribution measure addresses the key question of whether a state's funding system recognizes the need for additional resources for students in settings of concentrated student poverty.<sup>5</sup> In 2014, twelve states had progressive funding distributions, down from a high of twenty in 2008, and four less than 2013.<sup>6</sup> Fifteen states had no substantial variation in funding between high poverty and low poverty districts, and twenty-one states had regressive funding patterns, up from fourteen in 2013 (see Figure 2).

The four most progressive states, Delaware, Utah, Minnesota and Ohio, provide their highest poverty districts, on average, with between 27% and 44% more funding per student than their lowest poverty districts. In contrast, the most regressive states provide significantly less funding to their highest poverty districts. In Wyoming, high poverty districts get 70 cents for every dollar in low poverty districts, while in Nevada, high poverty districts receive only 59 cents to the dollar.

To view funding profiles, which present regional comparisons of both funding level and funding distribution among a set of geographically similar states, visit [www.schoolfundingfairness.org](http://www.schoolfundingfairness.org).

## **Fairness Measure #3: Effort**

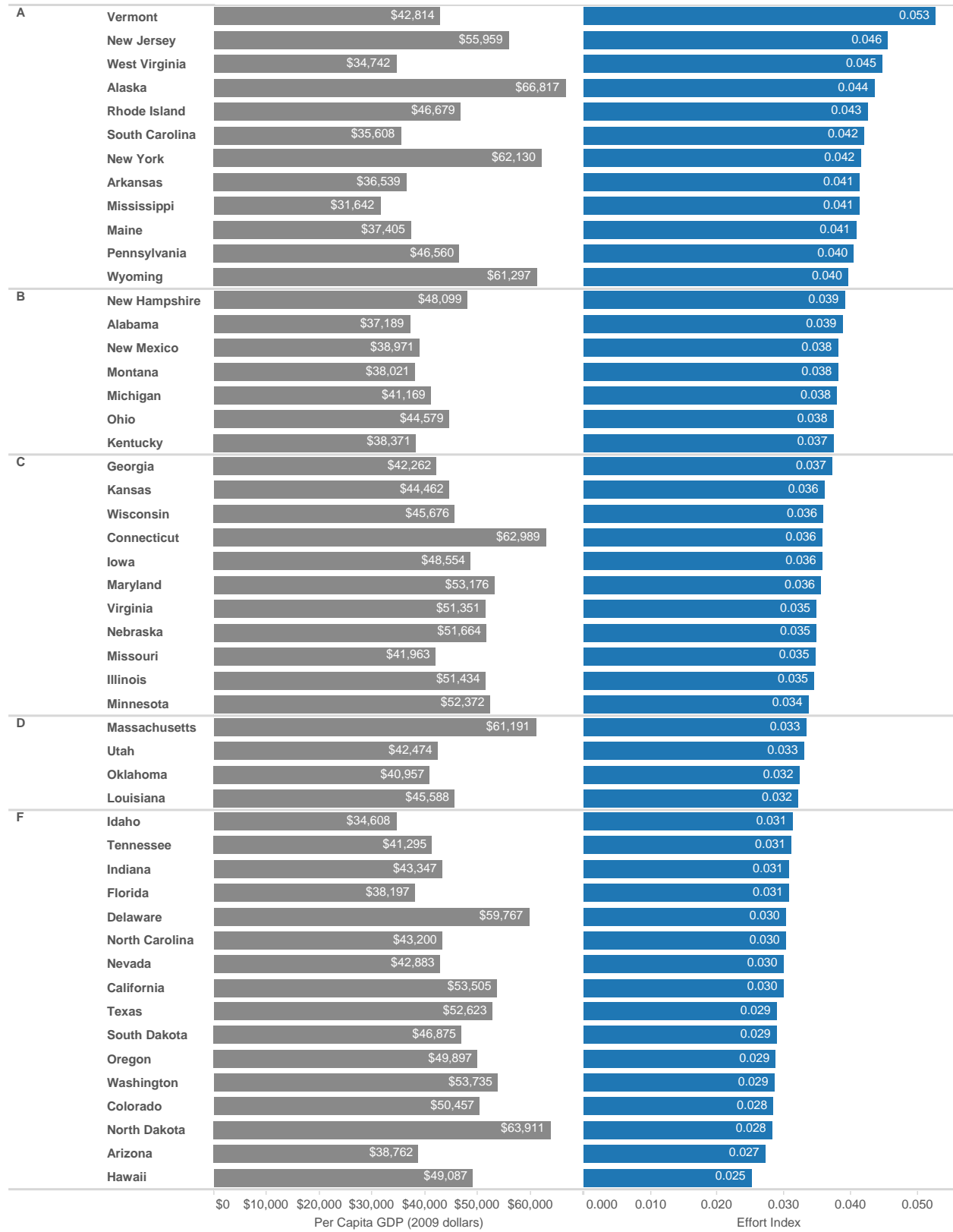
The Effort index takes into account each state's local and state spending on education in relation to the state's economic productivity, or gross state product (GSP). Combining these two elements into a ratio provides a sense of the priority education is given in state and local budgets. (Due to data availability, the Effort index is based on 2013 data.)

In 2013, the Effort index ranged from a high of 5.3% in Vermont to a low of 2.5% in Hawaii. However, effort must be understood within the context of a state's economic productivity.

One might assume that wealthy states, those with high GSP, will have low effort, and conversely states with low GSP will require higher effort. But the relationship between fiscal capacity and effort is not as strong as one might expect. Many states with low fiscal capacity also have low effort, such as Idaho, Florida and Arizona, while some states with high fiscal capacity also have high effort, such as Alaska, New Jersey, New York and Wyoming.

As has been well documented by the Center for Budget and Policy Priorities, most states are still providing less funding for K-12 education, despite the economic recovery from the Great Recession.<sup>7</sup> While total GSP has rebounded to 2008 levels or higher in most states, 18 states actually spent less on K-12 education, and the Effort index remains below 2008 levels in all but four states. Short-term trends are also troubling with only eight states improving their effort index between 2012 and 2013.

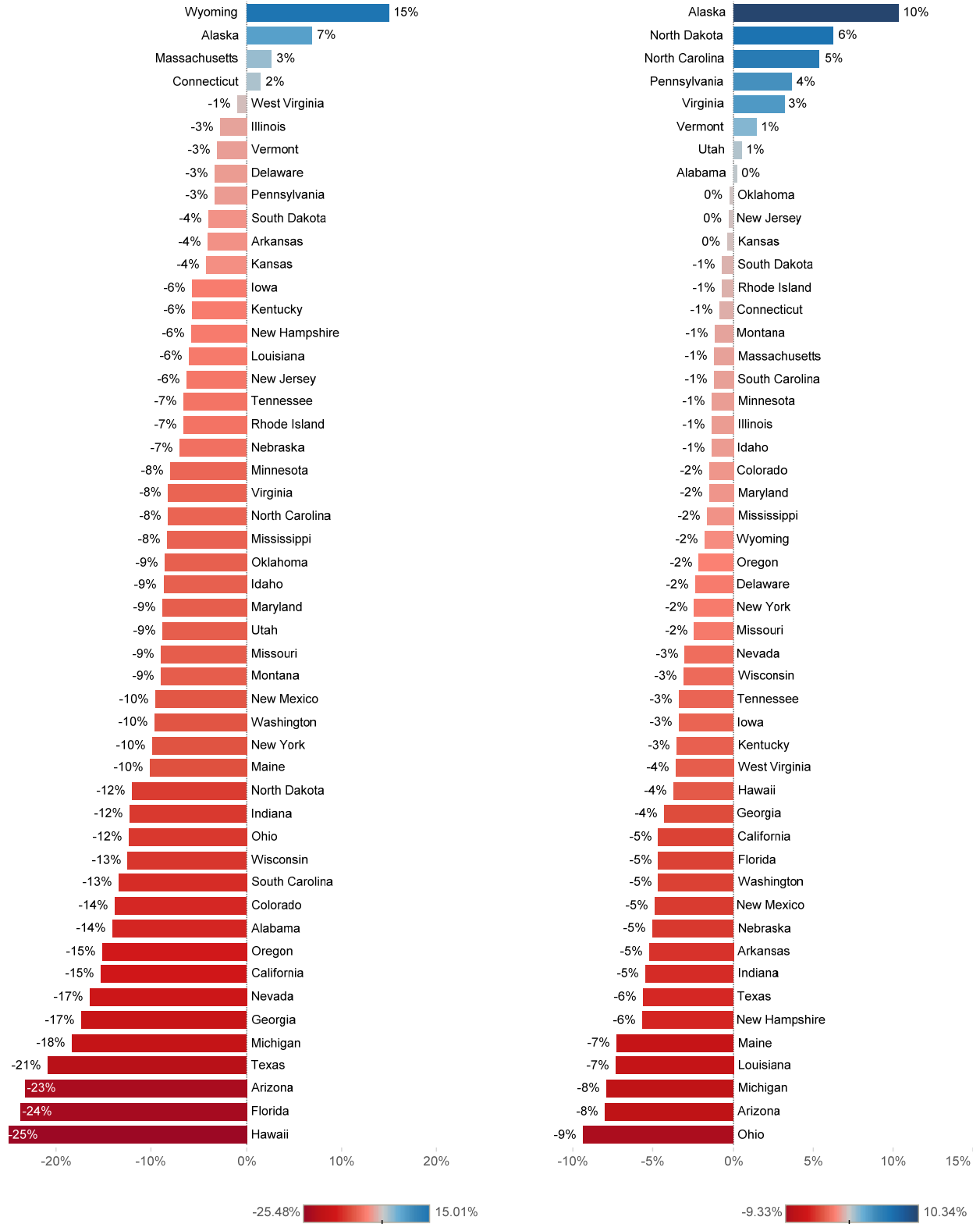
**Figure 3. Effort Index, 2013**



**Figure 4. Percentage Change in Effort Index**

2008 to 2013

2012 to 2013





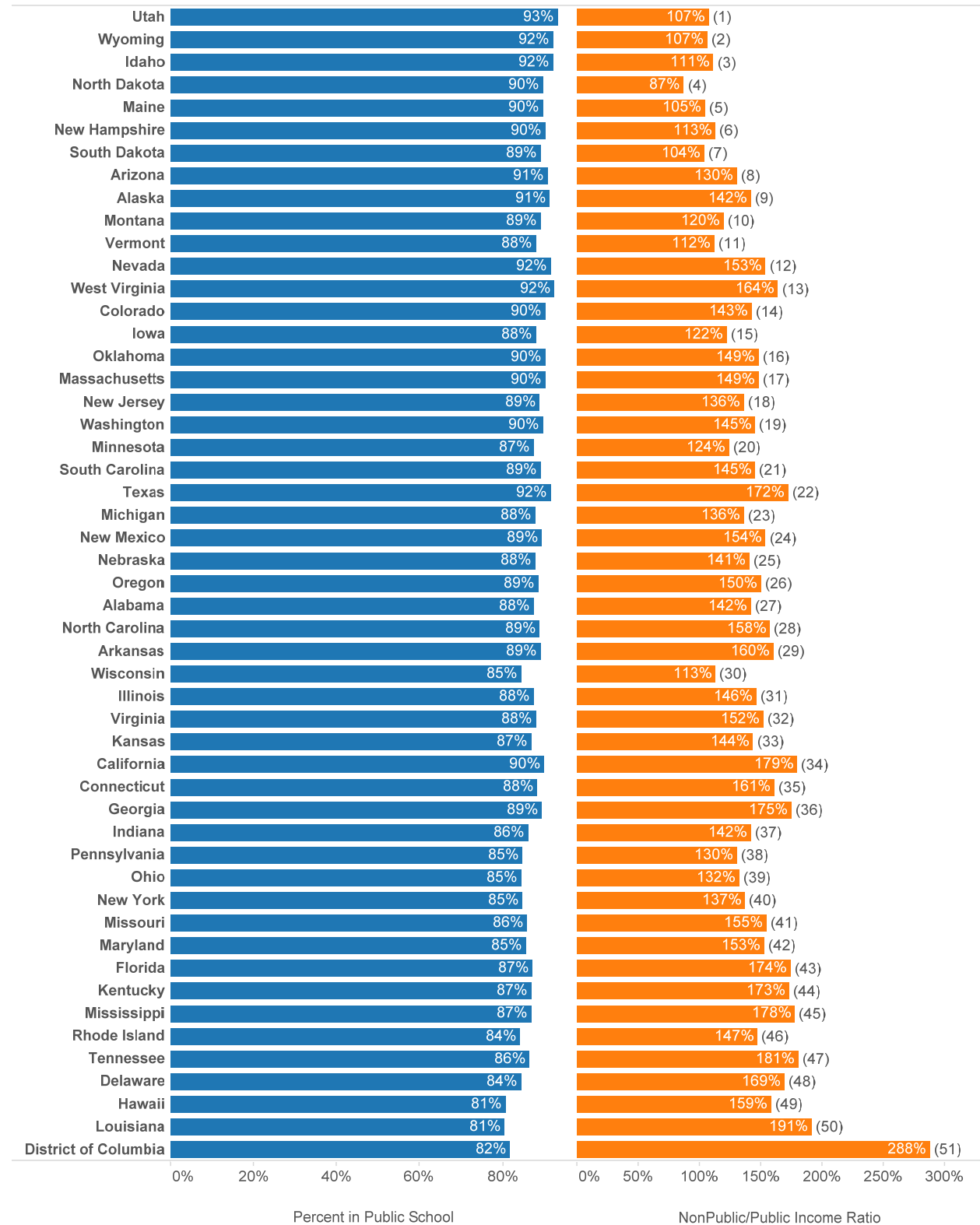
#### **Fairness Measure #4: Coverage**

The coverage indicator measures the share of school-aged children enrolled in public schools and the degree of economic disparity between households in the public and nonpublic education systems. The coverage indicator is a gauge of several important issues. First, the proportion of students enrolled in public schools affects the level of financial support necessary for public education. There are two important consequences to wealthier families opting out of public education: these opt outs further concentrate poverty and increase the need for resources in schools, and they can affect the public and political will necessary to generate fair funding through a state's school finance formula.

The percentage of school-aged children enrolled in public schools ranges from 81% in Hawaii and Louisiana to a high of 93% in Utah. In several states, there are wide disparities in the incomes of families with children in public and nonpublic schools. Nonpublic households in the District of Columbia have nearly three times the income of public school households.

States such as Utah, Wyoming and Maine have comparatively few students who opt out of public schools, and those who do are not very economically different from their public school peers. On the other hand, the District of Columbia, Louisiana and Delaware have a large percentage of students, whose families are significantly wealthier, who do not attend public schools.

Figure 5. Coverage, 2014



## The Four Fairness Measures

Table 1 presents the scores of each state on the four fairness indicators. This table provides a scorecard on the strengths and weakness of a particular state's finance system and how a state's performance compares to other states in their region and across the nation.

A few major findings stand out:

- New Jersey is positioned relatively well on all four fairness indicators.
- Wyoming, Maine, New Hampshire and Vermont score well on Funding Level, Effort and Coverage, but scored low on the important Funding Distribution measure. This means that even though these states are funded relatively well, with high funding levels and high effort, there is great inequity in the finance system that disadvantages poor districts.
- California and Florida are both positioned very poorly on all four fairness measures, receiving an “F” in Funding Effort, a “C” in Funding Distribution and scoring in the lower half of the Funding Level and Coverage rankings.
- Arizona, South Dakota, Idaho and Nevada score poorly on all measures except Coverage.
- Louisiana and Tennessee score poorly in all areas except Funding Distribution. With a low funding level and low fiscal investment, even a progressive distribution of funds will result in an unfair system.

**Table 1. The National Report Card**

	Distribution	Effort	Funding Level	Coverage
Alabama	D	B	37	27
Alaska		A	4	9
Arizona	F	F	47	8
Arkansas	C	A	32	29
California	C	F	36	34
Colorado	B	F	35	14
Connecticut	C	C	3	35
Delaware	A	F	10	48
District of Columbia				51
Florida	C	F	41	43
Georgia	A	C	38	36
Hawaii		F		49
Idaho	D	F	49	3
Illinois	F	C	15	31
Indiana	A	F	20	37
Iowa	D	C	19	15
Kansas	C	C	23	33
Kentucky	C	B	34	44
Louisiana	A	D	28	50
Maine	D	A	13	5
Maryland	C	C	12	42
Massachusetts	A	D	5	17
Michigan	C	B	25	23
Minnesota	A	C	14	20
Mississippi	C	A	46	45
Missouri	F	C	31	41
Montana	F	B	29	10
Nebraska	B	C	22	25
Nevada	F	F	42	12
New Hampshire	D	B	11	6
New Jersey	A	A	2	18
New Mexico	C	B	33	24

**Table 1. The National Report Card (Cont.)**

	Distribution	Effort	Funding Level	Coverage
New York	D	A	1	40
North Carolina	C	F	44	28
North Dakota	F	F	18	4
Ohio	A	B	16	39
Oklahoma	B	D	45	16
Oregon	C	F	30	26
Pennsylvania	C	A	8	38
Rhode Island	C	A	9	46
South Carolina	C	A	26	21
South Dakota	F	F	40	7
Tennessee	B	F	43	47
Texas	C	F	39	22
Utah	A	D	48	1
Vermont	D	A	6	11
Virginia	F	C	27	32
Washington	C	F	24	19
West Virginia	D	A	21	13
Wisconsin	C	C	17	30
Wyoming	F	A	7	2

Note: Funding Level and Coverage are colored by percentile rank: 1-25%, 25-50%, 50-75%, 75-100%.

## **Fair School Funding and Resource Allocation**

In this section we explore the consequences of funding fairness, or the lack thereof, for schools and students through three resource allocation indicators. These indicators are examples of how a state's funding priorities affect the quality and breadth of educational opportunities available for students. Information on methodology and data sources can be found in Appendix A. Detailed, longitudinal data tables for these indicators can be found in Appendix C.

### **Early Childhood Education**

Access to early childhood education is a critical component of a fair and equitable education system. Research shows that low-income children often come to school lagging behind their peers academically. High-quality preschool programs can help reduce those gaps.<sup>8</sup> States vary in the degree to which early education programs are available to young children across the socioeconomic spectrum. States that recognize the need for early interventions in children's educational careers can promote and support early education programs that focus on providing opportunities for low-income families.

Not surprisingly, there is great variation in the extent to which young children are enrolled in early childhood programs in the states. Total enrollment of 3- and 4-year-olds ranges from a high of 85% in the District of Columbia to a low of 30% in North Dakota. Enrollment of low-income children ranges from 76% in the District of Columbia to only 26% in New Mexico.

Though the importance of early childhood education for low-income children is well documented, in most states these children are actually less likely to be enrolled than their peers. Only a few states enroll proportionally more low-income students in early childhood programs. In Mississippi, Montana and North Dakota, low-income children are more likely than their peers to be enrolled in early education, as depicted by the enrollment ratio. In Alabama, Delaware, New Hampshire and New Mexico, low-income children are much less likely to be enrolled than their peers.

### **Wage Competitiveness**

A state's ability to attract and retain high quality teachers is a fundamental component of an equitable and successful school system. Because teachers' salaries and benefits make up the bulk of school budgets, a fair school funding system is required to maintain an equitable distribution of high quality teachers in all districts. One of the most important ways that states can ensure that teaching jobs remain desirable in the job market is to provide competitive wages.

We have constructed a measure of wage competitiveness that compares teachers' salaries to the salaries of other professionals in the same labor market and of similar age, degree level, and hours worked. Results are reported for 25 year-olds.

Most states' average teachers' salaries are far below the salaries of their non-teacher counterparts. Nationally, teachers beginning their careers at age 25 earn about 82% of what non-teachers earn. Only four states have average teacher wages that are comparable to other similar workers – Iowa, North

Dakota, Pennsylvania and Wyoming. Wages are least competitive in Colorado, Georgia, Utah, Virginia and Washington, where teachers earn about 30% less.

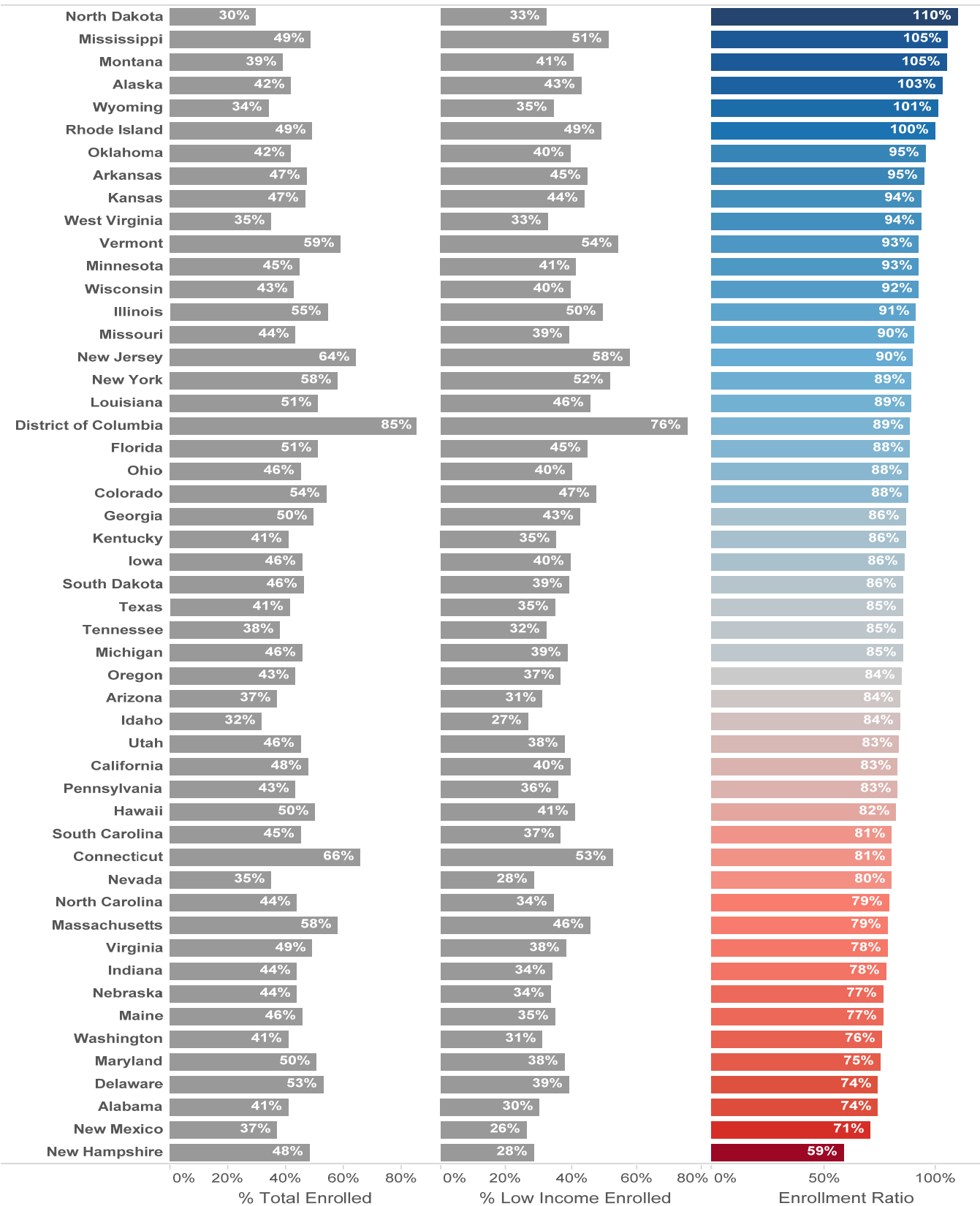
### **Teacher-to-Student Ratios**

The fundamental premise of fair school funding is that additional resources are required to address the needs of students in poverty. In schools and classrooms across the country, this means that high poverty schools require more staff to address the challenges of serving low-income students, since these schools can benefit from smaller class sizes, literacy and math specialists, instructional coaches, and social services such as counselors and nurses. To examine this, we construct a measure of staffing fairness that compares the number of teachers per 100 students in high and low poverty districts.

The pupil to teacher fairness measure, or the comparison of teacher-to-student ratios in high and low poverty districts, ranges from a progressive 140% in North Dakota to a regressive 77% in Florida. In other words, high poverty districts in North Dakota have, on average, 40% more teachers per 100 students than low poverty districts, potentially resulting in smaller class sizes, while in Nevada, the poorest districts have about 23% fewer teachers per 100 students than low poverty districts. Predicted staff ratios, at 10% poverty, range from a high of 8.6 teachers per 100 students in North Dakota to a low of 4.2 in California.

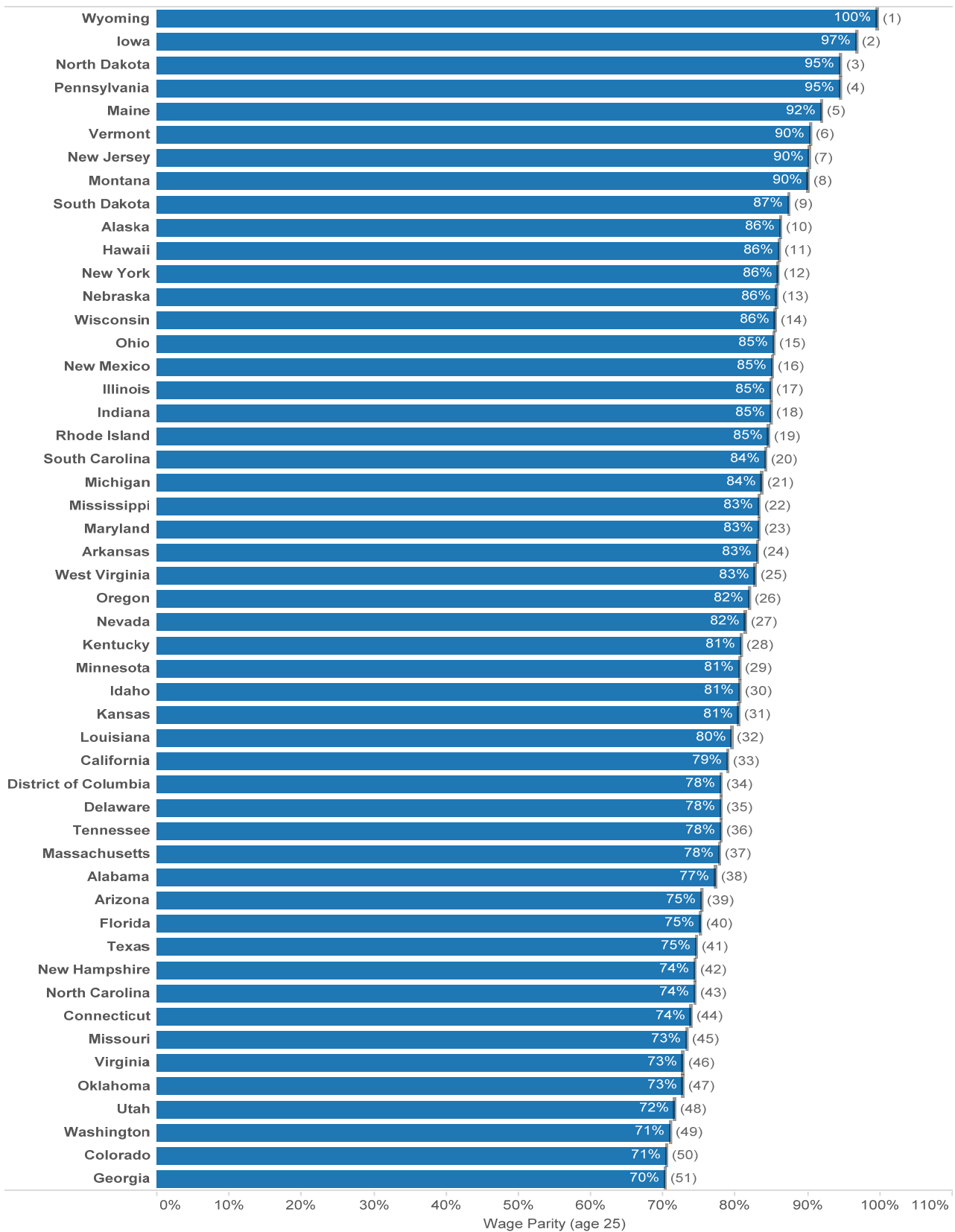
Twenty-two states have a progressive distribution of teachers, i.e., at least 5% more teachers per student in high poverty districts. Seven states are regressive and have fewer teachers per student in high poverty districts (Wisconsin, Connecticut, New York, Pennsylvania, Rhode Island, Nevada and Florida). The remaining 20 states have essentially no difference in staffing ratios between low and high poverty districts. This means that the majority of states are failing to systematically provide an equitable distribution of teachers so that high poverty schools have smaller teacher-to-student ratios than low poverty schools.

**Figure 6. Early Childhood Education**

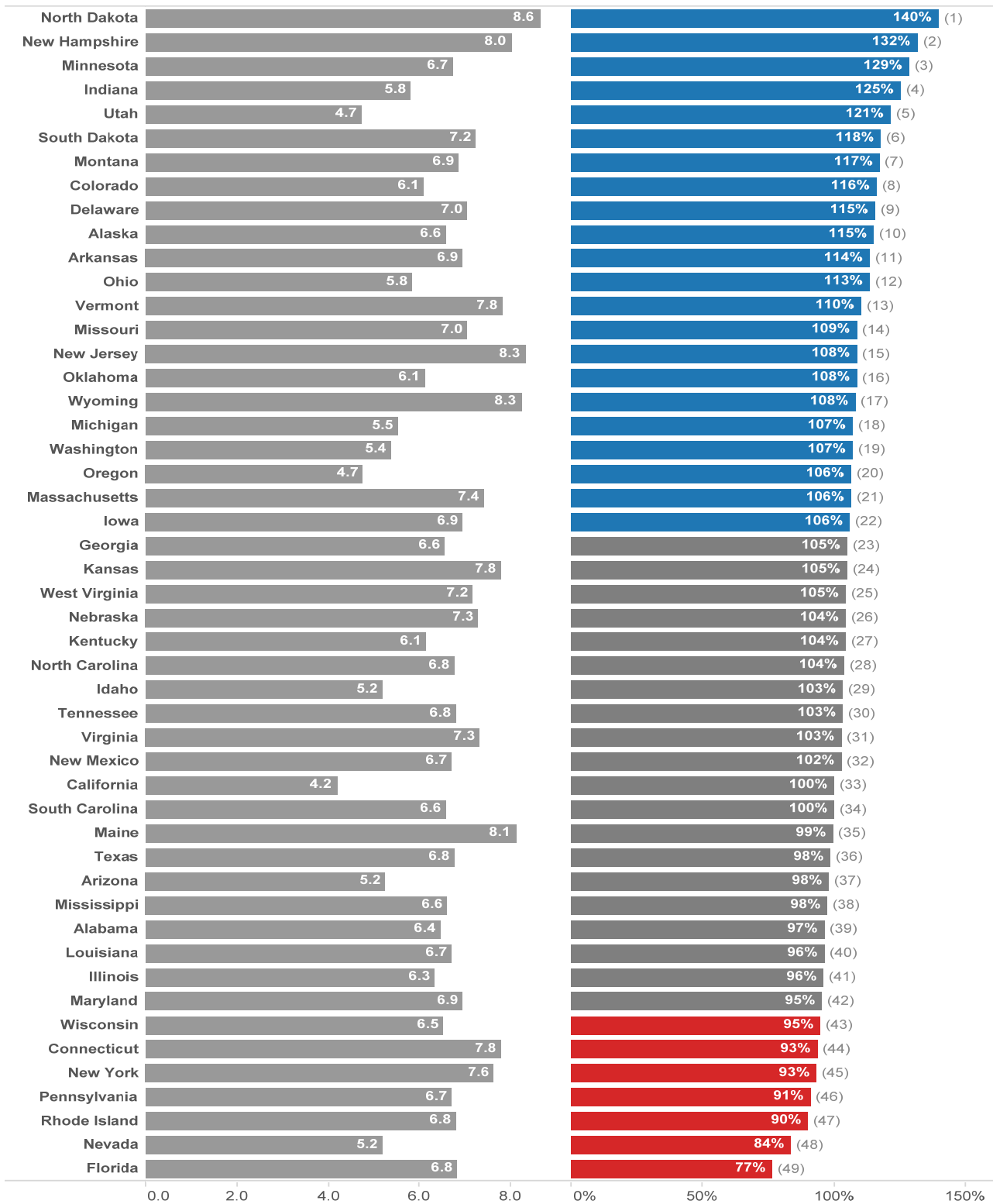




**Figure 7. Wage Competitiveness**



**Figure 8. Teacher-to-Student Fairness Ratio**



A state's performance on these three resource allocation measures can be juxtaposed against the state's ranking on the funding fairness indicators. This comparison provides clear evidence of how the fairness of a state's school funding system directly impacts the availability and distribution of essential resources to schools.

The correlation between funding fairness and essential resource availability is clear and compelling. Many of the low performing states on the funding fairness indicators are also ranked at the bottom of the resource allocation indicators, and vice versa. For example, states that score well on funding distribution also tend to exhibit fair teacher distribution (e.g., Minnesota, Indiana, Delaware and Ohio). States with low funding levels tend to have less competitive teacher wages (e.g., Virginia, Missouri, Arizona, and Alabama). These patterns are consistent across indicators, meaning that students in states with unfair school funding are likely to experience a deprivation of resources crucial for their success in school.<sup>9</sup>

## **Conclusion**

The National Report Card provides a set of indicators that, when evaluated together, provide a robust understanding of the fairness of each state's school funding system. Each of the indicators – Level, Distribution, Effort and Coverage – are important in their own right. But the complexity of each state's school finance system is best understood by considering the interaction of all four factors.

It should be noted that each state's finance system is embedded in a complicated historical, political and economic landscape. The NRC does not address these complex factors as they play out state-by-state. Therefore, the report's results should be approached with the understanding that every state has a unique story. The findings, however, can be useful in new or ongoing efforts to improve state funding of public education through the implementation or improvement of finance systems that recognize the demographic and resource needs of all students.

## End Notes

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<sup>1</sup>Bruce Baker, EdD, is a professor in the Department of Educational Theory, Policy and Administration in the Graduate School of Education at Rutgers University. He is co-author of *Financing Education Systems* with Preston Green and Craig Richards, author of numerous peer-reviewed articles on education finance, and sits on the editorial boards of the *Journal of Education Finance* and *Education Finance and Policy* as well as serving as a research fellow for the National Education Policy Center.

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<sup>2</sup> This report uses a slightly different measure of spending on education than that used in earlier reports. In prior editions, spending was measured as total state and local revenues for K-12 education. We now use an indicator of total direct expense for elementary and secondary education from the The Urban Institute-Brookings Institution Tax Policy Center Data Query System (SLF-DQS), available at <http://slfdqs.taxpolicycenter.org>.

<sup>3</sup> The U.S. has no established outcome measures for the 50 states and no national uniform program or input standards 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.

<sup>4</sup> To calculate grades, a standardized score (z-score) is calculated as the state's difference from the mean, expressed in standard deviations. 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

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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.

<sup>5</sup> Hawaii and the District of Columbia are excluded from this analysis because they are single-district systems. Alaska is also excluded because the state's unique geography and sparse population, so highly correlated with poverty, result in inconsistent estimates of within-state resource distribution.

<sup>6</sup> Year-to-year comparisons rely on updated models, and, therefore, may not align exactly with previously published results. To view longitudinal results with the updated models, visit [www.schoolfundingfairness.org](http://www.schoolfundingfairness.org).

<sup>7</sup> See Leachman, M., N. Albares, K. Masterson, and M. Wallace, "Most States Have Cut School Funding, and Some Continue Cutting." Center on Budget and Policy Priorities. January 25, 2016,

<sup>8</sup> For a review, see Barnett, W.S. (2011), "Effectiveness of early educational intervention." *Science*, 333, 975-978.

<sup>9</sup> For a deeper exploration of the consequences of school funding levels, distributions and changes in classroom resources see "The Changing Distribution of Educational Opportunities: 1993-2012" by Bruce Baker, Danielle Farrie, and David G. Sciarra in *The Dynamics of Opportunity in America: Evidence and Perspectives* edited by Irwin Kirsch and Henry Braun.

## Appendix A: Data and Methodology

### Fairness Measures

*Funding Level:* A regression model predicts an average per-pupil funding level for each state, while holding other factors constant. This eliminates the variation in funding associated with characteristics that vary between districts and across states, and determines average funding at the state level under hypothetical, yet meaningful, set of conditions. State and local funding levels are predicted with the following variables: student poverty, regional wage variation, economies of scale, population density, and the interaction between economies of scale and density. Reported funding levels are predicted using national averages for all independent variables and at a poverty rate of 20%.

The regression equation includes a panel of 21 years of data and presents estimates for the most recent five years. Models used in previous editions only included 3 year panels, with estimates reported for the most recent year. Due to this change in modeling, there will be slight differences in the results of this edition and previously published editions.

*Funding Distribution:* Using the above regression model, the relationship between student poverty and school funding is estimated for each state. Funding levels are predicted for poverty levels at 10% intervals from 0% to 30% under the average conditions within each state. The fairness ratio is calculated by dividing state and local funding at 30% poverty by funding at 0% poverty. A higher ratio indicates greater fairness.

*Effort:* The Effort index is calculated by dividing the total direct expense for elementary and secondary education by the state gross domestic product.

*Coverage:* The Coverage indicator includes two measures. First is the proportion of school-age children attending the state's public schools, as opposed to private schools, homeschooling, or not attending school at all. The second is the ratio of median household income of students who are enrolled in public schools to those who are not. The Coverage rankings are computed by calculating a standardized score (z-score) for each measure and then taking the average.

### Resource Allocation Indicators

*Early Childhood:* The early childhood indicator compares school enrollment rates for 3- and 4-year olds by income level. Low-income is defined as a family income below 185% of the Federal poverty level. This is the threshold at which students qualify for free or reduced lunch. School enrollment is not limited to public school and there are no restrictions on the number of days per week or hours per day the student attends. The ratio is calculated as the percentage of enrolled low-income students over the percentage of enrolled not low-income students. States are ranked on this ratio.

*Wage Competitiveness:* This indicator uses a regression model predicting average wages for teachers and non-teachers while controlling for age, education, and hours/weeks worked. The ratio of wages between teachers and non-teachers is computed at age 25 and 45 and indicates whether teachers, on

average, are paid more or less than non-teachers. States are ranked by calculating a standardized score (z-score) for the ratio at age 25 and 45 and averaging those scores.

*Teacher-to-Student Ratios:* The teacher-to-student ratio fairness measure is calculating by generating a regression model to establish the relationship between district teacher-to-student ratios (teachers per 100 students) and student poverty. Similar to the funding fairness analysis, the model controls for size, sparsity, and poverty and then estimates teacher-to-student ratios at various poverty levels for each state. The fairness ratio is calculated by dividing predicted teacher-to-student ratio at 30% poverty by the predicted ratio at 0% poverty.

**Table A-1. Data Sources Fairness Measures and Resource Allocation Indicators**

Indicator	Data Element	Data Source	
<i>Funding Level &amp; Funding Distribution</i>	Local and state revenues per pupil	U.S. Census F-33 Public Elementary-Secondary Education Finance Survey	<a href="http://www.census.gov/govs/school/">http://www.census.gov/govs/school/</a>
	Student poverty rates	U.S. Census Small Area Income and Poverty Estimates	<a href="http://www.census.gov/did/www/saie/data/index.html">http://www.census.gov/did/www/saie/data/index.html</a>
	Regional wage variation	Taylor’s Extended NCES Comparable Wage Index	<a href="http://bush.tamu.edu/research/faculty/Taylor_CWI">http://bush.tamu.edu/research/faculty/Taylor_CWI</a>
	Economies of Scale/District Size	NCES Common Core of Data – Local Education Agency Universe Survey	<a href="http://nces.ed.gov/ccd/">http://nces.ed.gov/ccd/</a>
	Population Density	U.S. Census Population Estimates	<a href="https://www.census.gov/popest/index.html">https://www.census.gov/popest/index.html</a>
<i>Effort</i>	Gross State Product	Bureau of Economic Analysis	<a href="http://bea.gov/itable/">http://bea.gov/itable/</a>
	Total direct expense for elementary and secondary education	The Urban Institute-Brookings Institution Tax Policy Center Data Query System (SLF-DQS)	<a href="http://slfdqs.taxpolicycenter.org">http://slfdqs.taxpolicycenter.org</a>
<i>Coverage</i>	% 6-16 Year olds enrolled in school	U.S. Census American Community Survey	Integrated Public Use Micro Data System <a href="http://www.ipums.org">www.ipums.org</a> (3-Year Sample)
	Median household income by school enrollment	U.S. Census American Community Survey	Integrated Public Use Micro Data System <a href="http://www.ipums.org">www.ipums.org</a> (3-Year Sample)
<i>Early Childhood Education</i>	School enrollment of 3- and 4-year olds by household income	U.S. Census American Community Survey	Integrated Public Use Micro Data System <a href="http://www.ipums.org">www.ipums.org</a> (3-Year Sample)
<i>Teacher-to-Student Fairness</i>	District teachers per 100 students	NCES Common Core of Data – Local Education Agency Universe Survey	<a href="http://nces.ed.gov/ccd/">http://nces.ed.gov/ccd/</a>

## Appendix B: Fairness Measures

**Table B-1. Funding Level**

	2010		2011		2012		2013		2014	
	Funding	Rank	Funding Level	Rank	Funding	Rank	Funding	Rank	Funding	Rank
Alabama	\$7,551	40	\$7,830	37	\$7,882	37	\$7,870	37	\$8,134	37
Alaska	\$15,155	3	\$14,527	3	\$15,326	3	\$17,719	1	\$16,410	4
Arizona	\$6,523	46	\$6,618	46	\$6,370	47	\$6,499	47	\$6,720	47
Arkansas	\$8,081	32	\$8,245	30	\$8,536	31	\$8,418	32	\$8,649	32
California	\$7,308	43	\$7,730	38	\$7,612	39	\$7,734	38	\$8,316	36
Colorado	\$8,380	29	\$8,024	35	\$7,978	36	\$8,226	35	\$8,388	35
Connecticut	\$14,039	5	\$13,984	5	\$15,237	4	\$15,802	4	\$16,466	3
Delaware	\$11,500	12	\$11,444	12	\$12,462	10	\$13,563	8	\$13,465	10
Florida	\$7,445	42	\$7,396	41	\$7,051	42	\$7,196	42	\$7,536	41
Georgia	\$7,901	35	\$8,208	31	\$8,144	35	\$7,990	36	\$8,067	38
Idaho	\$5,742	49	\$6,145	48	\$5,764	49	\$5,831	49	\$5,838	49
Illinois	\$9,039	21	\$10,389	16	\$10,651	16	\$10,788	15	\$11,108	15
Indiana	\$11,048	14	\$9,860	19	\$10,165	20	\$10,192	19	\$10,296	20
Iowa	\$8,997	22	\$9,942	18	\$10,244	19	\$10,312	18	\$10,532	19
Kansas	\$9,074	20	\$9,148	22	\$9,546	22	\$9,559	22	\$9,749	23
Kentucky	\$7,821	36	\$8,110	34	\$8,310	32	\$8,449	31	\$8,504	34
Louisiana	\$8,526	28	\$8,616	26	\$9,017	25	\$8,995	28	\$9,148	28
Maine	\$11,447	13	\$11,234	13	\$10,876	15	\$11,532	13	\$12,107	13
Maryland	\$11,852	10	\$11,879	10	\$12,315	11	\$12,391	12	\$12,545	12
Massachusetts	\$13,192	6	\$13,349	6	\$13,847	6	\$14,277	6	\$14,865	5
Michigan	\$8,775	24	\$9,121	23	\$9,205	24	\$9,403	23	\$9,537	25
Minnesota	\$10,156	17	\$11,215	14	\$11,190	14	\$11,409	14	\$11,615	14
Mississippi	\$6,669	45	\$6,633	45	\$6,827	44	\$6,924	44	\$7,055	46
Missouri	\$7,689	37	\$8,202	32	\$8,698	29	\$8,779	30	\$8,848	31
Montana	\$8,367	31	\$8,358	29	\$8,582	30	\$8,800	29	\$9,004	29
Nebraska	\$9,354	18	\$9,502	20	\$9,610	21	\$9,919	21	\$10,213	22
Nevada	\$7,537	41	\$7,329	43	\$7,399	41	\$7,345	41	\$7,376	42
New Hampshire	\$12,190	8	\$11,561	11	\$12,150	12	\$12,614	11	\$13,011	11
New Jersey	\$14,660	4	\$14,270	4	\$16,397	2	\$16,516	3	\$17,044	2
New Mexico	\$7,949	34	\$8,121	33	\$8,204	33	\$8,252	34	\$8,564	33
New York	\$15,582	2	\$16,190	1	\$17,019	1	\$17,508	2	\$18,165	1
North Carolina	\$9,200	19	\$7,646	40	\$6,617	46	\$6,697	46	\$7,351	44
North Dakota	\$8,756	25	\$9,026	24	\$9,309	23	\$9,369	24	\$10,695	18
Ohio	\$10,216	16	\$10,301	17	\$10,285	18	\$10,421	17	\$10,935	16
Oklahoma	\$6,258	47	\$6,596	47	\$6,747	45	\$6,807	45	\$7,077	45
Oregon	\$8,016	33	\$7,868	36	\$8,191	34	\$8,273	33	\$8,971	30
Pennsylvania	\$11,752	11	\$11,985	9	\$12,498	9	\$13,047	10	\$13,727	8
Rhode Island	\$12,081	9	\$12,414	8	\$12,643	8	\$13,241	9	\$13,587	9
South Carolina	\$8,376	30	\$8,609	27	\$8,785	27	\$9,312	25	\$9,342	26
South Dakota	\$7,634	38	\$7,366	42	\$7,543	40	\$7,685	39	\$7,832	40
Tennessee	\$6,716	44	\$6,694	44	\$6,880	43	\$6,950	43	\$7,373	43
Texas	\$7,596	39	\$7,706	39	\$7,666	38	\$7,627	40	\$8,054	39
Utah	\$6,138	48	\$6,040	49	\$6,182	48	\$6,310	48	\$6,536	48
Vermont	\$12,958	7	\$12,919	7	\$13,363	7	\$13,780	7	\$14,682	6
Virginia	\$8,783	23	\$8,633	25	\$8,747	28	\$9,104	26	\$9,170	27
Washington	\$8,529	27	\$8,544	28	\$8,813	26	\$9,039	27	\$9,629	24
West Virginia	\$8,583	26	\$9,348	21	\$11,434	13	\$10,006	20	\$10,246	21
Wisconsin	\$10,412	15	\$11,005	15	\$10,515	17	\$10,569	16	\$10,700	17
Wyoming	\$15,923	1	\$14,646	2	\$14,237	5	\$14,614	5	\$14,575	7



**Table B-2. Funding Distribution**

	2010		2011		2012		2013		2014	
	Fairness Ratio	Grade	Fairness Ratio	Grade	Fairness Ratio	Grade	Fairness Ratio	Grade	Fairness Ratio	Grade
Alabama	0.93	C	0.92	D	0.91	D	0.91	D	0.92	D
Arizona	0.93	D	0.94	C	0.95	C	0.93	D	0.88	F
Arkansas	1.03	B	1.01	C	0.98	C	1.02	C	0.98	C
California	1.05	B	1.09	A	1.04	B	1.01	C	1.01	C
Colorado	0.99	C	0.96	C	0.98	C	1.07	B	1.05	B
Connecticut	1.07	B	0.99	C	1.05	B	1.06	B	0.98	C
Delaware	0.97	C	0.96	C	1.35	A	1.78	A	1.44	A
Florida	1.09	A	1.04	B	1.03	C	1.04	C	0.97	C
Georgia	1.08	A	1.09	A	1.02	C	1.09	B	1.10	A
Idaho	0.83	F	1.05	B	0.99	C	0.89	F	0.90	D
Illinois	0.71	F	0.85	F	0.88	D	0.82	F	0.77	F
Indiana	1.15	A	1.14	A	1.13	A	1.11	B	1.10	A
Iowa	0.89	D	0.92	D	0.91	D	0.92	D	0.92	D
Kansas	1.01	C	0.98	C	0.96	C	0.97	C	0.98	C
Kentucky	1.07	B	1.03	B	1.05	B	1.03	C	1.01	C
Louisiana	1.14	A	1.05	B	1.13	A	1.03	C	1.13	A
Maine	1.07	B	1.00	C	0.86	F	0.87	F	0.89	D
Maryland	0.93	D	0.94	C	0.90	D	0.92	D	0.94	C
Massachusetts	1.22	A	1.15	A	1.13	A	1.13	A	1.13	A
Michigan	0.94	C	0.95	C	0.98	C	0.99	C	0.98	C
Minnesota	1.30	A	1.24	A	1.31	A	1.30	A	1.29	A
Mississippi	0.97	C	0.99	C	1.02	C	1.00	C	1.01	C
Missouri	0.88	F	0.87	F	0.89	D	0.84	F	0.88	F
Montana	0.88	D	0.85	F	0.84	F	0.85	F	0.85	F
Nebraska	0.99	C	1.03	B	1.02	C	1.09	B	1.09	B
Nevada	0.59	F	0.56	F	0.41	F	0.69	F	0.59	F
New Hampshire	1.03	B	0.78	F	0.90	D	0.95	C	0.93	D
New Jersey	1.19	A	1.11	A	1.29	A	1.24	A	1.24	A
New Mexico	0.87	F	0.91	D	0.92	D	0.95	C	0.94	C
New York	0.90	D	0.91	D	0.95	C	0.94	D	0.93	D
North Carolina	0.58	F	0.97	C	1.10	A	1.12	B	1.02	C
North Dakota	0.76	F	0.70	F	0.70	F	0.69	F	0.74	F
Ohio	1.27	A	1.28	A	1.26	A	1.26	A	1.27	A
Oklahoma	1.00	C	1.05	B	1.05	B	1.03	C	1.05	B
Oregon	1.01	C	0.96	C	0.97	C	1.02	C	0.95	C
Pennsylvania	0.89	D	0.88	F	0.89	D	0.92	D	0.97	C
Rhode Island	0.97	C	0.97	C	0.94	C	0.96	C	0.94	C
South Carolina	0.99	C	0.92	D	1.05	B	0.97	C	0.99	C
South Dakota	0.90	D	0.85	F	0.85	F	0.87	F	0.88	F
Tennessee	1.12	A	1.13	A	1.12	A	1.13	A	1.08	B
Texas	0.94	C	0.92	D	0.94	C	0.94	D	0.94	C
Utah	1.22	A	1.24	A	1.23	A	1.26	A	1.30	A
Vermont	0.84	F	0.82	F	0.87	F	0.88	F	0.92	D
Virginia	0.91	D	0.86	F	0.86	F	0.87	F	0.86	F
Washington	0.92	D	0.93	C	0.96	C	0.99	C	0.99	C
West Virginia	1.11	A	1.17	A	0.96	C	0.94	D	0.90	D
Wisconsin	1.03	C	1.04	B	1.03	C	1.05	C	1.03	C
Wyoming	0.92	D	0.81	F	0.74	F	0.81	F	0.70	F

**Table B-3. Effort**

	2009			2010			2011			2012			2013		
	Per Capita GSP (2009 dollars)	Effort Index	Grade	Per Capita GSP (2009 dollars)	Effort Index	Grade	Per Capita GSP (2009 dollars)	Effort Index	Grade	Per Capita GSP (2009 dollars)	Effort Index	Grade	Per Capita GSP (2009 dollars)	Effort Index	Grade
Alabama	\$35,597	0.047	A	\$36,237	0.044	A	\$36,499	0.041	B	\$36,750	0.039	B	\$37,189	0.039	B
Alaska	\$70,918	0.049	A	\$67,761	0.046	A	\$68,707	0.043	A	\$70,804	0.040	B	\$66,817	0.044	A
Arizona	\$38,296	0.037	D	\$38,299	0.034	F	\$38,595	0.031	F	\$38,895	0.030	F	\$38,762	0.027	F
Arkansas	\$34,669	0.047	A	\$35,469	0.049	A	\$35,947	0.048	A	\$35,924	0.044	A	\$36,539	0.041	A
California	\$51,831	0.036	F	\$51,821	0.033	F	\$52,022	0.031	F	\$52,724	0.031	F	\$53,505	0.030	F
Colorado	\$50,275	0.033	F	\$50,135	0.033	F	\$50,007	0.031	F	\$50,254	0.029	F	\$50,457	0.028	F
Connecticut	\$63,612	0.038	D	\$63,955	0.037	D	\$63,311	0.036	C	\$63,363	0.036	C	\$62,989	0.036	C
Delaware	\$62,973	0.030	F	\$62,698	0.029	F	\$62,903	0.029	F	\$61,271	0.031	F	\$59,767	0.030	F
Florida	\$38,771	0.039	D	\$38,396	0.036	D	\$37,627	0.036	C	\$37,790	0.032	F	\$38,197	0.031	F
Georgia	\$42,145	0.046	A	\$41,735	0.042	B	\$41,889	0.040	B	\$41,904	0.039	B	\$42,262	0.037	C
Hawaii	\$48,268	0.036	F	\$48,858	0.031	F	\$49,117	0.028	F	\$49,333	0.026	F	\$49,087	0.025	F
Idaho	\$34,749	0.037	D	\$34,845	0.037	D	\$34,474	0.033	F	\$34,102	0.032	F	\$34,608	0.031	F
Illinois	\$50,102	0.039	D	\$50,323	0.037	D	\$51,203	0.036	C	\$52,018	0.035	C	\$51,434	0.035	C
Indiana	\$40,694	0.038	D	\$43,004	0.036	D	\$42,962	0.033	F	\$42,903	0.033	D	\$43,347	0.031	F
Iowa	\$45,087	0.039	C	\$45,837	0.040	C	\$46,696	0.038	C	\$48,319	0.037	C	\$48,554	0.036	C
Kansas	\$43,059	0.045	B	\$44,054	0.043	B	\$45,463	0.038	C	\$45,101	0.036	C	\$44,462	0.036	C
Kentucky	\$36,115	0.040	C	\$37,467	0.040	C	\$37,986	0.039	C	\$38,125	0.039	B	\$38,371	0.037	B
Louisiana	\$46,885	0.038	D	\$48,519	0.034	F	\$46,489	0.034	D	\$46,850	0.035	C	\$45,588	0.032	D
Maine	\$37,804	0.047	A	\$38,280	0.046	A	\$37,860	0.047	A	\$37,784	0.044	A	\$37,405	0.041	A
Maryland	\$52,901	0.039	D	\$53,715	0.039	C	\$53,940	0.037	C	\$53,704	0.036	C	\$53,176	0.036	C
Massachusetts	\$58,590	0.034	F	\$60,172	0.033	F	\$61,127	0.032	F	\$61,863	0.034	D	\$61,191	0.033	D
Michigan	\$36,882	0.049	A	\$38,854	0.046	A	\$39,715	0.044	A	\$40,226	0.041	A	\$41,169	0.038	B
Minnesota	\$49,133	0.040	C	\$50,550	0.036	D	\$51,344	0.035	D	\$51,615	0.034	D	\$52,372	0.034	C
Mississippi	\$31,173	0.048	A	\$31,493	0.046	A	\$31,227	0.044	A	\$31,862	0.042	A	\$31,642	0.041	A
Missouri	\$41,949	0.039	C	\$42,316	0.038	C	\$41,674	0.037	C	\$41,807	0.036	C	\$41,963	0.035	C
Montana	\$35,889	0.045	A	\$36,728	0.043	B	\$37,680	0.040	B	\$37,767	0.039	B	\$38,021	0.038	B
Nebraska	\$48,042	0.039	C	\$49,279	0.039	C	\$51,099	0.036	C	\$50,974	0.037	C	\$51,664	0.035	C
Nevada	\$44,375	0.036	F	\$43,781	0.033	F	\$43,891	0.033	F	\$43,307	0.031	F	\$42,883	0.030	F
New Hampshire	\$46,074	0.042	C	\$47,411	0.042	B	\$47,797	0.043	A	\$48,293	0.041	A	\$48,099	0.039	B
New Jersey	\$55,366	0.051	A	\$55,610	0.050	A	\$54,913	0.047	A	\$55,978	0.046	A	\$55,959	0.046	A
New Mexico	\$39,697	0.048	A	\$39,291	0.045	A	\$39,117	0.042	A	\$39,114	0.040	A	\$38,971	0.038	B
New York	\$59,205	0.047	A	\$61,415	0.047	A	\$61,188	0.045	A	\$62,742	0.043	A	\$62,130	0.042	A
North Carolina	\$43,390	0.035	F	\$43,501	0.032	F	\$43,699	0.030	F	\$43,159	0.029	F	\$43,200	0.030	F
North Dakota	\$48,134	0.033	F	\$50,934	0.034	F	\$55,387	0.030	F	\$64,618	0.027	F	\$63,911	0.028	F
Ohio	\$41,493	0.045	A	\$42,308	0.044	A	\$43,627	0.042	A	\$44,425	0.041	A	\$44,579	0.038	B
Oklahoma	\$38,562	0.041	C	\$38,768	0.039	C	\$39,577	0.033	F	\$40,664	0.032	F	\$40,957	0.032	D
Oregon	\$47,349	0.036	F	\$49,535	0.032	F	\$51,243	0.030	F	\$51,121	0.029	F	\$49,897	0.029	F
Pennsylvania	\$44,678	0.043	C	\$45,561	0.042	B	\$46,043	0.041	B	\$46,293	0.039	B	\$46,560	0.040	A
Rhode Island	\$45,420	0.045	A	\$46,278	0.044	A	\$46,220	0.044	A	\$46,604	0.043	A	\$46,679	0.043	A
South Carolina	\$35,141	0.051	A	\$35,325	0.048	A	\$35,801	0.044	A	\$35,563	0.043	A	\$35,608	0.042	A
South Dakota	\$45,103	0.033	F	\$45,633	0.032	F	\$48,239	0.031	F	\$47,190	0.029	F	\$46,875	0.029	F
Tennessee	\$39,219	0.035	F	\$39,487	0.035	F	\$40,306	0.034	D	\$41,283	0.032	F	\$41,295	0.031	F
Texas	\$47,224	0.041	C	\$47,668	0.039	C	\$48,604	0.035	D	\$50,670	0.031	F	\$52,623	0.029	F
Utah	\$41,810	0.038	D	\$41,702	0.034	F	\$42,229	0.033	F	\$41,890	0.033	D	\$42,474	0.033	D
Vermont	\$40,410	0.056	A	\$41,827	0.056	A	\$43,013	0.053	A	\$43,273	0.052	A	\$42,814	0.053	A
Virginia	\$51,677	0.036	F	\$52,290	0.035	F	\$52,094	0.034	D	\$51,933	0.034	D	\$51,351	0.035	C
Washington	\$52,626	0.034	F	\$53,075	0.031	F	\$52,860	0.031	F	\$53,718	0.030	F	\$53,735	0.029	F
West Virginia	\$34,113	0.046	A	\$34,869	0.049	A	\$35,633	0.047	A	\$34,347	0.047	A	\$34,742	0.045	A
Wisconsin	\$43,323	0.042	C	\$44,309	0.042	B	\$45,061	0.041	B	\$45,429	0.037	C	\$45,676	0.036	C
Wyoming	\$67,542	0.043	B	\$66,134	0.042	B	\$66,080	0.038	C	\$61,477	0.040	A	\$61,297	0.040	A

**Table B-4. Coverage**

	2010			2011			2012			2013			2014		
	Coverage	Income Ratio	Rank	Coverage	Income Ratio	Rank	Coverage	Income Ratio	Rank	Coverage	Income Ratio	Rank	Coverage	Income Ratio	Rank
Alabama	89%	160%	28	88%	168%	41	88%	155%	36	87%	152%	34	88%	142%	27
Alaska	90%	109%	7	91%	112%	3	88%	125%	14	87%	112%	10	91%	142%	9
Arizona	92%	141%	9	92%	129%	5	92%	142%	6	91%	137%	7	91%	130%	8
Arkansas	92%	172%	20	90%	142%	14	90%	167%	27	90%	162%	26	89%	160%	29
California	90%	172%	29	90%	180%	33	90%	179%	34	90%	180%	35	90%	179%	34
Colorado	90%	130%	12	91%	140%	10	90%	144%	12	92%	125%	5	90%	143%	14
Connecticut	88%	158%	36	88%	152%	27	89%	143%	15	90%	145%	19	88%	161%	35
Delaware	80%	167%	48	80%	176%	49	86%	175%	48	85%	203%	49	84%	169%	48
District of Columbia	80%	405%	51	77%	297%	51	79%	280%	51	76%	236%	51	82%	288%	51
Florida	87%	177%	45	87%	181%	45	88%	173%	44	87%	182%	44	87%	174%	43
Georgia	88%	162%	35	90%	184%	40	89%	179%	38	89%	185%	41	89%	175%	36
Hawaii	78%	139%	49	79%	152%	48	80%	164%	49	79%	139%	48	81%	159%	49
Idaho	92%	124%	4	91%	123%	7	92%	116%	2	90%	111%	6	92%	111%	3
Illinois	87%	148%	34	88%	157%	34	87%	148%	33	87%	147%	32	88%	146%	31
Indiana	87%	148%	37	86%	153%	39	87%	142%	32	86%	135%	29	86%	142%	37
Iowa	89%	124%	15	87%	123%	16	88%	126%	13	89%	125%	8	88%	122%	15
Kansas	89%	130%	16	89%	142%	23	87%	125%	17	88%	143%	24	87%	144%	33
Kentucky	87%	174%	43	88%	179%	43	87%	173%	46	87%	185%	45	87%	173%	44
Louisiana	81%	185%	50	81%	198%	50	81%	191%	50	81%	182%	50	81%	191%	50
Maine	91%	115%	5	88%	101%	9	89%	124%	7	91%	149%	12	90%	105%	5
Maryland	85%	162%	47	85%	149%	44	86%	147%	42	85%	154%	42	85%	153%	42
Massachusetts	88%	139%	27	88%	139%	21	88%	147%	29	89%	155%	23	90%	149%	17
Michigan	88%	130%	21	89%	138%	19	87%	136%	24	88%	130%	17	88%	136%	23
Minnesota	87%	127%	25	88%	122%	11	86%	133%	30	87%	128%	20	87%	124%	20
Mississippi	86%	167%	46	88%	176%	42	88%	183%	45	88%	185%	43	87%	178%	45
Missouri	85%	140%	38	85%	161%	46	86%	148%	43	86%	147%	39	86%	155%	41
Montana	90%	117%	10	88%	104%	8	89%	100%	3	89%	90%	2	89%	120%	10
Nebraska	87%	128%	26	87%	132%	24	86%	146%	41	86%	140%	33	88%	141%	25
Nevada	93%	157%	11	92%	157%	12	92%	170%	16	93%	173%	15	92%	153%	12
New Hampshire	88%	123%	18	89%	136%	13	89%	118%	8	88%	141%	22	90%	113%	6
New Jersey	87%	124%	23	88%	128%	17	88%	133%	19	88%	129%	16	89%	136%	18
New Mexico	89%	137%	19	92%	167%	18	90%	156%	22	91%	151%	13	89%	154%	24
New York	85%	148%	44	85%	140%	38	86%	136%	35	85%	139%	36	85%	137%	40
North Carolina	89%	163%	32	89%	173%	35	89%	163%	31	89%	170%	37	89%	158%	28
North Dakota	87%	117%	22	86%	141%	36	88%	145%	26	92%	130%	4	90%	87%	4
Ohio	85%	141%	41	85%	135%	32	86%	142%	39	84%	140%	40	85%	132%	39
Oklahoma	92%	161%	14	90%	158%	22	90%	140%	10	90%	140%	11	90%	149%	16
Oregon	90%	134%	13	90%	143%	15	88%	138%	20	88%	157%	31	89%	150%	26
Pennsylvania	85%	138%	39	84%	130%	37	85%	134%	40	84%	134%	38	85%	130%	38
Rhode Island	87%	173%	42	88%	146%	25	88%	162%	37	86%	187%	46	84%	147%	46
South Carolina	90%	171%	33	91%	176%	29	90%	158%	21	90%	163%	27	89%	145%	21
South Dakota	90%	118%	8	90%	165%	28	90%	147%	11	88%	138%	21	89%	104%	7
Tennessee	87%	166%	40	87%	200%	47	87%	178%	47	86%	187%	47	86%	181%	47
Texas	92%	172%	17	92%	187%	26	92%	184%	23	92%	182%	28	92%	172%	22
Utah	93%	121%	2	94%	120%	2	94%	113%	1	93%	119%	1	93%	107%	1
Vermont	90%	103%	6	91%	111%	4	89%	125%	9	86%	94%	9	88%	112%	11
Virginia	88%	151%	30	88%	151%	30	88%	152%	28	90%	139%	14	88%	152%	32
Washington	88%	135%	24	89%	148%	20	89%	149%	25	89%	154%	25	90%	145%	19
West Virginia	93%	131%	3	92%	127%	6	91%	121%	4	91%	157%	18	92%	164%	13
Wisconsin	85%	109%	31	84%	117%	31	86%	111%	18	84%	118%	30	85%	113%	30
Wyoming	94%	127%	1	92%	101%	1	92%	138%	5	90%	103%	3	92%	107%	2

## Appendix C: Resource Allocation Indicators

**Table C-1. Early Childhood Education**

	2010				2011				2012				2013				2014			
	Total	Low Income	Ratio by Income	Rank	Total	Low Income	Ratio by Income	Rank	Total	Low Income	Ratio by Income	Rank	Total	Low Income	Ratio by Income	Rank	Total	Low Income	Ratio by Income	Rank
Alabama	46%	39%	85%	16	44%	34%	76%	43	43%	36%	82%	30	41%	35%	86%	28	41%	30%	74%	49
Alaska	41%	39%	96%	5	45%	40%	88%	18	38%	41%	108%	2	38%	40%	106%	3	42%	43%	103%	4
Arizona	34%	25%	73%	47	35%	28%	80%	37	34%	25%	74%	44	36%	27%	75%	49	37%	31%	84%	31
Arkansas	54%	51%	95%	6	47%	42%	91%	13	46%	43%	94%	8	50%	42%	84%	29	47%	45%	95%	8
California	50%	41%	83%	28	49%	39%	79%	38	50%	41%	83%	28	48%	40%	84%	33	48%	40%	83%	34
Colorado	49%	39%	81%	33	47%	35%	74%	47	48%	36%	76%	42	51%	42%	82%	37	54%	47%	88%	22
Connecticut	63%	46%	73%	46	63%	60%	96%	5	68%	61%	91%	12	62%	48%	77%	45	66%	53%	81%	38
Delaware	54%	42%	78%	38	53%	47%	88%	17	46%	42%	91%	11	43%	34%	78%	40	53%	39%	74%	48
District of Columbia	73%	57%	77%	40	73%	58%	79%	39	75%	73%	97%	6	78%	70%	89%	16	85%	76%	89%	19
Florida	51%	42%	84%	25	51%	44%	86%	22	51%	41%	82%	31	50%	42%	84%	32	51%	45%	88%	20
Georgia	49%	41%	84%	23	49%	40%	83%	31	50%	40%	80%	35	48%	39%	81%	38	50%	43%	86%	23
Hawaii	56%	45%	81%	34	48%	44%	92%	12	50%	53%	107%	3	54%	54%	101%	5	50%	41%	82%	36
Idaho	43%	36%	84%	21	33%	34%	102%	2	34%	23%	68%	48	29%	25%	83%	35	32%	27%	84%	32
Illinois	55%	46%	84%	22	54%	43%	80%	35	54%	47%	89%	14	51%	45%	89%	13	55%	50%	91%	14
Indiana	40%	32%	80%	35	43%	37%	86%	23	39%	30%	78%	37	36%	31%	87%	25	44%	34%	78%	43
Iowa	47%	36%	77%	43	49%	47%	97%	4	49%	46%	94%	7	49%	47%	95%	7	46%	40%	86%	25
Kansas	50%	45%	90%	9	44%	37%	85%	24	46%	40%	88%	16	42%	35%	84%	30	47%	44%	94%	9
Kentucky	43%	35%	83%	30	40%	32%	79%	40	47%	41%	87%	18	42%	37%	87%	23	41%	35%	86%	24
Louisiana	52%	51%	99%	3	52%	50%	95%	8	52%	44%	86%	20	49%	44%	89%	14	51%	46%	89%	18
Maine	46%	32%	70%	50	40%	34%	84%	25	47%	38%	81%	34	45%	40%	88%	19	46%	35%	77%	45
Maryland	51%	40%	78%	39	49%	41%	84%	26	47%	29%	61%	51	47%	37%	78%	43	50%	38%	75%	47
Massachusetts	58%	46%	79%	36	61%	46%	75%	46	59%	46%	78%	38	59%	54%	92%	10	58%	46%	79%	41
Michigan	46%	38%	84%	24	53%	48%	90%	14	47%	41%	88%	15	46%	39%	84%	31	46%	39%	85%	29
Minnesota	46%	38%	83%	27	48%	40%	83%	29	47%	37%	79%	36	48%	42%	89%	18	45%	41%	93%	12
Mississippi	52%	52%	99%	2	56%	53%	95%	7	52%	53%	103%	5	47%	43%	91%	11	49%	51%	105%	2
Missouri	43%	34%	79%	37	47%	38%	81%	32	41%	33%	81%	32	44%	38%	86%	26	44%	39%	90%	15
Montana	42%	47%	111%	1	42%	40%	94%	11	35%	37%	107%	4	33%	33%	101%	4	39%	41%	105%	3
Nebraska	48%	40%	83%	29	47%	38%	80%	36	52%	48%	93%	10	38%	30%	78%	42	44%	34%	77%	44
Nevada	32%	25%	77%	41	31%	25%	81%	33	32%	21%	66%	49	32%	26%	83%	34	35%	28%	80%	39
New Hampshire	51%	42%	83%	31	53%	32%	61%	51	52%	33%	64%	50	59%	52%	88%	21	48%	28%	59%	51
New Jersey	63%	57%	90%	8	62%	55%	88%	20	65%	55%	84%	24	62%	57%	92%	9	64%	58%	90%	16
New Mexico	34%	30%	87%	13	40%	38%	95%	9	40%	34%	84%	23	37%	32%	87%	24	37%	26%	71%	50
New York	58%	51%	88%	12	58%	51%	87%	21	59%	51%	86%	19	56%	49%	88%	22	58%	52%	89%	17
North Carolina	42%	29%	70%	49	43%	33%	75%	44	43%	34%	77%	39	44%	34%	76%	47	44%	34%	79%	40
North Dakota	31%	28%	93%	7	36%	42%	115%	1	41%	36%	88%	17	39%	37%	95%	6	30%	33%	110%	1
Ohio	44%	38%	85%	18	47%	39%	83%	30	46%	37%	81%	33	46%	41%	88%	20	46%	40%	88%	21
Oklahoma	46%	41%	89%	10	44%	42%	96%	6	41%	37%	90%	13	39%	35%	90%	12	42%	40%	95%	7
Oregon	41%	31%	75%	44	39%	26%	67%	49	42%	32%	76%	41	41%	34%	83%	36	43%	37%	84%	30
Pennsylvania	49%	42%	86%	15	47%	36%	76%	42	50%	37%	73%	45	46%	36%	78%	41	43%	36%	83%	35
Rhode Island	44%	38%	85%	17	53%	47%	88%	19	48%	40%	84%	25	44%	42%	94%	8	49%	49%	100%	6
South Carolina	52%	42%	82%	32	45%	38%	84%	28	43%	36%	82%	29	42%	37%	89%	17	45%	37%	81%	37
South Dakota	39%	33%	87%	14	40%	39%	99%	3	38%	44%	116%	1	37%	26%	72%	50	46%	39%	86%	26
Tennessee	41%	35%	84%	19	39%	33%	84%	27	43%	35%	83%	26	38%	31%	80%	39	38%	32%	85%	28
Texas	43%	36%	83%	26	41%	33%	80%	34	44%	36%	83%	27	41%	35%	86%	27	41%	35%	85%	27
Utah	41%	31%	75%	45	38%	26%	69%	48	39%	30%	75%	43	42%	32%	75%	48	46%	38%	83%	33
Vermont	49%	48%	98%	4	61%	39%	63%	50	43%	33%	77%	40	54%	41%	77%	46	59%	54%	93%	11
Virginia	48%	35%	72%	48	49%	39%	78%	41	48%	34%	70%	47	45%	35%	77%	44	49%	38%	78%	42
Washington	39%	24%	62%	51	44%	33%	75%	45	41%	29%	72%	46	38%	26%	68%	51	41%	31%	76%	46
West Virginia	33%	28%	84%	20	37%	33%	90%	15	36%	31%	85%	22	37%	40%	107%	2	35%	33%	94%	10
Wisconsin	42%	37%	88%	11	41%	37%	89%	16	47%	44%	93%	9	45%	40%	89%	15	43%	40%	92%	13
Wyoming	34%	26%	77%	42	39%	37%	94%	10	60%	51%	85%	21	43%	53%	123%	1	34%	35%	101%	5

**Table C-2. Wage Competitiveness**

	2010		2011		2012		2013		2014	
	Wage Ratio at 25	Rank	Wage Ratio at 25	Rank	Wage Ratio at 25	Rank	Wage Ratio at 25	Rank	Wage Ratio at 25	Rank
Alabama	84%	32	82%	32	82%	31	80%	27	77%	38
Alaska	79%	42	83%	31	91%	5	83%	23	86%	10
Arizona	77%	49	79%	40	73%	50	71%	50	75%	39
Arkansas	89%	16	88%	12	87%	14	88%	10	83%	24
California	87%	24	83%	30	82%	32	79%	32	79%	33
Colorado	76%	50	75%	49	75%	47	68%	51	71%	50
Connecticut	79%	44	79%	42	77%	42	79%	31	74%	44
Delaware	81%	37	86%	18	84%	23	78%	36	78%	35
District of Columbia	77%	47	80%	38	79%	39	74%	42	78%	34
Florida	82%	34	79%	44	79%	38	78%	37	75%	40
Georgia	78%	45	76%	48	75%	48	72%	48	70%	51
Hawaii	91%	9	96%	3	86%	16	81%	25	86%	11
Idaho	87%	22	86%	16	84%	26	89%	8	81%	30
Illinois	88%	20	84%	26	86%	18	84%	18	85%	17
Indiana	91%	11	89%	11	83%	27	85%	14	85%	18
Iowa	96%	3	102%	1	105%	2	95%	5	97%	2
Kansas	83%	33	87%	15	81%	33	78%	35	81%	31
Kentucky	88%	21	85%	23	83%	28	84%	19	81%	28
Louisiana	87%	23	84%	28	85%	19	80%	26	80%	32
Maine	85%	27	93%	6	87%	13	85%	15	92%	5
Maryland	88%	19	85%	22	84%	21	82%	24	83%	23
Massachusetts	81%	36	84%	29	79%	37	79%	34	78%	37
Michigan	95%	4	92%	8	89%	8	87%	11	84%	21
Minnesota	80%	40	85%	20	80%	35	80%	29	81%	29
Mississippi	84%	30	84%	27	81%	34	76%	41	83%	22
Missouri	81%	39	79%	43	75%	49	74%	43	73%	45
Montana	90%	13	85%	21	84%	24	95%	4	90%	8
Nebraska	89%	18	88%	14	88%	9	86%	12	86%	13
Nevada	86%	26	81%	36	88%	12	80%	30	82%	27
New Hampshire	80%	41	84%	24	82%	30	77%	39	74%	42
New Jersey	91%	10	86%	17	86%	17	86%	13	90%	7
New Mexico	85%	29	81%	35	91%	4	84%	17	85%	16
New York	89%	15	86%	19	89%	7	84%	20	86%	12
North Carolina	84%	31	78%	45	75%	46	73%	46	74%	43
North Dakota	100%	2	96%	4	86%	15	100%	2	95%	3
Ohio	92%	8	89%	10	88%	11	85%	16	85%	15
Oklahoma	82%	35	82%	33	77%	41	73%	45	73%	47
Oregon	85%	28	84%	25	84%	22	80%	28	82%	26
Pennsylvania	93%	5	94%	5	94%	3	94%	6	95%	4
Rhode Island	92%	7	90%	9	83%	29	84%	21	85%	19
South Carolina	89%	17	88%	13	85%	20	83%	22	84%	20
South Dakota	93%	6	82%	34	84%	25	98%	3	87%	9
Tennessee	81%	38	80%	37	76%	45	78%	38	78%	36
Texas	79%	43	79%	41	78%	40	76%	40	75%	41
Utah	78%	46	77%	46	76%	43	74%	44	72%	48
Vermont	86%	25	80%	39	80%	36	90%	7	90%	6
Virginia	74%	51	71%	51	71%	51	72%	49	73%	46
Washington	77%	48	74%	50	76%	44	73%	47	71%	49
West Virginia	90%	14	76%	47	89%	6	79%	33	83%	25
Wisconsin	90%	12	92%	7	88%	10	89%	9	86%	14
Wyoming	103%	1	102%	2	115%	1	101%	1	100%	1

**Table C-3. Teacher to Student Ratios**

	2010			2011			2012			2013			2014		
	Teachers per 100 students	Staffing Fairness	Rank	Teachers per 100 students	Staffing Fairness	Rank	Teachers per 100 students	Staffing Fairness	Rank	Teachers per 100 students	Staffing Fairness	Rank	Teachers per 100 students	Staffing Fairness	Rank
Alabama	6.5	96%	45	6.9	94%	45	6.6	98%	39	7.1	97%	43	6.4	97%	39
Alaska	6.9	124%	6	6.9	122%	4	6.9	122%	5	6.6	133%	2	6.6	115%	10
Arizona	5.5	102%	33	5.3	102%	33	5.5	99%	33	5.3	102%	29	5.2	98%	37
Arkansas	7.4	114%	13	6.9	115%	8	6.8	113%	11	6.8	113%	11	6.9	114%	11
California	4.6	106%	25	4.2	104%	30	4.4	99%	35	4.3	98%	38	4.2	100%	33
Colorado	6.2	111%	16	6.0	110%	12	5.9	109%	15	6.0	114%	8	6.1	116%	8
Connecticut	7.6	98%	40	7.6	98%	38	7.8	97%	43	7.9	93%	47	7.8	93%	46
Delaware	7.0	102%	35	6.8	99%	36	6.8	97%	42	7.1	110%	13	7.0	115%	9
District of Columbia	9.6	96%	46	9.0	94%	43	8.2	98%	41	7.9	97%	41	7.8	97%	39
Florida	7.2	89%	49	6.8	93%	48	6.8	91%	49	6.8	91%	49	6.8	77%	51
Georgia	7.2	102%	32	6.9	106%	25	6.9	103%	27	6.7	104%	25	6.6	105%	23
Hawaii	6.4	96%	44	6.4	94%	45	6.4	98%	39	6.4	97%	40	6.4	97%	39
Idaho	5.7	111%	17	5.9	109%	15	5.8	110%	14	5.4	109%	15	5.2	103%	29
Illinois	6.4	99%	39	6.3	96%	41	6.2	94%	45	6.9	97%	41	6.3	96%	43
Indiana	5.9	124%	5	5.5	121%	5	6.0	114%	9	5.8	125%	5	5.8	125%	4
Iowa	7.1	106%	24	6.9	109%	16	6.9	107%	20	6.9	104%	22	6.9	106%	22
Kansas	7.2	101%	36	7.2	106%	24	7.6	99%	36	7.7	104%	21	7.8	105%	24
Kentucky	6.5	110%	19	6.2	108%	18	6.2	103%	26	6.3	103%	28	6.1	104%	27
Louisiana	7.3	84%	50	7.1	100%	34	7.1	103%	28	6.8	93%	48	6.7	96%	42
Maine	8.3	103%	29	8.0	109%	17	7.7	98%	38	8.0	103%	26	8.1	99%	35
Maryland	7.2	106%	23	7.2	106%	26	7.1	101%	31	7.0	97%	39	6.9	95%	44
Massachusetts	7.5	116%	12	7.4	112%	11	7.5	113%	10	7.5	112%	12	7.4	106%	21
Michigan	5.6	108%	22	5.5	110%	13	5.5	111%	12	5.5	108%	19	5.5	107%	18
Minnesota	6.6	123%	7	6.5	126%	2	6.6	127%	3	6.7	129%	4	6.7	129%	3
Mississippi	6.7	101%	38	6.5	103%	32	6.5	102%	30	6.7	98%	35	6.6	98%	38
Missouri	7.2	113%	14	7.0	105%	27	7.0	105%	22	7.0	98%	37	7.0	109%	14
Montana	7.1	122%	8	6.9	121%	6	6.8	117%	7	6.8	118%	7	6.9	117%	7
Nebraska	7.6	116%	10	7.5	113%	10	7.4	107%	21	7.3	104%	23	7.3	104%	26
Nevada	5.4	74%	51	5.3	69%	51	5.3	72%	51	5.0	75%	51	5.2	84%	50
New Hampshire	8.3	141%	2	7.9	110%	14	7.9	128%	2	8.0	130%	3	8.0	132%	2
New Jersey	8.3	112%	15	7.4	97%	40	8.2	109%	16	8.3	109%	17	8.3	108%	15
New Mexico	6.9	101%	37	6.7	105%	28	6.7	104%	24	6.6	107%	20	6.7	102%	32
New York	7.9	95%	47	7.8	96%	42	7.8	94%	46	7.7	94%	46	7.6	93%	47
North Carolina	6.8	104%	27	6.7	107%	22	6.6	102%	29	6.7	102%	30	6.8	104%	28
North Dakota	9.0	158%	1	9.0	149%	1	9.3	164%	1	9.2	159%	1	8.6	140%	1
Ohio	6.1	116%	11	6.0	114%	9	6.0	116%	8	5.9	113%	10	5.8	113%	12
Oklahoma	6.3	110%	20	6.1	108%	20	6.1	108%	18	6.1	108%	18	6.1	108%	16
Oregon	5.1	104%	28	5.0	107%	23	4.7	100%	32	4.7	109%	16	4.7	106%	20
Pennsylvania	7.2	103%	30	7.1	99%	35	6.9	96%	44	6.8	95%	45	6.7	91%	48
Rhode Island	7.8	91%	48	7.8	91%	50	8.0	88%	50	6.9	86%	50	6.8	90%	49
South Carolina	6.6	96%	43	6.4	98%	37	6.6	104%	23	6.7	98%	36	6.6	100%	34
South Dakota	7.5	127%	4	7.5	126%	3	7.3	125%	4	6.4	113%	9	7.2	118%	6
Tennessee	6.8	102%	34	6.8	104%	29	6.8	104%	25	6.8	103%	27	6.8	103%	30
Texas	7.1	98%	41	7.0	98%	39	6.8	99%	34	6.7	99%	34	6.8	98%	36
Utah	4.6	111%	18	4.7	115%	7	4.7	119%	6	4.7	120%	6	4.7	121%	5
Vermont	7.8	102%	31	7.6	93%	47	7.5	94%	47	7.6	101%	31	7.8	110%	13
Virginia	6.1	117%	9	5.9	108%	19	7.4	98%	37	7.4	101%	32	7.3	103%	31
Washington	5.3	109%	21	5.3	108%	21	5.3	108%	17	5.3	110%	14	5.4	107%	19
West Virginia	7.2	105%	26	7.2	103%	31	7.2	108%	19	7.2	104%	24	7.2	105%	25
Wisconsin	6.6	97%	42	6.5	92%	49	6.4	92%	48	6.5	96%	44	6.5	95%	45
Wyoming	8.5	136%	3	7.1	94%	43	8.3	111%	13	8.1	100%	33	8.3	108%	17