STATE SCHOOL FINANCE PROFILES

Profiles of the K-12 school finance systems of all 50 states and D.C.

2019-2020

ALBERT SHANKER INSTITUTE

UNIVERSITY OF MIAMI
SCHOOL of EDUCATION
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RUTGERS
Graduate School of Education

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Introduction to the profiles

School funding is both enormously important and extremely complicated. Large amounts of finance data are collected every year by districts, states, and the federal government. These data are used by scholars and organizations to produce volumes of reports and papers, which vary widely in terms of empirical rigor, and sometimes reach conflicting conclusions. This can be frustrating for policymakers, parents, educators, advocates, and other stakeholders.

The primary purpose of the **School Finance Indicators Database** (SFID) is to cut through this clutter. It is a collection of finance and resource allocation measures that are based on sophisticated and widely accepted methods, but also designed to be easy for non-researchers to understand and use. The full state database, as well as user-friendly documentation, online data visualizations, and other resources are freely available to the public at the SFID website: schoolfinancedata.org.

Each year, we publish a report summarizing key findings from the SFID. Although this report does present data from every state, it does not allow for the kind of convenient *state-specific* summary that many users desire. Moreover, while all of our state indicators data are available to the public, the fact remains that analyzing datasets, as well as compiling and contextualizing results from a variety of different measures, can be difficult and time-consuming. **These 51 one-page state profiles pull together a selection of key measures into one place and provide a succinct summary of each state's (and D.C.'s) public K-12 finance system.** They are published every year as an accompaniment to the annual report. Note that the individual state profiles compiled in this document can be downloaded as separate PDF files at the SFID website.

Characterizing complex state finance systems parsimoniously is a challenge. The State Indicators Database (SID), which is the primary product of the SFID, includes approximately 125 variables measuring revenue and spending at different levels (e.g., federal, state, local), resource allocation (e.g., staff ratios, teacher pay), and other topics. The indicators are statistically adjusted for factors, such as regional wage variation and poverty, to allow for better comparisons within and between states (many of the indicators are available over the past 25-30 years). Any attempt to include all or even most of these measures in a single profile would likely overwhelm many users. It is also unnecessary.

Instead, the profiles, like the annual report, focus on three "core" measures from the state database, which together offer an effective overview of the fairness and sufficiency of each state's finance system:

1. **Effort**: how much of a state's total resources or capacity are spent directly on public K-12 education;
2. **Statewide adequacy**: how many of states' students are in districts with resources sufficient to meet common outcome goals;
3. **Equal opportunity**: whether funding is more adequate for lower-poverty districts than for higher-poverty districts.

In the profiles, on both the front and back sides, we provide descriptions of each of these three measures, and we try to present the data clearly and in context. This includes, for example, comparisons of each state with the nation as a whole, and, where appropriate, trends over time. The profiles also include overall state scores.

On the back of each profile you can find more detailed information about the indicators and notes about how they are presented and might be interpreted. This back page also lists the names of SID variables used, should readers wish to download and analyze the data for themselves (note that some of the results in the profiles require use of the SFID's District Cost Database, which is also freely available to download on the SFID website). It is our hope that the profiles contribute to improving the quality and productivity of school finance debates and policymaking.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

ALABAMA

Summary: This 2019-20 profile of Alabama's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Alabama scores 30 out of 100, which ranks 42nd out of the 48 states with possible ratings.

CONTEXTUAL STATS	AL	U.S.
Child (5-17yo) poverty rate (%)	19.7	14.9
Public school coverage (%)	79.2	83.1
Percent revenue from state sources	56.7	47.0
Total enrollment (U.S. rank)	744,235	(24)

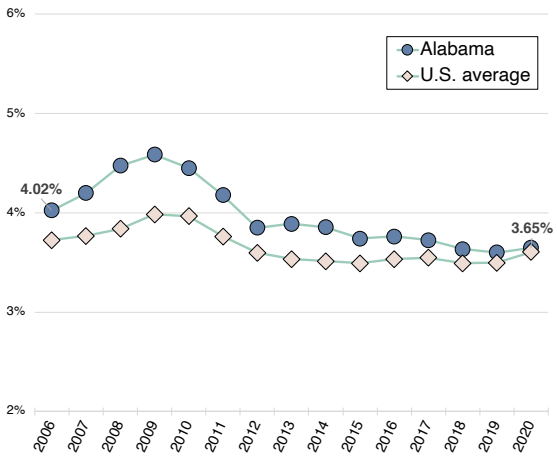
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Alabama effort	3.65 %
U.S. average	3.61 %

- AL is a medium effort state.
- In FY 2020, AL spent 3.65 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.04 percentage points higher than the unweighted national average of 3.61 percent.
- AL's effort level ranks #24 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- AL's 2020 effort level is 0.37 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #40 in the nation.

Net change by period (% pts.)		
Period	**AL**	**U.S.**
K-12 recession (2006-12)	-0.17	-0.13
Post-recession (2012-20)	-0.20	0.01
Full period (2006-20)	-0.37	-0.12

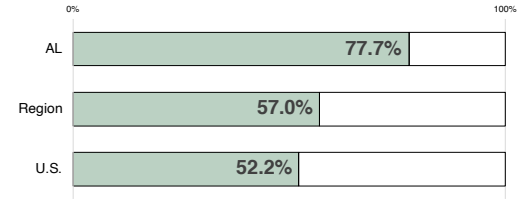
- AL's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $3.84 billion (9.6 percent) higher.
- AL is a relatively low capacity state, with a GSP per capita ranked #47 in the nation.

STATEWIDE ADEQUACY

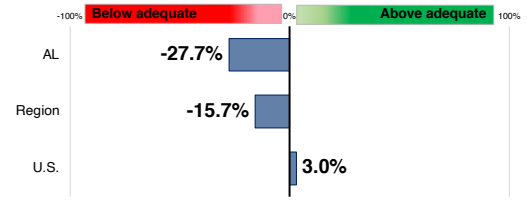
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in AL is relatively low.
- By the modest standard of U.S. average scores, 77.7 percent of AL students attend inadequately funded districts, which ranks #39 in the nation (out of 49).
- The typical AL student's district spends 27.7 percent below adequate levels, which ranks #47 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest AL districts

Percent above/below adequate spending, ten largest AL school districts	
MOBILE CNTY	-44.3
JEFFERSON CNTY	-43.3
BALDWIN CNTY	3.3
MONTGOMERY CNTY	-53.3
HUNTSVILLE CITY	-34.7
BIRMINGHAM CITY	-50.6
SHELBY CNTY	15.3
MADISON CNTY	-10.1
TUSCALOOSA CNTY	-34.5
HOOVER CITY	19.1

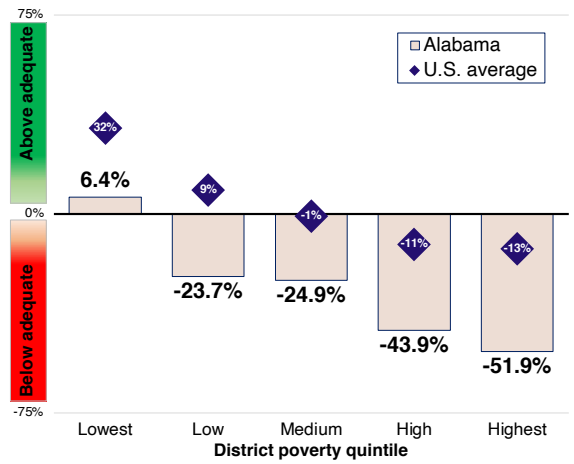
- Statewide, spending is below estimated adequate levels in 113 of the 137 AL districts with available data.
- Closing all these negative gaps would require $3.1 billion in new funding.

EQUAL OPPORTUNITY

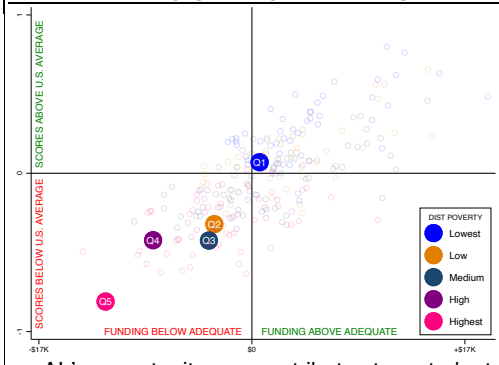
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in AL is highly unequal.
- Spending in AL's highest-poverty districts is 51.9 percent ($11,681 PP) below the estimated adequate level, compared with 6.4 percent ($617 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -58.3 percentage points is ranked #25 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- AL's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.88 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). AL's division is East South Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

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STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

ALASKA

State score: **88**

Summary: This 2019-20 profile of Alaska's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Alaska scores 88 out of 100, which ranks 2nd out of the 48 states with possible ratings.

CONTEXTUAL STATS	AK	U.S.
Child (5-17yo) poverty rate (%)	11.1	14.9
Public school coverage (%)	81.1	83.1
Percent revenue from state sources	63.6	47.0
Total enrollment (U.S. rank)	132,017 (47)	

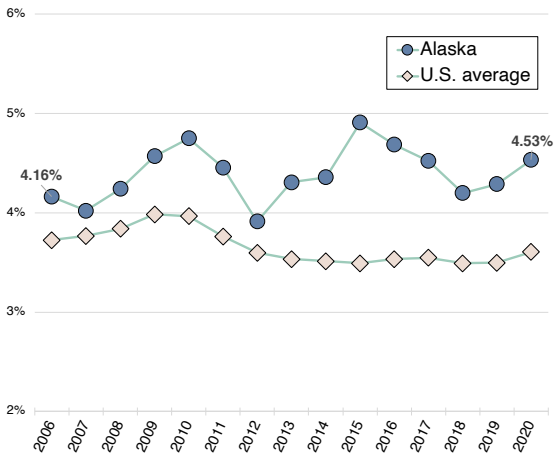
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Alaska effort	4.53 %
U.S. average	3.61 %

- AK is a high effort state.
- In FY 2020, AK spent 4.53 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.93 percentage points higher than the unweighted national average of 3.61 percent.
- AK's effort level ranks #3 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- AK's 2020 effort level is 0.37 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #5 in the nation.

Net change by period (% pts.)		
Period	**AK**	**U.S.**
K-12 recession (2006-12)	-0.25	-0.13
Post-recession (2012-20)	0.62	0.01
Full period (2006-20)	0.37	-0.12

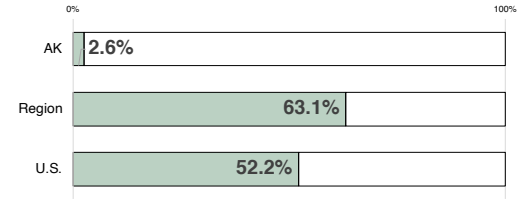
- AK's effort was lower than its 2006 level in 0 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.00 billion (0.0 percent) higher.
- AK is a relatively high capacity state, with a GSP per capita ranked #9 in the nation.

STATEWIDE ADEQUACY

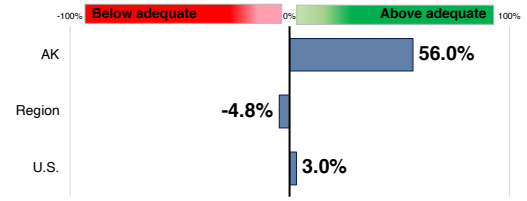
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in AK is relatively high.
- By the modest standard of U.S. average scores, 2.6 percent of AK students attend inadequately funded districts, which ranks #4 in the nation (out of 49).
- The typical AK student's district spends 56.0 percent above adequate levels, which ranks #7 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest AK districts

Percent above/below adequate spending, ten largest AK school districts	
ANCHORAGE SD	23.5
MATANUSKA-SUSITNA BORO SD	100.1
FAIRBANKS NORTH STAR BORO SD	79.4
KENAI PENINSULA BORO SD	65.3
GALENA CITY SD	0.1
JUNEAU BORO SD	62.9
LOWER KUSKOKWIM SD	27.6
KODIAK ISLAND BORO SD	138.9
KETCHIKAN GATEWAY BORO SD	135.0
NORTH SLOPE BORO SD	243.8

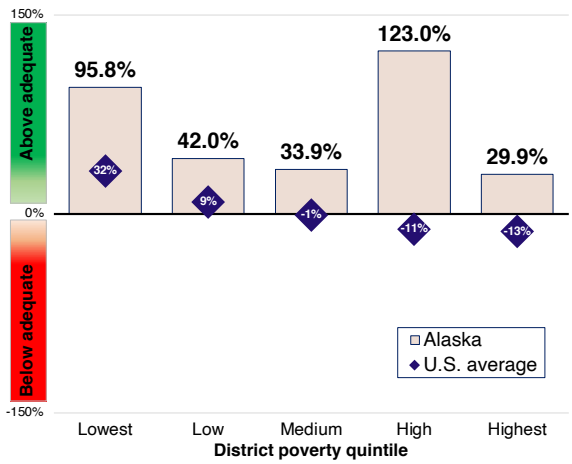
- Statewide, spending is below estimated adequate levels in 2 of the 53 AK districts with available data.
- Closing all these negative gaps would require $8.5 million in new funding.

EQUAL OPPORTUNITY

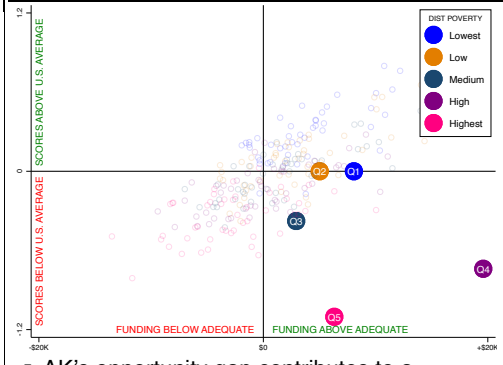
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in AK is highly unequal.
- Spending in AK's highest-poverty districts is 29.9 percent ($6,323 PP) above the estimated adequate level, compared with 95.8 percent ($8,069 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -65.9 percentage points is ranked #26 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- AK's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 1.10 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
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Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). AK's division is Pacific. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

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STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

ARIZONA

State score: **16**

Summary: This 2019-20 profile of Arizona's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Arizona scores 16 out of 100, which ranks 48th out of the 48 states with possible ratings.

CONTEXTUAL STATS	AZ	U.S.
Child (5-17yo) poverty rate (%)	16.6	14.9
Public school coverage (%)	83.5	83.1
Percent revenue from state sources	44.1	47.0
Total enrollment (U.S. rank)	1,152,586 (13)	

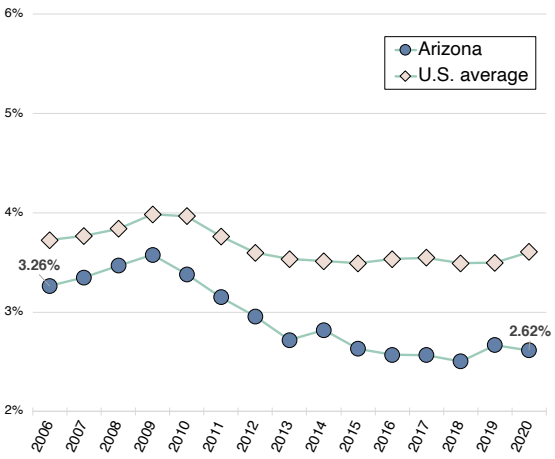
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Arizona effort	2.62 %
U.S. average	3.61 %

- AZ is a low effort state.
- In FY 2020, AZ spent 2.62 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.99 percentage points lower than the unweighted national average of 3.61 percent.
- AZ's effort level ranks #48 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- AZ's 2020 effort level is 0.65 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #47 in the nation.

Net change by period (% pts.)		
Period	**AZ**	**U.S.**
K-12 recession (2006-12)	-0.31	-0.13
Post-recession (2012-20)	-0.34	0.01
Full period (2006-20)	-0.65	-0.12

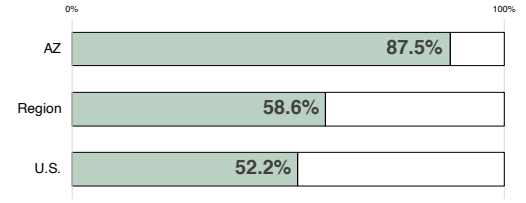
- AZ's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $11.46 billion (26.1 percent) higher.
- AZ is a relatively low capacity state, with a GSP per capita ranked #38 in the nation.

STATEWIDE ADEQUACY

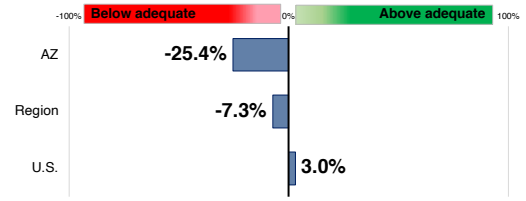
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in AZ is relatively low.
- By the modest standard of U.S. average scores, 87.5 percent of AZ students attend inadequately funded districts, which ranks #45 in the nation (out of 49).
- The typical AZ student's district spends 25.4 percent below adequate levels, which ranks #45 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest AZ districts

Percent above/below adequate spending, ten largest AZ school districts	
MESA UNIF DIST (4235)	-32.6
CHANDLER UNIF DIST #80 (4242)	-2.6
TUCSON UNIF DIST (4403)	-26.7
PEORIA UNIF SD (4237)	-24.4
GILBERT UNIF DIST (4239)	-3.2
DEER VALLEY UNIF DIST (4246)	-2.4
PARADISE VALLEY UNIF DIST (4241)	-3.7
PHOENIX UNION HIGH SD (4286)	-38.1
DYSART UNIF DIST (4243)	-27.6
WASHINGTON ELEM SD (4260)	-41.3

- Statewide, spending is below estimated adequate levels in 164 of the 207 AZ districts with available data.
- Closing all these negative gaps would require $2.9 billion in new funding.

EQUAL OPPORTUNITY

Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in AZ is moderately unequal.
- Spending in AZ's highest-poverty districts is 33.9 percent ($5,539 PP) below the estimated adequate level, compared with 6.1 percent ($535 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -27.8 percentage points is ranked #5 in the nation (out of 48).

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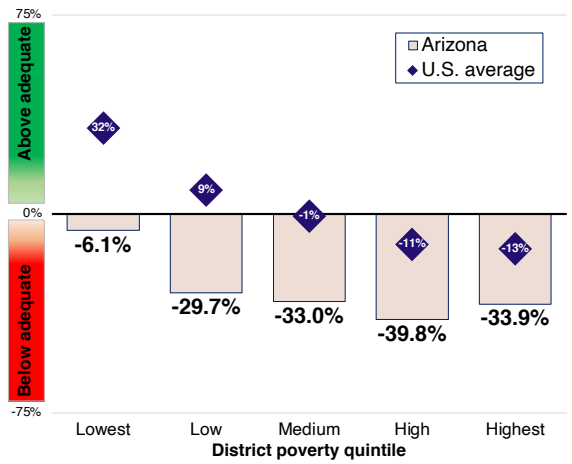

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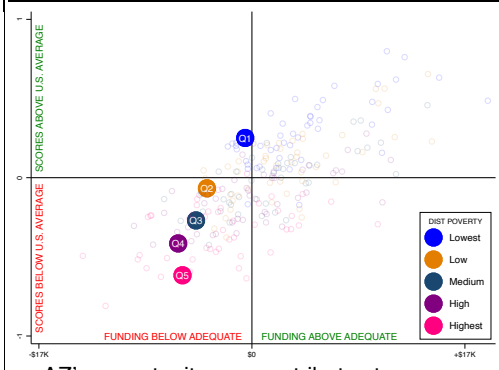

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- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

ARKANSAS

Summary: This 2019-20 profile of Arkansas's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Arkansas scores 43 out of 100, which ranks 32nd out of the 48 states with possible ratings.

CONTEXTUAL STATS	AR	U.S.
Child (5-17yo) poverty rate (%)	19.3	14.9
Public school coverage (%)	84.8	83.1
Percent revenue from state sources	75.3	47.0
Total enrollment (U.S. rank)	496,927	(34)

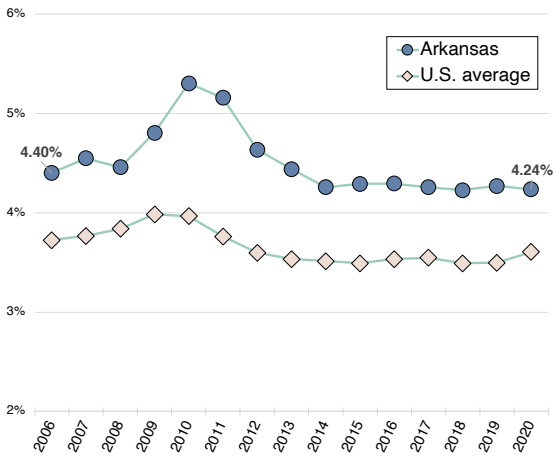
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Arkansas effort	4.24 %
U.S. average	3.61 %

- AR is a high effort state.
- In FY 2020, AR spent 4.24 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.63 percentage points higher than the unweighted national average of 3.61 percent.
- AR's effort level ranks #8 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- AR's 2020 effort level is 0.17 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #28 in the nation.

Net change by period (% pts.)		
Period	**AR**	**U.S.**
K-12 recession (2006-12)	0.23	-0.13
Post-recession (2012-20)	-0.40	0.01
Full period (2006-20)	-0.17	-0.12

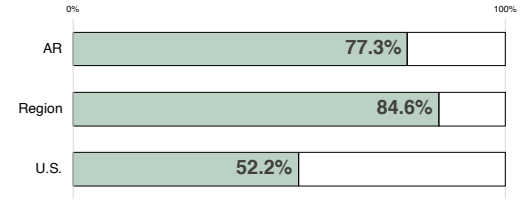
- AR's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.91 billion (3.4 percent) higher.
- AR is a relatively low capacity state, with a GSP per capita ranked #49 in the nation.

STATEWIDE ADEQUACY

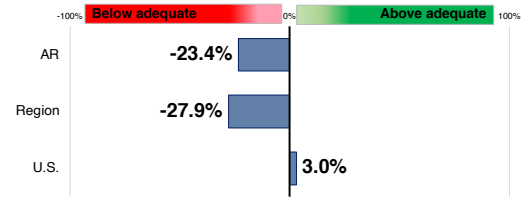
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in AR is relatively low.
- By the modest standard of U.S. average scores, 77.3 percent of AR students attend inadequately funded districts, which ranks #38 in the nation (out of 49).
- The typical AR student's district spends 23.4 percent below adequate levels, which ranks #43 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest AR districts

Percent above/below adequate spending, ten largest AR school districts	
SPRINGDALE SD	-29.9
LITTLE ROCK SD	-37.5
BENTONVILLE SD	41.5
ROGERS SD	-29.1
FORT SMITH SD	-34.7
PULASKI CO. SPEC. SD.	-16.2
CABOT SD	31.6
FAYETTEVILLE SD	13.2
CONWAY SD	-13.1
BRYANT SD	-2.6

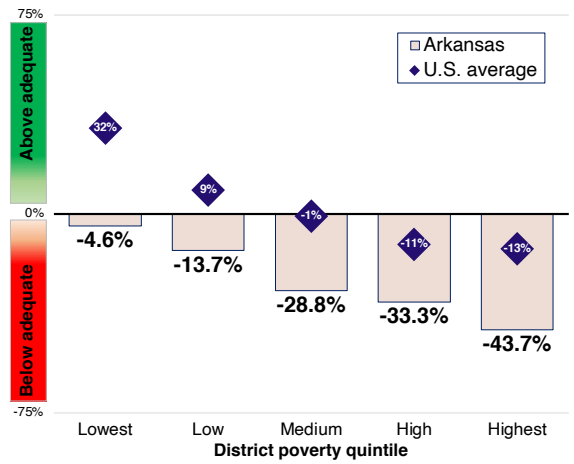
- Statewide, spending is below estimated adequate levels in 203 of the 235 AR districts with available data.
- Closing all these negative gaps would require $1.7 billion in new funding.

EQUAL OPPORTUNITY

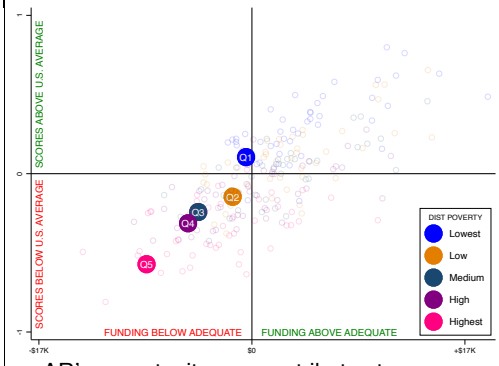
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in AR is highly unequal.
- Spending in AR's highest-poverty districts is 43.7 percent ($8,409 PP) below the estimated adequate level, compared with 4.6 percent ($466 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -39.1 percentage points is ranked #18 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- AR's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.68 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). AR's division is West South Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

CALIFORNIA

Summary: This 2019-20 profile of California's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), California scores 32 out of 100, which ranks 39th out of the 48 states with possible ratings.

CONTEXTUAL STATS	CA	U.S.
Child (5-17yo) poverty rate (%)	14.2	14.9
Public school coverage (%)	86.6	83.1
Percent revenue from state sources	54.9	47.0
Total enrollment (U.S. rank)	6,249,005 (1)	

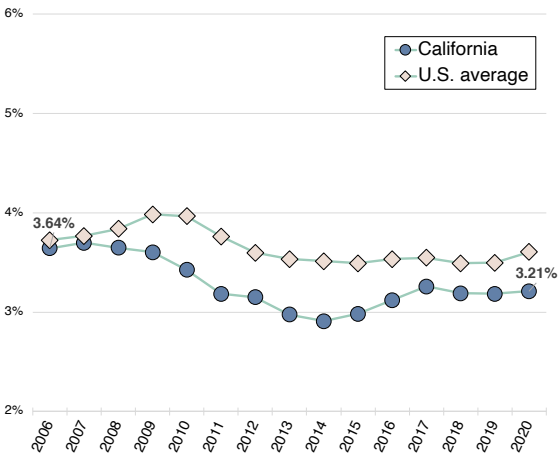
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

California effort	3.21 %
U.S. average	3.61 %

- CA is a low effort state.
- In FY 2020, CA spent 3.21 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.40 percentage points lower than the unweighted national average of 3.61 percent.
- CA's effort level ranks #36 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- CA's 2020 effort level is 0.43 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #43 in the nation.

Net change by period (% pts.)		
Period	**CA**	**U.S.**
K-12 recession (2006-12)	-0.49	-0.13
Post-recession (2012-20)	0.06	0.01
Full period (2006-20)	-0.43	-0.12

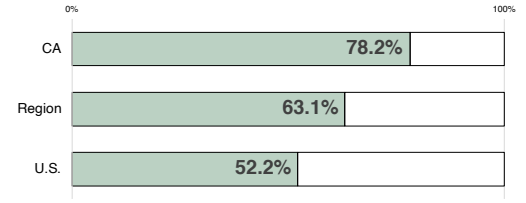
- CA's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $62.58 billion (14.0 percent) higher.
- CA is a relatively high capacity state, with a GSP per capita ranked #7 in the nation.

STATEWIDE ADEQUACY

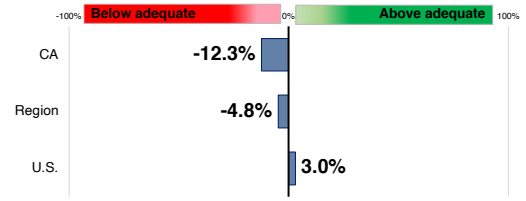
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in CA is relatively low.
- By the modest standard of U.S. average scores, 78.2 percent of CA students attend inadequately funded districts, which ranks #40 in the nation (out of 49).
- The typical CA student's district spends 12.3 percent below adequate levels, which ranks #37 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest CA districts

Percent above/below adequate spending, ten largest CA school districts	
LOS ANGELES UNIF	-10.6
SAN DIEGO UNIF	-7.2
LONG BEACH UNIF	-22.1
FRESNO UNIF	-13.8
ELK GROVE UNIF	-16.9
SAN FRANCISCO UNIF	-5.7
CORONA-NORCO UNIF	-8.9
SAN BERNARDINO CITY UNIF	-15.7
CAPISTRANO UNIF	10.5
SANTA ANA UNIF	-18.8

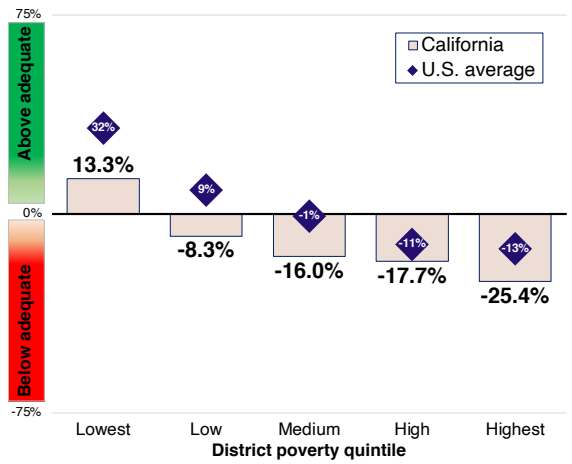
- Statewide, spending is below estimated adequate levels in 640 of the 933 CA districts with available data.
- Closing all these negative gaps would require $13.4 billion in new funding.

EQUAL OPPORTUNITY

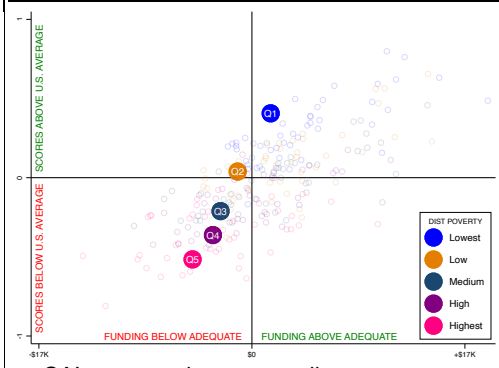
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in CA is highly unequal.
- Spending in CA's highest-poverty districts is 25.4 percent ($4,736 PP) below the estimated adequate level, compared with 13.3 percent ($1,498 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -38.6 percentage points is ranked #16 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- CA's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.92 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

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  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
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Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). CA's division is Pacific. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

COLORADO

State score: **43**

Summary: This 2019-20 profile of Colorado's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Colorado scores 43 out of 100, which ranks 30th out of the 48 states with possible ratings.

CONTEXTUAL STATS	CO	U.S.
Child (5-17yo) poverty rate (%)	9.8	14.9
Public school coverage (%)	85.8	83.1
Percent revenue from state sources	41.4	47.0
Total enrollment (U.S. rank)	913,223 (18)	

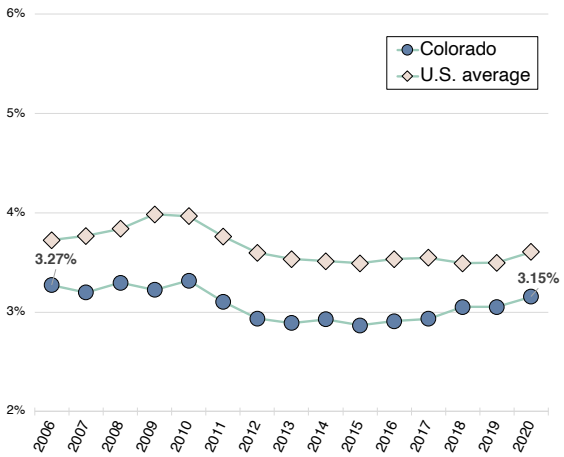
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Colorado effort	3.15 %
U.S. average	3.61 %

- CO is a low effort state.
- In FY 2020, CO spent 3.15 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.45 percentage points lower than the unweighted national average of 3.61 percent.
- CO's effort level ranks #40 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- CO's 2020 effort level is 0.12 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #23 in the nation.

Net change by period (% pts.)		
Period	**CO**	**U.S.**
K-12 recession (2006-12)	-0.34	-0.13
Post-recession (2012-20)	0.22	0.01
Full period (2006-20)	-0.12	-0.12

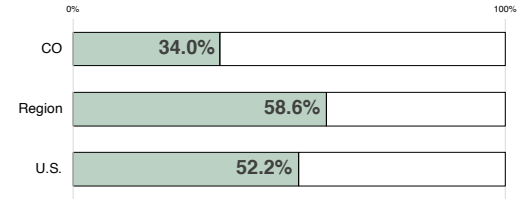
- CO's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $4.42 billion (8.2 percent) higher.
- CO is a relatively high capacity state, with a GSP per capita ranked #13 in the nation.

STATEWIDE ADEQUACY

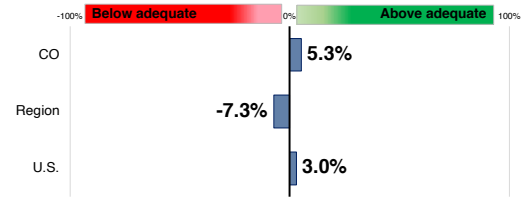
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in CO is relatively moderate.
- By the modest standard of U.S. average scores, 34.0 percent of CO students attend inadequately funded districts, which ranks #26 in the nation (out of 49).
- The typical CO student's district spends 5.3 percent above adequate levels, which ranks #29 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest CO districts

Percent above/below adequate spending, ten largest CO school districts	
SD NO. 1 IN THE CNTY OF DENVER	-26.3
JEFFERSON CNTY SD NO. R-1	28.1
DOUGLAS CNTY SD NO. RE 1	41.9
CHERRY CREEK SD NO. 5	13.2
AURORA JOINT DIST NO. 28	-29.2
ADAMS 12 FIVE STAR SCHLS	4.4
ST. VRAIN VALLEY SD NO. RE1J	15.9
BOULDER VALLEY SD NO. RE2	54.9
POUDRE SD R-1	46.8
ACADEMY SD 20	35.6

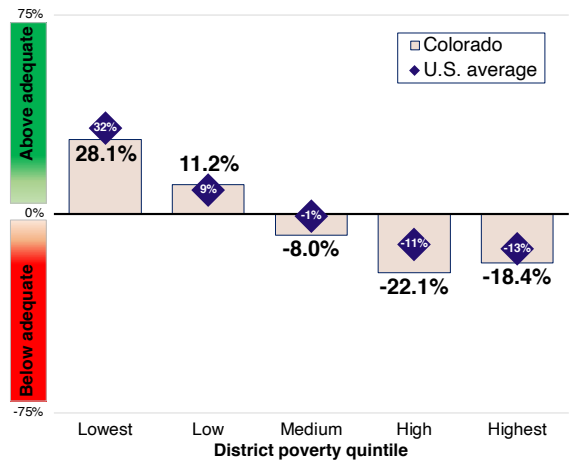
- Statewide, spending is below estimated adequate levels in 82 of the 178 CO districts with available data.
- Closing all these negative gaps would require $907.1 million in new funding.

EQUAL OPPORTUNITY

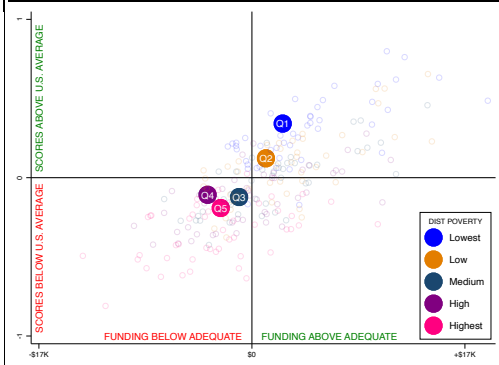
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in CO is highly unequal.
- Spending in CO's highest-poverty districts is 18.4 percent ($2,489 PP) below the estimated adequate level, compared with 28.1 percent ($2,456 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -46.5 percentage points is ranked #22 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- CO's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.53 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

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Statewide adequacy

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Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

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- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

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Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

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- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
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STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

CONNECTICUT

State score: **48**

Summary: This 2019-20 profile of Connecticut's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Connecticut scores 48 out of 100, which ranks 25th out of the 48 states with possible ratings.

CONTEXTUAL STATS	CT	U.S.
Child (5-17yo) poverty rate (%)	11.5	14.9
Public school coverage (%)	88.7	83.1
Percent revenue from state sources	37.3	47.0
Total enrollment (U.S. rank)	523,690 (30)	

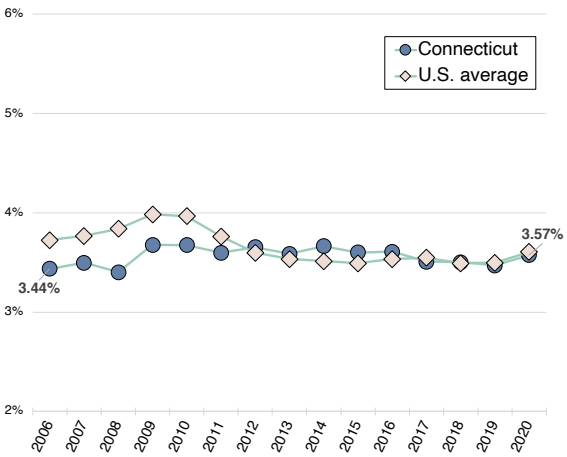
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Connecticut effort	3.57 %
U.S. average	3.61 %

- CT is a medium effort state.
- In FY 2020, CT spent 3.57 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.03 percentage points lower than the unweighted national average of 3.61 percent.
- CT's effort level ranks #27 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- CT's 2020 effort level is 0.14 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #10 in the nation.

Net change by period (% pts.)		
Period	**CT**	**U.S.**
K-12 recession (2006-12)	0.22	-0.13
Post-recession (2012-20)	-0.08	0.01
Full period (2006-20)	0.14	-0.12

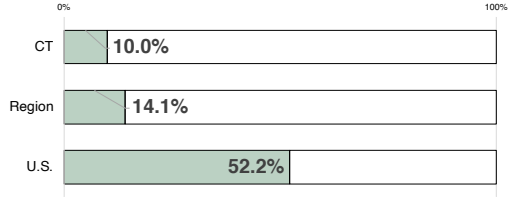
- CT's effort was lower than its 2006 level in 0 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.00 billion (0.0 percent) higher.
- CT is a relatively high capacity state, with a GSP per capita ranked #4 in the nation.

STATEWIDE ADEQUACY

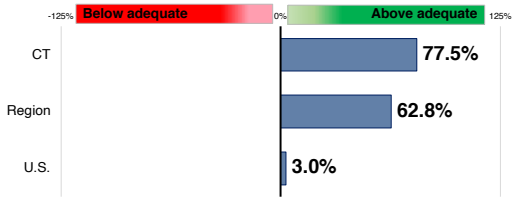
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in CT is relatively high.
- By the modest standard of U.S. average scores, 10.0 percent of CT students attend inadequately funded districts, which ranks #10 in the nation (out of 49).
- The typical CT student's district spends 77.5 percent above adequate levels, which ranks #3 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest CT districts

Percent above/below adequate spending, ten largest CT school districts	
NEW HAVEN SD	4.4
BRIDGEPORT SD	-22.0
WATERBURY SD	0.8
HARTFORD SD	-8.8
STAMFORD SD	56.7
DANBURY SD	4.3
NORWALK SD	54.1
NEW BRITAIN SD	-4.8
FAIRFIELD SD	186.9
WEST HARTFORD SD	145.1

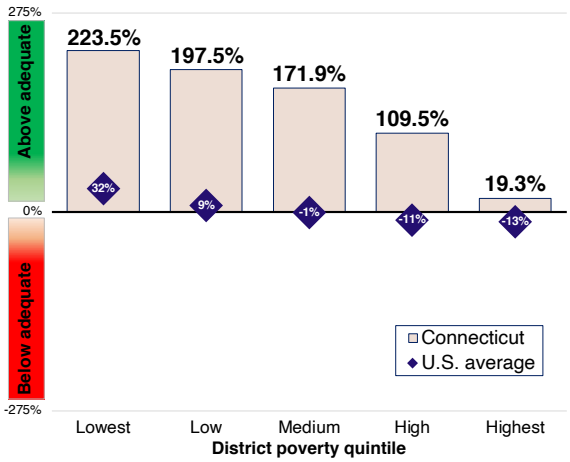
- Statewide, spending is below estimated adequate levels in 3 of the 166 CT districts with available data.
- Closing all these negative gaps would require $140.2 million in new funding.

EQUAL OPPORTUNITY

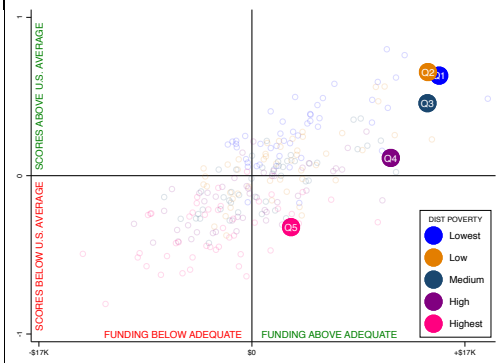
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in CT is severely unequal.
- Spending in CT's highest-poverty districts is 19.3 percent ($3,123 PP) above the estimated adequate level, compared with 223.5 percent ($14,947 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -204.2 percentage points is ranked #46 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- CT's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.96 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

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State School Finance Profiles 2019-20 (publ. 2022)

General

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- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
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Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). CT's division is New England. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(\ln)\text{SCHOOL} = b_0 + b_1\text{State}_i + b_2\text{LaborMarket}_{ij} + b_3\text{CWI}_{ij} + b_4\text{FINANCE}_{ij} + b_5\text{PopulationDensity}_{ij} + b_6\ \text{Enrollment}_{ij} + b_7\text{INDICATORS}_{ij} + b_8\text{Scale}_{ij} + b_9\text{Poverty}_{ij} + b_{10}\text{SchlType}_{ij} + b_{11}\text{DATABASE}_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

DELAWARE

State score: **55**

Summary: This 2019-20 profile of Delaware's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Delaware scores 55 out of 100, which ranks 18th out of the 48 states with possible ratings.

CONTEXTUAL STATS	DE	U.S.
Child (5-17yo) poverty rate (%)	14.1	14.9
Public school coverage (%)	80.4	83.1
Percent revenue from state sources	62.8	47.0
Total enrollment (U.S. rank)	139,930	(46)

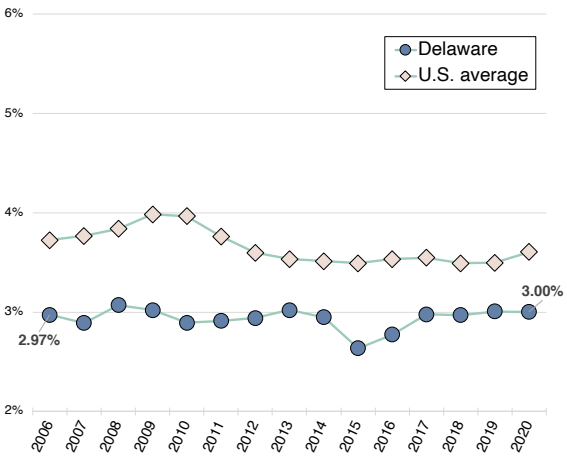
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Delaware effort	3.00 %
U.S. average	3.61 %

- DE is a low effort state.
- In FY 2020, DE spent 3.00 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.60 percentage points lower than the unweighted national average of 3.61 percent.
- DE's effort level ranks #43 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- DE's 2020 effort level is 0.03 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #16 in the nation.

Net change by period (% pts.)		
Period	**DE**	**U.S.**
K-12 recession (2006-12)	-0.03	-0.13
Post-recession (2012-20)	0.06	0.01
Full period (2006-20)	0.03	-0.12

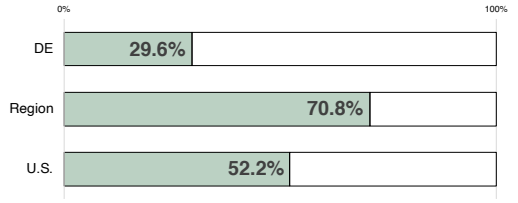
- DE's effort was lower than its 2006 level in 2 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.14 billion (1.3 percent) higher.
- DE is a relatively high capacity state, with a GSP per capita ranked #6 in the nation.

STATEWIDE ADEQUACY

Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in DE is relatively moderate.
- By the modest standard of U.S. average scores, 29.6 percent of DE students attend inadequately funded districts, which ranks #23 in the nation (out of 49).
- The typical DE student's district spends 6.6 percent above adequate levels, which ranks #27 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



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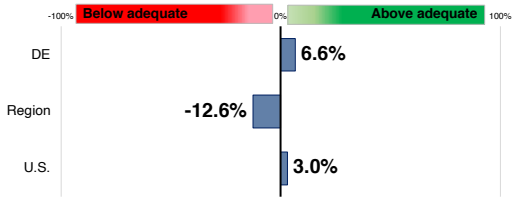

Adequacy in 10 largest DE districts

Percent above/below adequate spending, ten largest DE school districts	
RED CLAY CONSOL SD	11.9
CHRISTINA SD	13.2
APPOQUINIMINK SD	13.1
INDIAN RIVER SD	0.3
BRANDYWINE SD	18.6
COLONIAL SD	-8.7
CAESAR RODNEY SD	23.1
CAPITAL SD	-15.4
SMYRNA SD	7.4
CAPE HENLOPEN SD	86.4

- Statewide, spending is below estimated adequate levels in 8 of the 16 DE districts with available data.
- Closing all these negative gaps would require $85.3 million in new funding.

EQUAL OPPORTUNITY

Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in DE is highly unequal.
- Spending in DE's highest-poverty districts is 18.6 percent ($3,474 PP) below the estimated adequate level, compared with 14.4 percent ($1,948 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -33.0 percentage points is ranked #13 in the nation (out of 48).

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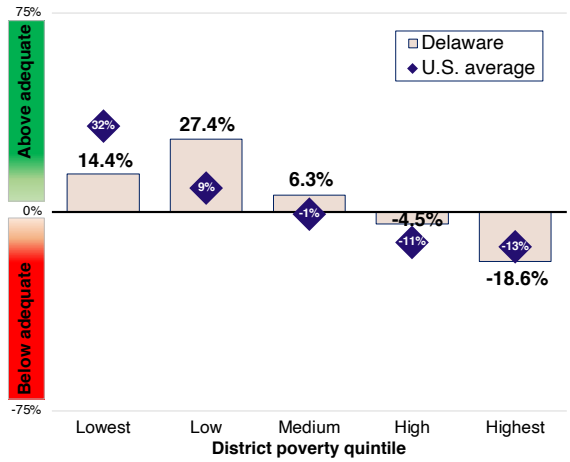
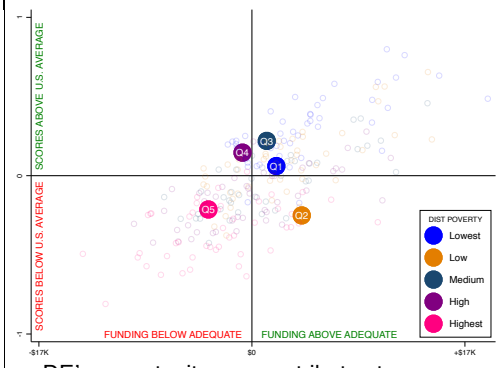


Adequacy gaps by outcome gaps



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Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(\ln)\text{SCHOOL} = b_0 + b_1\text{State}_i + b_2\text{LaborMarket}_{ij} + b_3\text{CWI}_{ij} + b_4\text{FINANCE}_{ij} + b_5\text{PopulationDensity}_{ij} + b_6\ \text{Enrollment}_{ij} + b_7\text{INDICATORS}_{ij} + b_8\text{Scale}_{ij} + b_9\text{Poverty}_{ij} + b_{10}\text{SchlType}_{ij} + b_{11}\text{DATABASE}_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

DISTRICT OF COLUMBIA

State score: **N/A**

Summary: This 2019-20 profile of District of Columbia's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), District of Columbia scores out of 100, which ranks out of the 48 states with possible ratings.

CONTEXTUAL STATS	DC	U.S.
Child (5-17yo) poverty rate (%)	23.2	14.9
Public school coverage (%)	82.3	83.1
Percent revenue from state sources		47.0
Total enrollment (U.S. rank)	89,878 (50)	

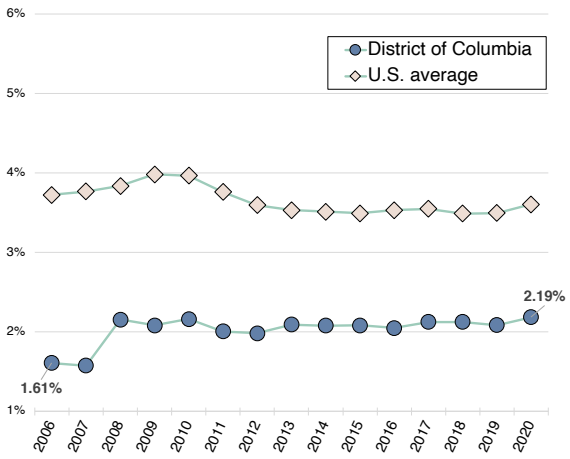
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

District of Columbia	2.19 %
U.S. average	3.61 %

- DC is a low effort state.
- In FY 2020, DC spent 2.19 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 1.42 percentage points lower than the unweighted national average of 3.61 percent.
- DC's effort level ranks #50 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- DC's 2020 effort level is 0.58 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #2 in the nation.

Net change by period (% pts.)		
Period	**DC**	**U.S.**
K-12 recession (2006-12)	0.37	-0.13
Post-recession (2012-20)	0.20	0.01
Full period (2006-20)	0.58	-0.12

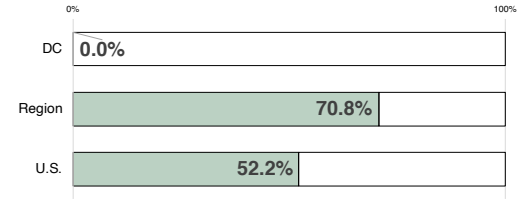
- DC's effort was lower than its 2006 level in 0 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.00 billion (0.0 percent) higher.
- DC is a relatively high capacity state, with a GSP per capita ranked #1 in the nation.

STATEWIDE ADEQUACY

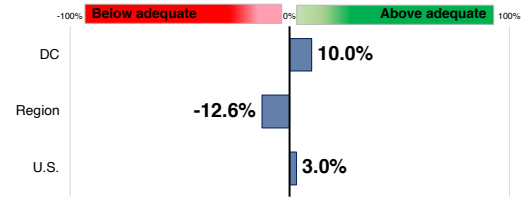
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in DC is relatively moderate.
- By the modest standard of U.S. average scores, 0.0 percent of DC students attend inadequately funded districts, which ranks #1.5 in the nation (out of 49).
- The typical DC student's district spends 10.0 percent above adequate levels, which ranks #25 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest DC districts

Percent above/below adequate spending, ten largest DC school districts	
DIST OF COLUMBIA PS	10.0

- Statewide, spending is below estimated adequate levels in 0 of the 1 DC districts with available data.
- Closing all these negative gaps would require $0.0 in new funding.

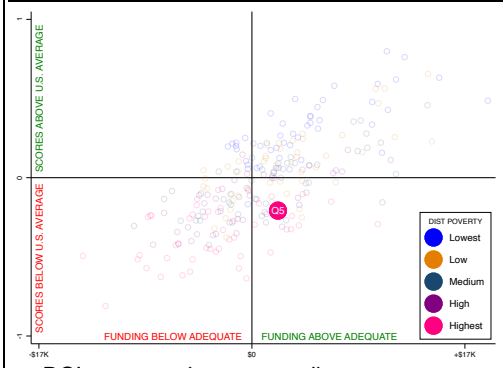
EQUAL OPPORTUNITY

Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in DC is .
- Spending in DC's highest-poverty districts is 10.0 percent ($2,082 PP) above the estimated adequate level, compared with percent ($ PP) adequate in the state's most affluent districts.
- This opportunity gap of percentage points is ranked # in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY

Adequacy gaps by outcome gaps



- DC's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). DC's division is South Atlantic. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

FLORIDA

State score: **20**

Summary: This 2019-20 profile of Florida's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Florida scores 20 out of 100, which ranks 46th out of the 48 states with possible ratings.

CONTEXTUAL STATS	FL	U.S.
Child (5-17yo) poverty rate (%)	16.5	14.9
Public school coverage (%)	80.4	83.1
Percent revenue from state sources	38.0	47.0
Total enrollment (U.S. rank)	2,858,461 (3)	

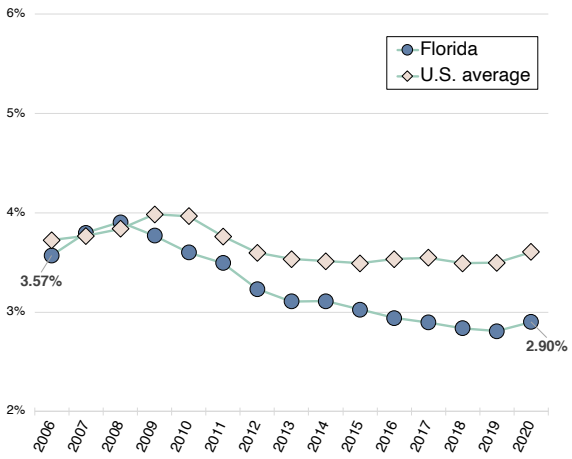
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Florida effort	2.90 %
U.S. average	3.61 %

- FL is a low effort state.
- In FY 2020, FL spent 2.90 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.71 percentage points lower than the unweighted national average of 3.61 percent.
- FL's effort level ranks #45 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- FL's 2020 effort level is 0.67 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #48 in the nation.

Net change by period (% pts.)		
Period	**FL**	**U.S.**
K-12 recession (2006-12)	-0.34	-0.13
Post-recession (2012-20)	-0.33	0.01
Full period (2006-20)	-0.67	-0.12

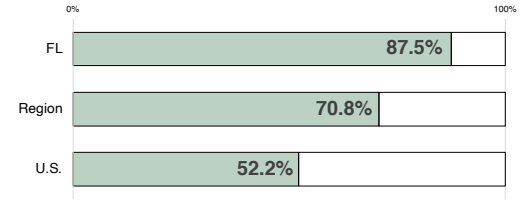
- FL's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $35.70 billion (24.2 percent) higher.
- FL is a relatively low capacity state, with a GSP per capita ranked #40 in the nation.

STATEWIDE ADEQUACY

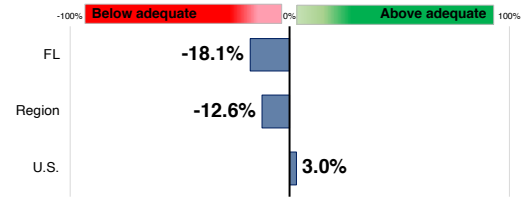
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in FL is relatively low.
- By the modest standard of U.S. average scores, 87.5 percent of FL students attend inadequately funded districts, which ranks #44 in the nation (out of 49).
- The typical FL student's district spends 18.1 percent below adequate levels, which ranks #40 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest FL districts

Percent above/below adequate spending, ten largest FL school districts	
MIAMI-DADE	-21.2
BROWARD	-29.5
HILLSBORO	-22.9
ORANGE	-14.9
PALM BEACH	-23.0
DUVAL	-40.5
POLK	-20.7
PINELLAS	-2.3
LEE	5.1
PASCO	-3.5

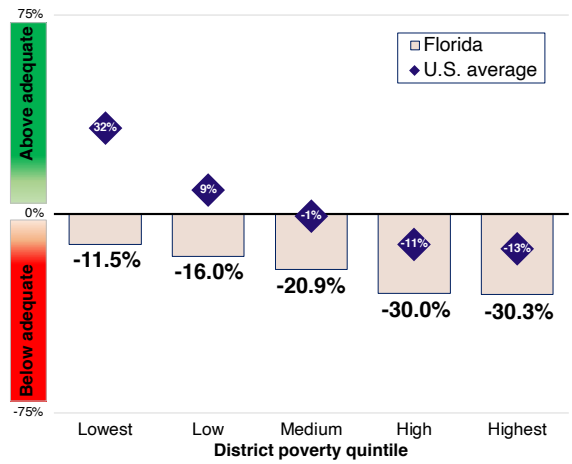
- Statewide, spending is below estimated adequate levels in 53 of the 67 FL districts with available data.
- Closing all these negative gaps would require $6.6 billion in new funding.

EQUAL OPPORTUNITY

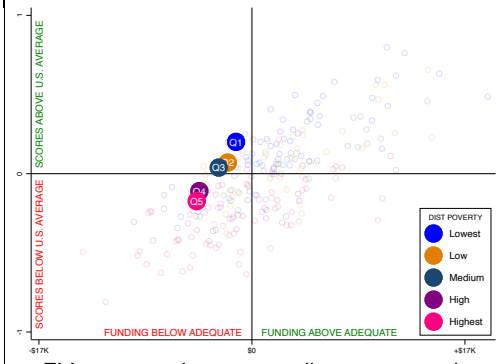
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in FL is moderately unequal.
- Spending in FL's highest-poverty districts is 30.3 percent ($4,402 PP) below the estimated adequate level, compared with 11.5 percent ($1,264 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -18.7 percentage points is ranked #1 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- FL's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.37 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

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  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). FL's division is South Atlantic. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

GEORGIA

State score: **40**

Summary: This 2019-20 profile of Georgia's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Georgia scores 40 out of 100, which ranks 36th out of the 48 states with possible ratings.

CONTEXTUAL STATS	GA	U.S.
Child (5-17yo) poverty rate (%)	18.8	14.9
Public school coverage (%)	83.2	83.1
Percent revenue from state sources	46.2	47.0
Total enrollment (U.S. rank)	1,769,657 (6)	

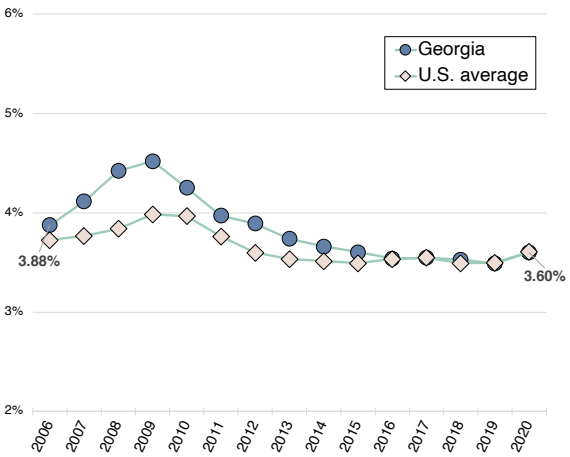
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Georgia effort	3.60 %
U.S. average	3.61 %

- GA is a medium effort state.
- In FY 2020, GA spent 3.60 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.00 percentage points lower than the unweighted national average of 3.61 percent.
- GA's effort level ranks #26 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- GA's 2020 effort level is 0.27 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #35 in the nation.

Net change by period (% pts.)		
Period	**GA**	**U.S.**
K-12 recession (2006-12)	0.02	-0.13
Post-recession (2012-20)	-0.29	0.01
Full period (2006-20)	-0.27	-0.12

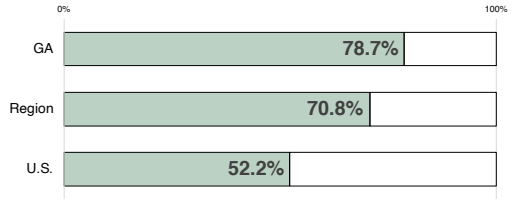
- GA's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $9.80 billion (9.4 percent) higher.
- GA is a relatively medium capacity state, with a GSP per capita ranked #26 in the nation.

STATEWIDE ADEQUACY

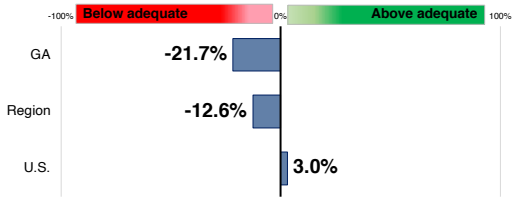
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in GA is relatively low.
- By the modest standard of U.S. average scores, 78.7 percent of GA students attend inadequately funded districts, which ranks #41 in the nation (out of 49).
- The typical GA student's district spends 21.7 percent below adequate levels, which ranks #42 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest GA districts

Percent above/below adequate spending, ten largest GA school districts	
GWINNETT CNTY	-25.9
COBB CNTY	-16.3
DEKALB CNTY	-38.2
FULTON CNTY	-14.3
CLAYTON CNTY	-48.3
ATLANTA PS	-12.8
FORSYTH CNTY	25.4
HENRY CNTY	-30.1
CHEROKEE CNTY	19.4
SAVANNAH-CHATHAM CNTY	-30.7

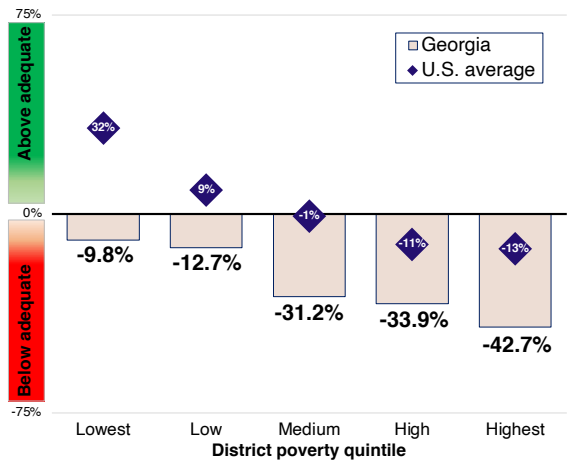
- Statewide, spending is below estimated adequate levels in 135 of the 180 GA districts with available data.
- Closing all these negative gaps would require $6.3 billion in new funding.

EQUAL OPPORTUNITY

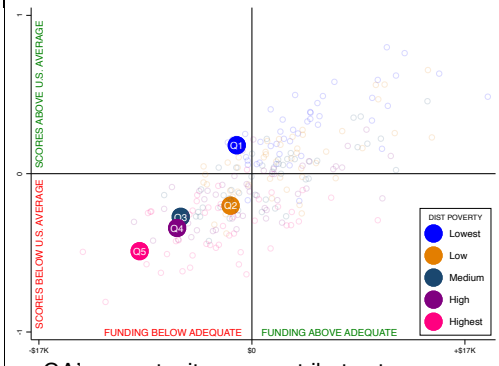
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in GA is highly unequal.
- Spending in GA's highest-poverty districts is 42.7 percent ($8,962 PP) below the estimated adequate level, compared with 9.8 percent ($1,210 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -32.9 percentage points is ranked #12 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- GA's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.67 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
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- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

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Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). GA's division is South Atlantic. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(\ln)\text{SCHOOL} = b_0 + b_1\text{State}_i + b_2\text{LaborMarket}_{ij} + b_3\text{CWI}_{ij} + b_4\text{FINANCE}_{ij} + b_5\text{PopulationDensity}_{ij} + b_6\ \text{Enrollment}_{ij} + b_7\text{INDICATORS}_{ij} + b_8\text{Scale}_{ij} + b_9\text{Poverty}_{ij} + b_{10}\text{SchlType}_{ij} + b_{11}\text{DATABASE}_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

HAWAII

State score: **N/A**

Summary: This 2019-20 profile of Hawaii's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Hawaii scores out of 100, which ranks out of the 48 states with possible ratings.

CONTEXTUAL STATS	HI	U.S.
Child (5-17yo) poverty rate (%)	9.8	14.9
Public school coverage (%)	75.3	83.1
Percent revenue from state sources	90.3	47.0
Total enrollment (U.S. rank)	181,088 (40)	

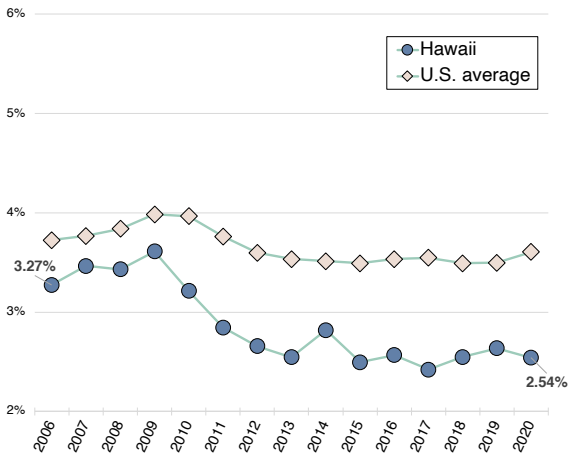
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Hawaii effort	2.54 %
U.S. average	3.61 %

- HI is a low effort state.
- In FY 2020, HI spent 2.54 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 1.06 percentage points lower than the unweighted national average of 3.61 percent.
- HI's effort level ranks #49 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- HI's 2020 effort level is 0.73 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #50 in the nation.

Net change by period (% pts.)		
Period	**HI**	**U.S.**
K-12 recession (2006-12)	-0.62	-0.13
Post-recession (2012-20)	-0.11	0.01
Full period (2006-20)	-0.73	-0.12

- HI's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $3.19 billion (28.7 percent) higher.
- HI is a relatively medium capacity state, with a GSP per capita ranked #21 in the nation.

STATEWIDE ADEQUACY

Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in HI is relatively .
- By the modest standard of U.S. average scores, percent of HI students attend inadequately funded districts, which ranks # in the nation (out of 49).
- The typical HI student's district spends percent adequate levels, which ranks # in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS

ADEQUATE FUNDING GAP OF TYPICAL STUDENT

Adequacy in 10 largest HI districts

Percent above/below adequate spending, ten largest HI school districts	
HAWAII PUBLIC SCHOOLS	77.5

- Statewide, spending is below estimated adequate levels in 0 of the 1 HI districts with available data.
- Closing all these negative gaps would require $ in new funding.

EQUAL OPPORTUNITY

Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in HI is .
- Spending in HI's highest-poverty districts is percent ($ PP) the estimated adequate level, compared with percent ($ PP) adequate in the state's most affluent districts.
- This opportunity gap of percentage points is ranked # in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY

Adequacy gaps by outcome gaps

- HI's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). HI's division is Pacific. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

IDAHO

State score: **30**

Summary: This 2019-20 profile of Idaho's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Idaho scores 30 out of 100, which ranks 41st out of the 48 states with possible ratings.

CONTEXTUAL STATS	ID	U.S.
Child (5-17yo) poverty rate (%)	10.4	14.9
Public school coverage (%)	85.2	83.1
Percent revenue from state sources	64.8	47.0
Total enrollment (U.S. rank)	311,096 (38)	

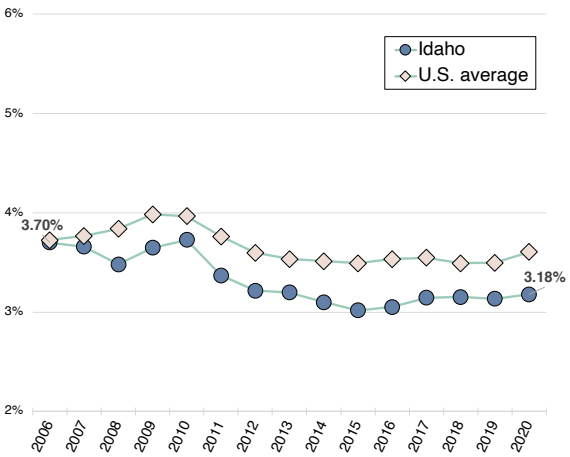
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Idaho effort	3.18 %
U.S. average	3.61 %

- ID is a low effort state.
- In FY 2020, ID spent 3.18 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.43 percentage points lower than the unweighted national average of 3.61 percent.
- ID's effort level ranks #38 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- ID's 2020 effort level is 0.52 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #44 in the nation.

Net change by period (% pts.)		
Period	**ID**	**U.S.**
K-12 recession (2006-12)	-0.49	-0.13
Post-recession (2012-20)	-0.04	0.01
Full period (2006-20)	-0.52	-0.12

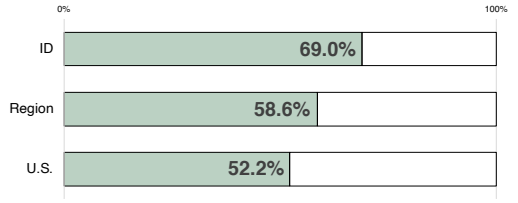
- ID's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $2.12 billion (18.1 percent) higher.
- ID is a relatively low capacity state, with a GSP per capita ranked #48 in the nation.

STATEWIDE ADEQUACY

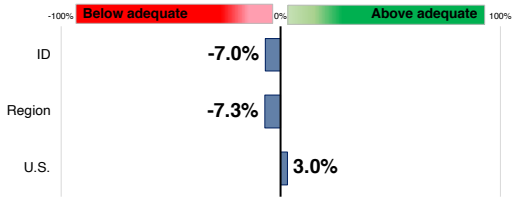
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in ID is relatively low.
- By the modest standard of U.S. average scores, 69.0 percent of ID students attend inadequately funded districts, which ranks #36 in the nation (out of 49).
- The typical ID student's district spends 7.0 percent below adequate levels, which ranks #34 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest ID districts

Percent above/below adequate spending, ten largest ID school districts	
JOINT SD NO. 2	-0.0
BOISE INDEP DIST	4.9
NAMPA SD	-15.3
BONNEVILLE JOINT DIST	-10.5
POCATELLO DIST	-0.2
COEUR D'ALENE DIST	43.5
IDAHO FALLS DIST	-25.5
VALLIVUE SD	-18.2
TWIN FALLS DIST	-9.7
JEFFERSON CNTY JOINT SD 251	15.7

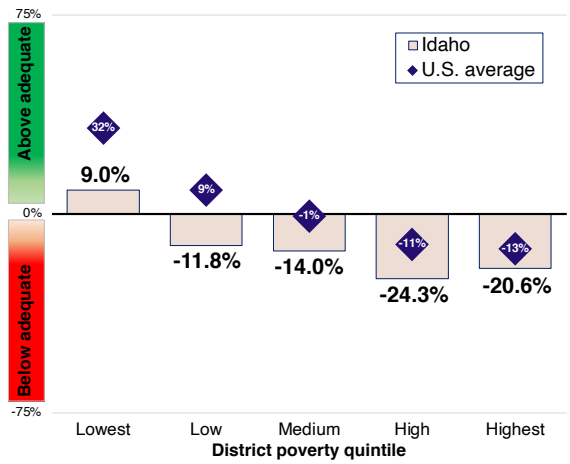
- Statewide, spending is below estimated adequate levels in 78 of the 115 ID districts with available data.
- Closing all these negative gaps would require $317.1 million in new funding.

EQUAL OPPORTUNITY

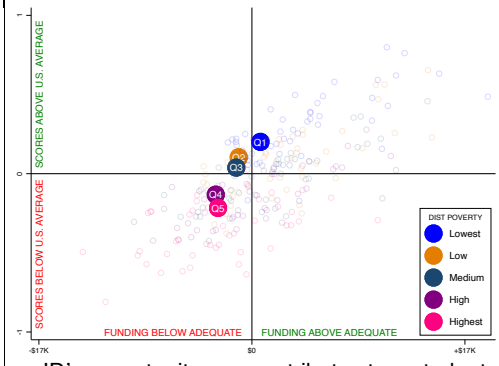
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in ID is moderately unequal.
- Spending in ID's highest-poverty districts is 20.6 percent ($2,701 PP) below the estimated adequate level, compared with 9.0 percent ($682 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -29.5 percentage points is ranked #8 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- ID's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.42 s.d. below its lowest-poverty districts (blue dot).

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Fiscal effort

SID variables used in this section: *effort*; *year*

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- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
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- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). ID's division is Mountain. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

ILLINOIS

State score: **42**

Summary: This 2019-20 profile of Illinois's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Illinois scores 42 out of 100, which ranks 33rd out of the 48 states with possible ratings.

CONTEXTUAL STATS	IL	U.S.
Child (5-17yo) poverty rate (%)	13.4	14.9
Public school coverage (%)	83.9	83.1
Percent revenue from state sources	42.4	47.0
Total enrollment (U.S. rank)	1,943,117 (5)	

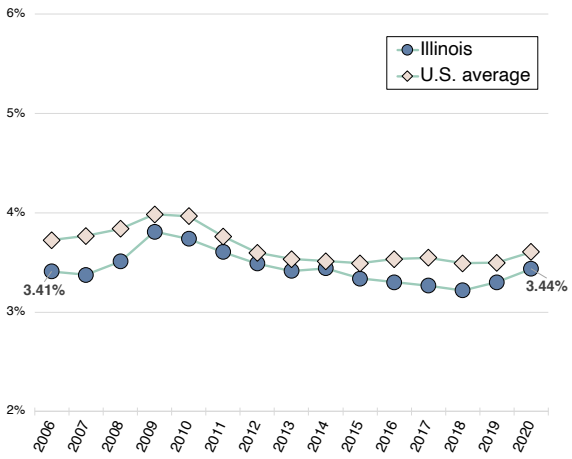
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Illinois effort	3.44 %
U.S. average	3.61 %

- IL is a medium effort state.
- In FY 2020, IL spent 3.44 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.17 percentage points lower than the unweighted national average of 3.61 percent.
- IL's effort level ranks #31 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- IL's 2020 effort level is 0.03 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #17 in the nation.

Net change by period (% pts.)		
Period	**IL**	**U.S.**
K-12 recession (2006-12)	0.08	-0.13
Post-recession (2012-20)	-0.05	0.01
Full period (2006-20)	0.03	-0.12

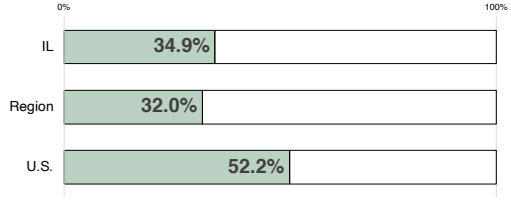
- IL's effort was lower than its 2006 level in 4 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $4.62 billion (3.3 percent) higher.
- IL is a relatively high capacity state, with a GSP per capita ranked #10 in the nation.

STATEWIDE ADEQUACY

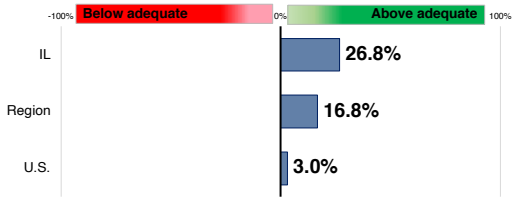
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in IL is relatively moderate.
- By the modest standard of U.S. average scores, 34.9 percent of IL students attend inadequately funded districts, which ranks #27 in the nation (out of 49).
- The typical IL student's district spends 26.8 percent above adequate levels, which ranks #15 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest IL districts

Percent above/below adequate spending, ten largest IL school districts	
CITY OF CHICAGO SD 299	-7.5
SD U-46	5.9
ROCKFORD SD 205	-7.5
INDIAN PRAIRIE CUSD 204	82.0
PLAINFIELD SD 202	31.4
CUSD 300	38.3
CUSD 308	73.9
NAPERVILLE CUSD 203	172.1
VALLEY VIEW CUSD 365U	43.0
SCHAUMBURG COMM CONSOL SD 54	87.9

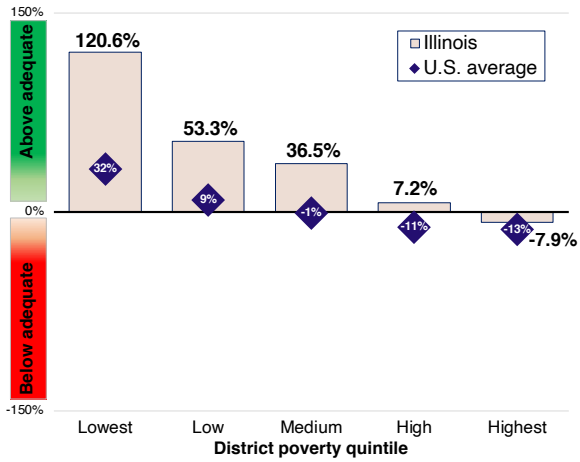
- Statewide, spending is below estimated adequate levels in 201 of the 846 IL districts with available data.
- Closing all these negative gaps would require $1.4 billion in new funding.

EQUAL OPPORTUNITY

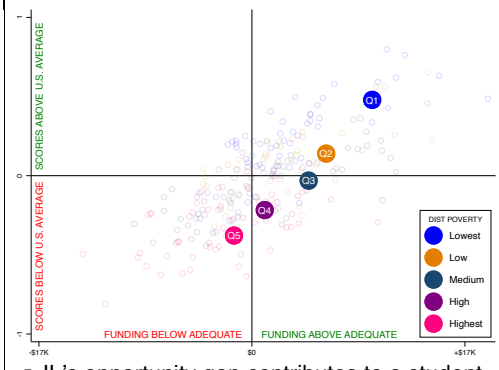
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in IL is severely unequal.
- Spending in IL's highest-poverty districts is 7.9 percent ($1,431 PP) below the estimated adequate level, compared with 120.6 percent ($9,602 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -128.5 percentage points is ranked #40 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- IL's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.86 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). IL's division is East North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

INDIANA

Summary: This 2019-20 profile of Indiana's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Indiana scores 37 out of 100, which ranks 37th out of the 48 states with possible ratings.

CONTEXTUAL STATS	IN	U.S.
Child (5-17yo) poverty rate (%)	13.7	14.9
Public school coverage (%)	81.7	83.1
Percent revenue from state sources	62.5	47.0
Total enrollment (U.S. rank)	1,051,411 (15)	

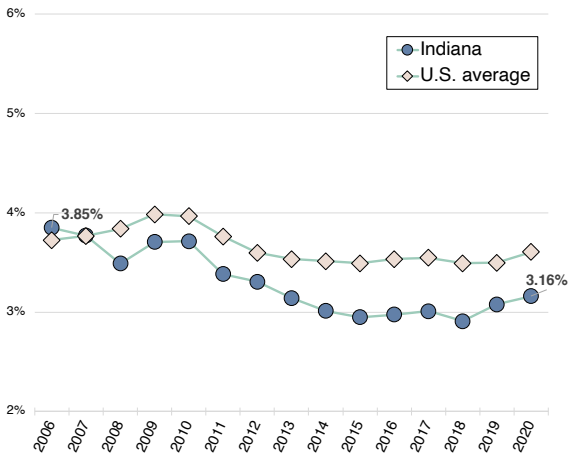
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Indiana effort	3.16 %
U.S. average	3.61 %

- IN is a low effort state.
- In FY 2020, IN spent 3.16 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.44 percentage points lower than the unweighted national average of 3.61 percent.
- IN's effort level ranks #39 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- IN's 2020 effort level is 0.69 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #49 in the nation.

Net change by period (% pts.)		
Period	**IN**	**U.S.**
K-12 recession (2006-12)	-0.54	-0.13
Post-recession (2012-20)	-0.14	0.01
Full period (2006-20)	-0.69	-0.12

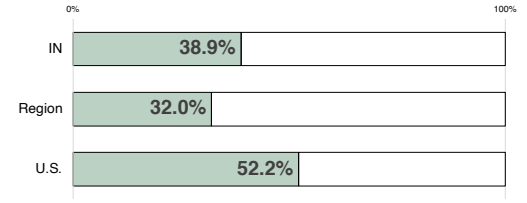
- IN's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $14.75 billion (27.1 percent) higher.
- IN is a relatively medium capacity state, with a GSP per capita ranked #32 in the nation.

STATEWIDE ADEQUACY

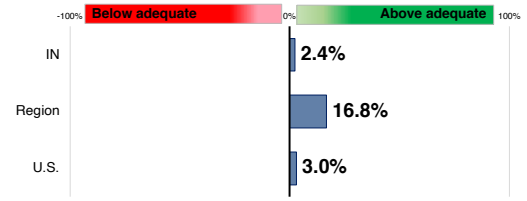
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in IN is relatively moderate.
- By the modest standard of U.S. average scores, 38.9 percent of IN students attend inadequately funded districts, which ranks #32 in the nation (out of 49).
- The typical IN student's district spends 2.4 percent above adequate levels, which ranks #33 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest IN districts

Percent above/below adequate spending, ten largest IN school districts	
FORT WAYNE COMM SCH	-19.1
INDIANAPOLIS PS	-24.5
EVANSVILLE VANDERBURGH SC	6.3
HAMILTON SOUTHEASTERN SCHLS	82.3
PERRY TOWNSHIP SCHLS	-21.1
M S D WAYNE TOWNSHIP	-28.2
SOUTH BEND COMMUNITY SC	-30.7
CARMEL CLAY SCHLS	107.7
M S D LAWRENCE TOWNSHIP	-23.4
VIGO CNTY SC	-8.0

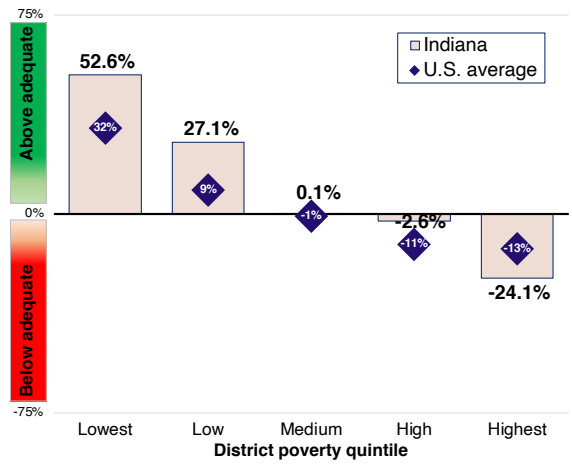
- Statewide, spending is below estimated adequate levels in 102 of the 288 IN districts with available data.
- Closing all these negative gaps would require $1.3 billion in new funding.

EQUAL OPPORTUNITY

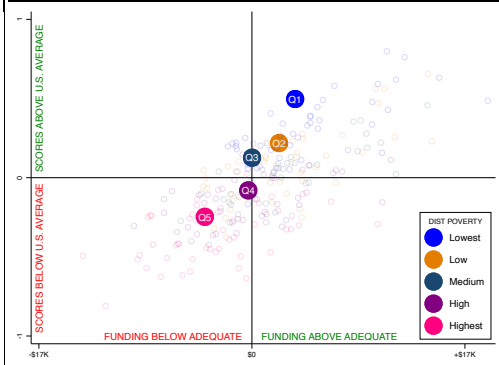
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in IN is severely unequal.
- Spending in IN's highest-poverty districts is 24.1 percent ($3,755 PP) below the estimated adequate level, compared with 52.6 percent ($3,451 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -76.7 percentage points is ranked #31 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- IN's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.74 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

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  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
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Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). IN's division is East North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

IOWA

State score: **58**

Summary: This 2019-20 profile of Iowa's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Iowa scores 58 out of 100, which ranks 15th out of the 48 states with possible ratings.

CONTEXTUAL STATS	IA	U.S.
Child (5-17yo) poverty rate (%)	11.1	14.9
Public school coverage (%)	84.0	83.1
Percent revenue from state sources	53.1	47.0
Total enrollment (U.S. rank)	517,324	(31)

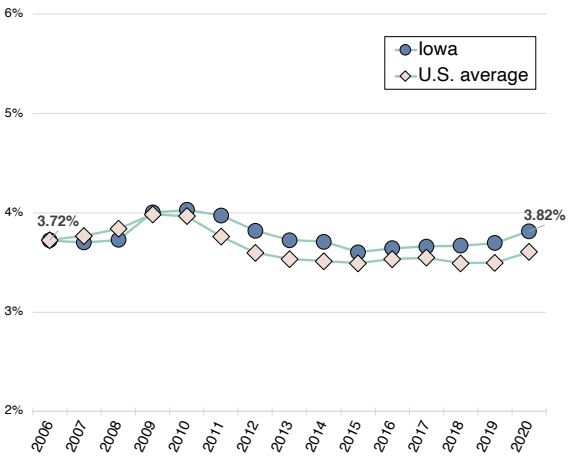
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Iowa effort	3.82 %
U.S. average	3.61 %

- IA is a medium effort state.
- In FY 2020, IA spent 3.82 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.21 percentage points higher than the unweighted national average of 3.61 percent.
- IA's effort level ranks #17 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- IA's 2020 effort level is 0.09 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #12 in the nation.

Net change by period (% pts.)		
Period	**IA**	**U.S.**
K-12 recession (2006-12)	0.10	-0.13
Post-recession (2012-20)	-0.01	0.01
Full period (2006-20)	0.09	-0.12

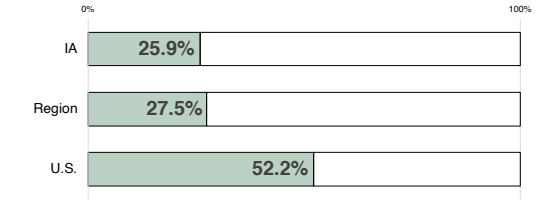
- IA's effort was lower than its 2006 level in 4 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.41 billion (1.2 percent) higher.
- IA is a relatively medium capacity state, with a GSP per capita ranked #22 in the nation.

STATEWIDE ADEQUACY

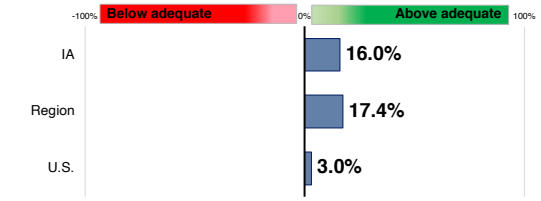
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in IA is relatively moderate.
- By the modest standard of U.S. average scores, 25.9 percent of IA students attend inadequately funded districts, which ranks #20 in the nation (out of 49).
- The typical IA student's district spends 16.0 percent above adequate levels, which ranks #21 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest IA districts

Percent above/below adequate spending, ten largest IA school districts	
DES MOINES INDEP COMM SD	-28.6
CEDAR RAPIDS COMM SD	9.1
SIOUX CITY COMM SD	-15.0
DAVENPORT COMM SD	-9.9
IOWA CITY COMM SD	18.5
ANKENY COMM SD	103.5
WAUKEE COMM SD	108.4
DUBUQUE COMM SD	25.6
WATERLOO COMM SD	-22.9
WEST DES MOINES COMM SD	24.2

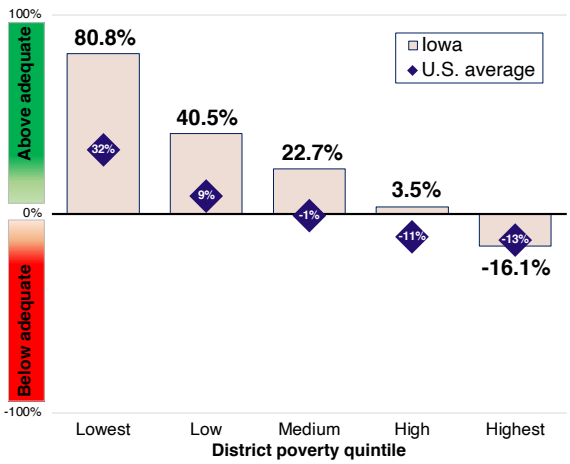
- Statewide, spending is below estimated adequate levels in 77 of the 327 IA districts with available data.
- Closing all these negative gaps would require $389.4 million in new funding.

EQUAL OPPORTUNITY

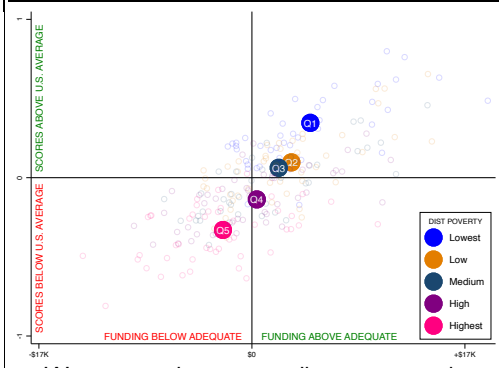
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in IA is severely unequal.
- Spending in IA's highest-poverty districts is 16.1 percent ($2,309 PP) below the estimated adequate level, compared with 80.8 percent ($4,662 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -96.8 percentage points is ranked #35 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- IA's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.68 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
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Statewide adequacy

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Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
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- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). IA's division is West North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

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Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

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STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

KANSAS

State score: **57**

Summary: This 2019-20 profile of Kansas's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Kansas scores 57 out of 100, which ranks 16th out of the 48 states with possible ratings.

CONTEXTUAL STATS	KS	U.S.
Child (5-17yo) poverty rate (%)	11.9	14.9
Public school coverage (%)	82.7	83.1
Percent revenue from state sources	67.0	47.0
Total enrollment (U.S. rank)	497,963 (32)	

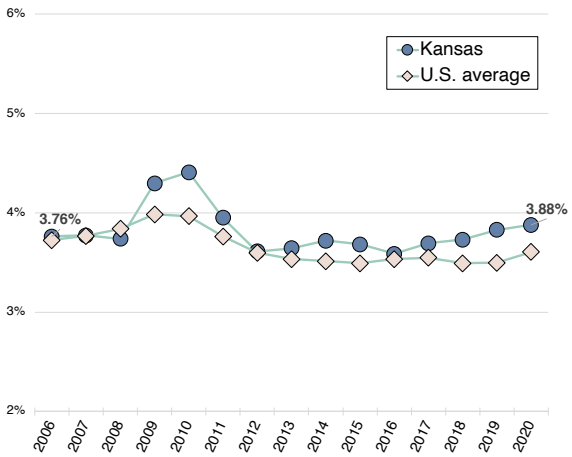
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Kansas effort	3.88 %
U.S. average	3.61 %

- KS is a high effort state.
- In FY 2020, KS spent 3.88 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.27 percentage points higher than the unweighted national average of 3.61 percent.
- KS's effort level ranks #16 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- KS's 2020 effort level is 0.12 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #11 in the nation.

Net change by period (% pts.)		
Period	**KS**	**U.S.**
K-12 recession (2006-12)	-0.15	-0.13
Post-recession (2012-20)	0.27	0.01
Full period (2006-20)	0.12	-0.12

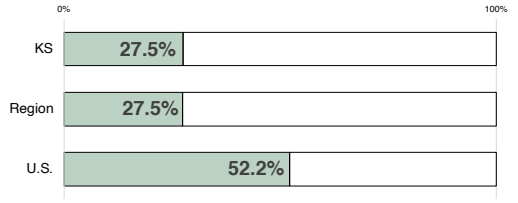
- KS's effort was lower than its 2006 level in 3 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.44 billion (1.4 percent) higher.
- KS is a relatively medium capacity state, with a GSP per capita ranked #25 in the nation.

STATEWIDE ADEQUACY

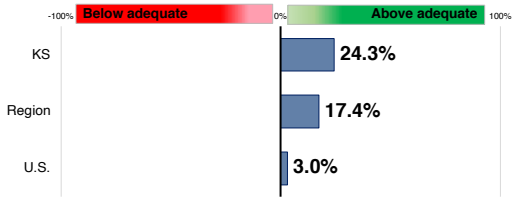
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in KS is relatively moderate.
- By the modest standard of U.S. average scores, 27.5 percent of KS students attend inadequately funded districts, which ranks #21 in the nation (out of 49).
- The typical KS student's district spends 24.3 percent above adequate levels, which ranks #17 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest KS districts

Percent above/below adequate spending, ten largest KS school districts	
WICHITA	-12.5
OLATHE	76.3
SHAWNEE MISSION PUB SCH	74.2
KANSAS CITY	-36.1
BLUE VALLEY	194.3
TOPEKA PS	-6.0
LAWRENCE	47.7
ANDOVER	354.5
MAIZE UNIFIED SD 266	102.5
GARDEN CITY	-19.1

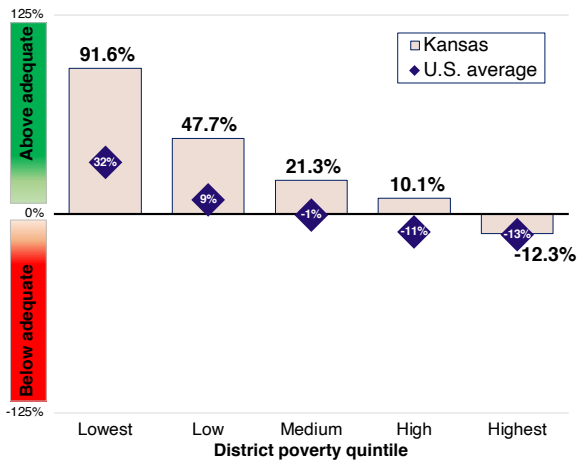
- Statewide, spending is below estimated adequate levels in 51 of the 285 KS districts with available data.
- Closing all these negative gaps would require $366.4 million in new funding.

EQUAL OPPORTUNITY

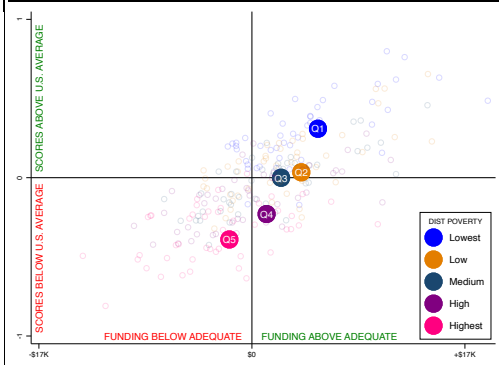
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in KS is severely unequal.
- Spending in KS's highest-poverty districts is 12.3 percent ($1,800 PP) below the estimated adequate level, compared with 91.6 percent ($5,273 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -103.9 percentage points is ranked #37 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- KS's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.70 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
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- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
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Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). KS's division is West North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

KENTUCKY

State score: **59**

Summary: This 2019-20 profile of Kentucky's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Kentucky scores 59 out of 100, which ranks 14th out of the 48 states with possible ratings.

CONTEXTUAL STATS	KY	U.S.
Child (5-17yo) poverty rate (%)	18.2	14.9
Public school coverage (%)	79.7	83.1
Percent revenue from state sources	53.9	47.0
Total enrollment (U.S. rank)	691,996 (27)	

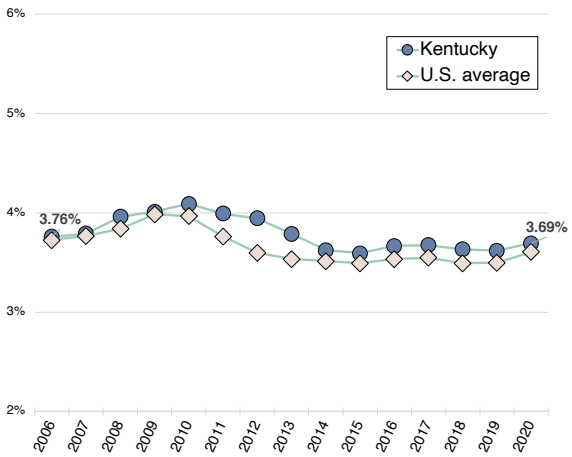
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Kentucky effort	3.69 %
U.S. average	3.61 %

- KY is a medium effort state.
- In FY 2020, KY spent 3.69 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.09 percentage points higher than the unweighted national average of 3.61 percent.
- KY's effort level ranks #21 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- KY's 2020 effort level is 0.07 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #21 in the nation.

Net change by period (% pts.)		
Period	**KY**	**U.S.**
K-12 recession (2006-12)	0.19	-0.13
Post-recession (2012-20)	-0.25	0.01
Full period (2006-20)	-0.07	-0.12

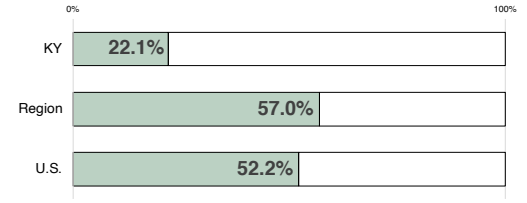
- KY's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $1.05 billion (2.8 percent) higher.
- KY is a relatively low capacity state, with a GSP per capita ranked #46 in the nation.

STATEWIDE ADEQUACY

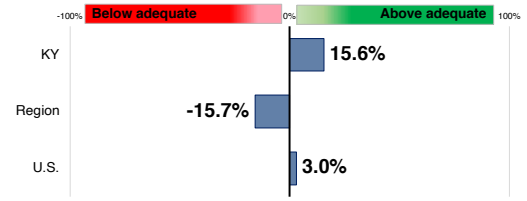
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in KY is relatively moderate.
- By the modest standard of U.S. average scores, 22.1 percent of KY students attend inadequately funded districts, which ranks #17 in the nation (out of 49).
- The typical KY student's district spends 15.6 percent above adequate levels, which ranks #22 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest KY districts

Percent above/below adequate spending, ten largest KY school districts	
JEFFERSON CNTY	13.6
FAYETTE CNTY	23.9
BOONE CNTY	73.4
WARREN CNTY	-12.5
HARDIN CNTY	11.7
KENTON CNTY	73.8
BULLITT CNTY	106.0
OLDHAM CNTY	169.1
DAVIESS CNTY	56.5
MADISON CNTY	27.6

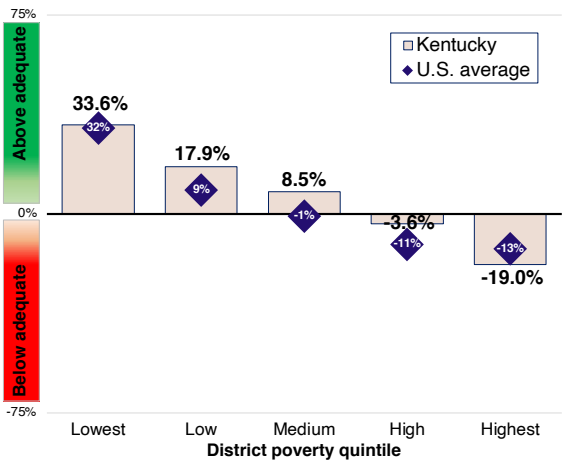
- Statewide, spending is below estimated adequate levels in 71 of the 172 KY districts with available data.
- Closing all these negative gaps would require $323.8 million in new funding.

EQUAL OPPORTUNITY

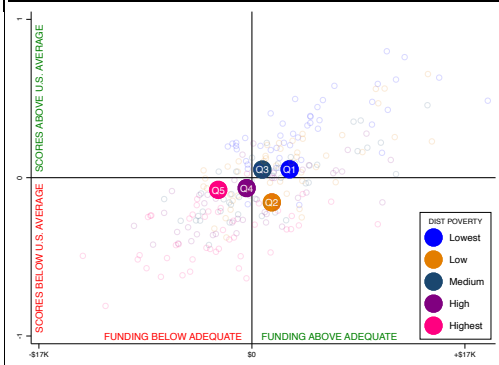
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in KY is highly unequal.
- Spending in KY's highest-poverty districts is 19.0 percent ($2,686 PP) below the estimated adequate level, compared with 33.6 percent ($3,010 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -52.6 percentage points is ranked #24 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- KY's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.13 s.d. below its lowest-poverty districts (blue dot).

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Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

LOUISIANA

State score: **29**

Summary: This 2019-20 profile of Louisiana's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Louisiana scores 29 out of 100, which ranks 43rd out of the 48 states with possible ratings.

CONTEXTUAL STATS	LA	U.S.
Child (5-17yo) poverty rate (%)	23.0	14.9
Public school coverage (%)	75.8	83.1
Percent revenue from state sources	41.6	47.0
Total enrollment (U.S. rank)	710,439 (25)	

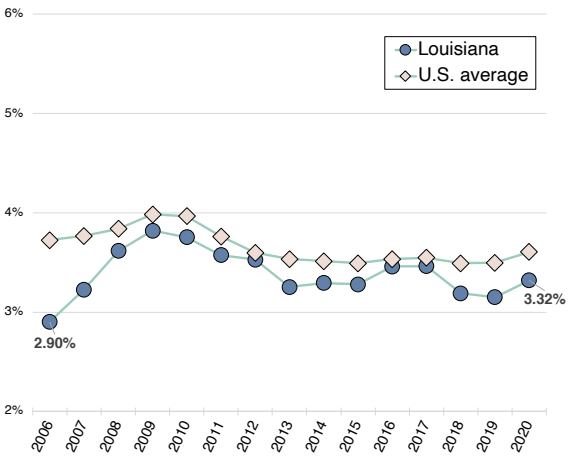
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Louisiana effort	3.32 %
U.S. average	3.61 %

- LA is a low effort state.
- In FY 2020, LA spent 3.32 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.29 percentage points lower than the unweighted national average of 3.61 percent.
- LA's effort level ranks #35 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- LA's 2020 effort level is 0.42 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #4 in the nation.

Net change by period (% pts.)		
Period	**LA**	**U.S.**
K-12 recession (2006-12)	0.63	-0.13
Post-recession (2012-20)	-0.21	0.01
Full period (2006-20)	0.42	-0.12

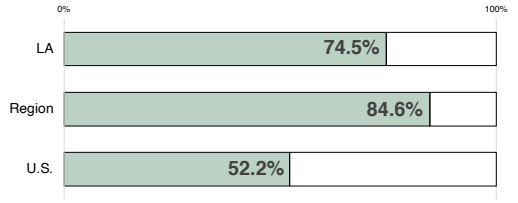
- LA's effort was lower than its 2006 level in 0 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.00 billion (0.0 percent) higher.
- LA is a relatively low capacity state, with a GSP per capita ranked #36 in the nation.

STATEWIDE ADEQUACY

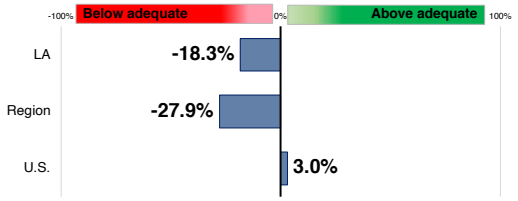
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in LA is relatively low.
- By the modest standard of U.S. average scores, 74.5 percent of LA students attend inadequately funded districts, which ranks #37 in the nation (out of 49).
- The typical LA student's district spends 18.3 percent below adequate levels, which ranks #41 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest LA districts

Percent above/below adequate spending, ten largest LA school districts	
JEFFERSON PARISH	-28.5
EAST BATON ROUGE PARISH	-24.1
ST. TAMMANY PARISH	3.0
CADDO PARISH	-26.6
CALCASIEU PARISH	-10.6
LAFAYETTE PARISH	-15.2
LIVINGSTON PARISH	12.9
ASCENSION PARISH	11.1
RAPIDES PARISH	-24.2
BOSSIER PARISH	-9.4

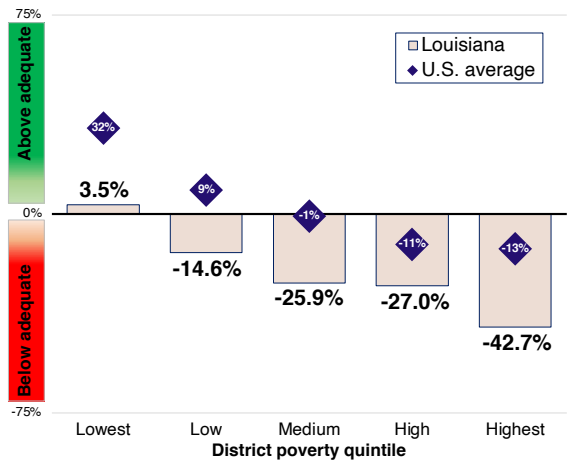
- Statewide, spending is below estimated adequate levels in 51 of the 68 LA districts with available data.
- Closing all these negative gaps would require $1.9 billion in new funding.

EQUAL OPPORTUNITY

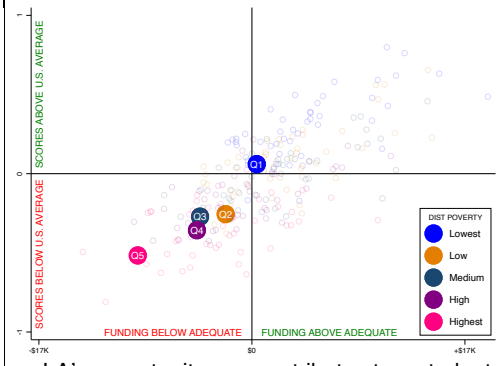
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in LA is highly unequal.
- Spending in LA's highest-poverty districts is 42.7 percent ($9,110 PP) below the estimated adequate level, compared with 3.5 percent ($387 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -46.2 percentage points is ranked #21 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- LA's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.58 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). LA's division is West South Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

MAINE

State score: **62**

Summary: This 2019-20 profile of Maine's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Maine scores 62 out of 100, which ranks 11th out of the 48 states with possible ratings.

CONTEXTUAL STATS	ME	U.S.
Child (5-17yo) poverty rate (%)	12.2	14.9
Public school coverage (%)	81.6	83.1
Percent revenue from state sources	39.5	47.0
Total enrollment (U.S. rank)	180,291	(41)

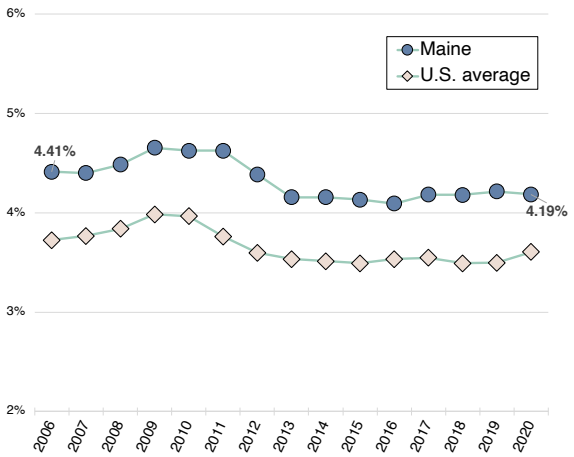
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Maine effort	4.19 %
U.S. average	3.61 %

- ME is a high effort state.
- In FY 2020, ME spent 4.19 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.58 percentage points higher than the unweighted national average of 3.61 percent.
- ME's effort level ranks #10 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- ME's 2020 effort level is 0.23 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #31 in the nation.

Net change by period (% pts.)		
Period	**ME**	**U.S.**
K-12 recession (2006-12)	-0.03	-0.13
Post-recession (2012-20)	-0.20	0.01
Full period (2006-20)	-0.23	-0.12

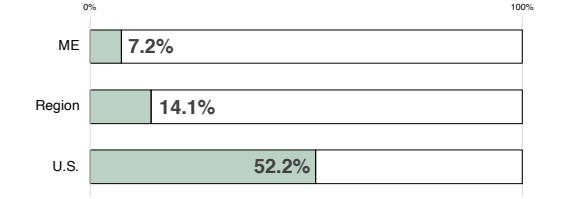
- ME's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.77 billion (5.8 percent) higher.
- ME is a relatively low capacity state, with a GSP per capita ranked #41 in the nation.

STATEWIDE ADEQUACY

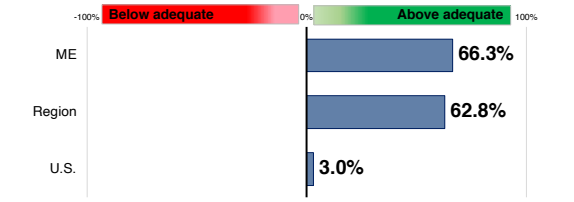
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in ME is relatively high.
- By the modest standard of U.S. average scores, 7.2 percent of ME students attend inadequately funded districts, which ranks #8 in the nation (out of 49).
- The typical ME student's district spends 66.3 percent above adequate levels, which ranks #5 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest ME districts

Percent above/below adequate spending, ten largest ME school districts	
PORTLAND PS	12.2
LEWISTON PS	-28.9
BANGOR PS	84.1
RSU 06/MSAD 06	100.7
AUBURN PS	35.8
RSU 17/MSAD 17	78.5
SANFORD PS	53.8
WINDHAM RAYMOND SD 14	180.4
RSU 60/MSAD 60	166.8
SCARBOROUGH TOWN SCHOOLS	303.4

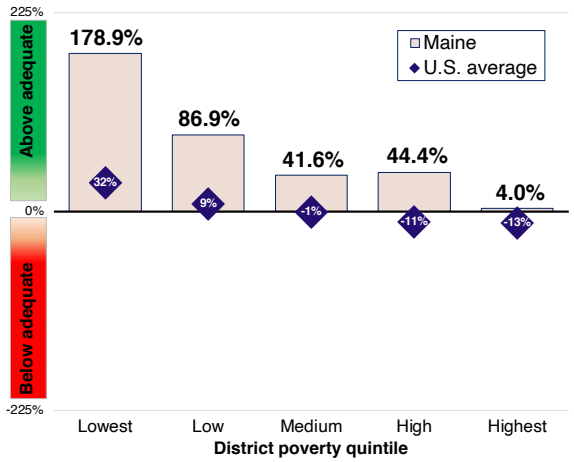
- Statewide, spending is below estimated adequate levels in 29 of the 182 ME districts with available data.
- Closing all these negative gaps would require $43.2 million in new funding.

EQUAL OPPORTUNITY

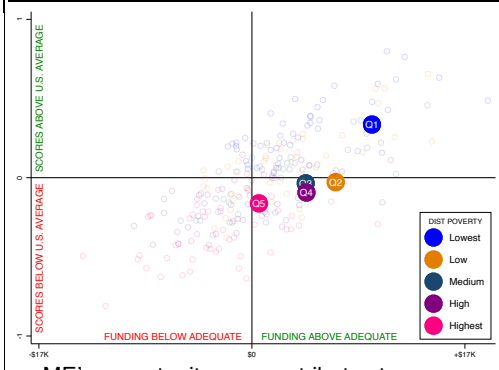
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in ME is severely unequal.
- Spending in ME's highest-poverty districts is 4.0 percent ($558 PP) above the estimated adequate level, compared with 178.9 percent ($9,581 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -174.9 percentage points is ranked #45 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- ME's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.50 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

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- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). ME's division is New England. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

MARYLAND

State score: **49**

Summary: This 2019-20 profile of Maryland's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Maryland scores 49 out of 100, which ranks 22nd out of the 48 states with possible ratings.

CONTEXTUAL STATS	MD	U.S.
Child (5-17yo) poverty rate (%)	10.8	14.9
Public school coverage (%)	80.7	83.1
Percent revenue from state sources	43.2	47.0
Total enrollment (U.S. rank)	909,404	(20)

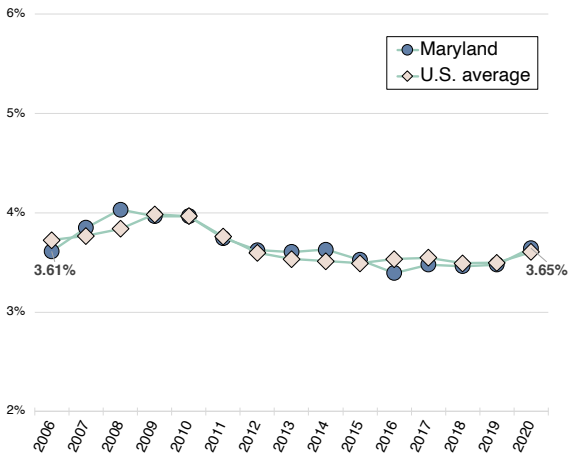
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Maryland effort	3.65 %
U.S. average	3.61 %

- MD is a medium effort state.
- In FY 2020, MD spent 3.65 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.04 percentage points higher than the unweighted national average of 3.61 percent.
- MD's effort level ranks #25 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- MD's 2020 effort level is 0.03 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #15 in the nation.

Net change by period (% pts.)		
Period	**MD**	**U.S.**
K-12 recession (2006-12)	0.01	-0.13
Post-recession (2012-20)	0.02	0.01
Full period (2006-20)	0.03	-0.12

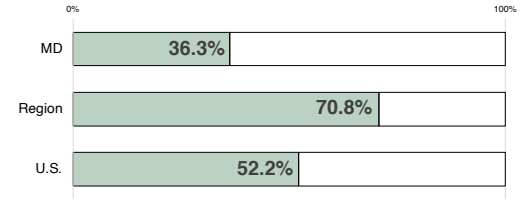
- MD's effort was lower than its 2006 level in 4 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $2.51 billion (3.6 percent) higher.
- MD is a relatively high capacity state, with a GSP per capita ranked #12 in the nation.

STATEWIDE ADEQUACY

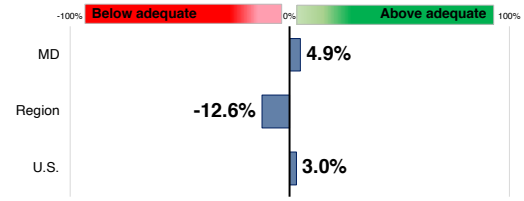
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in MD is relatively moderate.
- By the modest standard of U.S. average scores, 36.3 percent of MD students attend inadequately funded districts, which ranks #29 in the nation (out of 49).
- The typical MD student's district spends 4.9 percent above adequate levels, which ranks #30 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest MD districts

Percent above/below adequate spending, ten largest MD school districts	
MONTGOMERY CNTY PS	13.4
PRINCE GEORGE'S CNTY PS	-22.1
BALTIMORE CNTY PS	-1.7
ANNE ARUNDEL CNTY PS	25.8
BALTIMORE CITY PS	-32.7
HOWARD CNTY PS	50.7
FREDERICK CNTY PS	33.5
HARFORD CNTY PS	27.8
CHARLES CNTY PS	0.3
CARROLL CNTY PS	96.2

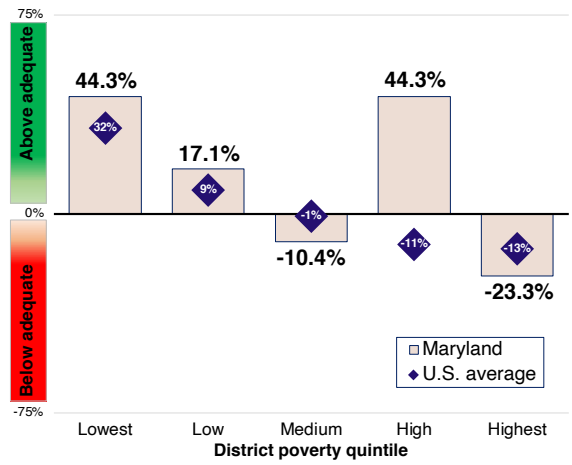
- Statewide, spending is below estimated adequate levels in 3 of the 24 MD districts with available data.
- Closing all these negative gaps would require $1.3 billion in new funding.

EQUAL OPPORTUNITY

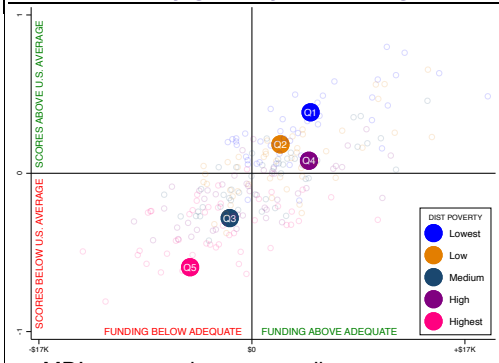
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in MD is highly unequal.
- Spending in MD's highest-poverty districts is 23.3 percent ($4,931 PP) below the estimated adequate level, compared with 44.3 percent ($4,681 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -67.6 percentage points is ranked #28 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- MD's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.98 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). MD's division is South Atlantic. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

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STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

MASSACHUSETTS

Summary: This 2019-20 profile of Massachusetts's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Massachusetts scores 45 out of 100, which ranks 28th out of the 48 states with possible ratings.

CONTEXTUAL STATS	MA	U.S.
Child (5-17yo) poverty rate (%)	10.5	14.9
Public school coverage (%)	85.9	83.1
Percent revenue from state sources	42.4	47.0
Total enrollment (U.S. rank)	959,394	(17)

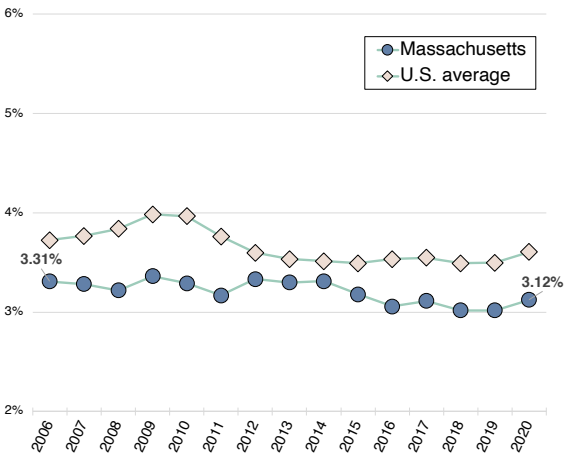
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Massachusetts effort	3.12 %
U.S. average	3.61 %

- MA is a low effort state.
- In FY 2020, MA spent 3.12 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.48 percentage points lower than the unweighted national average of 3.61 percent.
- MA's effort level ranks #42 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- MA's 2020 effort level is 0.19 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #29 in the nation.

Net change by period (% pts.)		
Period	**MA**	**U.S.**
K-12 recession (2006-12)	0.02	-0.13
Post-recession (2012-20)	-0.21	0.01
Full period (2006-20)	-0.19	-0.12

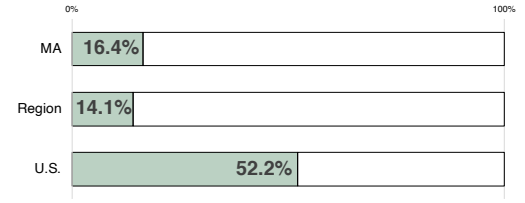
- MA's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $6.66 billion (7.9 percent) higher.
- MA is a relatively high capacity state, with a GSP per capita ranked #3 in the nation.

STATEWIDE ADEQUACY

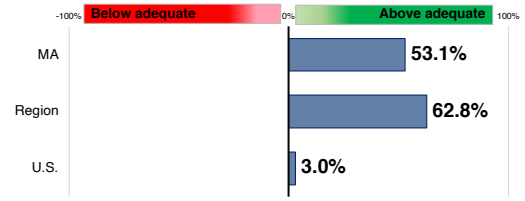
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in MA is relatively high.
- By the modest standard of U.S. average scores, 16.4 percent of MA students attend inadequately funded districts, which ranks #12 in the nation (out of 49).
- The typical MA student's district spends 53.1 percent above adequate levels, which ranks #8 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest MA districts

Percent above/below adequate spending, ten largest MA school districts	
BOSTON	18.9
WORCESTER	-14.0
SPRINGFIELD	-11.5
LYNN	-1.2
BROCKTON	-20.0
LOWELL	-0.9
LAWRENCE	-7.0
NEW BEDFORD	-10.8
NEWTON	139.1
FALL RIVER	0.2

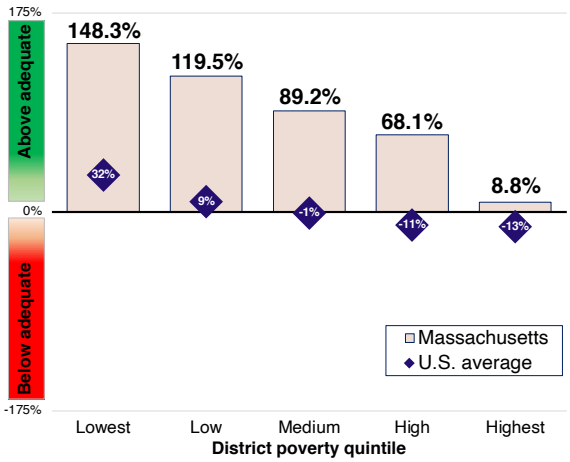
- Statewide, spending is below estimated adequate levels in 11 of the 288 MA districts with available data.
- Closing all these negative gaps would require $287.3 million in new funding.

EQUAL OPPORTUNITY

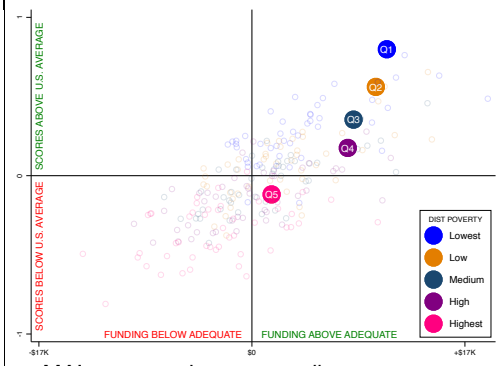
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in MA is severely unequal.
- Spending in MA's highest-poverty districts is 8.8 percent ($1,570 PP) above the estimated adequate level, compared with 148.3 percent ($10,768 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -139.5 percentage points is ranked #43 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- MA's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.92 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). MA's division is New England. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

MICHIGAN

Summary: This 2019-20 profile of Michigan's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Michigan scores 43 out of 100, which ranks 31st out of the 48 states with possible ratings.

CONTEXTUAL STATS	MI	U.S.
Child (5-17yo) poverty rate (%)	15.8	14.9
Public school coverage (%)	82.3	83.1
Percent revenue from state sources	56.4	47.0
Total enrollment (U.S. rank)	1,495,925 (10)	

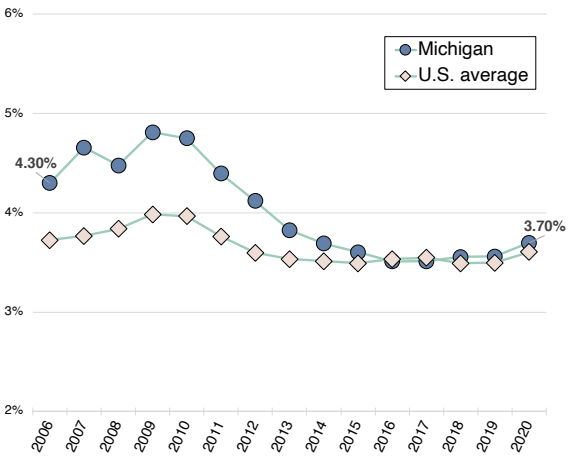
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Michigan effort	3.70 %
U.S. average	3.61 %

- MI is a medium effort state.
- In FY 2020, MI spent 3.70 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.09 percentage points higher than the unweighted national average of 3.61 percent.
- MI's effort level ranks #20 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- MI's 2020 effort level is 0.60 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #46 in the nation.

Net change by period (% pts.)		
Period	**MI**	**U.S.**
K-12 recession (2006-12)	-0.18	-0.13
Post-recession (2012-20)	-0.42	0.01
Full period (2006-20)	-0.60	-0.12

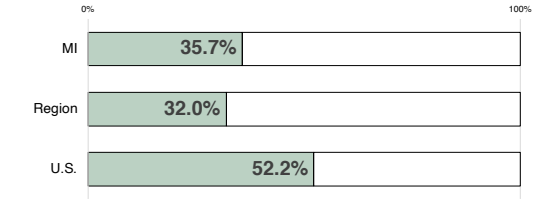
- MI's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $18.54 billion (20.5 percent) higher.
- MI is a relatively low capacity state, with a GSP per capita ranked #39 in the nation.

STATEWIDE ADEQUACY

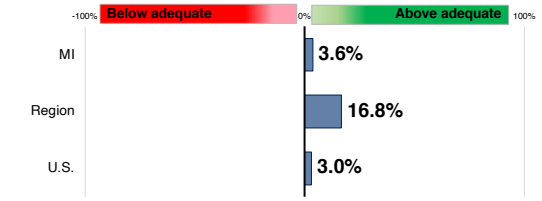
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in MI is relatively moderate.
- By the modest standard of U.S. average scores, 35.7 percent of MI students attend inadequately funded districts, which ranks #28 in the nation (out of 49).
- The typical MI student's district spends 3.6 percent above adequate levels, which ranks #31 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest MI districts

Percent above/below adequate spending, ten largest MI school districts	
DETROIT CITY SCHOOLS	-40.4
UTICA COMM SCH	7.5
DEARBORN CITY SD	-42.1
ANN ARBOR PS	49.2
PLYMOUTH-CANTON COMM SCH	41.5
CHIPPEWA VALLEY SCHLS	12.2
ROCHESTER COMMUNITY SD	72.3
GRAND RAPIDS PS	-31.6
LIVONIA PS SD	44.9
WARREN CONSOL SCHLS	-22.4

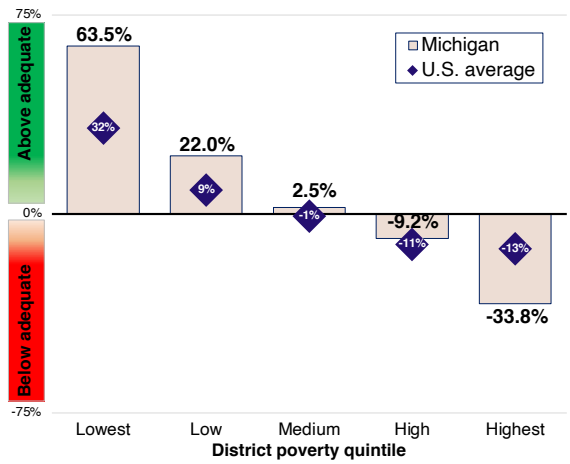
- Statewide, spending is below estimated adequate levels in 240 of the 537 MI districts with available data.
- Closing all these negative gaps would require $2.3 billion in new funding.

EQUAL OPPORTUNITY

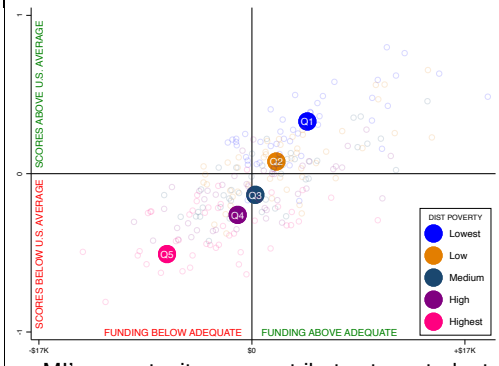
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in MI is severely unequal.
- Spending in MI's highest-poverty districts is 33.8 percent ($6,776 PP) below the estimated adequate level, compared with 63.5 percent ($4,427 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -97.2 percentage points is ranked #36 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



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Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). MI's division is East North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

MINNESOTA

Summary: This 2019-20 profile of Minnesota's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Minnesota scores 61 out of 100, which ranks 12th out of the 48 states with possible ratings.

CONTEXTUAL STATS	MN	U.S.
Child (5-17yo) poverty rate (%)	9.1	14.9
Public school coverage (%)	85.3	83.1
Percent revenue from state sources	64.2	47.0
Total enrollment (U.S. rank)	893,203 (21)	

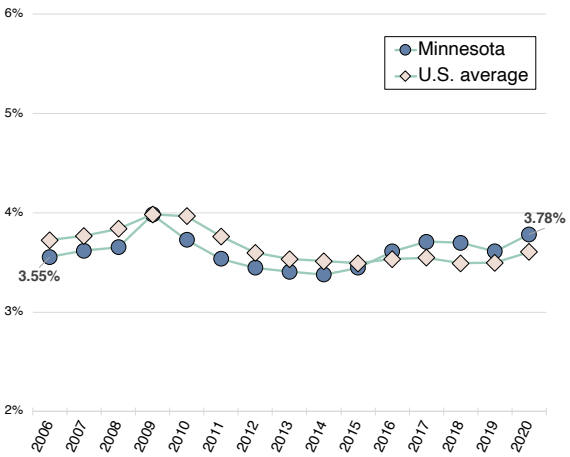
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Minnesota effort	3.78 %
U.S. average	3.61 %

- MN is a medium effort state.
- In FY 2020, MN spent 3.78 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.18 percentage points higher than the unweighted national average of 3.61 percent.
- MN's effort level ranks #18 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- MN's 2020 effort level is 0.23 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #7 in the nation.

Net change by period (% pts.)		
Period	**MN**	**U.S.**
K-12 recession (2006-12)	-0.11	-0.13
Post-recession (2012-20)	0.33	0.01
Full period (2006-20)	0.23	-0.12

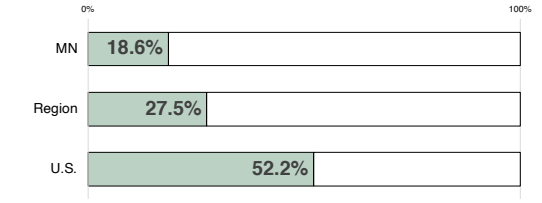
- MN's effort was lower than its 2006 level in 0 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.00 billion (0.0 percent) higher.
- MN is a relatively high capacity state, with a GSP per capita ranked #15 in the nation.

STATEWIDE ADEQUACY

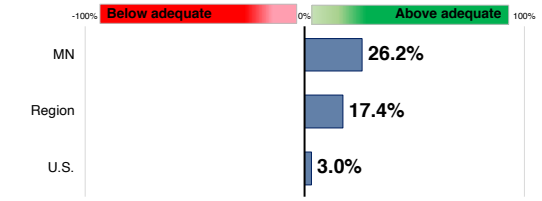
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in MN is relatively moderate.
- By the modest standard of U.S. average scores, 18.6 percent of MN students attend inadequately funded districts, which ranks #14 in the nation (out of 49).
- The typical MN student's district spends 26.2 percent above adequate levels, which ranks #16 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest MN districts

Percent above/below adequate spending, ten largest MN school districts	
ANOKA-HENNEPIN PUBLIC SCH DIST.	33.1
ST. PAUL PUBLIC SD	-15.2
MINNEAPOLIS PUBLIC SD	-11.6
ROSEMOUNT-APPLE VALLEY-EAGAN	52.8
OSSEO PUBLIC SD	16.6
SOUTH WASHINGTON CNTY SD	68.0
ROCHESTER PUBLIC SD	15.1
ELK RIVER SD	72.2
ROBBINSDALE PUBLIC SD	5.2
WAYZATA SD 284	160.9

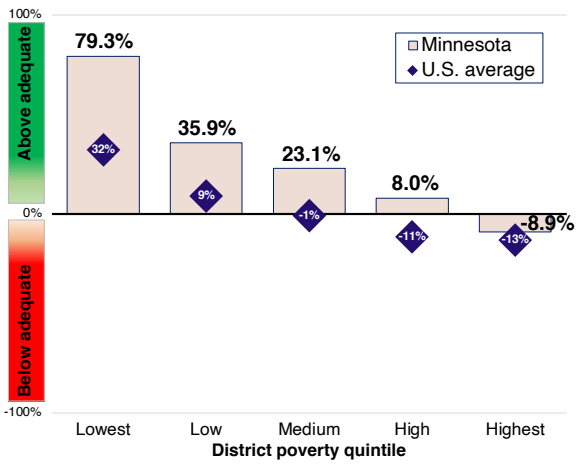
- Statewide, spending is below estimated adequate levels in 68 of the 327 MN districts with available data.
- Closing all these negative gaps would require $380.5 million in new funding.

EQUAL OPPORTUNITY

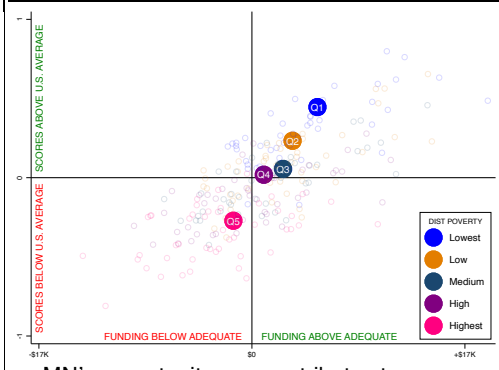
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in MN is severely unequal.
- Spending in MN's highest-poverty districts is 8.9 percent ($1,479 PP) below the estimated adequate level, compared with 79.3 percent ($5,230 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -88.1 percentage points is ranked #34 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- MN's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.72 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). MN's division is West North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

MISSISSIPPI

State score: **40**

Summary: This 2019-20 profile of Mississippi's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Mississippi scores 40 out of 100, which ranks 35th out of the 48 states with possible ratings.

CONTEXTUAL STATS	MS	U.S.
Child (5-17yo) poverty rate (%)	24.7	14.9
Public school coverage (%)	78.7	83.1
Percent revenue from state sources	50.2	47.0
Total enrollment (U.S. rank)	466,002 (35)	

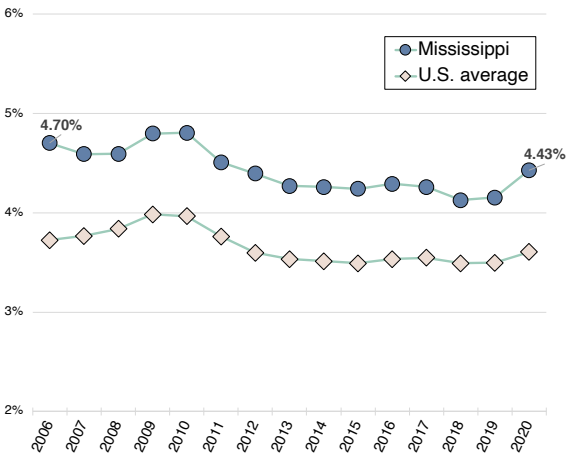
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Mississippi effort	4.43 %
U.S. average	3.61 %

- MS is a high effort state.
- In FY 2020, MS spent 4.43 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.82 percentage points higher than the unweighted national average of 3.61 percent.
- MS's effort level ranks #4 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- MS's 2020 effort level is 0.28 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #36 in the nation.

Net change by period (% pts.)		
Period	**MS**	**U.S.**
K-12 recession (2006-12)	-0.31	-0.13
Post-recession (2012-20)	0.03	0.01
Full period (2006-20)	-0.28	-0.12

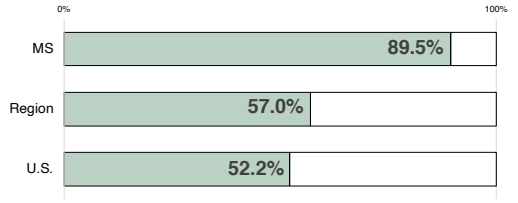
- MS's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $2.49 billion (10.6 percent) higher.
- MS is a relatively low capacity state, with a GSP per capita ranked #51 in the nation.

STATEWIDE ADEQUACY

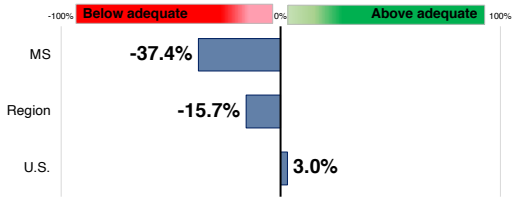
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in MS is relatively low.
- By the modest standard of U.S. average scores, 89.5 percent of MS students attend inadequately funded districts, which ranks #47 in the nation (out of 49).
- The typical MS student's district spends 37.4 percent below adequate levels, which ranks #49 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest MS districts

Percent above/below adequate spending, ten largest MS school districts	
DESOTO CO SD	-33.6
JACKSON PUBLIC SD	-55.6
RANKIN CO SD	4.8
HARRISON CO SD	-19.9
MADISON CO SD	-6.2
LAMAR CNTY SD	-22.8
JACKSON CO SD	10.5
JONES CO SD	-40.7
VICKSBURG WARREN SD	-41.4
TUPELO PUBLIC SD	-31.5

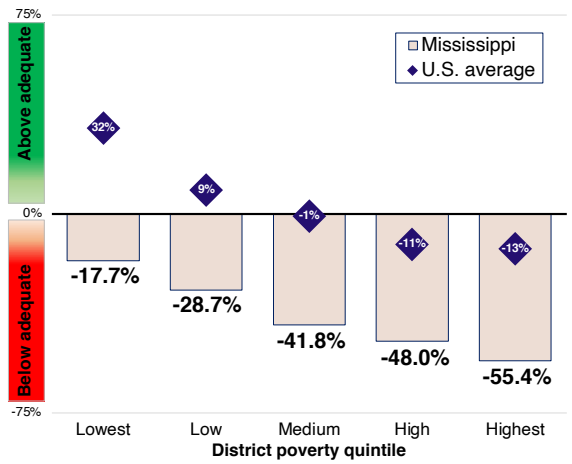
- Statewide, spending is below estimated adequate levels in 129 of the 137 MS districts with available data.
- Closing all these negative gaps would require $2.7 billion in new funding.

EQUAL OPPORTUNITY

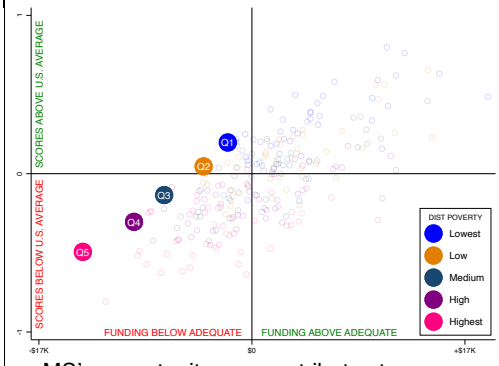
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in MS is highly unequal.
- Spending in MS's highest-poverty districts is 55.4 percent ($13,492 PP) below the estimated adequate level, compared with 17.7 percent ($1,925 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -37.7 percentage points is ranked #15 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- MS's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.69 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
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- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). MS's division is East South Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

MISSOURI

State score: **41**

Summary: This 2019-20 profile of Missouri's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Missouri scores 41 out of 100, which ranks 34th out of the 48 states with possible ratings.

CONTEXTUAL STATS	MO	U.S.
Child (5-17yo) poverty rate (%)	14.8	14.9
Public school coverage (%)	78.8	83.1
Percent revenue from state sources	43.0	47.0
Total enrollment (U.S. rank)	910,466 (19)	

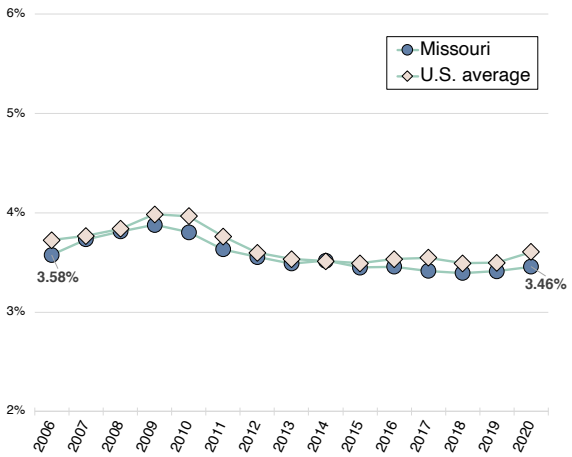
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Missouri effort	3.46 %
U.S. average	3.61 %

- MO is a medium effort state.
- In FY 2020, MO spent 3.46 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.15 percentage points lower than the unweighted national average of 3.61 percent.
- MO's effort level ranks #30 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- MO's 2020 effort level is 0.12 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #24 in the nation.

Net change by period (% pts.)		
Period	**MO**	**U.S.**
K-12 recession (2006-12)	-0.02	-0.13
Post-recession (2012-20)	-0.10	0.01
Full period (2006-20)	-0.12	-0.12

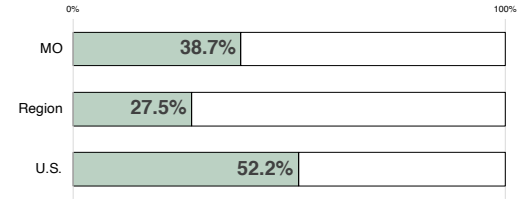
- MO's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $2.36 billion (4.4 percent) higher.
- MO is a relatively low capacity state, with a GSP per capita ranked #35 in the nation.

STATEWIDE ADEQUACY

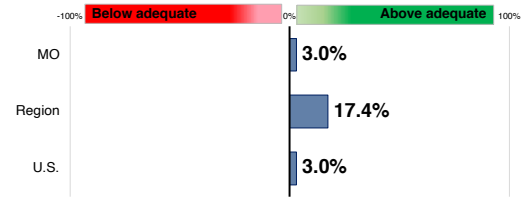
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in MO is relatively moderate.
- By the modest standard of U.S. average scores, 38.7 percent of MO students attend inadequately funded districts, which ranks #31 in the nation (out of 49).
- The typical MO student's district spends 3.0 percent above adequate levels, which ranks #32 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest MO districts

Percent above/below adequate spending, ten largest MO school districts	
SPRINGFIELD R-XII	30.1
ST. LOUIS CITY	-32.1
ROCKWOOD R-VI	52.1
NORTH KANSAS CITY 74	20.9
COLUMBIA 93	34.2
LEE'S SUMMIT R-VII	92.2
PARKWAY C-2	46.6
FT. ZUMWALT R-II	49.9
WENTZVILLE SD R 4	51.0
FRANCIS HOWELL R-III	87.6

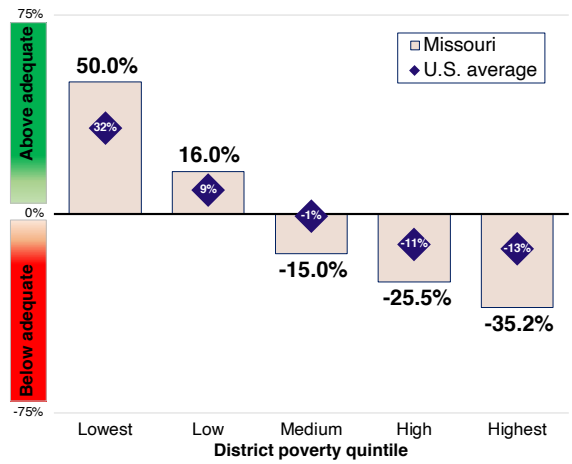
- Statewide, spending is below estimated adequate levels in 318 of the 514 MO districts with available data.
- Closing all these negative gaps would require $1.4 billion in new funding.

EQUAL OPPORTUNITY

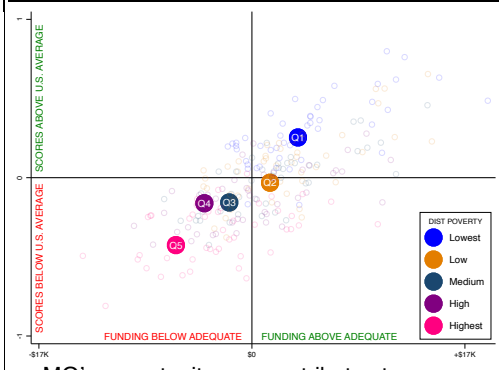
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in MO is severely unequal.
- Spending in MO's highest-poverty districts is 35.2 percent ($6,064 PP) below the estimated adequate level, compared with 50.0 percent ($3,676 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -85.2 percentage points is ranked #33 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- MO's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.68 s.d. below its lowest-poverty districts (blue dot).

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Equal opportunity

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- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

MONTANA

State score: **70**

Summary: This 2019-20 profile of Montana's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Montana scores 70 out of 100, which ranks 6th out of the 48 states with possible ratings.

CONTEXTUAL STATS	MT	U.S.
Child (5-17yo) poverty rate (%)	13.4	14.9
Public school coverage (%)	81.9	83.1
Percent revenue from state sources	42.9	47.0
Total enrollment (U.S. rank)	149,917 (43)	

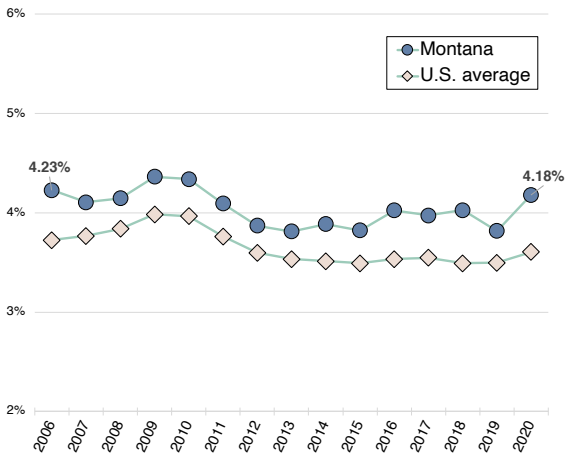
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Montana effort	4.18 %
U.S. average	3.61 %

- MT is a high effort state.
- In FY 2020, MT spent 4.18 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.57 percentage points higher than the unweighted national average of 3.61 percent.
- MT's effort level ranks #11 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- MT's 2020 effort level is 0.05 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #19 in the nation.

Net change by period (% pts.)		
Period	**MT**	**U.S.**
K-12 recession (2006-12)	-0.36	-0.13
Post-recession (2012-20)	0.31	0.01
Full period (2006-20)	-0.05	-0.12

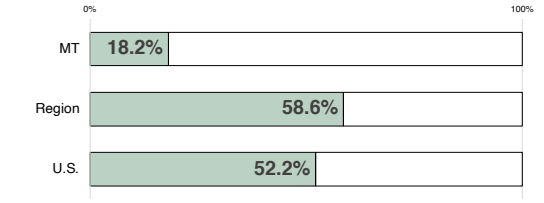
- MT's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.55 billion (5.6 percent) higher.
- MT is a relatively low capacity state, with a GSP per capita ranked #45 in the nation.

STATEWIDE ADEQUACY

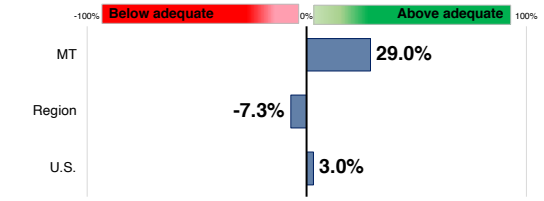
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in MT is relatively moderate.
- By the modest standard of U.S. average scores, 18.2 percent of MT students attend inadequately funded districts, which ranks #13 in the nation (out of 49).
- The typical MT student's district spends 29.0 percent above adequate levels, which ranks #13 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest MT districts

Percent above/below adequate spending, ten largest MT school districts	
BILLINGS ELEM	116.0
GREAT FALLS ELEM	87.5
MISSOULA ELEM	98.5
BILLINGS H S	18.6
HELENA ELEM	94.2
BOZEMAN ELEM	260.3
MISSOULA H S	22.3
KALISPELL ELEM	141.4
BUTTE ELEM	159.0
GREAT FALLS H S	-7.7

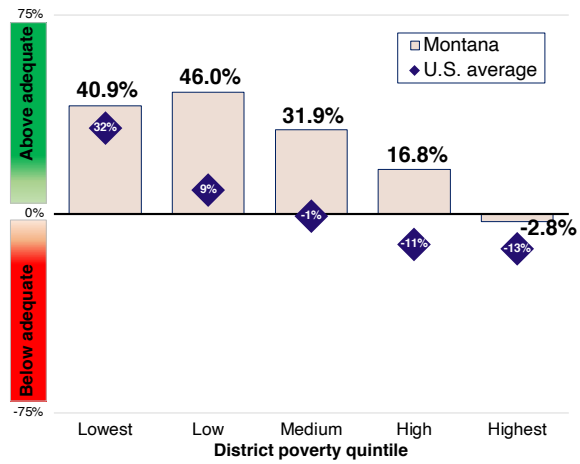
- Statewide, spending is below estimated adequate levels in 158 of the 397 MT districts with available data.
- Closing all these negative gaps would require $72.0 million in new funding.

EQUAL OPPORTUNITY

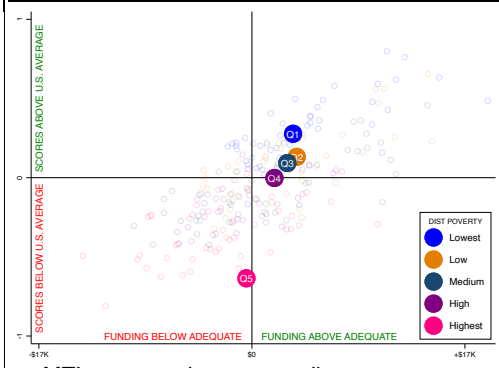
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in MT is highly unequal.
- Spending in MT's highest-poverty districts is 2.8 percent ($436 PP) below the estimated adequate level, compared with 40.9 percent ($3,288 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -43.6 percentage points is ranked #20 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- MT's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.91 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). MT's division is Mountain. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

NEBRASKA

State score: **68**

Summary: This 2019-20 profile of Nebraska's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Nebraska scores 68 out of 100, which ranks 9th out of the 48 states with possible ratings.

CONTEXTUAL STATS	NE	U.S.
Child (5-17yo) poverty rate (%)	9.5	14.9
Public school coverage (%)	82.4	83.1
Percent revenue from state sources	33.3	47.0
Total enrollment (U.S. rank)	330,018 (37)	

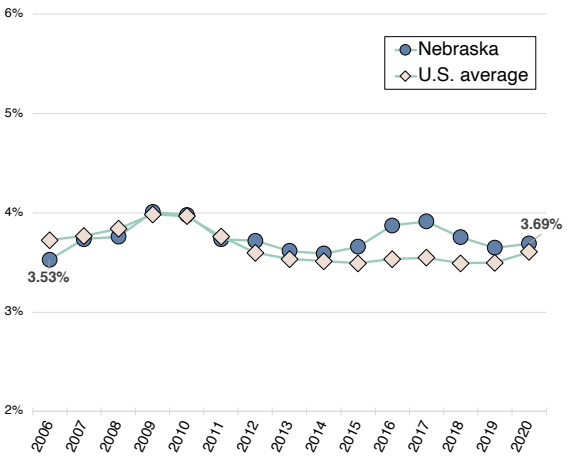
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Nebraska effort	3.69 %
U.S. average	3.61 %

- NE is a medium effort state.
- In FY 2020, NE spent 3.69 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.08 percentage points higher than the unweighted national average of 3.61 percent.
- NE's effort level ranks #22 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- NE's 2020 effort level is 0.16 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #8 in the nation.

Net change by period (% pts.)		
Period	**NE**	**U.S.**
K-12 recession (2006-12)	0.19	-0.13
Post-recession (2012-20)	-0.03	0.01
Full period (2006-20)	0.16	-0.12

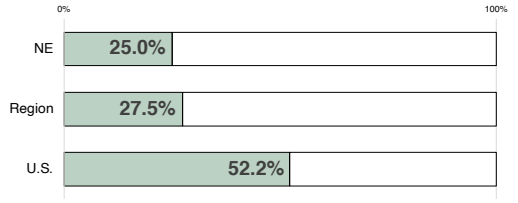
- NE's effort was lower than its 2006 level in 0 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.00 billion (0.0 percent) higher.
- NE is a relatively high capacity state, with a GSP per capita ranked #14 in the nation.

STATEWIDE ADEQUACY

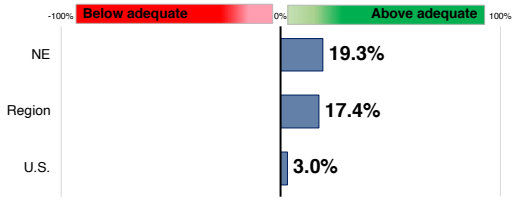
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in NE is relatively moderate.
- By the modest standard of U.S. average scores, 25.0 percent of NE students attend inadequately funded districts, which ranks #19 in the nation (out of 49).
- The typical NE student's district spends 19.3 percent above adequate levels, which ranks #20 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest NE districts

Percent above/below adequate spending, ten largest NE school districts	
OMAHA PS	-24.9
LINCOLN PS	17.7
MILLARD PS	78.8
PAPILLION LA VISTA COMM SCH	63.7
ELKHORN PS	137.9
GRAND ISLAND PS	-6.9
BELLEVUE PS	29.9
KEARNEY PS	44.3
WESTSIDE COMM SCH	108.0
GRETNA PS	121.2

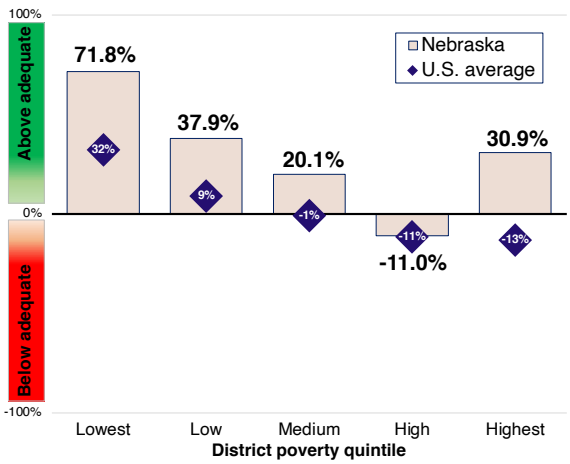
- Statewide, spending is below estimated adequate levels in 15 of the 242 NE districts with available data.
- Closing all these negative gaps would require $247.0 million in new funding.

EQUAL OPPORTUNITY

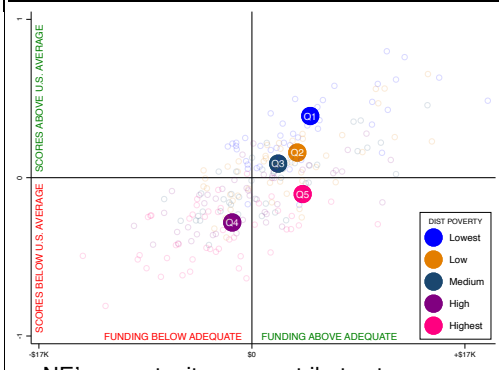
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in NE is highly unequal.
- Spending in NE's highest-poverty districts is 30.9 percent ($4,051 PP) above the estimated adequate level, compared with 71.8 percent ($4,654 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -40.8 percentage points is ranked #19 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- NE's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.49 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

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Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). NE's division is West North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(\ln)\text{SCHOOL} = b_0 + b_1\text{State}_i + b_2\text{LaborMarket}_{ij} + b_3\text{CWI}_{ij} + b_4\text{FINANCE}_{ij} + b_5\text{PopulationDensity}_{ij} + b_6\ \text{Enrollment}_{ij} + b_7\text{INDICATORS}_{ij} + b_8\text{Scale}_{ij} + b_9\text{Poverty}_{ij} + b_{10}\text{SchlType}_{ij} + b_{11}\text{DATABASE}_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

NEVADA

State score: **21**

Summary: This 2019-20 profile of Nevada's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Nevada scores 21 out of 100, which ranks 45th out of the 48 states with possible ratings.

CONTEXTUAL STATS	NV	U.S.
Child (5-17yo) poverty rate (%)	15.2	14.9
Public school coverage (%)	86.3	83.1
Percent revenue from state sources	62.2	47.0
Total enrollment (U.S. rank)	496,934	(33)

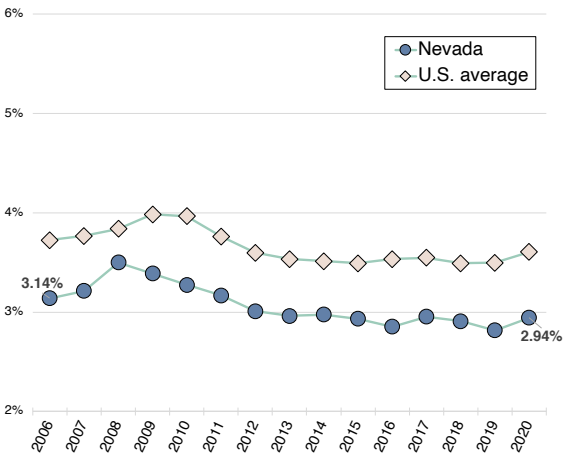
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Nevada effort	2.94 %
U.S. average	3.61 %

- NV is a low effort state.
- In FY 2020, NV spent 2.94 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.66 percentage points lower than the unweighted national average of 3.61 percent.
- NV's effort level ranks #44 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- NV's 2020 effort level is 0.20 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #30 in the nation.

Net change by period (% pts.)		
Period	**NV**	**U.S.**
K-12 recession (2006-12)	-0.13	-0.13
Post-recession (2012-20)	-0.07	0.01
Full period (2006-20)	-0.20	-0.12

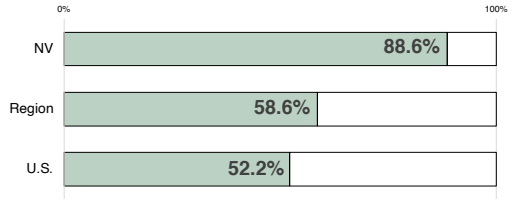
- NV's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $2.01 billion (8.4 percent) higher.
- NV is a relatively medium capacity state, with a GSP per capita ranked #30 in the nation.

STATEWIDE ADEQUACY

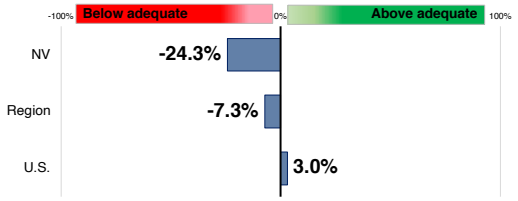
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in NV is relatively low.
- By the modest standard of U.S. average scores, 88.6 percent of NV students attend inadequately funded districts, which ranks #46 in the nation (out of 49).
- The typical NV student's district spends 24.3 percent below adequate levels, which ranks #44 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest NV districts

Percent above/below adequate spending, ten largest NV school districts	
CLARK CNTY SD	-32.0
WASHOE CNTY SD	-6.1
ELKO CNTY SD	25.5
LYON CNTY SD	27.5
CARSON CITY SD	3.3
DOUGLAS CNTY SD	34.3
NYE CNTY SD	3.8
HUMBOLDT CNTY SD	35.7
CHURCHILL CNTY SD	11.3
WHITE PINE CNTY SD	36.0

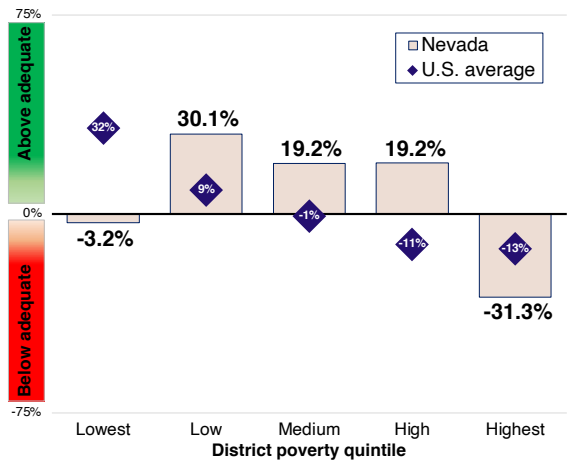
- Statewide, spending is below estimated adequate levels in 2 of the 17 NV districts with available data.
- Closing all these negative gaps would require $1.5 billion in new funding.

EQUAL OPPORTUNITY

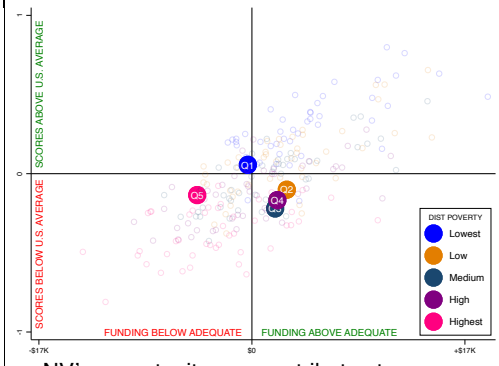
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in NV is moderately unequal.
- Spending in NV's highest-poverty districts is 31.3 percent ($4,366 PP) below the estimated adequate level, compared with 3.2 percent ($325 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -28.2 percentage points is ranked #6 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- NV's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.19 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
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Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). NV's division is Mountain. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

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Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

NEW HAMPSHIRE

State score: **65**

Summary: This 2019-20 profile of New Hampshire's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), New Hampshire scores 65 out of 100, which ranks 10th out of the 48 states with possible ratings.

CONTEXTUAL STATS	NH	U.S.
Child (5-17yo) poverty rate (%)	7.6	14.9
Public school coverage (%)	84.1	83.1
Percent revenue from state sources	31.2	47.0
Total enrollment (U.S. rank)	177,351	(42)

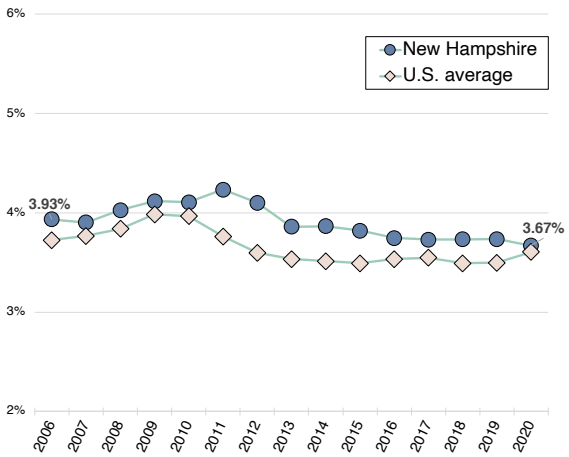
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

New Hampshire effort	3.67 %
U.S. average	3.61 %

- NH is a medium effort state.
- In FY 2020, NH spent 3.67 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.06 percentage points higher than the unweighted national average of 3.61 percent.
- NH's effort level ranks #23 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- NH's 2020 effort level is 0.26 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #33 in the nation.

Net change by period (% pts.)		
Period	**NH**	**U.S.**
K-12 recession (2006-12)	0.17	-0.13
Post-recession (2012-20)	-0.43	0.01
Full period (2006-20)	-0.26	-0.12

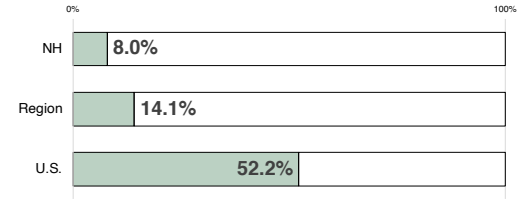
- NH's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.88 billion (5.7 percent) higher.
- NH is a relatively medium capacity state, with a GSP per capita ranked #18 in the nation.

STATEWIDE ADEQUACY

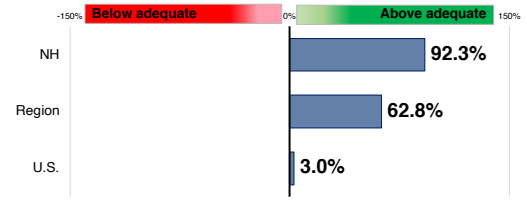
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in NH is relatively high.
- By the modest standard of U.S. average scores, 8.0 percent of NH students attend inadequately funded districts, which ranks #9 in the nation (out of 49).
- The typical NH student's district spends 92.3 percent above adequate levels, which ranks #2 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest NH districts

Percent above/below adequate spending, ten largest NH school districts	
MANCHESTER SD	-10.3
NASHUA SD	45.1
BEDFORD SD	200.3
CONCORD SD	86.3
ROCHESTER SD	81.8
LONDONDERRY SD	197.4
DOVER SD	73.3
MERRIMACK SD	161.2
SALEM SD	195.3
TIMBERLANE REGIONAL SD	148.1

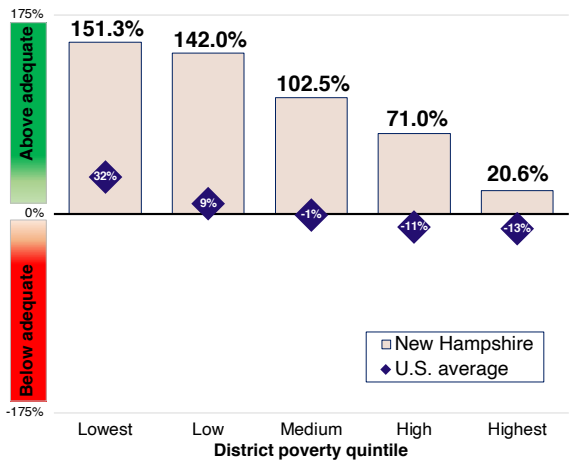
- Statewide, spending is below estimated adequate levels in 5 of the 162 NH districts with available data.
- Closing all these negative gaps would require $20.9 million in new funding.

EQUAL OPPORTUNITY

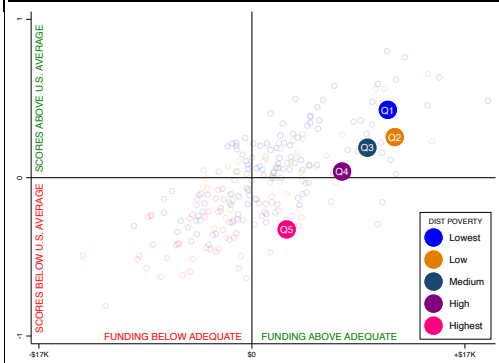
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in NH is severely unequal.
- Spending in NH's highest-poverty districts is 20.6 percent ($2,773 PP) above the estimated adequate level, compared with 151.3 percent ($10,847 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -130.6 percentage points is ranked #41 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- NH's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.76 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). NH's division is New England. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

NEW JERSEY

State score: **79**

Summary: This 2019-20 profile of New Jersey's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), New Jersey scores 79 out of 100, which ranks 4th out of the 48 states with possible ratings.

CONTEXTUAL STATS	NJ	U.S.
Child (5-17yo) poverty rate (%)	12.1	14.9
Public school coverage (%)	83.6	83.1
Percent revenue from state sources	43.3	47.0
Total enrollment (U.S. rank)	1,411,917 (11)	

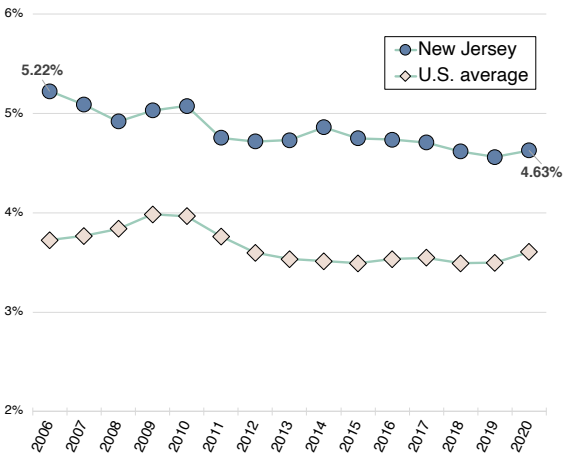
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

New Jersey effort	4.63 %
U.S. average	3.61 %

- NJ is a high effort state.
- In FY 2020, NJ spent 4.63 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 1.02 percentage points higher than the unweighted national average of 3.61 percent.
- NJ's effort level ranks #1 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- NJ's 2020 effort level is 0.60 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #45 in the nation.

Net change by period (% pts.)		
Period	**NJ**	**U.S.**
K-12 recession (2006-12)	-0.51	-0.13
Post-recession (2012-20)	-0.09	0.01
Full period (2006-20)	-0.60	-0.12

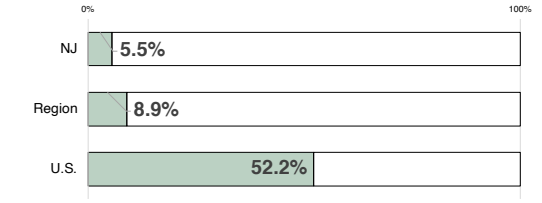
- NJ's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $17.32 billion (12.4 percent) higher.
- NJ is a relatively high capacity state, with a GSP per capita ranked #11 in the nation.

STATEWIDE ADEQUACY

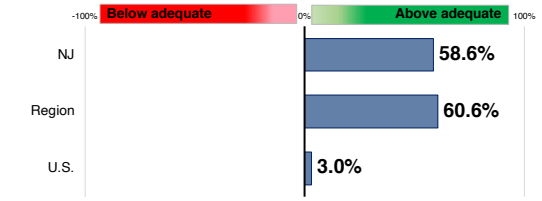
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in NJ is relatively high.
- By the modest standard of U.S. average scores, 5.5 percent of NJ students attend inadequately funded districts, which ranks #7 in the nation (out of 49).
- The typical NJ student's district spends 58.6 percent above adequate levels, which ranks #6 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest NJ districts

Percent above/below adequate spending, ten largest NJ school districts	
NEWARK PUBLIC SD	7.0
JERSEY CITY PS	33.1
ELIZABETH PS	27.8
PATERSON PUBLIC SD	-6.5
EDISON TOWNSHIP SD	135.3
TRENTON PUBLIC SD	-20.1
TOMS RIVER REGIONAL SD	65.7
PASSAIC CITY SD	10.8
WOODBRIDGE TOWNSHIP SD	101.3
UNION CITY SD	28.4

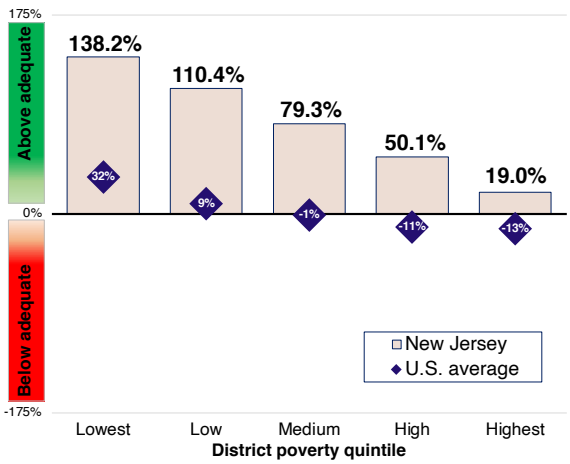
- Statewide, spending is below estimated adequate levels in 22 of the 541 NJ districts with available data.
- Closing all these negative gaps would require $165.9 million in new funding.

EQUAL OPPORTUNITY

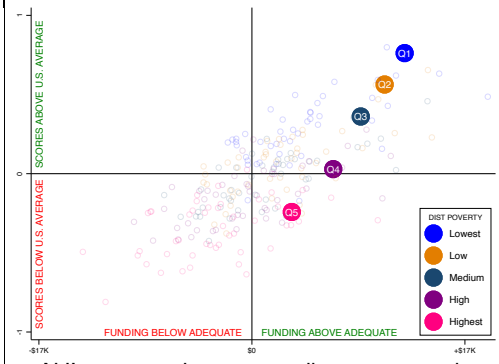
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in NJ is severely unequal.
- Spending in NJ's highest-poverty districts is 19.0 percent ($3,183 PP) above the estimated adequate level, compared with 138.2 percent ($12,189 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -119.2 percentage points is ranked #39 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- NJ's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 1.00 s.d. below its lowest-poverty districts (blue dot).

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- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
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Statewide adequacy

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Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
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Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

NEW MEXICO

State score: **49**

Summary: This 2019-20 profile of New Mexico's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), New Mexico scores 49 out of 100, which ranks 23rd out of the 48 states with possible ratings.

CONTEXTUAL STATS	NM	U.S.
Child (5-17yo) poverty rate (%)	20.6	14.9
Public school coverage (%)	84.0	83.1
Percent revenue from state sources	67.8	47.0
Total enrollment (U.S. rank)	331,206 (36)	

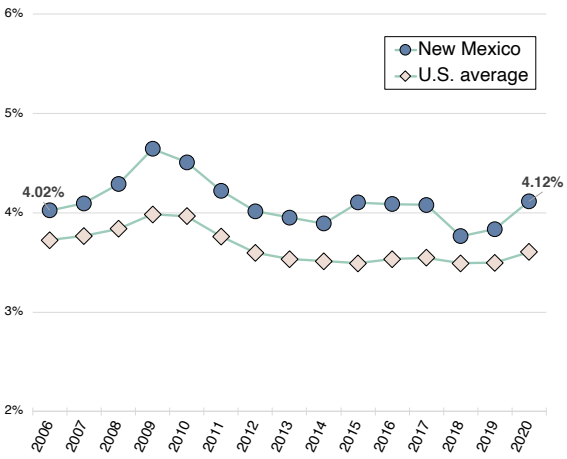
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

New Mexico effort	4.12 %
U.S. average	3.61 %

- NM is a high effort state.
- In FY 2020, NM spent 4.12 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.51 percentage points higher than the unweighted national average of 3.61 percent.
- NM's effort level ranks #13 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- NM's 2020 effort level is 0.09 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #13 in the nation.

Net change by period (% pts.)		
Period	**NM**	**U.S.**
K-12 recession (2006-12)	-0.01	-0.13
Post-recession (2012-20)	0.10	0.01
Full period (2006-20)	0.09	-0.12

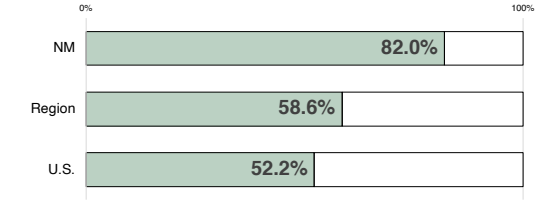
- NM's effort was lower than its 2006 level in 2 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.43 billion (2.3 percent) higher.
- NM is a relatively low capacity state, with a GSP per capita ranked #43 in the nation.

STATEWIDE ADEQUACY

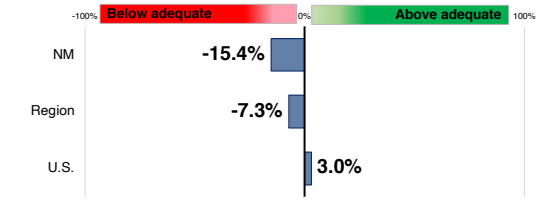
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in NM is relatively low.
- By the modest standard of U.S. average scores, 82.0 percent of NM students attend inadequately funded districts, which ranks #43 in the nation (out of 49).
- The typical NM student's district spends 15.4 percent below adequate levels, which ranks #39 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest NM districts

Percent above/below adequate spending, ten largest NM school districts	
ALBUQUERQUE PS	-19.5
LAS CRUCES PS	-13.4
RIO RANCHO PS	8.9
GADSDEN INDEP SCHLS	-42.9
SANTA FE PS	-15.6
FARMINGTON MUNICIPAL SCHLS	-15.3
GALLUP-MCKINLEY CTY SCHLS	-26.4
ROSWELL INDEP SCHLS	-19.5
HOBBS MUNICIPAL SCHLS	-13.2
CARLSBAD SD	5.0

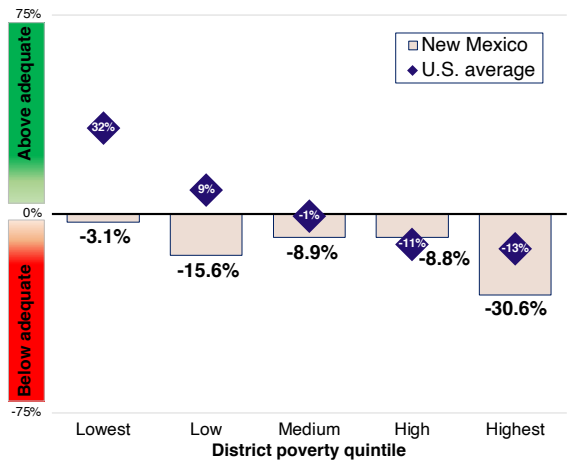
- Statewide, spending is below estimated adequate levels in 48 of the 89 NM districts with available data.
- Closing all these negative gaps would require $720.2 million in new funding.

EQUAL OPPORTUNITY

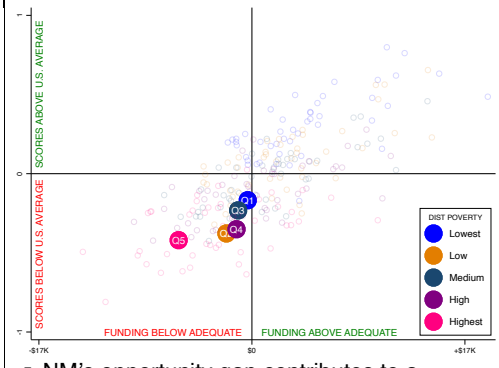
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in NM is moderately unequal.
- Spending in NM's highest-poverty districts is 30.6 percent ($5,848 PP) below the estimated adequate level, compared with 3.1 percent ($332 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -27.5 percentage points is ranked #4 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- NM's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.25 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). NM's division is Mountain. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

NEW YORK

State score: **69**

Summary: This 2019-20 profile of New York's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), New York scores 69 out of 100, which ranks 7th out of the 48 states with possible ratings.

CONTEXTUAL STATS	NY	U.S.
Child (5-17yo) poverty rate (%)	16.3	14.9
Public school coverage (%)	80.6	83.1
Percent revenue from state sources	39.8	47.0
Total enrollment (U.S. rank)	2,692,589 (4)	

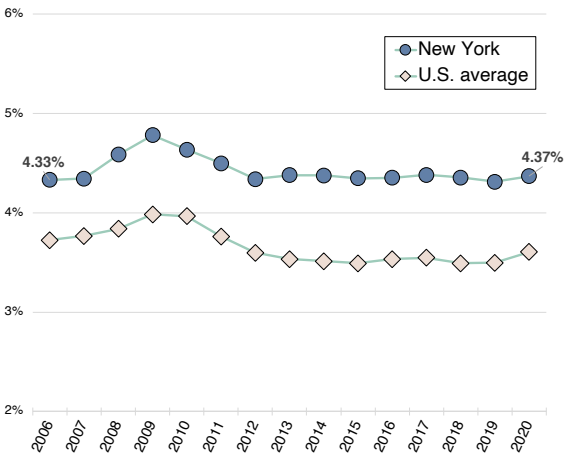
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

New York effort	4.37 %
U.S. average	3.61 %

- NY is a high effort state.
- In FY 2020, NY spent 4.37 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.76 percentage points higher than the unweighted national average of 3.61 percent.
- NY's effort level ranks #6 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- NY's 2020 effort level is 0.04 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #14 in the nation.

Net change by period (% pts.)		
Period	**NY**	**U.S.**
K-12 recession (2006-12)	0.01	-0.13
Post-recession (2012-20)	0.03	0.01
Full period (2006-20)	0.04	-0.12

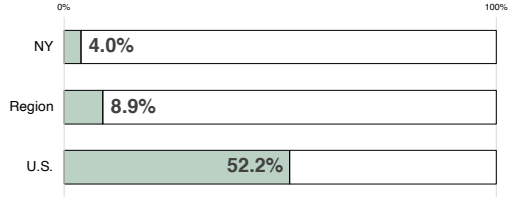
- NY's effort was lower than its 2006 level in 1 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.30 billion (0.1 percent) higher.
- NY is a relatively high capacity state, with a GSP per capita ranked #2 in the nation.

STATEWIDE ADEQUACY

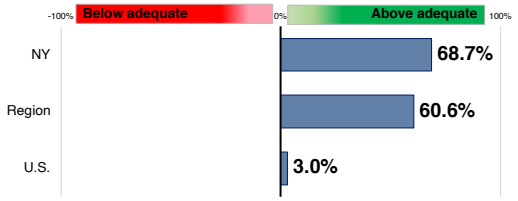
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in NY is relatively high.
- By the modest standard of U.S. average scores, 4.0 percent of NY students attend inadequately funded districts, which ranks #6 in the nation (out of 49).
- The typical NY student's district spends 68.7 percent above adequate levels, which ranks #4 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest NY districts

Percent above/below adequate spending, ten largest NY school districts	
NYC CHANCELLOR'S OFFICE	31.3
BUFFALO CITY SD	-18.5
ROCHESTER CITY SD	-10.2
YONKERS CITY SD	44.6
SYRACUSE CITY SD	-17.6
BRENTWOOD UNION FREE SD	37.5
SACHEM CENTRAL SD	175.2
NEWBURGH CITY SD	63.8
GREECE CENTRAL SD	85.2
WAPPINGERS CENTRAL SD	158.1

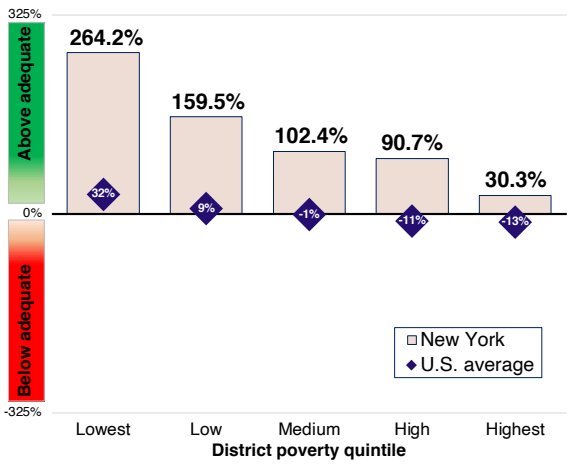
- Statewide, spending is below estimated adequate levels in 5 of the 674 NY districts with available data.
- Closing all these negative gaps would require $360.0 million in new funding.

EQUAL OPPORTUNITY

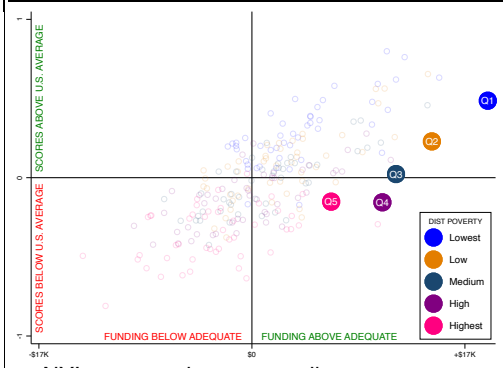
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in NY is severely unequal.
- Spending in NY's highest-poverty districts is 30.3 percent ($6,327 PP) above the estimated adequate level, compared with 264.2 percent ($18,826 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -233.9 percentage points is ranked #48 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- NY's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.64 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). NY's division is Middle Atlantic. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

NORTH CAROLINA

Summary: This 2019-20 profile of North Carolina's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), North Carolina scores 19 out of 100, which ranks 47th out of the 48 states with possible ratings.

CONTEXTUAL STATS	NC	U.S.
Child (5-17yo) poverty rate (%)	17.0	14.9
Public school coverage (%)	83.7	83.1
Percent revenue from state sources	61.6	47.0
Total enrollment (U.S. rank)	1,560,350 (9)	

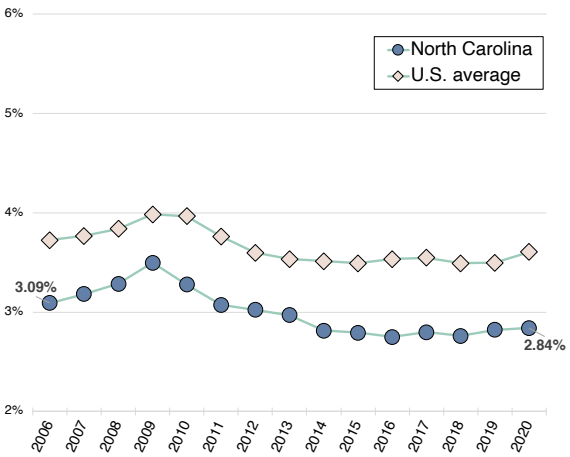
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

North Carolina effort	2.84 %
U.S. average	3.61 %

- NC is a low effort state.
- In FY 2020, NC spent 2.84 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.77 percentage points lower than the unweighted national average of 3.61 percent.
- NC's effort level ranks #46 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- NC's 2020 effort level is 0.25 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #32 in the nation.

Net change by period (% pts.)		
Period	**NC**	**U.S.**
K-12 recession (2006-12)	-0.07	-0.13
Post-recession (2012-20)	-0.18	0.01
Full period (2006-20)	-0.25	-0.12

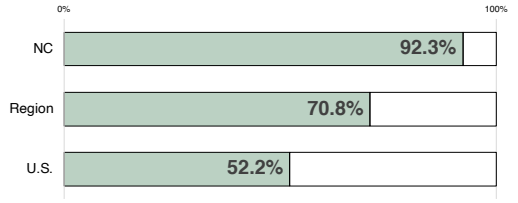
- NC's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $8.28 billion (10.6 percent) higher.
- NC is a relatively medium capacity state, with a GSP per capita ranked #31 in the nation.

STATEWIDE ADEQUACY

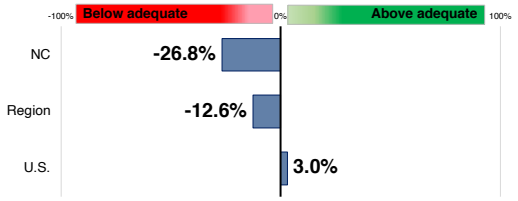
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in NC is relatively low.
- By the modest standard of U.S. average scores, 92.3 percent of NC students attend inadequately funded districts, which ranks #49 in the nation (out of 49).
- The typical NC student's district spends 26.8 percent below adequate levels, which ranks #46 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest NC districts

Percent above/below adequate spending, ten largest NC school districts	
WAKE CNTY SCHLS	-16.8
CHARLOTTE-MECKLENBURG SCHLS	-37.0
GUILFORD CNTY SCHLS	-37.0
WINSTON SALEM / FORSYTH CS	-36.8
CUMBERLAND CNTY SCHLS	-42.2
UNION CNTY PS	6.8
JOHNSTON CNTY PS	-26.2
CABARRUS CNTY SCHLS	-13.8
DURHAM PS	-33.5
GASTON CNTY SCHLS	-27.1

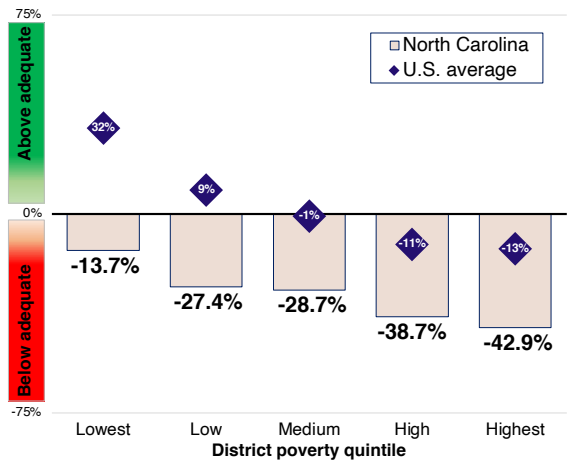
- Statewide, spending is below estimated adequate levels in 99 of the 115 NC districts with available data.
- Closing all these negative gaps would require $5.4 billion in new funding.

EQUAL OPPORTUNITY

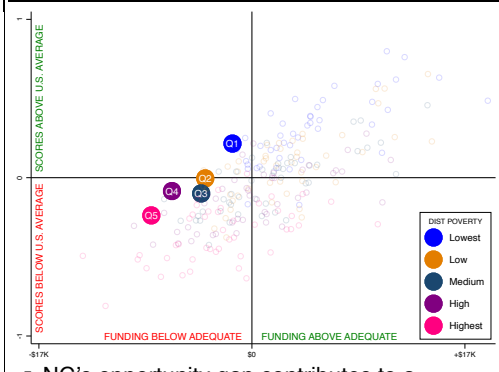
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in NC is moderately unequal.
- Spending in NC's highest-poverty districts is 42.9 percent ($8,029 PP) below the estimated adequate level, compared with 13.7 percent ($1,551 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -29.3 percentage points is ranked #7 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- NC's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.45 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
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- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). NC's division is South Atlantic. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

NORTH DAKOTA

Summary: This 2019-20 profile of North Dakota's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), North Dakota scores 78 out of 100, which ranks 5th out of the 48 states with possible ratings.

CONTEXTUAL STATS	ND	U.S.
Child (5-17yo) poverty rate (%)	9.4	14.9
Public school coverage (%)	85.0	83.1
Percent revenue from state sources	54.8	47.0
Total enrollment (U.S. rank)	116,185 (48)	

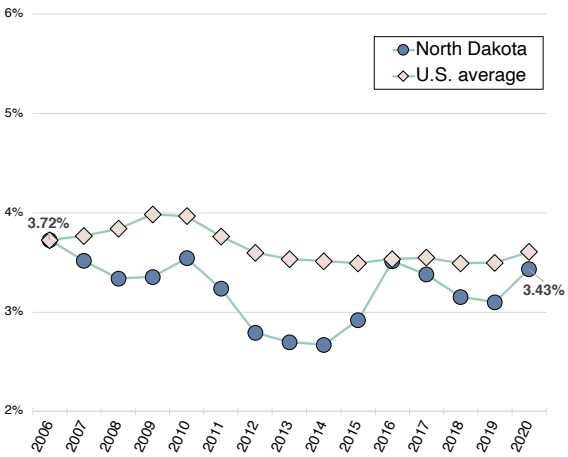
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

North Dakota effort	3.43 %
U.S. average	3.61 %

- ND is a medium effort state.
- In FY 2020, ND spent 3.43 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.17 percentage points lower than the unweighted national average of 3.61 percent.
- ND's effort level ranks #32 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- ND's 2020 effort level is 0.29 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #38 in the nation.

Net change by period (% pts.)		
Period	**ND**	**U.S.**
K-12 recession (2006-12)	-0.93	-0.13
Post-recession (2012-20)	0.64	0.01
Full period (2006-20)	-0.29	-0.12

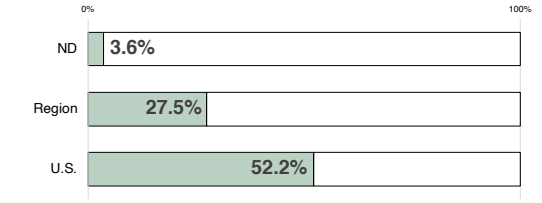
- ND's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $1.16 billion (12.5 percent) higher.
- ND is a relatively high capacity state, with a GSP per capita ranked #8 in the nation.

STATEWIDE ADEQUACY

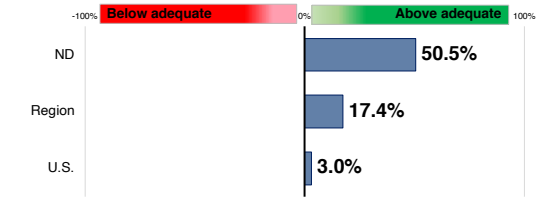
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in ND is relatively high.
- By the modest standard of U.S. average scores, 3.6 percent of ND students attend inadequately funded districts, which ranks #5 in the nation (out of 49).
- The typical ND student's district spends 50.5 percent above adequate levels, which ranks #9 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest ND districts

Percent above/below adequate spending, ten largest ND school districts	
BISMARCK 1	108.4
FARGO 1	56.5
WEST FARGO 6	45.5
MINOT 1	68.9
GRAND FORKS 1	51.1
WILLISTON 1	68.1
DICKINSON 1	52.3
MANDAN 1	114.1
JAMESTOWN 1	87.3
MCKENZIE CO SD 1	49.1

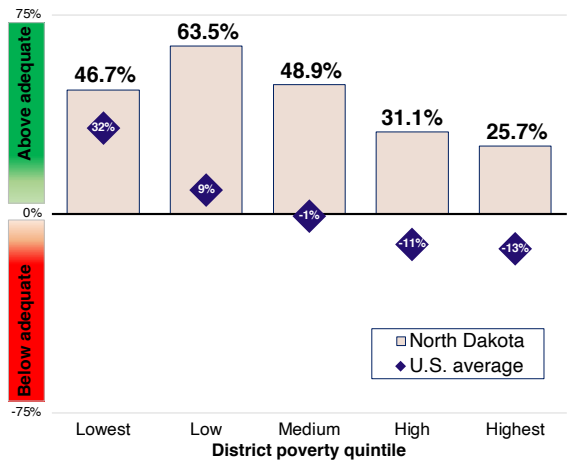
- Statewide, spending is below estimated adequate levels in 19 of the 168 ND districts with available data.
- Closing all these negative gaps would require $6.0 million in new funding.

EQUAL OPPORTUNITY

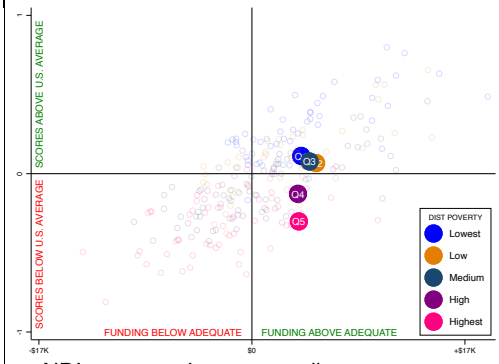
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in ND is moderately unequal.
- Spending in ND's highest-poverty districts is 25.7 percent ($3,746 PP) above the estimated adequate level, compared with 46.7 percent ($3,937 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -21.0 percentage points is ranked #2 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- ND's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.41 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). ND's division is West North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

OHIO

State score: **55**

Summary: This 2019-20 profile of Ohio's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Ohio scores 55 out of 100, which ranks 19th out of the 48 states with possible ratings.

CONTEXTUAL STATS	OH	U.S.
Child (5-17yo) poverty rate (%)	15.3	14.9
Public school coverage (%)	81.0	83.1
Percent revenue from state sources	38.5	47.0
Total enrollment (U.S. rank)	1,689,867 (8)	

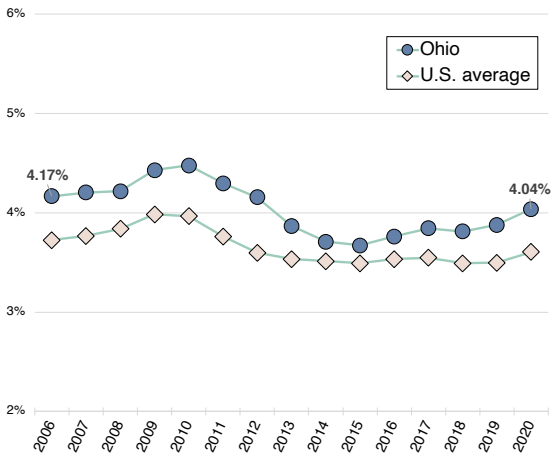
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Ohio effort	4.04 %
U.S. average	3.61 %

- OH is a high effort state.
- In FY 2020, OH spent 4.04 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.43 percentage points higher than the unweighted national average of 3.61 percent.
- OH's effort level ranks #14 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- OH's 2020 effort level is 0.13 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #25 in the nation.

Net change by period (% pts.)		
Period	**OH**	**U.S.**
K-12 recession (2006-12)	-0.01	-0.13
Post-recession (2012-20)	-0.12	0.01
Full period (2006-20)	-0.13	-0.12

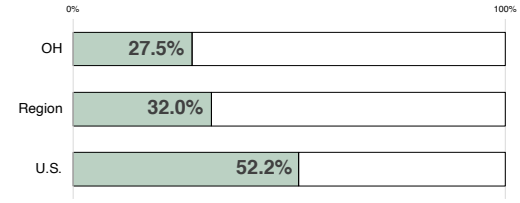
- OH's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $9.66 billion (7.7 percent) higher.
- OH is a relatively medium capacity state, with a GSP per capita ranked #28 in the nation.

STATEWIDE ADEQUACY

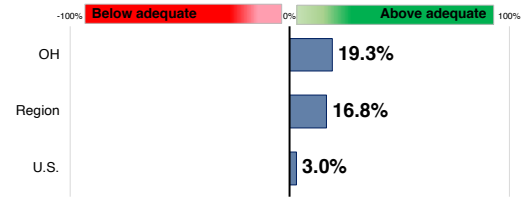
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in OH is relatively moderate.
- By the modest standard of U.S. average scores, 27.5 percent of OH students attend inadequately funded districts, which ranks #22 in the nation (out of 49).
- The typical OH student's district spends 19.3 percent above adequate levels, which ranks #19 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest OH districts

Percent above/below adequate spending, ten largest OH school districts	
COLUMBUS CITY SD	-27.1
CLEVELAND MUNICIPAL	-25.9
CINCINNATI PS	-29.8
TOLEDO CITY	-25.3
SOUTH-WESTERN CITY	-18.2
OLENTANGY LOCAL	119.3
AKRON CITY	-21.3
DUBLIN CITY	75.2
HILLIARD CITY	39.1
LAKOTA LOCAL	64.2

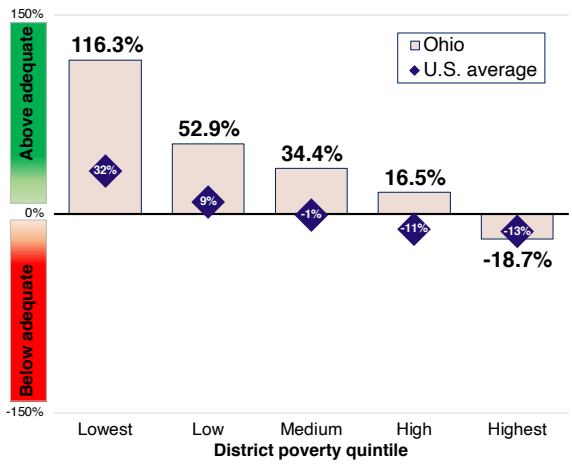
- Statewide, spending is below estimated adequate levels in 89 of the 608 OH districts with available data.
- Closing all these negative gaps would require $1.8 billion in new funding.

EQUAL OPPORTUNITY

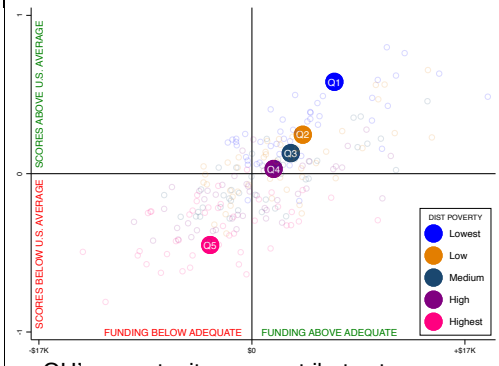
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in OH is severely unequal.
- Spending in OH's highest-poverty districts is 18.7 percent ($3,331 PP) below the estimated adequate level, compared with 116.3 percent ($6,584 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -135.0 percentage points is ranked #42 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



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Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). OH's division is East North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(\text{In})\text{SCHOOL} = b_0 + b_1\text{State}_i + b_2\text{LaborMarket}_{ij} + b_3\text{CWI}_{ij} + b_4\text{FINANCE}_{ij} + b_5\text{PopulationDensity}_{ij} + b_6\ \text{Enrollment}_{ij} + b_7\text{INDICATORS}_{ij} + b_8\text{Scale}_{ij} + b_9\text{Poverty}_{ij} + b_{10}\text{SchlType}_{ij} + b_{11}\text{DATABASE}_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

OKLAHOMA

Summary: This 2019-20 profile of Oklahoma's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Oklahoma scores 35 out of 100, which ranks 38th out of the 48 states with possible ratings.

CONTEXTUAL STATS	OK	U.S.
Child (5-17yo) poverty rate (%)	17.3	14.9
Public school coverage (%)	81.1	83.1
Percent revenue from state sources	47.6	47.0
Total enrollment (U.S. rank)	703,719 (26)	

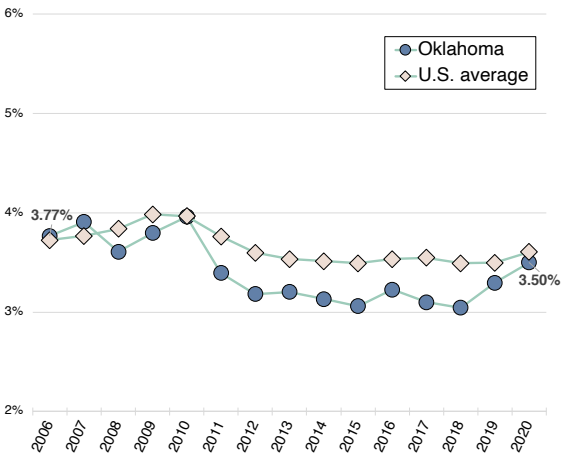
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Oklahoma effort	3.50 %
U.S. average	3.61 %

- OK is a medium effort state.
- In FY 2020, OK spent 3.50 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.11 percentage points lower than the unweighted national average of 3.61 percent.
- OK's effort level ranks #29 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- OK's 2020 effort level is 0.27 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #34 in the nation.

Net change by period (% pts.)		
Period	**OK**	**U.S.**
K-12 recession (2006-12)	-0.59	-0.13
Post-recession (2012-20)	0.32	0.01
Full period (2006-20)	-0.27	-0.12

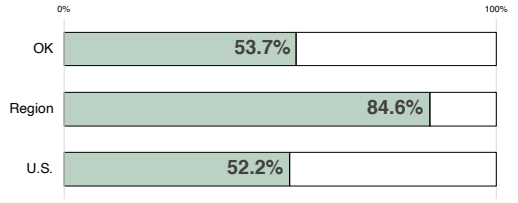
- OK's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $5.14 billion (16.5 percent) higher.
- OK is a relatively low capacity state, with a GSP per capita ranked #42 in the nation.

STATEWIDE ADEQUACY

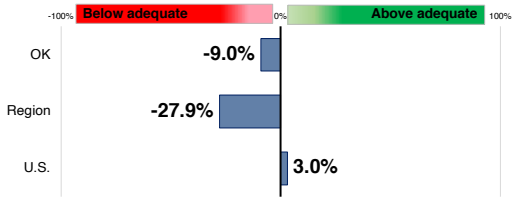
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in OK is relatively low.
- By the modest standard of U.S. average scores, 53.7 percent of OK students attend inadequately funded districts, which ranks #35 in the nation (out of 49).
- The typical OK student's district spends 9.0 percent below adequate levels, which ranks #35 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest OK districts

Percent above/below adequate spending, ten largest OK school districts	
OKLAHOMA CITY	-43.8
TULSA	-30.3
EDMOND	58.4
MOORE	23.8
PUTNAM CITY	-33.1
BROKEN ARROW	45.8
NORMAN	8.4
UNION	-18.5
MIDWEST CITY-DEL CITY	-28.3
LAWTON	-21.8

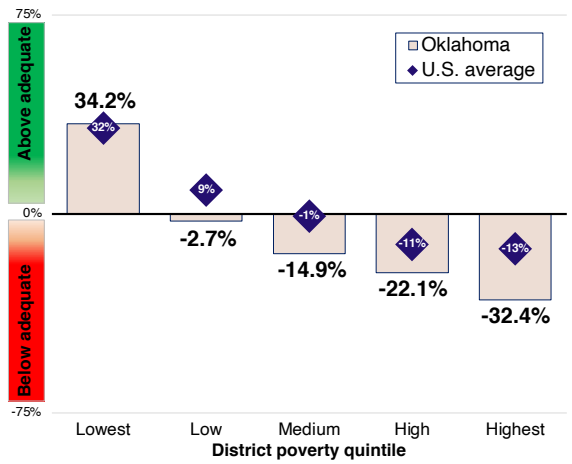
- Statewide, spending is below estimated adequate levels in 341 of the 506 OK districts with available data.
- Closing all these negative gaps would require $1.3 billion in new funding.

EQUAL OPPORTUNITY

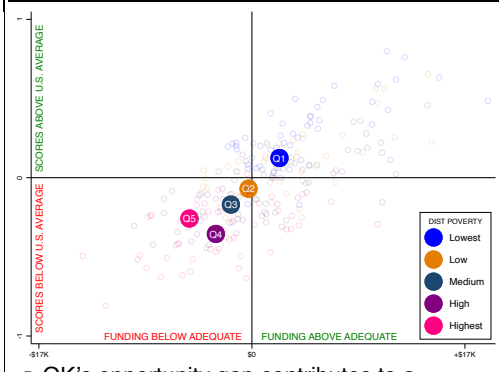
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in OK is highly unequal.
- Spending in OK's highest-poverty districts is 32.4 percent ($4,987 PP) below the estimated adequate level, compared with 34.2 percent ($2,201 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -66.6 percentage points is ranked #27 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- OK's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.38 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). OK's division is West South Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

OREGON

Summary: This 2019-20 profile of Oregon's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Oregon scores 69 out of 100, which ranks 8th out of the 48 states with possible ratings.

CONTEXTUAL STATS	OR	U.S.
Child (5-17yo) poverty rate (%)	11.3	14.9
Public school coverage (%)	81.9	83.1
Percent revenue from state sources	53.4	47.0
Total enrollment (U.S. rank)	610,648 (29)	

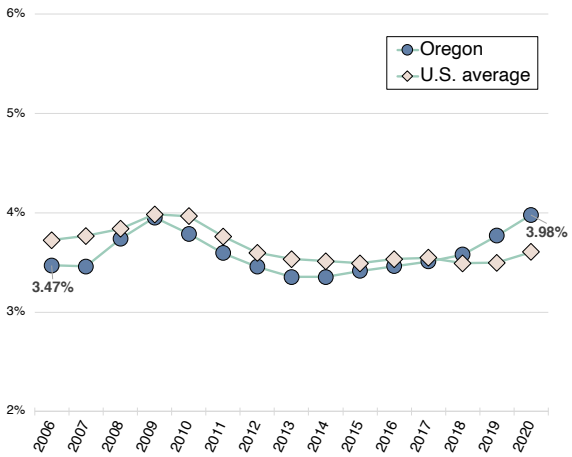
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Oregon effort	3.98 %
U.S. average	3.61 %

- OR is a high effort state.
- In FY 2020, OR spent 3.98 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.37 percentage points higher than the unweighted national average of 3.61 percent.
- OR's effort level ranks #15 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- OR's 2020 effort level is 0.51 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #3 in the nation.

Net change by period (% pts.)		
Period	**OR**	**U.S.**
K-12 recession (2006-12)	-0.01	-0.13
Post-recession (2012-20)	0.52	0.01
Full period (2006-20)	0.51	-0.12

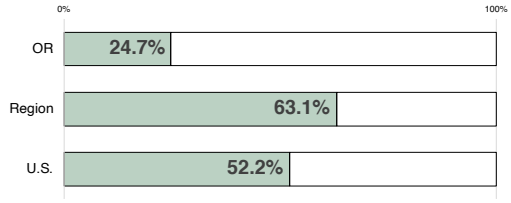
- OR's effort was lower than its 2006 level in 1 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.02 billion (0.0 percent) higher.
- OR is a relatively medium capacity state, with a GSP per capita ranked #27 in the nation.

STATEWIDE ADEQUACY

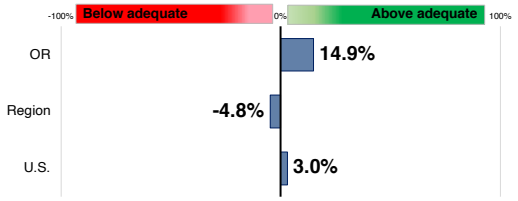
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in OR is relatively moderate.
- By the modest standard of U.S. average scores, 24.7 percent of OR students attend inadequately funded districts, which ranks #18 in the nation (out of 49).
- The typical OR student's district spends 14.9 percent above adequate levels, which ranks #23 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest OR districts

Percent above/below adequate spending, ten largest OR school districts	
PORTLAND SD 1J	36.5
SALEM-KEIZER SD 24J	-9.8
BEAVERTON SD 48J	21.6
HILLSBORO SD 1J	-2.6
BEND-LAPINE ADMINISTRATIVE SD 1	84.4
EUGENE SD 4J	40.1
NORTH CLACKAMAS SD 12	13.0
MEDFORD SD 549C	8.0
TIGARD-TUALATIN SD 23J	43.6
GRESHAM-BARLOW SD 10J	2.5

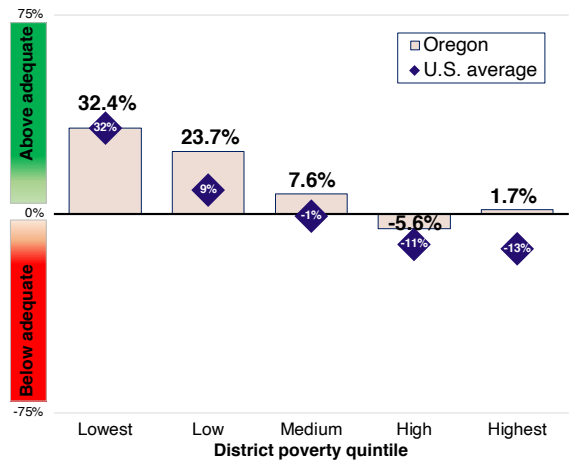
- Statewide, spending is below estimated adequate levels in 40 of the 196 OR districts with available data.
- Closing all these negative gaps would require $271.9 million in new funding.

EQUAL OPPORTUNITY

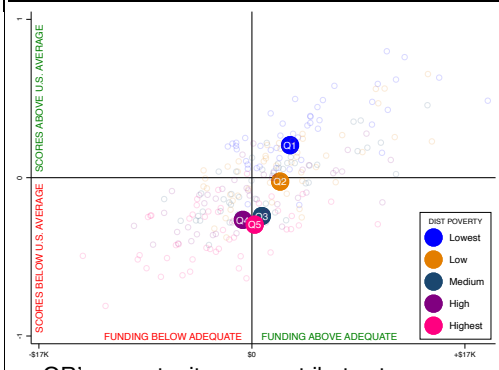
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in OR is highly unequal.
- Spending in OR's highest-poverty districts is 1.7 percent ($225 PP) above the estimated adequate level, compared with 32.4 percent ($3,045 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -30.7 percentage points is ranked #9 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- OR's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.50 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
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- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
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  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). OR's division is Pacific. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

PENNSYLVANIA

Summary: This 2019-20 profile of Pennsylvania's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Pennsylvania scores 56 out of 100, which ranks 17th out of the 48 states with possible ratings.

CONTEXTUAL STATS	PA	U.S.
Child (5-17yo) poverty rate (%)	13.7	14.9
Public school coverage (%)	79.5	83.1
Percent revenue from state sources	38.5	47.0
Total enrollment (U.S. rank)	1,732,449 (7)	

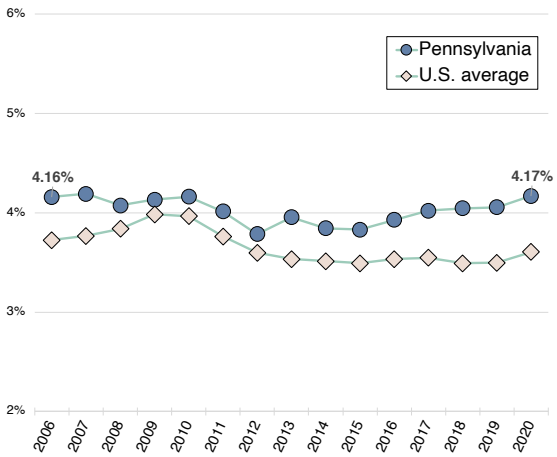
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Pennsylvania effort	4.17 %
U.S. average	3.61 %

- PA is a high effort state.
- In FY 2020, PA spent 4.17 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.56 percentage points higher than the unweighted national average of 3.61 percent.
- PA's effort level ranks #12 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- PA's 2020 effort level is 0.01 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #18 in the nation.

Net change by period (% pts.)		
Period	**PA**	**U.S.**
K-12 recession (2006-12)	-0.37	-0.13
Post-recession (2012-20)	0.38	0.01
Full period (2006-20)	0.01	-0.12

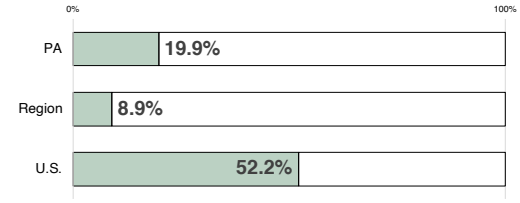
- PA's effort was lower than its 2006 level in 4 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $4.36 billion (2.9 percent) higher.
- PA is a relatively medium capacity state, with a GSP per capita ranked #23 in the nation.

STATEWIDE ADEQUACY

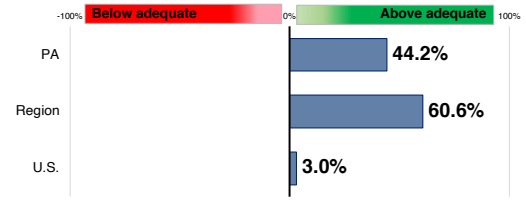
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in PA is relatively moderate.
- By the modest standard of U.S. average scores, 19.9 percent of PA students attend inadequately funded districts, which ranks #16 in the nation (out of 49).
- The typical PA student's district spends 44.2 percent above adequate levels, which ranks #10 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest PA districts

Percent above/below adequate spending, ten largest PA school districts	
PHILADELPHIA CITY SD	-34.6
PITTSBURGH SD	18.6
CENTRAL BUCKS SD	216.8
READING SD	-40.1
ALLENTOWN CITY SD	-23.5
BETHLEHEM AREA SD	27.7
DOWNINGTOWN AREA SD	114.8
NORTH PENN SD	106.6
UPPER DARBY SD	-20.3
CENTRAL DAUPHIN SD	27.8

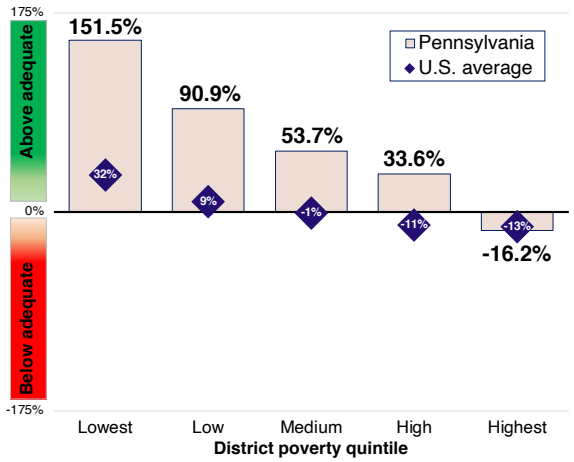
- Statewide, spending is below estimated adequate levels in 48 of the 499 PA districts with available data.
- Closing all these negative gaps would require $1.6 billion in new funding.

EQUAL OPPORTUNITY

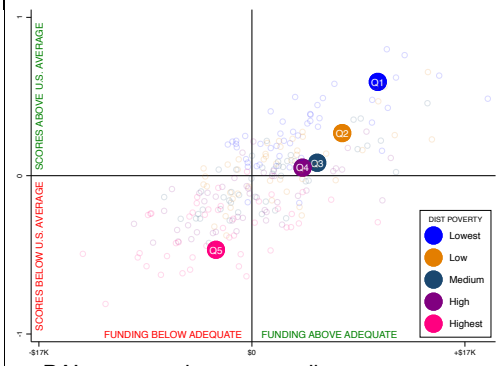
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in PA is severely unequal.
- Spending in PA's highest-poverty districts is 16.2 percent ($2,867 PP) below the estimated adequate level, compared with 151.5 percent ($10,045 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -167.7 percentage points is ranked #44 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- PA's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 1.06 s.d. below its lowest-poverty districts (blue dot).

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Equal opportunity

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- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

RHODE ISLAND

Summary: This 2019-20 profile of Rhode Island's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Rhode Island scores 48 out of 100, which ranks 24th out of the 48 states with possible ratings.

CONTEXTUAL STATS	RI	U.S.
Child (5-17yo) poverty rate (%)	13.8	14.9
Public school coverage (%)	82.7	83.1
Percent revenue from state sources	40.2	47.0
Total enrollment (U.S. rank)	143,557 (44)	

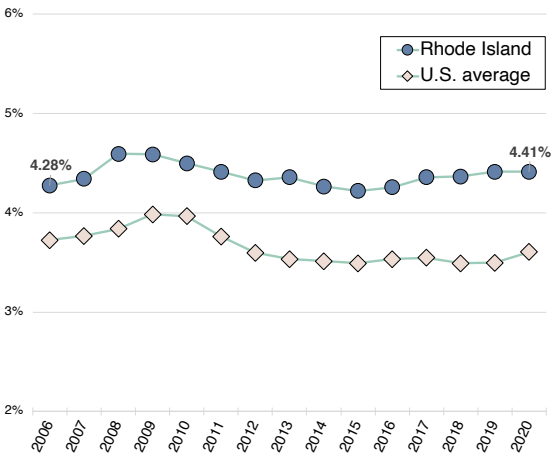
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Rhode Island effort	4.41 %
U.S. average	3.61 %

- RI is a high effort state.
- In FY 2020, RI spent 4.41 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.81 percentage points higher than the unweighted national average of 3.61 percent.
- RI's effort level ranks #5 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- RI's 2020 effort level is 0.14 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #9 in the nation.

Net change by period (% pts.)		
Period	**RI**	**U.S.**
K-12 recession (2006-12)	0.05	-0.13
Post-recession (2012-20)	0.09	0.01
Full period (2006-20)	0.14	-0.12

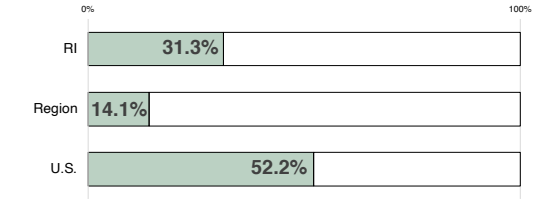
- RI's effort was lower than its 2006 level in 1 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.01 billion (0.1 percent) higher.
- RI is a relatively medium capacity state, with a GSP per capita ranked #33 in the nation.

STATEWIDE ADEQUACY

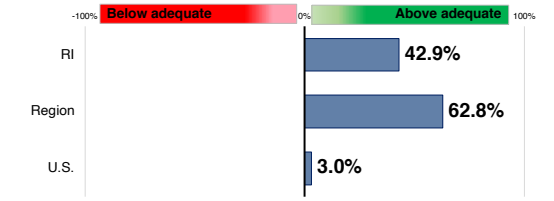
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in RI is relatively moderate.
- By the modest standard of U.S. average scores, 31.3 percent of RI students attend inadequately funded districts, which ranks #25 in the nation (out of 49).
- The typical RI student's district spends 42.9 percent above adequate levels, which ranks #11 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest RI districts

Percent above/below adequate spending, ten largest RI school districts	
PROVIDENCE	-11.3
CRANSTON	64.8
PAWTUCKET	-13.3
WARWICK	143.6
WOONSOCKET	-34.3
EAST PROVIDENCE	51.8
CUMBERLAND	106.3
COVENTRY	129.8
NORTH KINGSTOWN	154.6
WEST WARWICK DIST SCHLS	41.7

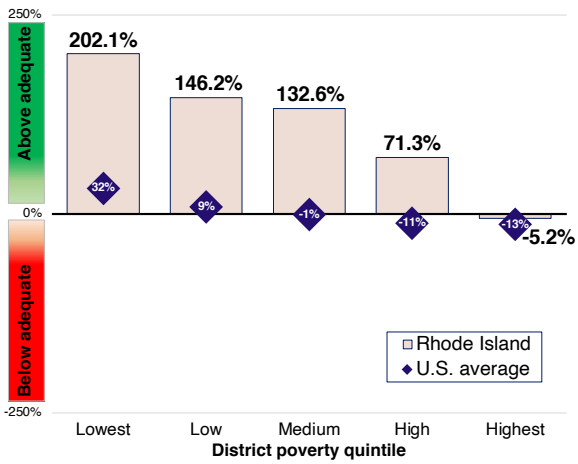
- Statewide, spending is below estimated adequate levels in 4 of the 36 RI districts with available data.
- Closing all these negative gaps would require $136.1 million in new funding.

EQUAL OPPORTUNITY

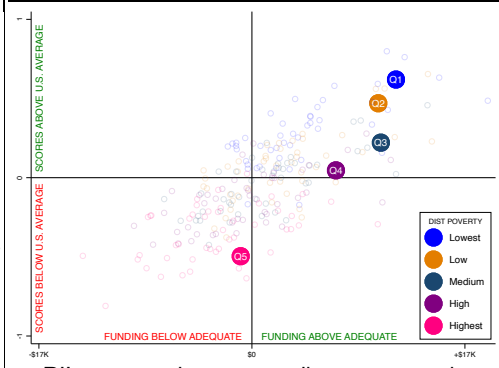
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in RI is severely unequal.
- Spending in RI's highest-poverty districts is 5.2 percent ($896 PP) below the estimated adequate level, compared with 202.1 percent ($11,498 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -207.3 percentage points is ranked #47 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- RI's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 1.12 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). RI's division is New England. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

SOUTH CAROLINA

Summary: This 2019-20 profile of South Carolina's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), South Carolina scores 47 out of 100, which ranks 27th out of the 48 states with possible ratings.

CONTEXTUAL STATS	SC	U.S.
Child (5-17yo) poverty rate (%)	17.8	14.9
Public school coverage (%)	82.3	83.1
Percent revenue from state sources	47.4	47.0
Total enrollment (U.S. rank)	786,879	(23)

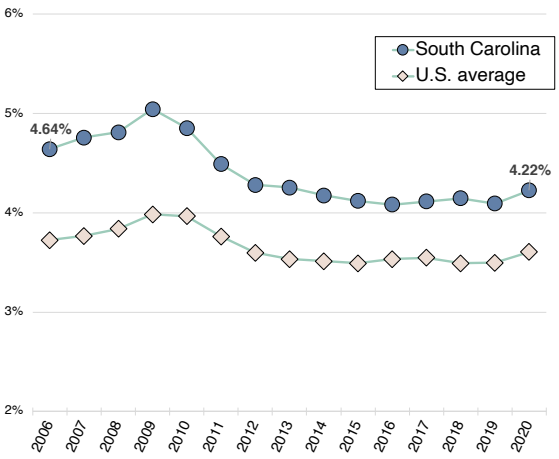
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

South Carolina effort	4.22 %
U.S. average	3.61 %

- SC is a high effort state.
- In FY 2020, SC spent 4.22 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.62 percentage points higher than the unweighted national average of 3.61 percent.
- SC's effort level ranks #9 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- SC's 2020 effort level is 0.42 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #42 in the nation.

Net change by period (% pts.)		
Period	**SC**	**U.S.**
K-12 recession (2006-12)	-0.36	-0.13
Post-recession (2012-20)	-0.06	0.01
Full period (2006-20)	-0.42	-0.12

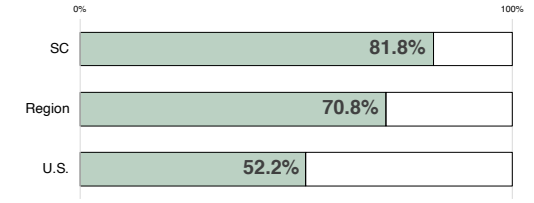
- SC's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $5.78 billion (12.3 percent) higher.
- SC is a relatively low capacity state, with a GSP per capita ranked #44 in the nation.

STATEWIDE ADEQUACY

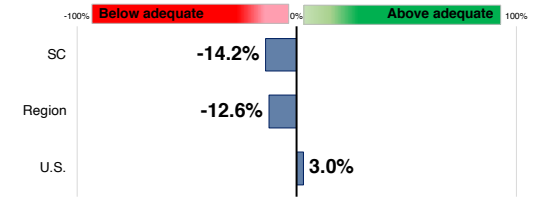
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in SC is relatively low.
- By the modest standard of U.S. average scores, 81.8 percent of SC students attend inadequately funded districts, which ranks #42 in the nation (out of 49).
- The typical SC student's district spends 14.2 percent below adequate levels, which ranks #38 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest SC districts

Percent above/below adequate spending, ten largest SC school districts	
GREENVILLE 01	-19.4
CHARLESTON 01	-1.9
HORRY 01	-10.2
BERKELEY 01	-17.6
RICHLAND 02	-21.9
LEXINGTON 01	44.0
DORCHESTER 02	-14.0
AIKEN 01	-25.7
RICHLAND 01	-18.4
BEAUFORT 01	1.2

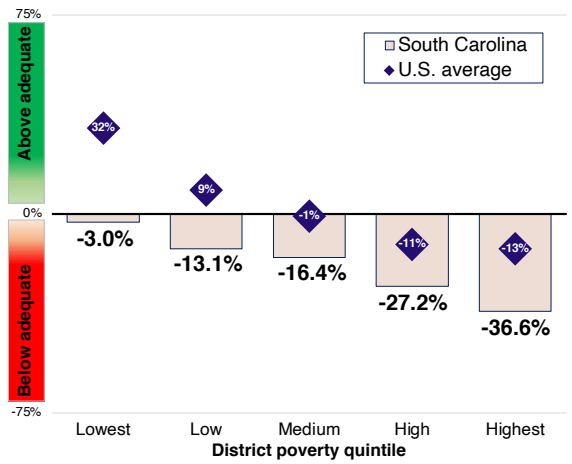
- Statewide, spending is below estimated adequate levels in 66 of the 78 SC districts with available data.
- Closing all these negative gaps would require $1.7 billion in new funding.

EQUAL OPPORTUNITY

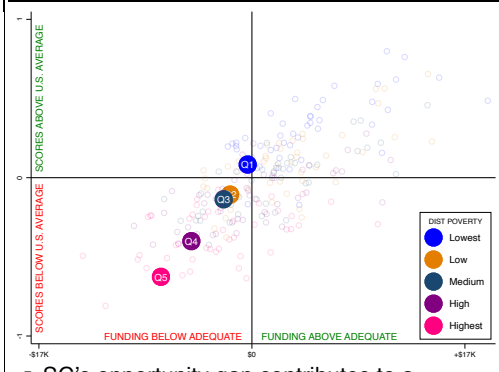
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in SC is highly unequal.
- Spending in SC's highest-poverty districts is 36.6 percent ($7,262 PP) below the estimated adequate level, compared with 3.0 percent ($337 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -33.6 percentage points is ranked #14 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- SC's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.71 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

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Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). SC's division is South Atlantic. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

SOUTH DAKOTA

State score: **44**

Summary: This 2019-20 profile of South Dakota's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), South Dakota scores 44 out of 100, which ranks 29th out of the 48 states with possible ratings.

CONTEXTUAL STATS	SD	U.S.
Child (5-17yo) poverty rate (%)	12.7	14.9
Public school coverage (%)	88.7	83.1
Percent revenue from state sources	33.6	47.0
Total enrollment (U.S. rank)	139,949 (45)	

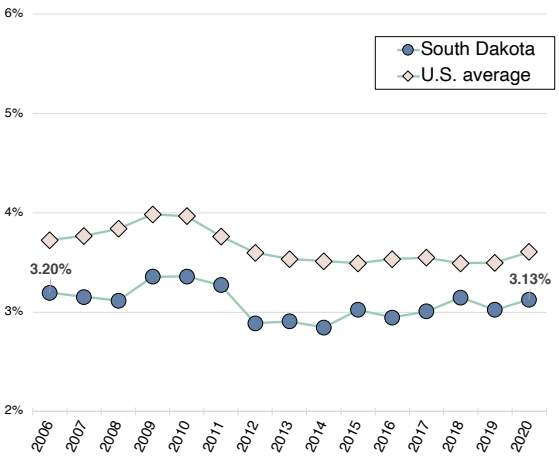
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

South Dakota effort	3.13 %
U.S. average	3.61 %

- SD is a low effort state.
- In FY 2020, SD spent 3.13 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.48 percentage points lower than the unweighted national average of 3.61 percent.
- SD's effort level ranks #41 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- SD's 2020 effort level is 0.07 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #22 in the nation.

Net change by period (% pts.)		
Period	**SD**	**U.S.**
K-12 recession (2006-12)	-0.31	-0.13
Post-recession (2012-20)	0.24	0.01
Full period (2006-20)	-0.07	-0.12

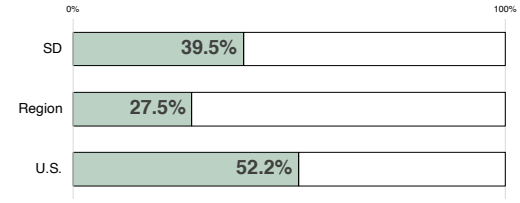
- SD's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.37 billion (4.7 percent) higher.
- SD is a relatively medium capacity state, with a GSP per capita ranked #20 in the nation.

STATEWIDE ADEQUACY

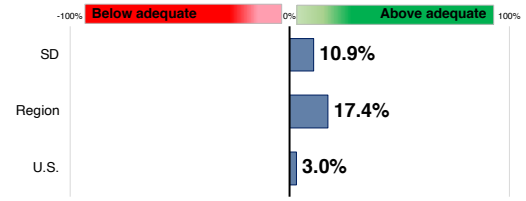
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in SD is relatively moderate.
- By the modest standard of U.S. average scores, 39.5 percent of SD students attend inadequately funded districts, which ranks #33 in the nation (out of 49).
- The typical SD student's district spends 10.9 percent above adequate levels, which ranks #24 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest SD districts

Percent above/below adequate spending, ten largest SD school districts	
SIOUX FALLS SD 49-5	-0.1
RAPID CITY AREA SD 51-4	43.8
HARRISBURG SD 41-2	48.3
ABERDEEN SD 06-1	9.0
BRANDON VALLEY SD 49-2	80.8
WATERTOWN SD 14-4	39.7
BROOKINGS SD 05-1	34.9
MEADE SD 46-1	56.8
YANKTON SD 63-3	36.2
DOUGLAS SD 51-1	53.7

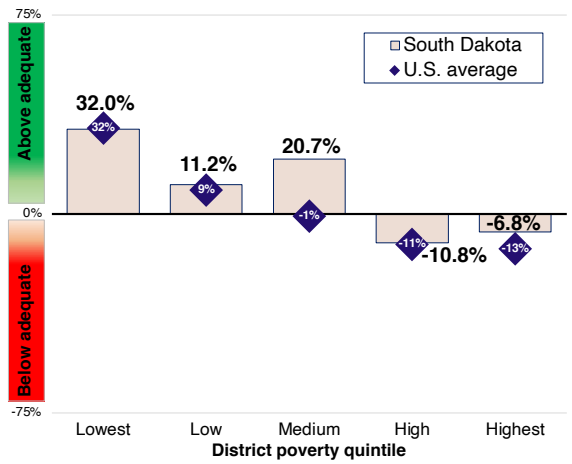
- Statewide, spending is below estimated adequate levels in 71 of the 149 SD districts with available data.
- Closing all these negative gaps would require $65.1 million in new funding.

EQUAL OPPORTUNITY

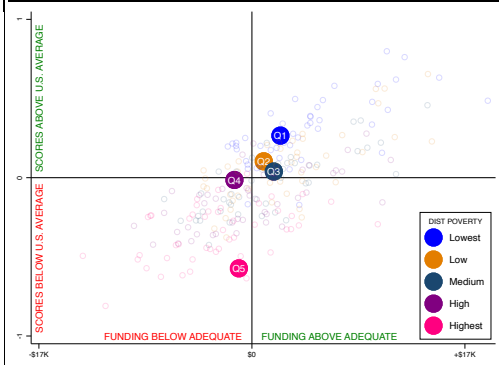
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in SD is highly unequal.
- Spending in SD's highest-poverty districts is 6.8 percent ($1,039 PP) below the estimated adequate level, compared with 32.0 percent ($2,273 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -38.8 percentage points is ranked #17 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- SD's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.84 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). SD's division is West North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

TENNESSEE

State score: **25**

Summary: This 2019-20 profile of Tennessee's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Tennessee scores 25 out of 100, which ranks 44th out of the 48 states with possible ratings.

CONTEXTUAL STATS	TN	U.S.
Child (5-17yo) poverty rate (%)	17.4	14.9
Public school coverage (%)	78.2	83.1
Percent revenue from state sources	47.1	47.0
Total enrollment (U.S. rank)	1,014,744 (16)	

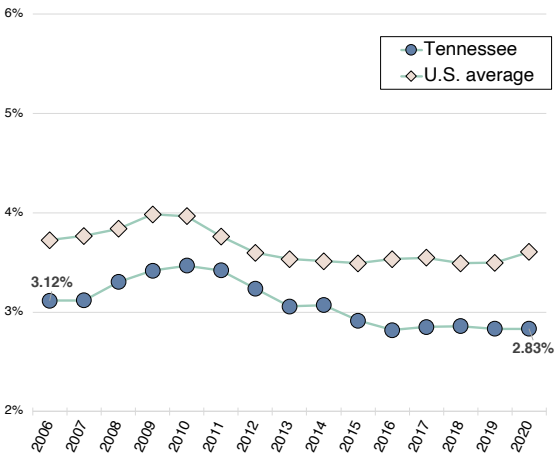
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Tennessee effort	2.83 %
U.S. average	3.61 %

- TN is a low effort state.
- In FY 2020, TN spent 2.83 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.77 percentage points lower than the unweighted national average of 3.61 percent.
- TN's effort level ranks #47 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- TN's 2020 effort level is 0.28 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #37 in the nation.

Net change by period (% pts.)		
Period	**TN**	**U.S.**
K-12 recession (2006-12)	0.12	-0.13
Post-recession (2012-20)	-0.40	0.01
Full period (2006-20)	-0.28	-0.12

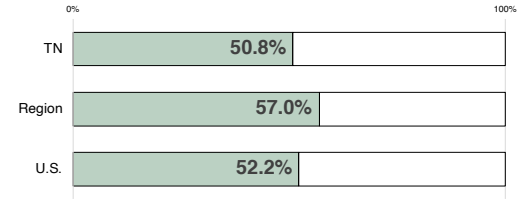
- TN's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $4.92 billion (9.8 percent) higher.
- TN is a relatively low capacity state, with a GSP per capita ranked #34 in the nation.

STATEWIDE ADEQUACY

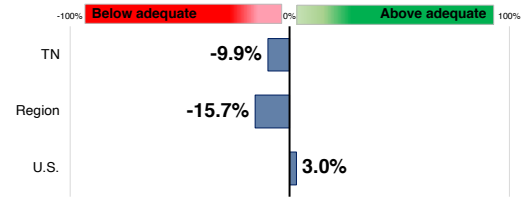
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in TN is relatively low.
- By the modest standard of U.S. average scores, 50.8 percent of TN students attend inadequately funded districts, which ranks #34 in the nation (out of 49).
- The typical TN student's district spends 9.9 percent below adequate levels, which ranks #36 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest TN districts

Percent above/below adequate spending, ten largest TN school districts	
SHELBY CNTY SD	-48.1
DAVIDSON CNTY	-22.1
KNOX CNTY	4.9
RUTHERFORD CNTY	21.8
HAMILTON CNTY	-5.9
WILLIAMSON CNTY	114.7
MONTGOMERY CNTY	-7.6
SUMNER CNTY	16.5
WILSON CNTY	26.1
SEVIER CNTY	20.0

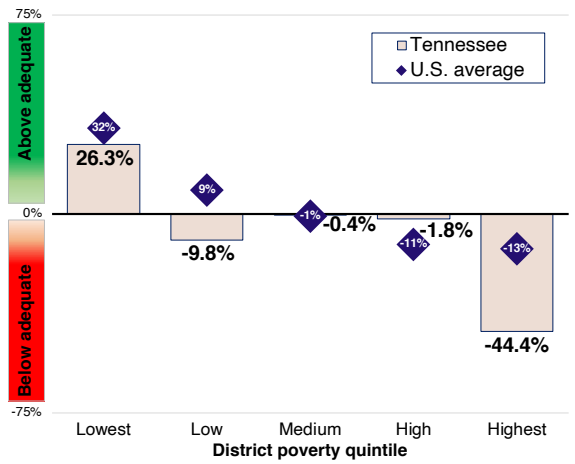
- Statewide, spending is below estimated adequate levels in 76 of the 140 TN districts with available data.
- Closing all these negative gaps would require $2.0 billion in new funding.

EQUAL OPPORTUNITY

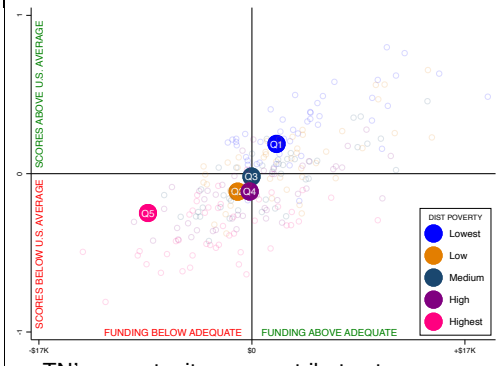
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in TN is highly unequal.
- Spending in TN's highest-poverty districts is 44.4 percent ($8,294 PP) below the estimated adequate level, compared with 26.3 percent ($1,966 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -70.6 percentage points is ranked #29 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- TN's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.44 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). TN's division is East South Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

TEXAS

State score: **32**

Summary: This 2019-20 profile of Texas's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Texas scores 32 out of 100, which ranks 40th out of the 48 states with possible ratings.

CONTEXTUAL STATS	TX	U.S.
Child (5-17yo) poverty rate (%)	17.9	14.9
Public school coverage (%)	86.0	83.1
Percent revenue from state sources	34.2	47.0
Total enrollment (U.S. rank)	5,495,398 (2)	

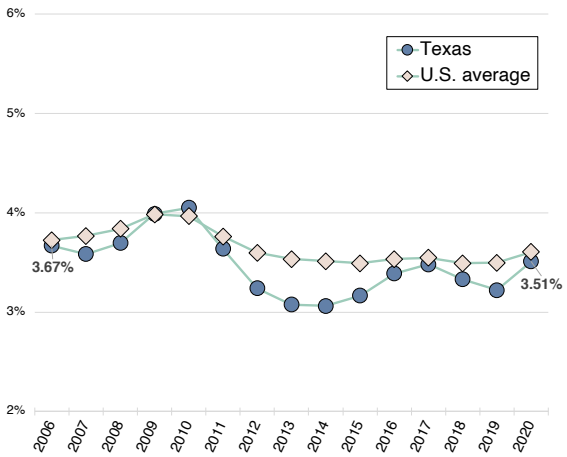
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Texas effort	3.51 %
U.S. average	3.61 %

- TX is a medium effort state.
- In FY 2020, TX spent 3.51 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.10 percentage points lower than the unweighted national average of 3.61 percent.
- TX's effort level ranks #28 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- TX's 2020 effort level is 0.16 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #27 in the nation.

Net change by period (% pts.)		
Period	**TX**	**U.S.**
K-12 recession (2006-12)	-0.43	-0.13
Post-recession (2012-20)	0.27	0.01
Full period (2006-20)	-0.16	-0.12

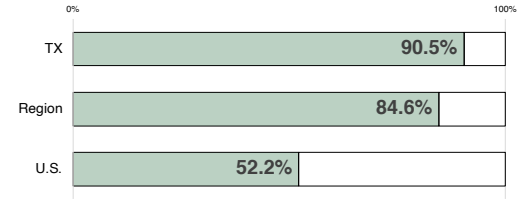
- TX's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $24.55 billion (8.4 percent) higher.
- TX is a relatively medium capacity state, with a GSP per capita ranked #19 in the nation.

STATEWIDE ADEQUACY

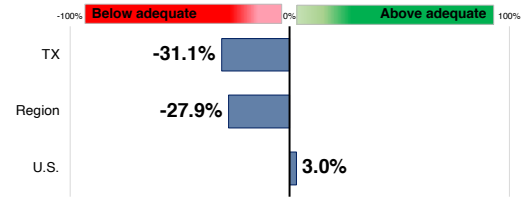
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in TX is relatively low.
- By the modest standard of U.S. average scores, 90.5 percent of TX students attend inadequately funded districts, which ranks #48 in the nation (out of 49).
- The typical TX student's district spends 31.1 percent below adequate levels, which ranks #48 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest TX districts

Percent above/below adequate spending, ten largest TX school districts	
HOUSTON ISD	-49.5
DALLAS ISD	-50.2
CYPRESS-FAIRBANKS ISD	-35.6
NORTHSIDE ISD	-21.7
KATY ISD	-25.0
FORT WORTH ISD	-46.7
AUSTIN ISD	-28.5
FORT BEND ISD	-28.0
ALDINE ISD	-53.5
CONROE IND SD 902	-18.7

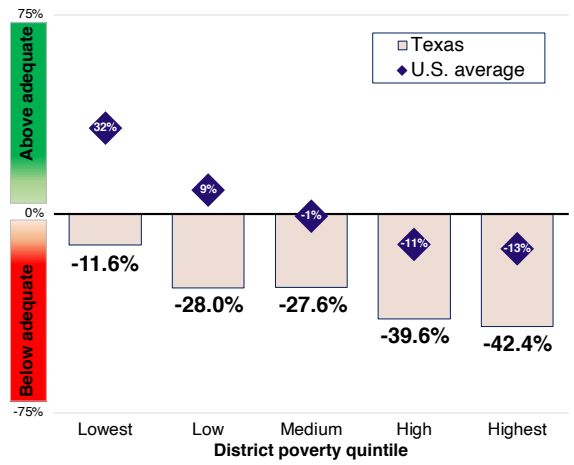
- Statewide, spending is below estimated adequate levels in 787 of the 1,019 TX districts with available data.
- Closing all these negative gaps would require $24.5 billion in new funding.

EQUAL OPPORTUNITY

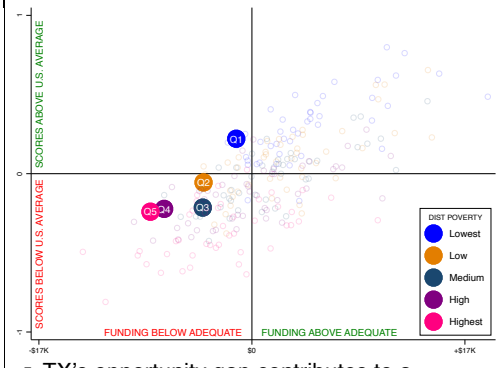
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in TX is highly unequal.
- Spending in TX's highest-poverty districts is 42.4 percent ($8,098 PP) below the estimated adequate level, compared with 11.6 percent ($1,249 PP) below adequate in the state's most affluent districts.
- This opportunity gap of -30.9 percentage points is ranked #10 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- TX's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.46 s.d. below its lowest-poverty districts (blue dot).

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- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
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- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
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Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

UTAH

State score: **53**

Summary: This 2019-20 profile of Utah's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Utah scores 53 out of 100, which ranks 20th out of the 48 states with possible ratings.

CONTEXTUAL STATS	UT	U.S.
Child (5-17yo) poverty rate (%)	6.7	14.9
Public school coverage (%)	88.5	83.1
Percent revenue from state sources	51.4	47.0
Total enrollment (U.S. rank)	684,694	(28)

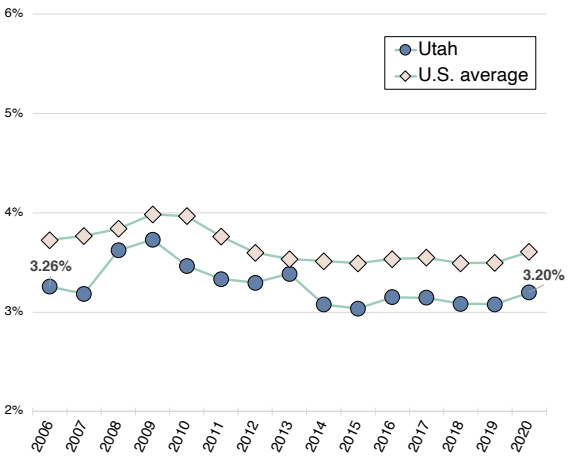
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Utah effort	3.20 %
U.S. average	3.61 %

- UT is a low effort state.
- In FY 2020, UT spent 3.20 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.41 percentage points lower than the unweighted national average of 3.61 percent.
- UT's effort level ranks #37 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- UT's 2020 effort level is 0.06 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #20 in the nation.

Net change by period (% pts.)		
Period	**UT**	**U.S.**
K-12 recession (2006-12)	0.04	-0.13
Post-recession (2012-20)	-0.10	0.01
Full period (2006-20)	-0.06	-0.12

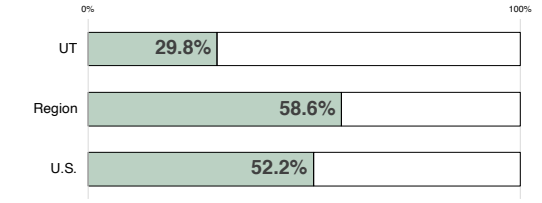
- UT's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $1.09 billion (4.0 percent) higher.
- UT is a relatively medium capacity state, with a GSP per capita ranked #24 in the nation.

STATEWIDE ADEQUACY

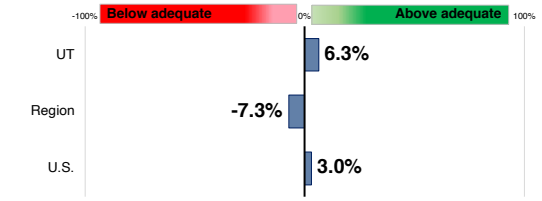
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in UT is relatively moderate.
- By the modest standard of U.S. average scores, 29.8 percent of UT students attend inadequately funded districts, which ranks #24 in the nation (out of 49).
- The typical UT student's district spends 6.3 percent above adequate levels, which ranks #28 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest UT districts

Percent above/below adequate spending, ten largest UT school districts	
ALPINE DIST	26.3
DAVIS DIST	23.2
GRANITE DIST	-24.0
JORDAN DIST	12.3
WASHINGTON DIST	-4.6
CANYONS SD	20.8
NEBO DIST	1.2
WEBER DIST	16.9
SALT LAKE DIST	-15.6
CACHE DIST	39.9

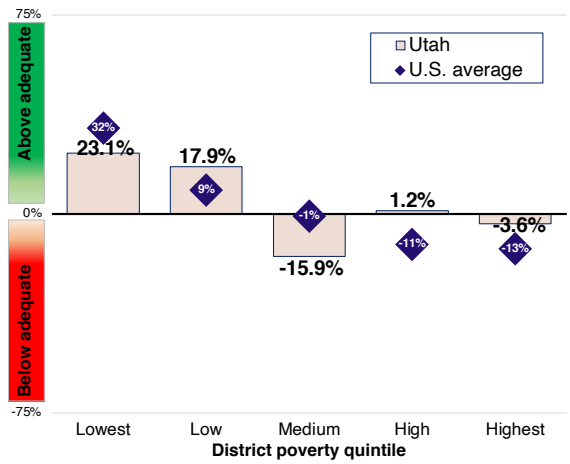
- Statewide, spending is below estimated adequate levels in 12 of the 41 UT districts with available data.
- Closing all these negative gaps would require $304.3 million in new funding.

EQUAL OPPORTUNITY

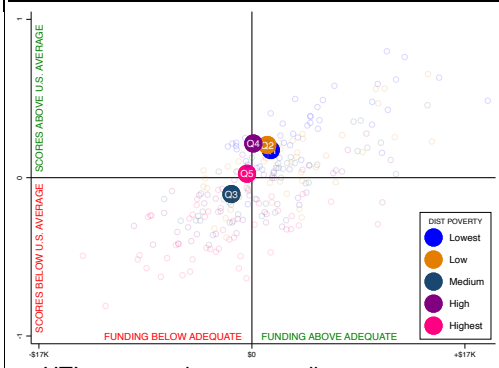
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in UT is moderately unequal.
- Spending in UT's highest-poverty districts is 3.6 percent ($389 PP) below the estimated adequate level, compared with 23.1 percent ($1,505 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -26.7 percentage points is ranked #3 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- UT's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.15 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). UT's division is Mountain. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

VERMONT

State score: **N/A**

Summary: This 2019-20 profile of Vermont's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Vermont scores out of 100, which ranks out of the 48 states with possible ratings.

CONTEXTUAL STATS		U.S.
Child (5-17yo) poverty rate (%)	9.7	14.9
Public school coverage (%)		83.1
Percent revenue from state sources	90.8	47.0
Total enrollment (U.S. rank)	86,759 (51)	

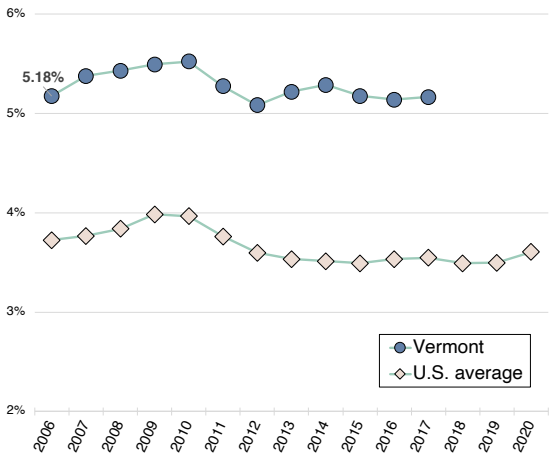
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Vermont effort	%
U.S. average	3.61 %

- is a state.
- In FY 2020, spent percent of its economic capacity (GSP) on its K-12 public schools.
- This was percentage points than the unweighted national average of 3.61 percent.
- 's effort level ranks # in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- 's 2020 effort level is pct. points than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked # in the nation.

Net change by period (% pts.)		
Period		**U.S.**
K-12 recession (2006-12)		-0.13
Post-recession (2012-20)		0.01
Full period (2006-20)		-0.12

- 's effort was lower than its 2006 level in of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $ billion (percent) higher.
- is a relatively state, with a GSP per capita ranked # in the nation.

STATEWIDE ADEQUACY

Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in is relatively .
- By the modest standard of U.S. average scores, percent of students attend inadequately funded districts, which ranks # in the nation (out of 49).
- The typical student's district spends percent adequate levels, which ranks # in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS

ADEQUATE FUNDING GAP OF TYPICAL STUDENT

Adequacy in 10 largest districts

Percent above/below adequate spending, ten largest school districts	

- Statewide, spending is below estimated adequate levels in of the districts with available data.
- Closing all these negative gaps would require $ in new funding.

EQUAL OPPORTUNITY

Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in is .
- Spending in 's highest-poverty districts is percent ($ PP) the estimated adequate level, compared with percent ($ PP) adequate in the state's most affluent districts.
- This opportunity gap of percentage points is ranked # in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY

Adequacy gaps by outcome gaps

- 's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score s.d. below its lowest-poverty districts (blue dot).

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- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). 's division is . Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

VIRGINIA

State score: **48**

Summary: This 2019-20 profile of Virginia's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Virginia scores 48 out of 100, which ranks 26th out of the 48 states with possible ratings.

CONTEXTUAL STATS	VA	U.S.
Child (5-17yo) poverty rate (%)	11.3	14.9
Public school coverage (%)	82.3	83.1
Percent revenue from state sources	40.5	47.0
Total enrollment (U.S. rank)	1,297,012 (12)	

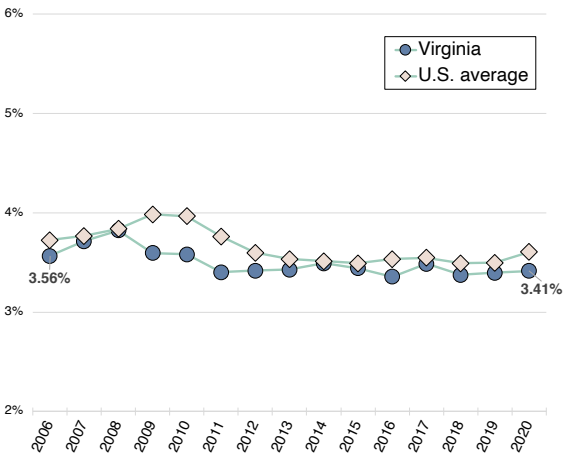
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Virginia effort	3.41 %
U.S. average	3.61 %

- VA is a low effort state.
- In FY 2020, VA spent 3.41 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.19 percentage points lower than the unweighted national average of 3.61 percent.
- VA's effort level ranks #34 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- VA's 2020 effort level is 0.15 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #26 in the nation.

Net change by period (% pts.)		
Period	**VA**	**U.S.**
K-12 recession (2006-12)	-0.15	-0.13
Post-recession (2012-20)	-0.00	0.01
Full period (2006-20)	-0.15	-0.12

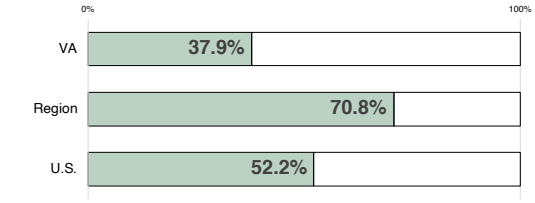
- VA's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $4.14 billion (4.7 percent) higher.
- VA is a relatively medium capacity state, with a GSP per capita ranked #17 in the nation.

STATEWIDE ADEQUACY

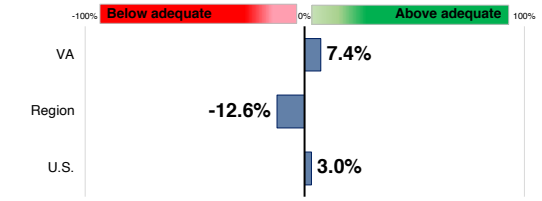
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in VA is relatively moderate.
- By the modest standard of U.S. average scores, 37.9 percent of VA students attend inadequately funded districts, which ranks #30 in the nation (out of 49).
- The typical VA student's district spends 7.4 percent above adequate levels, which ranks #26 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest VA districts

Percent above/below adequate spending, ten largest VA school districts	
FAIRFAX CO PBLC SCHS	17.4
PRINCE WILLIAM CO PBLC SCHS	-5.2
LOUDOUN CO PBLC SCHS	79.8
VA BEACH CITY PBLC SCHS	26.3
CHESTERFIELD CO PBLC SCHS	-4.8
HENRICO CO PBLC SCHS	-19.0
CHESAPEAKE CITY PBLC SCHS	0.4
STAFFORD CO PBLC SCHS	6.9
NORFOLK CITY PBLC SCHS	-32.6
NEWPORT NEWS CITY PBLC SCHS	-26.8

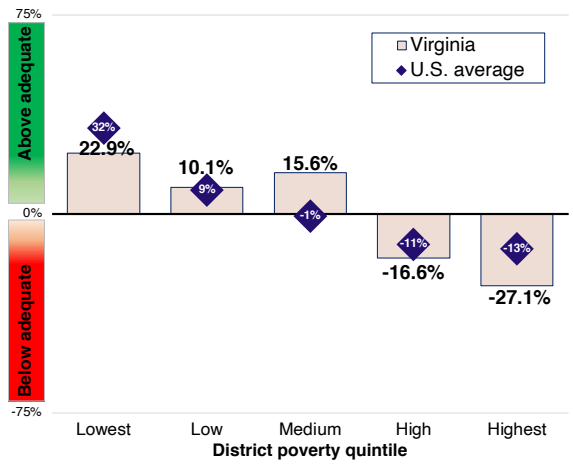
- Statewide, spending is below estimated adequate levels in 55 of the 132 VA districts with available data.
- Closing all these negative gaps would require $1.3 billion in new funding.

EQUAL OPPORTUNITY

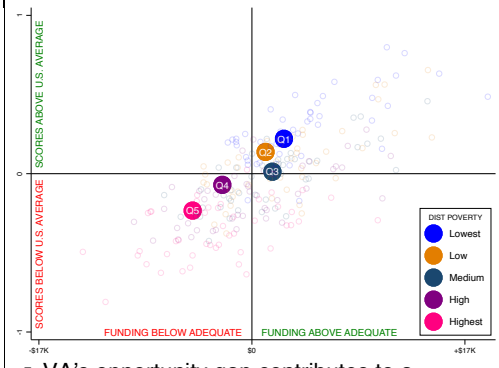
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in VA is highly unequal.
- Spending in VA's highest-poverty districts is 27.1 percent ($4,730 PP) below the estimated adequate level, compared with 22.9 percent ($2,555 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -50.0 percentage points is ranked #23 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- VA's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.45 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

The data in this state profile are from the **School Finance Indicators Database** (SFID), a collection of public K-12 school finance and resource allocation indicators published annually by researchers from the **Albert Shanker Institute**, **University of Miami School of Education and Human Development**, and **Rutgers University Graduate School of Education**. The primary product of the SFID is the State Indicators Database (SID), a state-level dataset containing roughly 125 variables. This profile focuses on three types of measures included in the SID: **fiscal effort**, **statewide adequacy**, and **equal opportunity**. The full SID dataset, along with accessible documentation of and data sources for all the measures presented in this profile, as well other SFID datasets, tools, and reports, are freely available to download at: schoolfinancedata.org. The following are some general notes about the profiles, followed by descriptions and notes pertaining to the three types of measures they present:

- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). VA's division is South Atlantic. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

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STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

WASHINGTON

State score: **60**

Summary: This 2019-20 profile of Washington's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Washington scores 60 out of 100, which ranks 13th out of the 48 states with possible ratings.

CONTEXTUAL STATS	WA	U.S.
Child (5-17yo) poverty rate (%)	10.1	14.9
Public school coverage (%)	83.5	83.1
Percent revenue from state sources	70.6	47.0
Total enrollment (U.S. rank)	1,142,073 (14)	

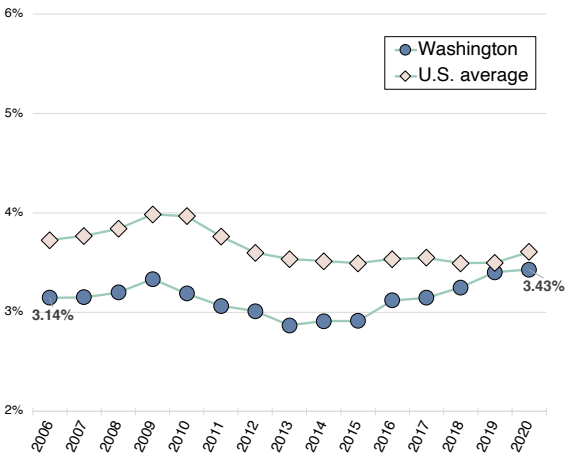
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Washington effort	3.43 %
U.S. average	3.61 %

- WA is a medium effort state.
- In FY 2020, WA spent 3.43 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.18 percentage points lower than the unweighted national average of 3.61 percent.
- WA's effort level ranks #33 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- WA's 2020 effort level is 0.28 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #6 in the nation.

Net change by period (% pts.)		
Period	**WA**	**U.S.**
K-12 recession (2006-12)	-0.14	-0.13
Post-recession (2012-20)	0.42	0.01
Full period (2006-20)	0.28	-0.12

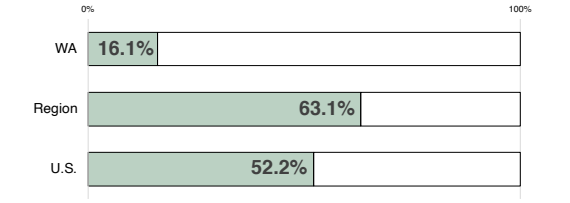
- WA's effort was lower than its 2006 level in 2 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.13 billion (0.2 percent) higher.
- WA is a relatively high capacity state, with a GSP per capita ranked #5 in the nation.

STATEWIDE ADEQUACY

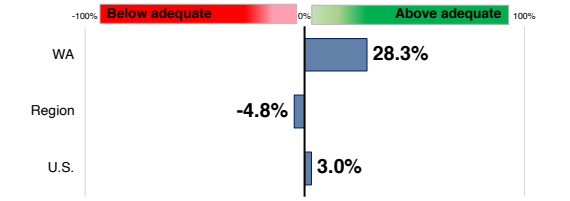
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in WA is relatively moderate.
- By the modest standard of U.S. average scores, 16.1 percent of WA students attend inadequately funded districts, which ranks #11 in the nation (out of 49).
- The typical WA student's district spends 28.3 percent above adequate levels, which ranks #14 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest WA districts

Percent above/below adequate spending, ten largest WA school districts	
SEATTLE SD NO. 1	35.5
LAKE WASHINGTON SD	61.4
SPOKANE SD	23.8
TACOMA SD	27.7
KENT SD	-3.6
EVERGREEN SD (CLARK)	24.9
NORTHSHORE SD	83.9
PUYALLUP SD	66.3
VANCOUVER SD	26.3
FEDERAL WAY SD	-11.6

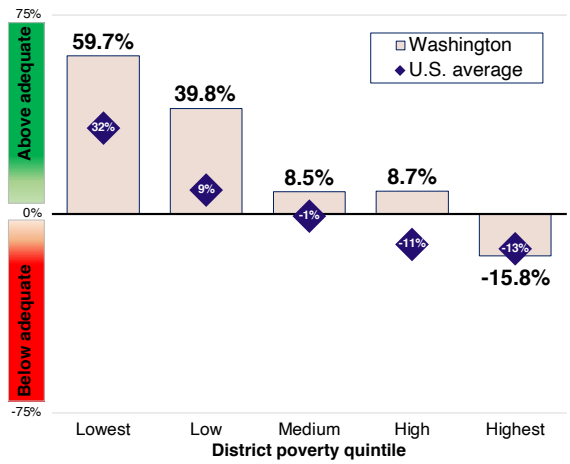
- Statewide, spending is below estimated adequate levels in 70 of the 295 WA districts with available data.
- Closing all these negative gaps would require $436.8 million in new funding.

EQUAL OPPORTUNITY

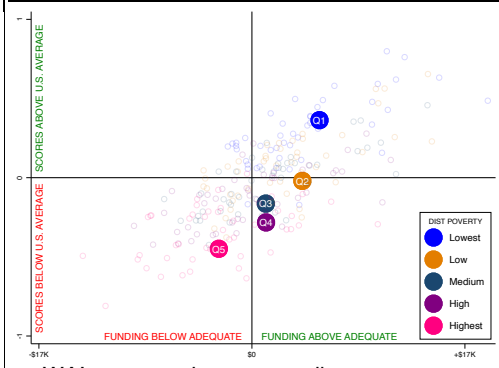
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in WA is severely unequal.
- Spending in WA's highest-poverty districts is 15.8 percent ($2,638 PP) below the estimated adequate level, compared with 59.7 percent ($5,396 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -75.5 percentage points is ranked #30 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- WA's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.81 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
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- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). WA's division is Pacific. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

WEST VIRGINIA

Summary: This 2019-20 profile of West Virginia's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), West Virginia scores 80 out of 100, which ranks 3rd out of the 48 states with possible ratings.

CONTEXTUAL STATS	WV	U.S.
Child (5-17yo) poverty rate (%)	19.0	14.9
Public school coverage (%)	82.2	83.1
Percent revenue from state sources	55.0	47.0
Total enrollment (U.S. rank)	263,486 (39)	

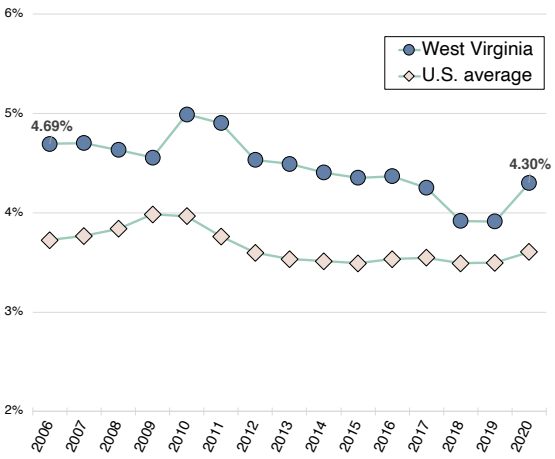
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

West Virginia effort	4.30 %
U.S. average	3.61 %

- WV is a high effort state.
- In FY 2020, WV spent 4.30 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.69 percentage points higher than the unweighted national average of 3.61 percent.
- WV's effort level ranks #7 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- WV's 2020 effort level is 0.40 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #41 in the nation.

Net change by period (% pts.)		
Period	**WV**	**U.S.**
K-12 recession (2006-12)	-0.16	-0.13
Post-recession (2012-20)	-0.23	0.01
Full period (2006-20)	-0.40	-0.12

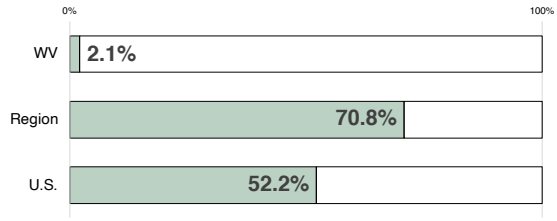
- WV's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $2.07 billion (13.3 percent) higher.
- WV is a relatively low capacity state, with a GSP per capita ranked #50 in the nation.

STATEWIDE ADEQUACY

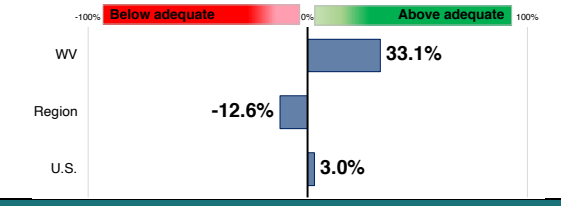
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in WV is relatively moderate.
- By the modest standard of U.S. average scores, 2.1 percent of WV students attend inadequately funded districts, which ranks #3 in the nation (out of 49).
- The typical WV student's district spends 33.1 percent above adequate levels, which ranks #12 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest WV districts

Percent above/below adequate spending, ten largest WV school districts	
KANAWHA CNTY SCHLS	30.5
BERKELEY CNTY SCHLS	21.3
WOOD CNTY SCHLS	33.5
CABELL CNTY SCHLS	24.5
MONONGALIA CNTY SCHLS	81.5
RALEIGH CNTY SCHLS	20.1
HARRISON CNTY SCHLS	32.7
PUTNAM CNTY SCHLS	51.4
JEFFERSON CNTY SCHLS	75.9
MERCER CNTY SCHLS	10.1

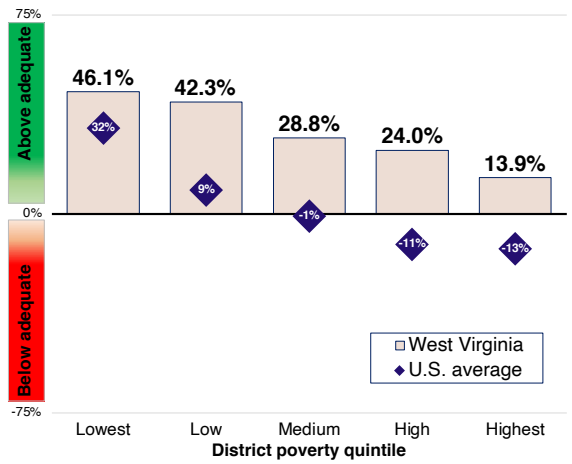
- Statewide, spending is below estimated adequate levels in 3 of the 55 WV districts with available data.
- Closing all these negative gaps would require $3.4 million in new funding.

EQUAL OPPORTUNITY

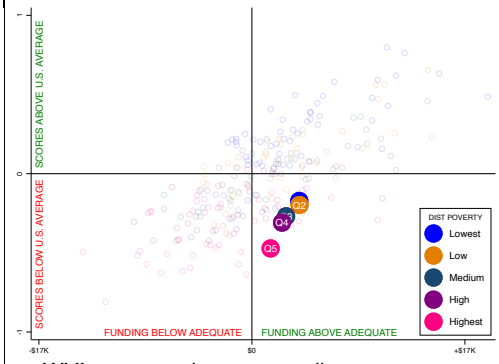
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in WV is highly unequal.
- Spending in WV's highest-poverty districts is 13.9 percent ($1,490 PP) above the estimated adequate level, compared with 46.1 percent ($3,781 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -32.3 percentage points is ranked #11 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- WV's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.30 s.d. below its lowest-poverty districts (blue dot).

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Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

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- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

WISCONSIN

Summary: This 2019-20 profile of Wisconsin's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Wisconsin scores 52 out of 100, which ranks 21st out of the 48 states with possible ratings.

CONTEXTUAL STATS	WI	U.S.
Child (5-17yo) poverty rate (%)	11.3	14.9
Public school coverage (%)	79.4	83.1
Percent revenue from state sources	54.9	47.0
Total enrollment (U.S. rank)	855,400 (22)	

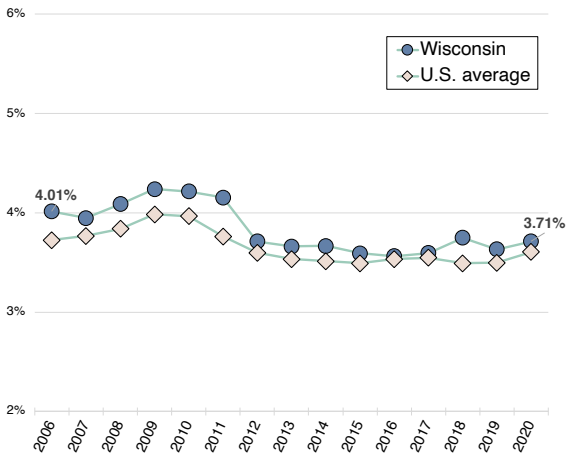
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Wisconsin effort	3.71 %
U.S. average	3.61 %

- WI is a medium effort state.
- In FY 2020, WI spent 3.71 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 0.10 percentage points higher than the unweighted national average of 3.61 percent.
- WI's effort level ranks #19 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- WI's 2020 effort level is 0.30 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #39 in the nation.

Net change by period (% pts.)		
Period	**WI**	**U.S.**
K-12 recession (2006-12)	-0.30	-0.13
Post-recession (2012-20)	0.00	0.01
Full period (2006-20)	-0.30	-0.12

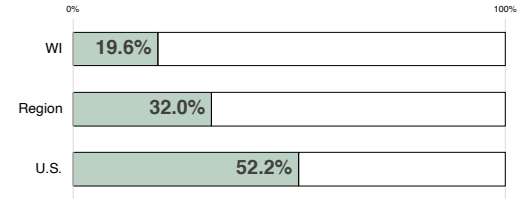
- WI's effort was lower than its 2006 level in 5 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $5.91 billion (9.9 percent) higher.
- WI is a relatively medium capacity state, with a GSP per capita ranked #29 in the nation.

STATEWIDE ADEQUACY

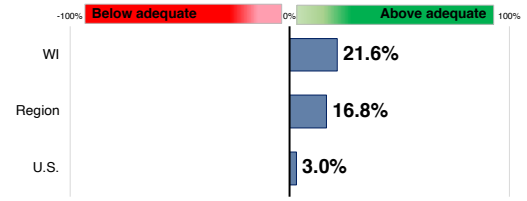
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in WI is relatively moderate.
- By the modest standard of U.S. average scores, 19.6 percent of WI students attend inadequately funded districts, which ranks #15 in the nation (out of 49).
- The typical WI student's district spends 21.6 percent above adequate levels, which ranks #18 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest WI districts

Percent above/below adequate spending, ten largest WI school districts	
MILWAUKEE SD	-37.6
MADISON METROPOLITAN SD	9.4
KENOSHA SD	11.1
GREEN BAY AREA PUBLIC SD	-0.9
RACINE UNIF SD	-8.2
APPLETON AREA SD	12.4
WAUKESHA SD	16.8
EAU CLAIRE AREA SD	53.9
SHEBOYGAN AREA SD	-4.4
JANESVILLE SD	31.6

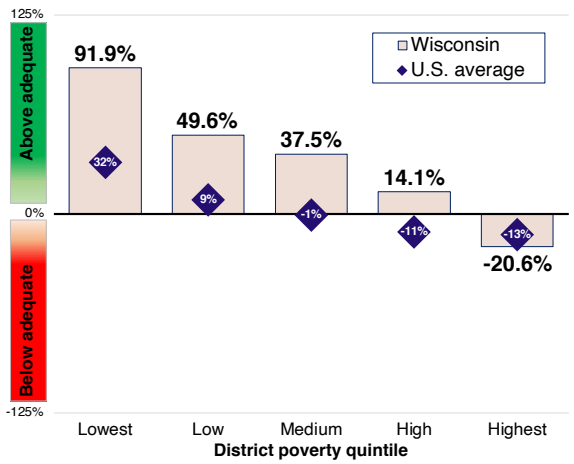
- Statewide, spending is below estimated adequate levels in 58 of the 420 WI districts with available data.
- Closing all these negative gaps would require $744.8 million in new funding.

EQUAL OPPORTUNITY

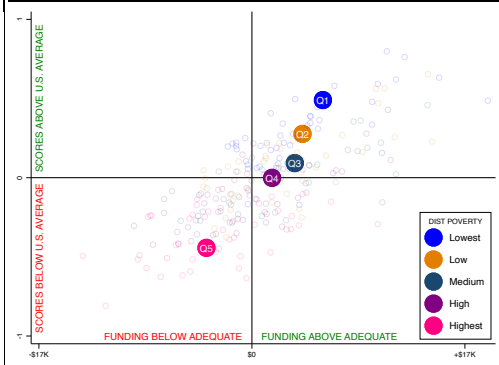
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in WI is severely unequal.
- Spending in WI's highest-poverty districts is 20.6 percent ($3,630 PP) below the estimated adequate level, compared with 91.9 percent ($5,666 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -112.5 percentage points is ranked #38 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- WI's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.93 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

NOTES ON DATA AND MEASURES

State School Finance Profiles 2019-20 (publ. 2022)

General

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- The years in the profile refer to the spring semester of the school year (e.g., 2020 is 2019-20).
- Estimates may differ slightly from previous profiles, as some measures are changed or improved each year, and all years are recalculated annually with updated data.
- Due to rounding, changes and differences published in this profile may vary slightly from users' manual calculations of the estimates on the front side.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in all states.
- **Overall state scores**: The overall scores reported at the top of the profile provide a very simple summary of states' combined "performance" on the three core indicators featured in the profiles. They do not represent comprehensive evaluations of states' school finance systems. Each state is scored entirely relative to other states (i.e., rather than based on some absolute standard of "good" or "bad"), and the selection/weighting of components entails subjective judgments on the part of the SFID research team.
  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). WI's division is East North Central. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

$$(\text{In})\text{SCHOOL} = b_0 + b_1\text{State}_i + b_2\text{LaborMarket}_{ij} + b_3\text{CWI}_{ij} + b_4\text{FINANCE}_{ij} + b_5\text{PopulationDensity}_{ij} + b_6\ \text{Enrollment}_{ij} + b_7\text{INDICATORS}_{ij} + b_8\text{Scale}_{ij} + b_9\text{Poverty}_{ij} + b_{10}\text{SchlType}_{ij} + b_{11}\text{DATABASE}_{ij} + e$$

STATE SCHOOL FINANCE PROFILE

2019-20 SCHOOL YEAR

WYOMING

Summary: This 2019-20 profile of Wyoming's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures (see back), Wyoming scores 93 out of 100, which ranks 1st out of the 48 states with possible ratings.

CONTEXTUAL STATS	WY	U.S.
Child (5-17yo) poverty rate (%)	9.1	14.9
Public school coverage (%)	89.3	83.1
Percent revenue from state sources	52.7	47.0
Total enrollment (U.S. rank)	94,616 (49)	

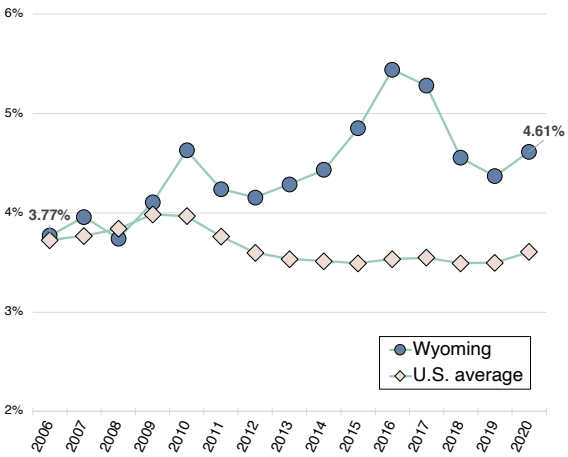
FISCAL EFFORT

Fiscal effort is a measure of how much states devote to their schools as a share of their economic capacity (i.e., ability to raise revenue). Effort is calculated by dividing direct state and local K-12 expenditures in each state by its gross state product (GSP).

Wyoming effort	4.61 %
U.S. average	3.61 %

- WY is a high effort state.
- In FY 2020, WY spent 4.61 percent of its economic capacity (GSP) on its K-12 public schools.
- This was 1.01 percentage points higher than the unweighted national average of 3.61 percent.
- WY's effort level ranks #2 in the nation (out of 50).

K-12 FISCAL EFFORT TREND, 2006-20



Effort trend and capacity

- WY's 2020 effort level is 0.84 pct. points higher than it was pre-recession (2006).
- This net change in effort between 2006 and 2020 is ranked #1 in the nation.

Net change by period (% pts.)		
Period	**WY**	**U.S.**
K-12 recession (2006-12)	0.38	-0.13
Post-recession (2012-20)	0.46	0.01
Full period (2006-20)	0.84	-0.12

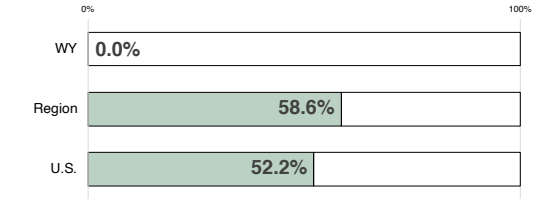
- WY's effort was lower than its 2006 level in 0 of 5 years between 2016-2020; had effort recovered to its 2006 level during these years, total 2016-20 spending would have been $0.00 billion (0.0 percent) higher.
- WY is a relatively high capacity state, with a GSP per capita ranked #16 in the nation.

STATEWIDE ADEQUACY

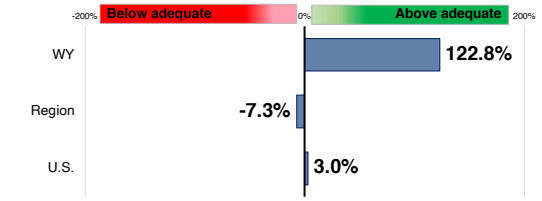
Statewide adequacy compares actual per-pupil (PP) spending in each state to district-level cost model estimates of the amount required to achieve the modest goal of U.S. average test scores. The graphs to the right indicate the percentage of students in districts where spending is below adequate and the funding gap (% above/below) in the typical student's district. The graphs include regional and national averages.

- Overall adequacy in WY is relatively high.
- By the modest standard of U.S. average scores, 0.0 percent of WY students attend inadequately funded districts, which ranks #1.5 in the nation (out of 49).
- The typical WY student's district spends 122.8 percent above adequate levels, which ranks #1 in the nation.

PCT. OF STUDENTS IN BELOW ADEQUATE DISTRICTS



ADEQUATE FUNDING GAP OF TYPICAL STUDENT



Adequacy in 10 largest WY districts

Percent above/below adequate spending, ten largest WY school districts	
LARAMIE CNTY SD #1	155.8
NATRONA CNTY SD #1	118.0
CAMPBELL CNTY SD #1	182.2
SWEETWATER CNTY SD #1	79.4
ALBANY CNTY SD #1	166.9
SHERIDAN CNTY SD #2	240.6
LINCOLN CNTY SD #2	161.3
TETON CNTY SD #1	206.3
UINTA CNTY SD #1	114.8
SWEETWATER CNTY SD #2	138.3

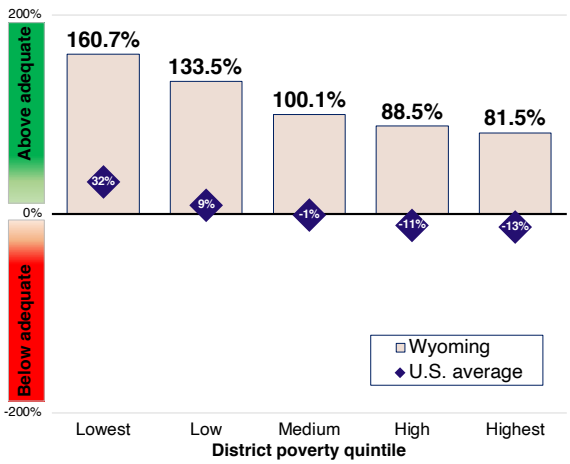
- Statewide, spending is below estimated adequate levels in 0 of the 48 WY districts with available data.
- Closing all these negative gaps would require $0.0 in new funding.

EQUAL OPPORTUNITY

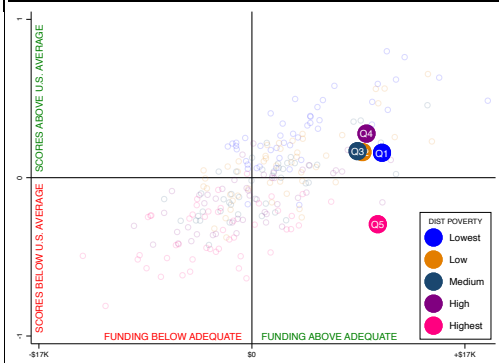
Equal opportunity is the comparison of adequacy between each state's higher- and lower-poverty districts. The graph to the right presents adequate funding gaps by district poverty quintile (the blue diamonds are U.S. averages). The difference (in pct. points) between the lowest- and highest-poverty groups is a state's "opportunity gap."

- Educational opportunity in WY is severely unequal.
- Spending in WY's highest-poverty districts is 81.5 percent ($10,046 PP) above the estimated adequate level, compared with 160.7 percent ($10,382 PP) above adequate in the state's most affluent districts.
- This opportunity gap of -79.3 percentage points is ranked #32 in the nation (out of 48).

ADEQUACY BY DISTRICT POVERTY



Adequacy gaps by outcome gaps



- WY's opportunity gap contributes to a student outcome gap: the state's highest-poverty districts (pink dot) score 0.45 s.d. below its lowest-poverty districts (blue dot).

$$(In)SCHOOL = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4FINANCE_{ij} + b_5PopulationDensity_{ij} + b_6 Enrollment_{ij} + b_7INDICATORS_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}DATABASE_{ij} + e$$

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  - The scores are calculated as a weighted average of z-scores (final averages expressed as percentile equivalents, with a score of 50 = z-score of 0) of the following measures (weights in parentheses): 1) percent of students in districts with above adequate funding (22.5%); 2) statewide (%) adequacy gap (22.5%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%). State rankings may reflect differences in unrounded scores.
  - D.C., Hawaii, and Vermont are not assigned scores, as one or more of the measures that constitute the scores cannot be calculated for these states.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2020) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for sources used for public school coverage estimates; 3) percent of total (FY 2020) revenue from state sources from the U.S. Census Bureau Annual Survey of School System Finances; 4) total state public elementary and secondary school enrollment (Fall 2019) from the *2020 Digest of Education Statistics*, published by the National Center for Education Statistics.

Fiscal effort

SID variables used in this section: *effort*; *year*

Fiscal effort indicates how much of a state's total economic capacity goes toward K-12 schools. It is calculated in the SFID by dividing direct state and local K-12 expenditures by either Gross State Product (GSP) or aggregate state personal income. Both of these are measures of a state's economic capacity. In this sense, effort measures how much each state contributes as a percentage of how much it *might* contribute. The former denominator (GSP) is used in these profiles, but the two are highly correlated, and the income-based effort indicator is available in the SID. Bear in mind that high-capacity states with larger economies, such as New York and California, can put forth lower effort than lower capacity states, such as Mississippi and Alabama, but still produce the same funding. We therefore use effort primarily as a means of differentiating between low/inadequate funding states that do and do not have the capacity to increase revenue.

- U.S. effort averages are unweighted and do not include Vermont in any year (effort not available in 2018-20 due to data irregularities), so as to keep a consistent set of states across all years. In the first bullet of the left panel, we characterize each state's effort level as low, medium, or high by sorting states into three roughly equal groups using terciles. Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies. Note also that 2006 is the first year in which we can calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- The table in the right panel summarizes the center-panel graph, with a focus on effort trends before and after the 2007-09 recession. The 2006-12 period (the "K-12 recession") is highlighted in the table (rather than, say, 2006-09) because the direct impact of the recession on K-12 funding in the typical state persisted for a few years after the "official recession" ended, and because federal stimulus funds ran out after 2011. 2012 is therefore an apt starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- In the third bullet of the right panel, below the table, we present a "thought experiment" of sorts, in which we calculate how much additional total state and local spending each state would have had between 2016 and 2020 had that state returned to its own pre-recession (2006) effort level by 2016 (with 2012-2016 representing a reasonable time period for full recovery). For each state/year combination in which 2016-20 effort exceeded the state's 2006 level, the hypothetical additional spending is zero (i.e., the hypothetical additional funding estimates do not include years in which 2016-20 funding would have been lower under states' 2006 effort levels).
- In order to provide a sense of states' capacity, we characterize each state's GSP per capita as small, medium, or large by sorting states into three roughly equal groups using terciles.

Statewide adequacy

SID variables used in this section: *necm_predcost_state*; *necm_ppcstot_state*; *necm_enroll_state*

Adequacy is typically defined as the extent to which the amount of funding for schools is sufficient for students to reach a minimum/acceptable level of educational outcomes. Our adequacy estimates compare each district's actual spending levels to estimates from cost models of how much that district *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). We express statewide adequacy in terms of either: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the adequacy gap (percentage difference between actual and estimated adequate spending) for the typical student in each state. All these estimates are from the National Education Cost Model (NECM), which is part of the SFID. The NECM calculates required spending based on the relationship between outcomes and cost factors such as regional wage variation, district size, and student characteristics. Note that this model and the data it uses are necessarily imperfect, and estimates should be viewed with appropriate caution. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section of the profile can be calculated using SID variables, whereas others (e.g., the district-by-district estimates in the right panel) require use of the SFID's District Cost Database (DCD); many but not all SID adequacy measures (all of which have variable name beginning with necm_) are aggregations of DCD estimates. The full DCD dataset (going back to 2009) is also publicly available at the SFID website (2020 estimates will be released in early 2023).

- Statewide adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and for Vermont between 2017 and 2020 (due to data irregularities). Estimates for D.C. apply to a single school district (District of Columbia Public Schools).
- In the first bullet of the left panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below-adequate districts and statewide [typical student's] gap of +50 percent or greater); moderate (greater than 20 percent below adequate and statewide gap under +50 percent OR fewer than 20 percent below adequate and statewide gap above +50 percent); high (greater than 50 percent in below adequate districts).
- The regional comparisons in the graphs in the middle panel are U.S. Census divisions (9 groups). WY's division is Mountain. Axis ranges for the bottom graph may vary by state.
- The table in the right panel presents adequacy estimates (percentage difference between actual and estimated adequate spending) for the 10 largest (enrollment) districts in this state.
- The first bullet directly below the table presents the number of districts with below adequate funding as well as the total number of districts in this state with valid estimates. The second bullet presents the total additional funding that would be required to close all these negative funding gaps ("ignoring" all districts in which actual spending exceeds adequate levels).

Equal opportunity

SID variables used in this section: *necm_predcost_q1—q5*; *necm_ppcstot_q1-q5*; *necm_enroll_q1-q5*; *necm_outcomegap_q1-q5*

Equal educational opportunity is achieved in a given state when none of that state's districts are substantially further above or below adequate spending levels than are other districts. In the SFID, we measure equal opportunity (EO) with the same NECM estimates used for statewide adequacy (see above), but in this case by comparing adequacy gaps (percentage difference between actual and estimated adequate spending) between the highest- and lowest-poverty districts in each state. That is, each state's "opportunity gap" is the difference (in percentage points) between these two groups (district poverty groups are defined in terms of quintiles—e.g., the 20 percent highest-poverty districts compared with the 20 percent lowest-poverty districts in each state). Note that EO is conceptually independent of statewide adequacy—e.g., a hypothetical state in which all districts are below adequate funding levels might still exhibit EO, so long as high- and low-poverty districts are inadequate by roughly the same proportions, whereas highly unequal opportunity might exist in a state in which funding is universally adequate, if high-poverty districts are more adequately funded than lower-poverty districts.

- EO estimates are not available for Vermont and Hawaii (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- In the first bullet of the left panel, we characterize EO in each state as follows: severely unequal (EO gap less than -75 points); highly unequal (EO gap between -30 and -75 points); moderately unequal (EO gap above -30 points).
- The center panel figure presents adequate funding gaps for all five quintiles in each state (although opportunity gaps as we define them for the purposes of this profile use only the highest- and lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (blue diamonds) estimates in the graph are average differences between actual and required spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (blue diamonds) represent an approximation of the national situation. Axis ranges for this graph may vary between states.
- The scatterplot in the right panel presents, by district poverty quintile, adequacy (difference between actual and required spending) expressed in dollars per pupil (horizontal axis) by average student testing outcomes expressed as the difference from the national average in standard deviations (vertical axis). The other markers (circles) in the plot are other states' district poverty groups (color coded in the same manner, but with more transparent markers to allow for clear viewing of this state's markers). The difference in student outcomes between the highest- (Q5) and lowest-poverty (Q1) estimate is presented in the first bullet, below the plot, and can be interpreted as a poverty-based student achievement gap in this state.

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$$(In)\mathbf{SCHOOL} = b_0 + b_1State_i + b_2LaborMarket_{ij} + b_3CWI_{ij} + b_4\mathbf{FINANCE}_{ij} + b_5PopulationDensity_{ij} + b_6\ Enrollment_{ij} + b_7\mathbf{INDICATORS}_{ij} + b_8Scale_{ij} + b_9Poverty_{ij} + b_{10}SchlType_{ij} + b_{11}\mathbf{DATABASE}_{ij} + e$$