**TENNESSEE**

**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).

<table>
<thead>
<tr>
<th>State</th>
<th>Effort 2019</th>
<th>Effort 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN</td>
<td>2.83 %</td>
<td>2.83 %</td>
</tr>
<tr>
<td>U.S.</td>
<td>3.61 %</td>
<td>3.61 %</td>
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</tbody>
</table>

- 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).

**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.

**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).

**STATE ADEQUACY**

Adequacy in 10 largest TN districts

<table>
<thead>
<tr>
<th>Percent above/below adequate spending, ten largest TN school districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHELBY CNTY SD</td>
</tr>
<tr>
<td>DAVIDSON CNTY</td>
</tr>
<tr>
<td>KNOX CNTY</td>
</tr>
<tr>
<td>RUTHERFORD CNTY</td>
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<tr>
<td>HAMILTON CNTY</td>
</tr>
<tr>
<td>WILLIAMSON CNTY</td>
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<tr>
<td>MONTGOMERY CNTY</td>
</tr>
<tr>
<td>SUMNER CNTY</td>
</tr>
<tr>
<td>WILSON CNTY</td>
</tr>
<tr>
<td>SEVIER CNTY</td>
</tr>
</tbody>
</table>

- 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.

**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).
**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, toolkits, and reports, are freely available to download at: <https://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 reflect 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, expenditure summaries from users’ manual calculations may not exactly match 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/weight 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) equal opportunity gap (Q5/Q1 difference in adequacy gap, in percentage points) (25%); and 5) personal income-based fiscal effort (15%).

**FISCAL EFFORT**

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. This means that for high-capacity states, it is more appropriate to look at personal income 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 calculate GSP-based fiscal effort, as quarterly GSP estimates are not available before that.
- **The table in the right panel organizes the same data by school district.** 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 2005 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 state’s 2006 level, the hypothetical additional funding is (in 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**

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 the use of the SFID Cost Data Base (CDB); 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 is calculated as a weighted average of all estimates in all isolates, 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); moderate (20 percent above 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 respective denominators are U.S. Census divisions (9 groups). TC’s division is East South Central. Axis ranges for the bottom graph may vary by state.
- Statewide adequacy is calculated as a weighted average of all estimates in all isolates, 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 right panel, we characterize statewide adequacy as follows: high (fewer than 20 percent of students in below adequate districts); moderate (20 percent above 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 classification in the graph is by NECM predcost: q1 (12 expenditures by either Gross State Product (GSP) or aggregate state personal income; 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 Digest of Education Statistics, published by the National Center for Education Statistics.

**EQUAL OPPORTUNITY**

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 the adequacy estimates (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 low-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 (-30 to -15 points); and slightly unequal (+15 to +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.

- **In the right panel, we present 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- 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.**