

PENNSYLVANIA



Summary: This 2018-19 profile of Pennsylvania's public K-12 school finance system focuses on three core indicators from the School Finance Indicators Database: *fiscal effort*, *adequacy*, and *progressivity*. On a weighted average of these three measures (see back), Pennsylvania scores 61 out of 100, which ranks 13th out of the 48 states with possible ratings.

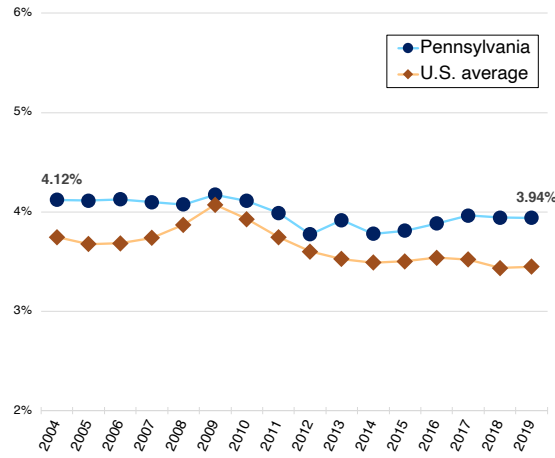
CONTEXTUAL STATS	PA	U.S.
Child (5-17yo) poverty rate (%)	15.9	15.8
Public school coverage (%)	85.1	87.6
Percent revenue from state sources	37.9	47.6
Total enrollment (U.S. rank)	1,719,900 (7)	

FISCAL EFFORT

Fiscal effort is direct state and local K-12 expenditures in each state as a percentage of its "economic capacity," which we measure here in terms of gross state product (GSP).

Pennsylvania effort	3.94 %
U.S. average	3.45 %

- In FY 2019, total direct state and local K-12 spending in PA was equivalent to 3.94% of the state's economic capacity (GSP).
- This was 0.49 percentage points **higher** than the unweighted national average of 3.45%.
- PA's effort level ranks #11 in the nation (out of 49).



Effort trend, 2004-2019

- There was an **increase** of 0.17 percentage points in PA's effort during the "K-12 recovery" period of 2012-2019.

Net change by period (% pts.)

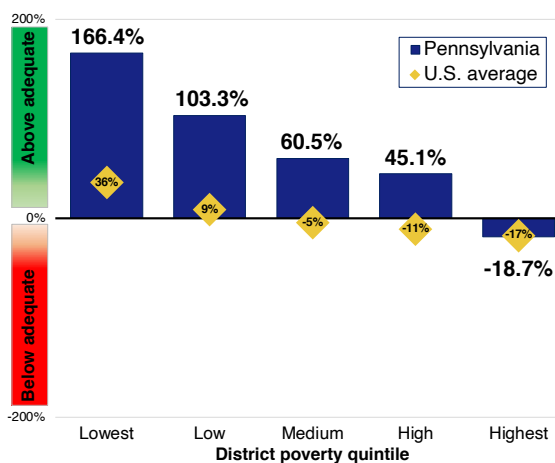
Period	PA	U.S.
2004-2007	-0.02	-0.01
2012-2019	0.17	-0.15
2004-2019	-0.18	-0.30

- Effort **decreased** during the three years before the recession, going from 4.12% in 2004 to 4.10% in 2007.
- PA's effort was 0.18 percentage points **lower** in 2019 than in 2004, compared with a U.S. average decrease of 0.30 points during this time period.

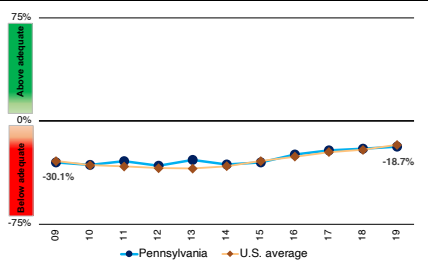
ADEQUACY

Adequacy compares actual per-pupil (PP) spending in each state to cost model estimates of the amount required to achieve U.S. average test scores. These comparisons (% difference) are presented for 2019, by district poverty quintile, in the center graph (the gold diamonds represent U.S. averages).

- Resources in PA's highest poverty districts are **below adequate**.
- Spending in these districts is \$3,333 PP **lower** than the adequacy target (\$17,849), a difference of -18.7%.
- This ranks #25 in the U.S. (out of 49).
- Across the entire state, 18.5% of PA students attend districts with spending below estimated adequate levels.



Adequacy trend (pov. Q5), 2009-19

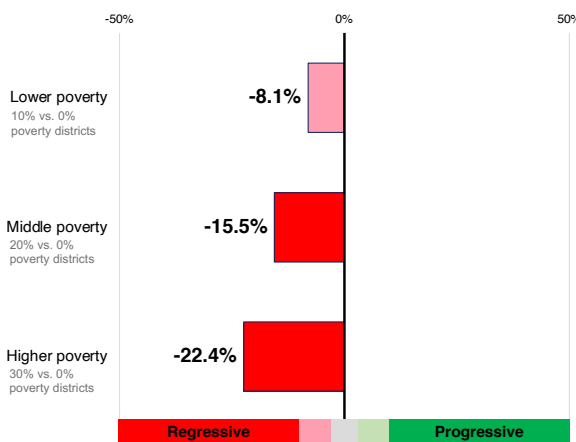


- Adequacy in PA's highest-poverty districts **improved** between 2009 (-30.1%) and 2019 (-18.7%).
- During this period, U.S. average adequacy in these districts (orange line) improved from -29.1% to -17.3%.

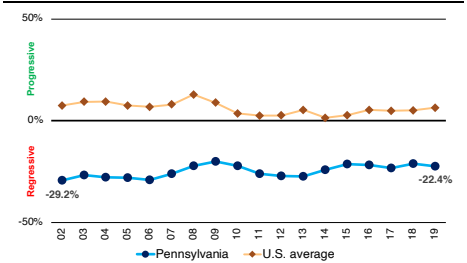
PROGRESSIVITY

Progressivity is the degree to which states provide greater resources to districts serving higher-need students. The center graph is the percentage difference in 2019 state and local revenue between: 1) lower- (10% Census poverty), middle- (20%), and higher-poverty (30%) districts and; 2) zero-poverty districts, controlling for labor costs, size, and population density.

- School funding in PA is **regressive**.
- Higher-poverty (30%) districts receive 22.4% **less** revenue than zero-poverty districts.
- This level of progressivity ranks #46 in the nation (out of 49).



Progressivity trend (30v0%), 2002-19



- PA's funding was **less regressive** in 2019 (-22.4%) vs. 2002 (-29.2%).
- Since the 2007-09 recession, funding in the typical state (orange line) is generally neither progressive nor regressive.

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 and the 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**, **adequacy**, and **progressivity**. The full SID dataset, along with accessible documentation of 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., 2019 is 2018-19).
- Estimates may differ slightly from previous profiles, as some measures are 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.
- The total number of states assigned rankings varies slightly by measure, as not all measures are available in D.C. and Hawaii, and we've excluded Vermont from our 2019 effort and adequacy calculations due to irregularities in that state's data.
- **Overall state scores:** The overall scores 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) adequacy gap (%) in highest-poverty district quintile (40%); 2) adequacy gap (%) in the high-poverty quintile (20%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) 30/0% revenue progressivity (10%).
 - D.C., Hawaii, and Vermont are not included, as one or more of the measures that constitute the scores cannot be calculated for these states.
 - State rankings may reflect differences in unrounded scores.
- **Non-SFID data sources** ("Contextual Stats" table): 1) Child (5-17 year old) poverty (2019) 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 2019) 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 2018) from the [2019 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 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.

- U.S. effort averages are unweighted and do not include D.C. (effort not calculated in any year) or Vermont (effort not available in 2018/2019 due to data irregularities), so as to keep a consistent set of states across all years.
- 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 2012-19 period (the "K-12 recovery period") is highlighted in the table (rather than, say, 2009-2019) 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 also because federal stimulus funds ran out after 2011. 2012 is therefore a good starting point for assessing states' reinvestment (or lack thereof). Trends, however, vary by state.
- Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies.

Adequacy

SID variables used in this section: *necm_predcost_q1—necm_predcost_q5; necm_ppcstot_q1—necm_ppcstot_q5; necm_enroll_q1—necm_enroll_q5; year*

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. The SFID's primary measure of adequacy compares, by poverty quintile, a state's actual spending levels to estimates from cost models of how much that state *would have to spend* in order to achieve national average test scores (i.e., "required" or "adequate" spending). The 2009-2019 estimates in this profile 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. For more information about the NECM, see the SID user's guide.

- Adequacy estimates are not available for Hawaii in all years (due to it being a geographically isolated, single-district state), and Vermont in 2018 and 2019 (due to data irregularities). Estimates for D.C. are only available for the highest-poverty quintile.
- The district poverty categories (e.g., lowest, low, medium, high, highest) are defined in terms of quintiles (i.e., 20 percentile increments in each state).
- In the first bullet of the left panel, states with Q5 ("highest-poverty") gaps lower than -20% are assigned the designation "severely inadequate." The remaining designations are "below adequate" (between 0 and -20%) and "above adequate" (greater than 0%).
- The estimate in the fourth bullet of the left panel is calculated using our District Cost Database (our state adequacy measures are aggregations of these district-level estimates). You can download or analyze this dataset at the SFID website; the 2019 estimates used for this profile will be released in early 2022.
- The U.S. averages represented by the gold diamonds in the center-panel figure are national average differences between actual and required spending (weighted by enrollment). Note, however, that poverty quintiles are defined state by state, and so the U.S. averages represent an approximation of the national situation. In addition to Hawaii and Vermont, D.C. is excluded from these averages to keep a consistent set of states across quintiles. Axis ranges for this graph may vary between states.
- The graph in the right panel presents the same estimates as the "highest-poverty" bar (state) and diamond (U.S. average) in the center graph, but between 2009-19.

Progressivity

SID variables used in this section: *predicted_slocrev0_ ; predicted_slocrev10_ ; predicted_slocrev20_ ; predicted_slocrev30_ ; year*

A progressive school finance system is one in which districts serving larger shares of disadvantaged students (all else equal) are allocated more resources than their counterparts serving lower proportions of these students. In this profile, progressivity is calculated by comparing adjusted state and local revenue between districts with (U.S. Census) child poverty rates of zero to those with higher poverty rates (i.e., 10, 20, and 30 percent). In addition to child poverty, revenue is also adjusted for labor market costs, population density, and district size, all of which affect the value of the education dollar.

- Progressivity estimates are not available for D.C. and Hawaii (single-district states)
- In the left panel (first bullet), the progressivity of each state's system is characterized based on the adjusted revenue gap between high (30%) and 0% poverty districts (this is also the estimate presented in the bottom bar of the center panel graph). The designations are assigned as follows: progressive (revenue in high poverty districts is at least 10% greater than that in zero poverty districts); moderately progressive (between +3% and +10%); neither progressive nor regressive (within three percentage points of zero); moderately regressive (between -3% and -10%); regressive (lower than -10%).
- The estimates in the center-panel graph are percentage differences in adjusted state and local revenue between low/medium/high (10/20/30%) poverty districts and zero-poverty districts. Note that the definitions of district poverty groups in this section, which are based on poverty rates (0, 10, 20, and 30%), vary from those in the "Adequacy" section, in which districts are sorted into quintiles by poverty. Axis ranges for this graph may vary between states.
- The graph in the right panel presents the trend in percentage difference between high (30%) and zero poverty districts, both for this state and on average across the U.S. (for each state in 2019, this is the same figure as the bottom bar in the center panel graph). The U.S. averages are unweighted (do not include D.C. or Hawaii) and can be interpreted as 30/0 progressivity in the typical state in a given year. Axis ranges for this graph may vary between states.