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

STATE SCHOOL FINANCE PROFILE

2021-22 SCHOOL YEAR

MONTANA

Summary: This 2021-22 profile of Montana's public K-12 school finance system focuses on three core indicators: fiscal effort, statewide adequacy, and equal opportunity. On a weighted average of these three measures, with performance assessed relative to that of other states (see back), **Montana scores 52 out of 100,** which **ranks 24th out of the 47 states** with possible ratings.

CONTEXTUAL STATS	MT	U.S.
Child (5-17yo) poverty rate (%)	12.9	15.5
Public school coverage (%)	85.1	85.1
Percent revenue from state sources	39.6	43.7
Total enrollment (U.S. rank)	150,195 (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).

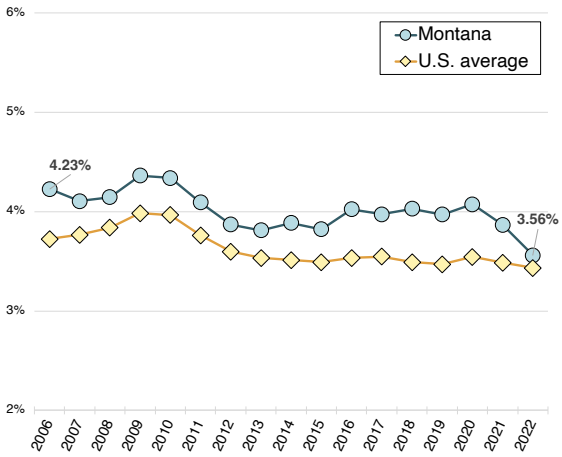
Rating **relative to other states** (high | medium | low):

MT is a medium effort state.

Fiscal effort summary	
Montana effort	3.56%
U.S. average effort	3.43%

- MT spends 3.56 percent of its economic capacity (gross state product) on its K-12 public schools.
- This effort level is 0.13 percentage points higher than the unweighted U.S. average of 3.43 percent (rank #**23** of 50).

K-12 FISCAL EFFORT TREND, 2006-22



Fiscal effort trend, 2006-22

- MT's 2022 effort level is 0.67 pct. points lower than it was pre-recession (2006).
- This net change in effort between 2006 and 2022 is ranked #43 in the nation.

Net change by period (% pts.)		
Period	**MT**	**U.S.**
K-12 recession (2006-12)	-0.36	-0.13
Post-recession (2012-22)	-0.31	-0.16
Full period (2006-22)	-0.67	-0.29

- MT's effort was lower than its 2006 level in 7 of 7 years between 2016-2022; had effort recovered to its 2006 level during these years, total 2016-22 spending would have been $1.16 billion (8.1 percent) higher.
- MT 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 estimates of the amount adequate to achieve the modest goal of U.S. average test scores. The graph to the right compares this state with other states in terms of the percentage of students in below adequate districts (spending is below adequate) and the percentage in *chronically* below adequate districts (the top 20% largest negative gaps nationally).

Rating **relative to other states** (high | medium | low):

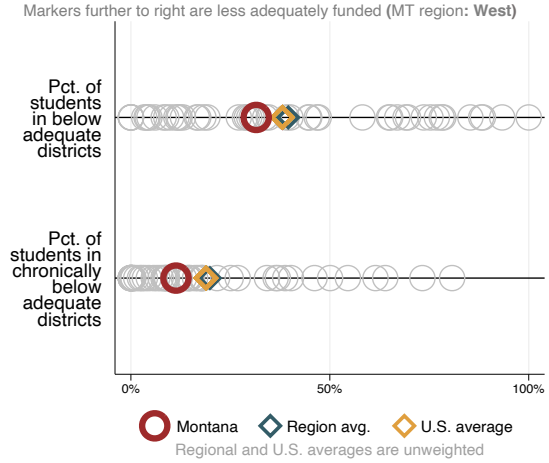
Statewide adequacy in MT is medium.

Percent underfunded (rank #1 = most adequate)	
Pct. of students in below adequate districts (rank of 48)	31.5% (**#24**)
Pct. of students in *chronically* below adequate districts (rank)	11.3% (**#22**)

- The typical MT student's district spends 7.0 pct. above adequate levels (rank #**23**).

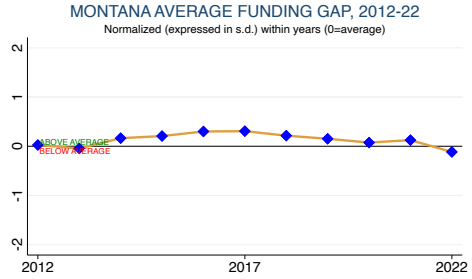
PERCENT BELOW ADEQUATE COMPARISONS

Markers further to right are less adequately funded (MT region: **West**)



Statewide adequacy trend, 2012-22

- Spending in MT was less adequate in 2022 compared with 2012, with a net change (in standard deviations) of -0.141 s.d.



- MT's adequacy gap was ranked #18 in 2012 (#1 = most adequate) and #23 in 2022.

EQUAL OPPORTUNITY

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

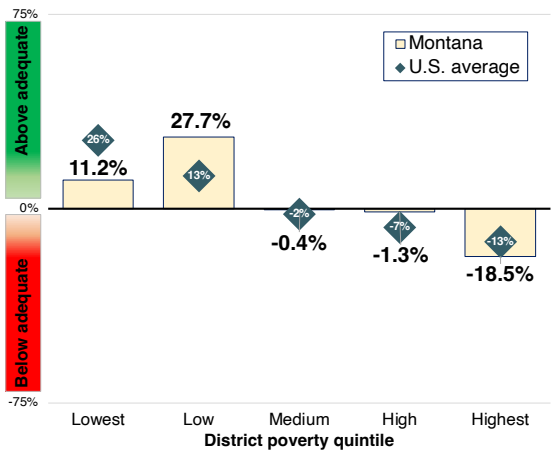
Rating **relative to other states** (high | medium | low):

Equal opportunity in MT is medium.

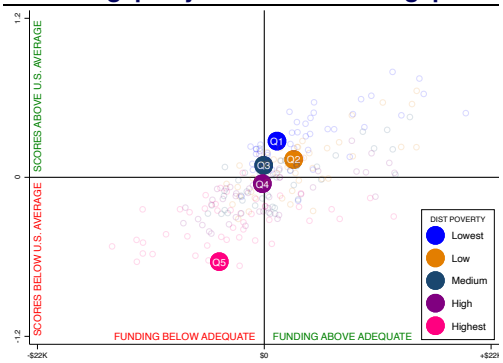
Average (enr-weighted) funding gaps by poverty (Red=below adequate | Green=above adequate)	
A. Low/lowest poverty districts	19.6 %
B. High/highest poverty districts	-8.9 %
C. Opportunity gap (B minus A)	**-28.6** pts

- MT's opportunity gap of -28.6 points is ranked #**16** out of 47 (#1=most equal).

ADEQUACY GAPS (%) BY DISTRICT POVERTY



EO gaps by student 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).

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

NOTES ON DATA AND MEASURES

State School Finance Profiles 2021-22 (publ. 2025)

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:

- **The measures in this profile are interpreted relatively**—that is, by making comparisons between states (rankings) and within states (e.g., by district poverty or over time).
- The years in the profile refer to the spring semester of the school year (e.g., 2022 is the 2021-22 school year).
- Estimates for prior years may differ 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 indicated), 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. Each state is scored entirely relative to other states, 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 (30%); 2) statewide (%) adequacy gap (30%); 3) GSP-based fiscal effort (15%); 4) personal income-based fiscal effort (15%); and 5) equal opportunity gap (Q4/5 vs. Q1/2 difference in adequacy gap, in pct. points) (10%). State rankings may reflect differences in unrounded scores.
  - Alaska, 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 (2022) from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program; 2) see SID documentation for school coverage estimates; 3) percent of total (FY 2022) 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 2021) from the *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 API). GSP and API 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. We present GSP-based effort in these profiles, but the two are highly correlated, and the API-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 2018-22 due to data irregularities), so as to keep a consistent set of states across years.
- We characterize each state's effort level as low, medium, or high by sorting states into three groups based on their effort levels (using terciles). Note that even seemingly small changes or differences in effort levels represent large revenue amounts, as the denominators are entire state economies.
- 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 2022 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 2016-22 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 2016-22 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 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 three ways: 1) the proportion of students in each state in districts with actual funding below estimated adequate levels; and 2) the proportion of students in *chronically* below adequate districts (see below); and 3) 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. Given the imprecision inherent in comparing both finance and testing data between districts in all states, as well as the fact that we set a modest common outcome goal (average test scores), our adequacy estimates are most appropriate when making comparisons within or between states. For more information about the NECM, see the SID user's guide. Some of the estimates presented in this section (e.g., percent in below adequate districts) require use of the SFID's District Cost Database (DCD); 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 (2022 estimates will be released in mid-2024).

- Statewide adequacy estimates are not available for Alaska (isolated, unique costs), Hawaii (isolated, single-district), and Vermont (missing/irregular data). Estimates for D.C. apply to a single school district (District of Columbia Public Schools). We also recommend that New York results be interpreted with particular caution (see SID users' guide for more information).
- We characterize each state's statewide adequacy as low, medium, or high by averaging within-year z-scores for percent above adequate and average funding gap and dividing states into three groups using these average z-scores (terciles).
- "Chronically below adequate" districts are those with funding gaps (percent difference between actual and adequate funding) among the 20 percent largest in the nation.
- The regional and U.S. averages in the middle graph (the teal and gold diamonds, respectively) are unweighted—i.e., they represent adequacy in the typical state, not the typical student.
- The trend graph in the right panel presents the average statewide funding gap (the percentage difference between actual and estimated adequate funding for the typical student) normalized within each year (converted to standard deviations) such that the average is zero. This allows for more appropriate comparisons over time. In the first bullet of this panel, states' net changes between 2012 and 2022 are characterized as "substantial" if the absolute change exceeds 0.3 s.d., "modest" if the absolute change is between 0.05 and 0.3 s.d., and "no more or less adequate" if the absolute change does not exceed 0.05 s.d. Axis ranges for this graph are expanded in a handful of states.

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 two highest- and the two lowest-poverty districts in each state (i.e., a weighted average of the "highest" and "high" poverty quintiles and a weighted average of the "lowest" and "low" poverty quintiles). Each state's "opportunity gap" is the difference (in percentage points) between these two groups. 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. Statewide adequacy and equal opportunity as we define them are independent concepts.

- EO estimates are not available for Alaska, Hawaii, and Vermont (adequacy estimates not available), and cannot be calculated for D.C. (single government-run district state).
- We characterize each state's degree of equal opportunity as low, medium, or high by sorting states into three groups based on their opportunity gaps (using terciles).
- 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 two highest- and the two lowest-poverty groups, this graph permits comparison of gaps between different combinations of groups). The state (bars) and U.S. (diamonds) estimates in the graph are average differences between actual and estimated adequate spending (weighted by enrollment), by district poverty quintile. Note, however, that poverty quintiles are defined state by state, and so the U.S. averages (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 student outcome data are for 2019, the latest available year in the Stanford Education Data Archive (some districts' values are imputed). The other markers (hollow 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. Note that this gap compares different groups than does our opportunity gap measure. Axis ranges for this graph are expanded in a handful of states.