

Money Matters — and the Evidence Keeps Growing

An update to *Does Money Matter in Education?* (3rd ed.): what rigorous causal research published since early 2025 adds, and why the case keeps getting stronger.

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Key takeaways

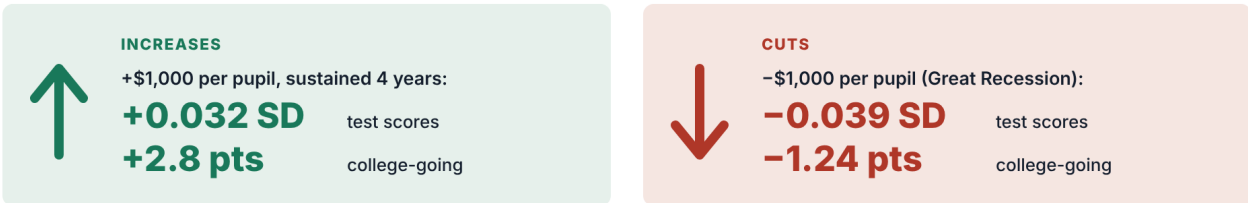
- 1 Money matters, whether it's going up or down.** Across 31 quasi-experimental studies, \$1,000 more per pupil sustained over four years raises test scores by about 0.03 standard deviations and college-going by about 2.8 percentage points. Cuts do the reverse. Studies from 2025 and 2026 confirm both directions: increases from state reforms, levies, bonds, federal aid and salary floors; losses from recession cuts and revenue drained by school choice expansion.
- 2 Money matters whatever its source or cause.** The same answer comes from court-ordered reforms, legislative formulas, voter-approved levies and bonds, federal pandemic aid, hold-harmless provisions and statewide salary mandates, across different states and decades.
- 3 Operating and capital spending both matter.** A 2025 study in the *Quarterly Journal of Economics*, covering about 17,000 bond issues, finds that \$1,000 of capital spending raises scores about 0.05 SD. HVAC and building-system upgrades produce the largest gains. New salary-floor studies show that pay raises keep teachers in the classroom.
- 4 The effects reach well beyond test scores.** New and newly published work links school funding to less adult crime, more civic engagement, higher state earnings per worker and higher GDP per capita, on top of the established effects on graduation, college going, earnings and intergenerational mobility.
- 5 Money matters most for children who need it most.** Gains are consistently concentrated in high-poverty, historically underfunded districts. The one recent null result is the exception that proves the rule: when federal aid replaced local taxes instead of adding to spending, outcomes did not change.

FIGURE 1 · THE EVIDENCE AT A GLANCE

MONEY MATTERS

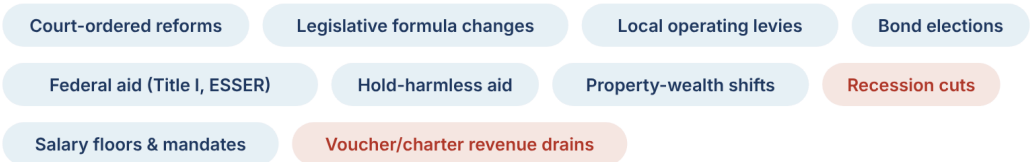
What three decades of rigorous research say about school funding and student outcomes

1 Money matters whether it's going up or down



Sources: Jackson & Mackevicius (2024) meta-analysis of 31 quasi-experimental studies; Jackson, Wigger & Xiong (2021).

2 ...whatever the source or cause of the change

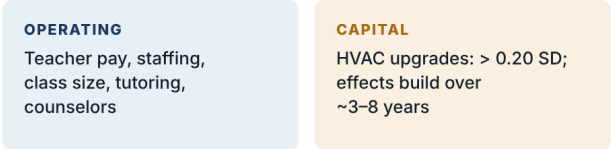


Different natural experiments, different states and decades — the same answer.

3 ...and it shows up across short- and long-term outcomes



4 Operating and capital both matter



5 It matters most for kids who need it most



Sources: Baker (2025), Does Money Matter in Education? 3rd ed.; Biasi, Lafortune & Schönholzer (2025); Rauscher & Shen (2022); see brief for full references.

Note. SD = standard deviation. "pts" = percentage points. Increase estimates are the pooled meta-analytic averages from Jackson & Mackevicius (2024). Cut estimates are from Jackson, Wigger & Xiong (2021). The "up to 20x" figure is from Rauscher & Shen (2022), comparing returns in high- vs. low-need counties.

Why revisit the question now?

The third edition of *Does Money Matter in Education?* (January 2025) concluded that the "money doesn't matter" argument had largely faded from serious research debate. The open questions were how much is enough and which uses of funds are most cost-effective, not whether money matters at all. In the 21 months since, the policy context has shifted sharply. Federal pandemic aid has expired. Enrollment declines and "fiscal cliffs" are forcing cuts. Universal voucher programs are diverting public revenue. Federal education funding and administration face new threats. Each of these is a large, real-world funding shock, and the research community has kept studying them.

This brief asks a simple question: **has rigorous evidence published since the third edition strengthened or weakened its conclusions?** We focused on studies with credible causal designs (regression discontinuity around close elections, difference-in-differences around policy changes, instrumental variables built on funding formulas) and on major journal publication of work previously available only as working papers. The answer is that the evidence has grown, broadened and kept pointing the same way.

What's new: rigorous studies, 2025–2026

STUDY	SETTING & DESIGN	KEY FINDING
Biasi, Lafortune & Schönholzer (2025), <i>QJE</i> UP	~17,000 bond elections, 28–29 states; close-election RD	\$1,000 of capital spending (over 5 years) raises scores ≈ 0.05 SD. HVAC projects > 0.20 SD; health/safety and infrastructure ≈ 0.15 SD. Gains ≈ 0.13 SD in low-SES districts, none detectable in high-SES districts.
Goldhaber & Falken (2025), CALDER WP 301 UP	~5,000 districts, 28 states; ESSER instrumented by Title I formula shares	Positive, modest math effects (≈ 0.007 SD per \$1,000 in a single year). ESSER explains $\approx 18\%$ of 2022–23 math recovery. Larger effects in high-poverty districts and for disadvantaged students.
Kane, Reardon et al. (2025–26), Education Recovery Scorecard UP	National district panel, 2022–2025	Each \$1,000 of pandemic aid is associated with about six additional days of learning. In the highest-poverty districts, the authors estimate there would have been almost no math recovery without the aid.
Zamarro, Camp, McGee, Wilson & Vernon (2026), CALDER WP 336 UP	Arkansas LEARNS Act raised the salary floor from \$36K to \$50K; triple-difference	Raises over \$8,000 increased same-district retention by 3.1 pts. Exits from public schools fell ≈ 0.2 pts per \$1,000. Rural/urban starting-pay gap fell from \$2,075 to \$258.
Shakya (2024), EdWorkingPaper 24-1104 UP	New Jersey "\$50K the First Day" campaign; staggered DiD	Proficiency up 1.2–1.7 pts in 4th-grade and high school math. Graduation up ≈ 0.9 pts. Gains attributed to teacher motivation and stronger entrants, not teacher migration.
Rauscher, Mellon, Loeb & Abbott (2024), EdWorkingPaper 24-1016 UP	Tax (9 states) and bond (8 states) elections; RD	Operating funds ≈ 0.10 SD per \$1,000, rising to ≈ 0.18 SD in low-spending, high-poverty districts. Mechanisms include teacher salaries and counselors. Suspensions and arrests fell.
Baron, Hyman & Vasquez (2026), <i>REStat</i> UP	Michigan Proposal A funding formula	School funding increases reduced adult criminal activity. Now published in a top general-interest journal.
Jackson (2026), NBER WP 35755 UP	Staggered state finance reforms; event study vs. calibrated model	Earnings per worker flat for ~ 15 years, then $\approx 4.7\%$ above counterfactual after 30 years. GDP per capita $> 5\%$ higher.
Chin & Chen (2026), <i>AERJ</i> DOWN	Indiana's 2011 voucher and charter expansion; DiD	Highly exposed districts lost \$433 per pupil (up to $\sim 6\%$ of spending), saw student-teacher ratios rise 0.5–0.9 and closed schools. Achievement turned significantly negative for several subgroups.
Clemens, Hoxie & Veuger (2026), NBER WP 35447 NO SPENDING CHANGE	ESSER eligibility threshold; difference-in-discontinuities (low-poverty districts)	Extra aid was passed through as lower local property taxes. Spending did not rise, and test scores did not change.

RD = regression discontinuity; DiD = difference-in-differences; SD = standard deviation; pts = percentage points. Rows for 2024 working papers are included because they appeared too late in 2024 to be reflected in most syntheses.

Three things the new evidence adds

1. Capital spending is no longer the open question it was

Earlier facilities research showed that residents value school construction, since narrowly passed bonds raise home values, but student outcome effects were mixed. The 2025 *QJE* study by Biasi, Lafortune and Schönholzer changes that. The scale is national, and spending is broken out by project type. Spending on the building systems that shape the daily learning environment (HVAC, air quality, roofs, plumbing, health and safety) raises test scores substantially. Spending on athletic facilities raises home prices but not scores. The test-score gains are concentrated almost entirely in districts serving disadvantaged students. The policy lesson is a "both/and" one: operating dollars pay for the people who teach, and capital dollars pay for the conditions they teach in.

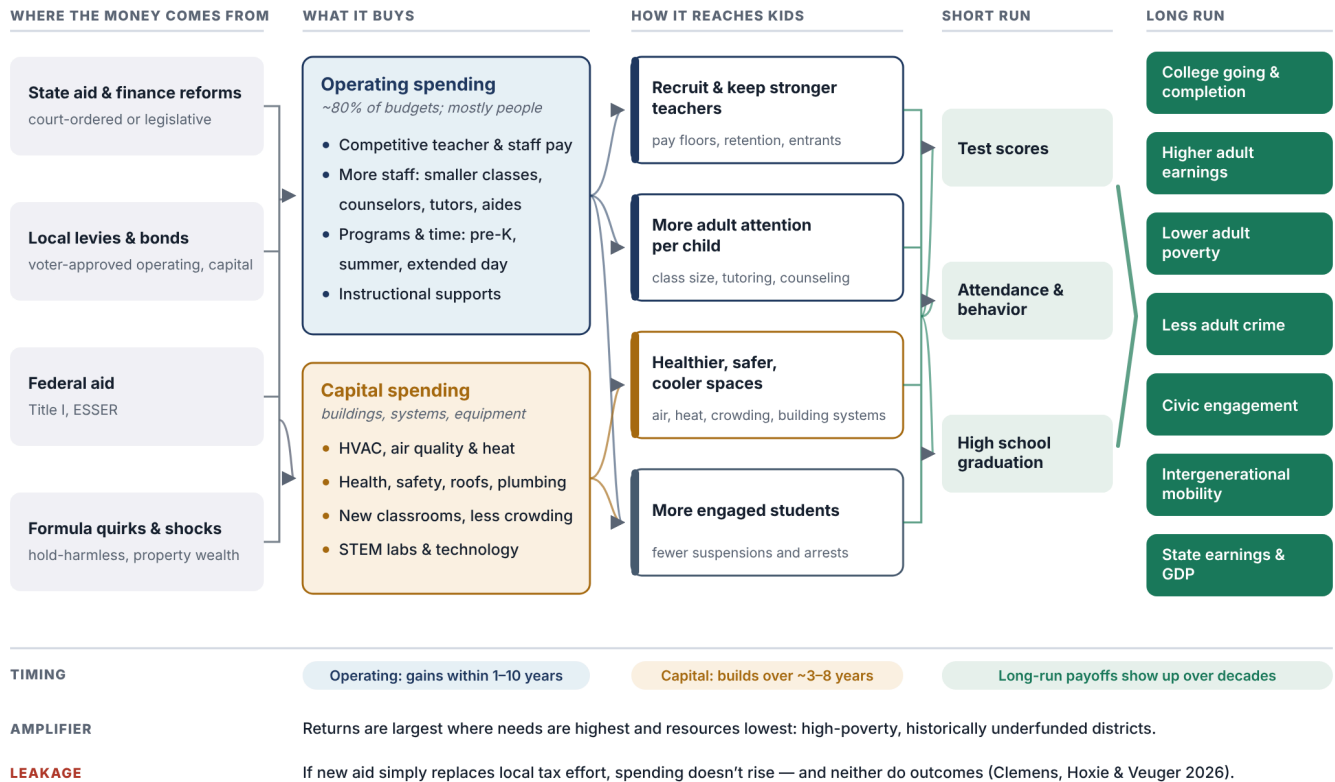
2. Teacher pay is a direct pathway, and states are running the experiments

Roughly 80 percent of school operating spending pays for people, so the most direct way money matters is through who teaches and how many adults work with each child. The third edition reported that reform-driven pay increases explained much of the test-score gains in states with stronger teacher bargaining (Brunner, Hyman & Ju 2020). Since then, statewide salary floors have offered cleaner tests. In Arkansas, the largest raises produced the largest retention gains. In New Jersey, a \$50K floor was followed by gains in proficiency and graduation. Rauscher and colleagues trace part of the effect of voter-approved operating levies to salaries and counselors.

3. Effects reach adult life, communities and state economies

The long-run evidence base now includes adult crime (Baron, Hyman & Vasquez 2026), volunteering and civic engagement (Asker, Brunner & Ross 2022), intergenerational mobility (Biasi 2023) and state-level output. Jackson's (2026) macroeconomic analysis shows the expected pattern. State earnings per worker barely move for 15 years, while treated children are still in school. Earnings then climb as those cohorts enter the workforce, reaching roughly 4.7 percent above the counterfactual after 30 years. Effects on that timescale will never appear in a year-over-year comparison of spending and test scores.

FIGURE 2 · HOW SCHOOL FUNDING REACHES STUDENTS



Reading the figure. Revenue from any source becomes operating spending (mainly people) or capital spending (buildings and systems). It reaches students through a few well-documented mechanisms, showing up first in school outcomes and then, over decades, in adult outcomes. Effects are largest where needs are highest, and only when aid actually adds to spending.

Reading the skeptics fairly

Not every recent analysis reads as an endorsement, and a credible brief has to engage with the others.

- **Cross-state correlations.** A September 2025 Brookings analysis (Reber & Goodman) finds that the cross-state relationship between spending and outcomes is about half the causal estimate and close to zero once state income or poverty is controlled. A January 2026 Texas A&M blog post notes that NAEP scores fell in most states between 2003 and 2022 even as real spending rose. The Brookings authors themselves say their analysis is not causal. These are the modern equivalent of the Coleman-era analyses that causal designs were built to move past: higher-spending states differ in needs, labor costs and much else, and a post-2013 score decline that coincides with smartphones and a pandemic says little about what an added dollar does in a given district.
- **Modest pandemic-aid effects.** ESSER effects per dollar are smaller than the meta-analytic average. That is what one would expect from one-time money, delivered quickly with weak targeting rules and spent in a crisis. The effects are still positive, concentrated in high-poverty districts and consistent in direction with everything else.
- **The null result.** Clemens, Hoxie and Veuger (2026) find no test-score effect of extra ESSER dollars near an eligibility threshold, because districts used the money to cut local taxes and did not spend more. No added spending, no added outcomes: the mechanism working exactly as expected.
- **Heterogeneity.** Handel and Hanushek (2024) argue that variation across studies makes the average effect hard to generalize. The variation is real. But almost all of it falls on the positive side of zero, and the most consistent pattern in it is that money matters more for children in poverty. That is an argument for progressive funding, not against funding.

FIGURE 3 · SIXTY YEARS OF EVIDENCE ON SCHOOL FUNDING AND STUDENT OUTCOMES



Note. Selected studies. Green markers indicate funding increases that improved outcomes; red markers indicate funding decreases that worsened them. Since about 2016, quasi-experimental studies covering dozens of states, many funding sources and both short- and long-run outcomes have pointed in the same direction.

What this means for policy

- **Treat cuts as harmful, not neutral.** The evidence that cuts hurt is as strong as the evidence that increases help. States facing fiscal cliffs, enrollment decline or voucher-driven revenue losses should expect measurable harm to students, concentrated in high-need districts, unless they protect funding.
- **Make funding systems progressive and sufficient.** Returns are largest in high-poverty, historically underfunded districts. Formulas should send more money, not equal money, to districts with greater needs, and should sustain it, since effects build over years.
- **Make sure new money adds to spending.** Pair state and federal aid with maintenance-of-effort requirements so that it supplements local support and is not passed through as tax relief.
- **Fund both people and buildings.** Competitive salaries, adequate staffing and modern building systems are complements. Prioritize HVAC, air quality and health and safety projects in disadvantaged districts, where the payoff is largest.
- **Judge investments over the right time horizon.** Operating gains can take several years to appear, capital gains three to eight, and economic returns decades. A one-year look at scores is the wrong test.

Bottom line. Every year brings new natural experiments from new states, new funding sources and new outcomes. Every year the answer is the same: when schools get more money and spend it, children do better, especially children in poverty, and when schools lose money, children do worse. The question for policymakers is no longer whether money matters. It is whether they will provide it.

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