

School Finance 101*Data and thoughts on public and private school funding in the U.S.*

POLICY BRIEF · NEW JERSEY

Misinform, Not Inform

Why the Roza/Edunomics spending graphs have no place in New Jersey's school funding debate

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2013

Edunomics' chosen starting year: after the cuts bottomed out, when scores peaked

115% → 98%

NJ spending relative to the cost of Massachusetts-average outcomes, 2013–2024

–0.17 vs. +0.39

NJ schools: raw spending vs. outcomes, and spending relative to cost vs. outcomes, 2024

The bottom line

Two graphics from Marguerite Roza's Edunomics Lab have been showing up in one state after another. Edunomics publishes a version of each for every state: one shows spending rising and test scores falling since 2013; the other scatters every district by spending and test scores and finds no pattern. Wherever they land, they send the same message: more money has bought nothing. It is only a matter of time before they show up in New Jersey's school funding debate. New Jersey policymakers should know what is wrong with them before they do.

Neither graph belongs in a serious policy conversation. Both are built so they cannot show anything else. They are far more likely to misinform legislators, judges and the public than to inform them, and anyone who presents them as evidence about New Jersey's school funding should be challenged directly.

- **The trend graph** starts in 2013, the year New Jersey's post-recession cuts had bottomed out and NAEP scores had peaked. That choice is intentionally deceitful. The graph then reports nominal dollars, never asks what outcomes cost, and stretches two unrelated scales onto one axis.
- **The scatterplot** dumps every district onto one chart by raw spending, with no adjustment for the students served. In New Jersey, the districts and schools that spend the most per pupil serve the most low-income students and face the highest costs. The chart invites readers to call them wasteful.
- **Done correctly, New Jersey's data say the opposite.** From 2013 to 2024, New Jersey's spending fell from 115% to 98% of the estimated cost of

Massachusetts-average outcomes. Across New Jersey schools in 2024, raw spending correlates with outcomes at -0.17 ; spending relative to cost correlates at $+0.39$.

None of this is new. I have documented the same moves in Roza's work since 2009 ([Baker, 2026a](#)). The logo has changed. The tricks have not.

What the Edunomics graphs show

Exhibit A: the trend graph. Edunomics' New Jersey page plots cumulative growth in per-pupil spending against cumulative change in NAEP scores, starting in 2013 ([Edunomics Lab, 2025](#)). Its caption: spending grew 44% to about \$26,300 per pupil, while 8th-grade math and 4th-grade reading scores fell.

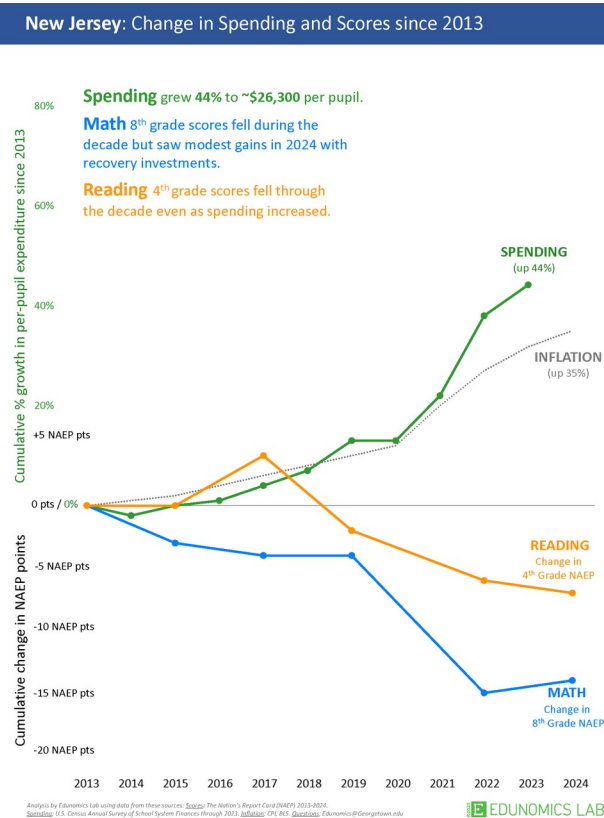


Exhibit A. Edunomics Lab, "New Jersey: Change in Spending and Scores since 2013." Reproduced for purposes of critique.

Exhibit B: the spending-versus-proficiency scatterplot. Edunomics publishes an interactive scatter for every state. New Jersey's plots each district's 2024–25 per-pupil expenditure against the share of students proficient on the 2024–25 NJSLA, with crosshairs at the state averages ([Edunomics Lab, 2026](#)). Its companion worksheet asks users to find schools that spend more but get lower outcomes than similar peers ([Edunomics Lab, 2022](#)).

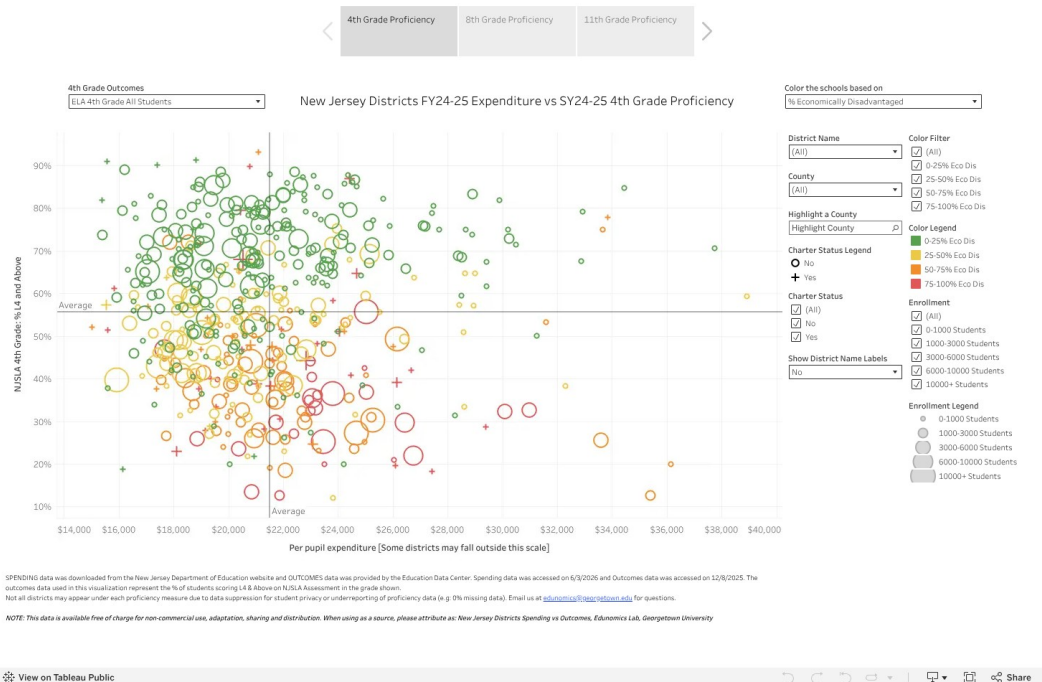


Exhibit B. Edunomics Lab, "New Jersey Districts FY24-25 Expenditure vs SY24-25 4th Grade Proficiency" (Tableau Public). Reproduced for purposes of critique, with attribution as Edunomics requests.

Look at the colors Edunomics chose. Its own legend marks the highest-poverty districts in red and orange, and they cluster below average proficiency, many of them to the right of average spending. The graph displays the very pattern that cost explains, then invites readers to read it as waste.

Problem 1: the trend graph is rigged by its starting year

Every design choice in the trend graph pushes in one direction.

- 1. The starting year.** The graph starts in 2013, the one year that all but guarantees spending up and scores down. Why that choice is deliberate is explained below.
- 2. Nominal dollars.** The headline 44% is nominal. The graph's own inflation line rises 35%, leaving real growth of about 7% over a decade, well under 1% a year. Spending tracks inflation almost exactly until 2020; the gap opens only in 2021–2023, the years of temporary federal pandemic relief.
- 3. The wrong deflator, and no cost.** The CPI measures consumer prices, not the price of teachers in New Jersey's labor market. Nothing in the graph accounts for who the students are or what their outcomes cost.
- 4. Mismatched years and scales.** Spending stops in 2023 while scores run through 2024, and percentage growth and NAEP points share one vertical axis at an arbitrary exchange rate. Rescale either axis and the "divergence" grows or shrinks at will.

5. **No comparison.** NAEP fell nationwide after 2019, overwhelmingly in the pandemic years. Plotting one state's spending next to a national decline says nothing about whether New Jersey's dollars mattered.

Why the choice of 2013 is intentionally deceitful

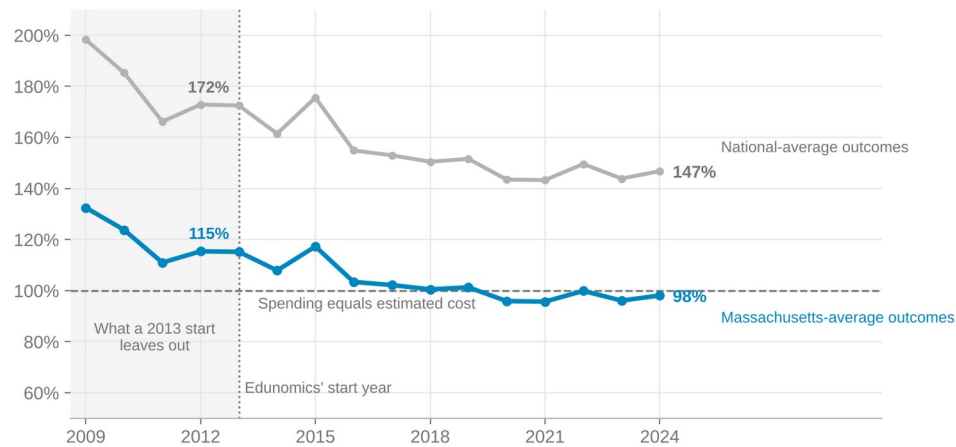
Calling a graph deceitful is a strong charge. Here is why it fits, and why 2013 is not an innocent default.

1. **2013 is where the scores topped out.** It is well understood among researchers who work with NAEP that 2013 is the point at which scores nationally leveled off and began to turn down. Start the clock there and almost any state will show flat or falling scores afterward, whatever it spent.
2. **2013 is where the spending cuts hit bottom.** The recession-era cuts to school funding had largely run their course by 2013, so per-pupil spending sits near the bottom of its trough. Start the clock there and almost any state will show spending climbing, even if it is only recovering lost ground and keeping pace with inflation.
3. **Put the two together and the conclusion is built in.** A starting year at the top of the scores and the bottom of spending manufactures the apparent divergence. Edunomics' tool produces this graph for every state, and it produces the same picture in nearly all of them. That is the tell: the conclusion comes from the starting year, not from anything about a particular state's schools.
4. **Earlier years were available and left out.** State NAEP results in reading and math go back to 2003 for every state, every two years. Starting in 2009 or 2011 would have shown what happened first in New Jersey: spending fell from 132% to 111% of the estimated cost of Massachusetts-average outcomes in just two years. A starting year that hides the cuts is a choice.
5. **They have been told, repeatedly and in public.** These problems have been laid out for Edunomics on social media, in blog posts and in a 2026 video critique ([Baker, 2026a](#); [Baker, 2026c](#)). The 2013 start has stayed. A misleading choice made once can be a mistake. Keeping it after being told exactly why it misleads is not.

Measured against cost, the trend runs the other way. New Jersey's spending fell from 115% of the estimated cost of Massachusetts-average outcomes in 2013 to 98% in 2024, and from 172% to 147% of the cost of national-average outcomes. The system also became less progressive: districts with 30% child poverty went from 18% more state and local revenue per pupil than districts with none to 9% more, and from 9% more teachers per pupil to 17% fewer ([SFID](#)).

Measured against cost, New Jersey's school spending fell after 2013

NJ district spending as % of the NECM estimated cost of each outcome level, enrollment-weighted, 2009–2024



Counter-exhibit 1. School Finance Indicators Database, NECM district data merged with SEDA outcomes, 449 New Jersey districts.

Problem 2: the scatterplot ignores what outcomes cost

Spending is what a school spends. Cost is the minimum it would take to reach a given outcome with the students it serves, in the labor market it hires from. Efficiency is the gap between the two. A graph with no cost estimate cannot say anything about efficiency, and this one doesn't try ([Baker, 2026b](#)).

The raw cloud is not neutral, either. New Jersey sends more money to higher-poverty schools, but nowhere near enough more. Those districts and schools land in the "spends more, scores lower" corner, and the chart invites its users to call them wasteful. It points policy at exactly the wrong schools: the ones furthest below what their students need.

Nationally, the same districts and the same test scores tell opposite stories depending on whether cost is measured: raw spending and outcomes correlate at -0.08 ; spending relative to the cost of national-average outcomes correlates at $+0.59$ ([Baker, 2026b](#)).

Same districts, same test scores, opposite conclusions (2022–2024)



8,000+ districts in 38 states, 2022–2024 averages. Cost: NECM predicted cost of national-average outcomes. r and fit lines enrollment-weighted; markers sized by enrollment.

Counter-exhibit 2. National Education Cost Model, 8,000+ districts in 38 states, 2022–2024 (Baker, 2026b).

New Jersey's own school-level data show the same reversal. Using the state-specific cost model, raw spending in 2024 correlates with outcomes at -0.17 . Spending relative to the cost of current statewide average outcomes correlates at $+0.39$.

Same New Jersey schools, same outcomes, opposite conclusions

2,310 schools, 2024. Left: the unadjusted cloud. Right: spending measured against what each school's outcomes cost.



Counter-exhibit 3. New Jersey state-specific school cost model (Baker, 2025), 2,310 schools, 2024. Blue: highest-poverty fifth of schools.

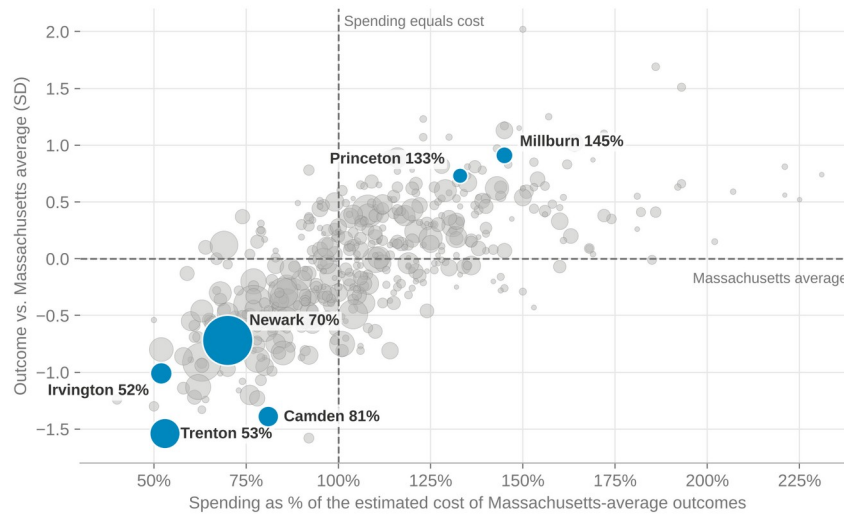
The numbers explain why. The highest-poverty fifth of New Jersey schools does spend the most per pupil, a median of about \$22,600 in 2024. But reaching current statewide average outcomes would cost those schools about \$28,000, so they spend 82% of cost. The lowest-poverty fifth spends about \$20,400 against a cost of \$17,700, or 114%. About a quarter of New Jersey schools combine above-median spending with below-median outcomes, the corner Edunomics tells users to scrutinize. Two-thirds of them spend less than their outcomes would cost, and their median low-income share is 55%, against 24% for all schools.

What New Jersey's evidence shows instead

Across all 449 New Jersey districts, spending relative to the cost of Massachusetts-average outcomes and outcomes move together (correlation 0.67). The districts furthest below cost are furthest below the Massachusetts average, and they are the state's highest-poverty districts.

Districts that spend less relative to cost post lower outcomes

449 New Jersey districts, 2024 · bubble size = enrollment · correlation 0.67



Counter-exhibit 4. School Finance Indicators Database, NECM district data merged with SEDA outcomes, 2024. Bubble size = enrollment.

- **Money buys more in New Jersey, not less.** Within states, the payoff to spending relative to cost is about 1.2 in New Jersey, Connecticut and Massachusetts, against 0.44 in Florida and 0.70 in Texas. Compared with districts in their own state, New Jersey's districts are about as efficient as Florida's (0.905 vs. 0.917) ([Baker, 2026b](#)).
- **The shortfall is concentrated where needs are greatest.** In 2024 the highest-poverty fifth of districts spent 72% of the cost of Massachusetts-average outcomes, down from 91% in 2009. The lowest-poverty fifth spent 122%.
- **Two independent models agree.** The NECM and the state-specific school model ([Baker, 2025](#)) correlate at 0.72 on spending relative to cost and 0.95 on outcomes across New Jersey districts, weighted by enrollment. Neither shows high-poverty districts swimming in excess resources.

Same tricks, new logo

These graphics are new editions of two very old devices that I have documented in Roza's work for seventeen years ([Baker, 2026a](#); [Baker, 2026c](#)):

- **The "long-term trend."** Start the clock in 2013, the one year that all but guarantees spending up and scores down. Skip the cost adjustment, stretch the axes, and announce that money doesn't matter. The baseline is not an accident. It is intentionally deceitful.
- **The "clouds of doubt."** Throw every district or school onto one chart by raw spending, with no adjustment for students, labor markets or scale, and call the resulting cloud a finding. Measure against cost and the cloud resolves into a clear positive relationship, in New Jersey and nationally.
- **Not a first offense.** In 2011 Roza circulated a "productivity curve" with no data behind it at all. The Edunomics graphs repeat the pattern: confident claims about what money buys, with no measure of what outcomes cost.

These graphs do not inform the SFRA debate. They misinform it. They should not be cited in testimony, in budget hearings, in litigation or in training for school board members. Anyone who puts them in front of New Jersey policymakers should be asked, publicly, why they chose 2013 and why they left out cost.

What to ask of any spending-and-outcomes graph

1. **Why this starting year?** Would an earlier or later baseline change the story?
2. **Is spending measured against what outcomes cost?** Student needs, regional labor costs and scale, not just the CPI.
3. **Real or nominal, and which dollars?** Does the figure include temporary federal relief or costs that never reach classrooms?
4. **Compared with what?** National trends, other states, or the outcomes the money was supposed to buy?
5. **Who lands in the "inefficient" corner?** If it is the highest-poverty schools, the graph is measuring need, not waste.

Sources and notes

My work

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About the author

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