

EQUITY IS THE KEY TO BETTER SCHOOL FUNDING

THE RELATIONSHIP BETWEEN government spending on K-12 public education and student outcomes has been an endless source of debate among those involved in education policy.

For example, the United States spends more on education than any other industrialized country, yet ranks at or below average in the latest international math, science, and reading scores, compared with the world's most-developed countries.

Some argue that there is no correlation between spending and outcomes. But new research from The Boston Consulting Group adds another dimension to the discussion. BCG has worked in numerous school systems and states and has analyzed issues of school funding, student performance, and equity for years.

In our ongoing work with Advance Illinois (a nonprofit education advocacy organization whose board includes BCG's Marin Gjaja), we recently looked at state funding of public education. Our analysis led us to investigate the relationship between the way each of the 50 states funds K-12 public education and each state's student outcomes on the National Assessment of Educational Progress (NAEP). We focused on fourth-grade reading scores and eighth-grade math scores from 2003 to 2011, and we also looked at outcomes for students

at different income levels. We controlled for regional variations in costs between states, as well as for the differences in the concentrations of poverty.

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We found that how much state governments spend per pupil and how they spend it does in fact have a significant correlation with achievement, particularly for the low-income students whose performance on average significantly lags behind that of students from more-advantaged backgrounds. We also discovered strong statistical evidence to support three findings about the relationship between state-level funding and student outcomes. Each of these insights can inform the debates about K-12 public education spending at the local, state, and federal levels.

The level of spending matters. Our analysis shows that increased spending per pupil has a positive impact on fourth-grade reading results, both for low-income students and



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their non-low-income peers. Our statistical modeling predicted that, all else remaining equal, a \$1,000-per-pupil funding increase is correlated with a 0.42-point increase in NAEP scores for low-income fourth graders.

In the current challenged fiscal environment, states and districts are sometimes reducing spending on education, hoping that a little belt-tightening will not affect student performance. Our research predicts that the dollars being reallocated to address other spending priorities at the state or local level are likely to have a negative impact on all schoolchildren and will hurt low-income students the most.

The source of spending matters. The proportion of public education spending provided by state governments varies widely across the United States. Significant funding also comes from the federal government, local property taxes, and additional fundraising among parents and the community, particularly in wealthier districts. We found that the greater the proportion of total public spending covered by a state, the better the outcomes on NAEP.

The effect was most pronounced for the eighth-grade math scores of low-income students. Our model showed, at 99 percent confidence, that an increase of 20 percentage points in the state share of spending correlated with a 1-point improvement in the eighth-grade math scores of low-income students.

In most states, local property taxes tend to stay in the local district and cannot be redirected outside that district toward those in greatest need as easily as state funding can.

States can help level the playing field by directing spending across a much wider and more diverse area than a local district. Those states paying a low share of total education spending are not using the power of the purse to most efficiently allocate funding to the highest needs.

The equity of spending matters.

By far, the most statistically robust finding in our analysis was the role of increased funding equity in student outcomes.

Equity should require that every student receives sufficient resources to have the same chance to succeed, rather than that every child gets the same level of funding. Unfortunately, many states are far from achieving even the same level of funding for students at different incomes. Many states are in fact quite inequitable in how they allocate education funding, paradoxically investing much more in the richest students than they do in the poorest students, as a result of a combination of complex state spending formulas and a heavy reliance on local funding.

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Giving kids in high-poverty areas an equal opportunity to succeed requires spending more money on those students. We have observed

that states with increased equity ratios (the ratio of per-student funding between high- and low-poverty districts) have had a positive impact on low-income students' performance in reading and math. In fact, we have found that increased funding equity benefits students at every income level.

Many districts have a wide range of student income backgrounds, so greater funding for low-income districts benefits both low- and high-income students.

Interestingly, our analysis suggests that an improvement in the equity of funding across a state can improve academic performance without any additional spending overall. And the effect is significant: For example, a 20-point improvement in the equity ratio, holding all other factors constant, is correlated with a nearly 2-point improvement in fourth-grade NAEP reading scores for low-income students, equal to a roughly 1 percent gain.

Improving funding equity across a state can improve academic performance without any additional spending.

By optimizing all three of these elements, our modeling predicts that states can increase NAEP scores for low-income students by 1 to 2 percent. That may not sound like a lot, but in some states such a gain would bring as many as a quarter of low-income kids who were formerly not proficient in reading to proficiency. Given the connection between proficiency and college readiness, the odds of low-income students' completing college

would consequently be higher. Hundreds of thousands of kids would have a better chance at academic and career success.

But to get the funding formula right for public education, policymakers need to ask themselves the following set of broad questions:

- Are all kids and all districts getting adequate funding in the aggregate?
- Is the state's proportion of spending great enough to help level the playing field?
- Is state funding equitable (not equal) across districts?

The United States can better live up to its reputation as the land of opportunity by creating more opportunities for all students, especially low-income students. State governments can create more opportunities by ensuring adequate levels of spending, an appropriate proportion of funding from the state, and greater spending equity. Changes in these areas can maximize the impact of resources spent on education, fostering better student outcomes and changing lives.

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