The Coronavirus Pandemic and K-12 Education Funding

Bruce D. Baker
Matthew Di Carlo

April 2020

ALBERT SHANKER INSTITUTE

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EXECUTIVE SUMMARY

The most terrible and lasting effects of the coronavirus pandemic will of course be measured in loss of life. But a parallel tragedy will also be unfolding in the coming months and years, this one affecting those at the beginning of their lives: an unprecedented school funding crisis that threatens to disadvantage a generation of children.

It currently is difficult to make any precise predictions about the magnitude of the economic recession caused by the coronavirus pandemic, except to say that it has already started and it is likely to be severe. The revenue that funds public K-12 schools—almost 90 percent of which comes from state and local sources—will see large decreases. There will be cuts.

Making things worse, school districts in many states have yet to recover from the last recession, the so-called Great Recession, which officially began in late 2007 and devastated state and local education budgets. That is, many jurisdictions will be facing a possibly unprecedented funding crisis while they are still digging out from the last one.

Students in the senior class that will graduate this spring started kindergarten in fall 2007. They have spent most of their K-12 careers in schools either facing budget cuts or struggling to recover from them—this means, for example, fewer teachers and support staff, larger classes, and a narrower array of academic and extracurricular programs. The children who begin formal schooling in fall 2020 may be facing the same fate.

States and districts, however, are not powerless; there is a path forward. It will not prevent all damage, and it will require forward-thinking policymaking, but it can mitigate the severity and duration of the coronavirus pandemic's impact on public school funding, as well as make states and districts better prepared for the next crisis.

In this report, using data from multiple sources, we describe the effects of previous recessions, particularly the Great Recession, on K-12 education finance, as well as the federal, state, and local policies and trends that mediated—for better or worse—the impact of these downturns on public school budgets. We then use these lessons to offer recommendations for short- and long-term responses to our current crisis.

The impact of the Great Recession on education funding

The Great Recession of 2007-09, and its aftermath, was a disaster for K-12 education funding in the U.S., and a persistent disaster at that. We show that:

- Average state and local K-12 education funding to districts, adjusted for labor costs, dropped precipitously starting in 2008, and bottomed out in 2011, about 6 percent lower than its pre-recession level.

- The effects were particularly severe in higher-poverty districts.
- Some states had recovered by 2017 (the last year for which we have data), but most had not.
- The revenue and spending declines had real effects in schools, including a drop in teacher staffing ratios.

How policies mediated the impact of the Great Recession on school budgets

The large declines in revenue stemming from the Great Recession meant that K-12 education cuts were a certainty. Yet several state and local policy trends, many of them predating the Great Recession by years, may have exacerbated the severity and duration of the recession's impact. We focus on four main factors, all of which inform our plan to address the current situation:

- *A permanent decline in "fiscal effort"*: The share of state economies devoted to K-12 education decreased between 2009 and 2012, and has not recovered.
- *Steady erosion of state and local revenue*: State and local revenue as a percentage of personal income, including tax revenue, has been declining for 25 years.
- *Calibration of tax revenue sources*: For years, many states had come to rely increasingly on local property tax revenue to offset cuts in state income and sales tax revenue. When the housing market crashed, property tax revenue declined for the first time, leaving states without their main means of shoring up education revenue.
- *Non-progressive school funding*: For the past 20 years, state and local public school funding has been neither progressive nor regressive (high- and low-poverty districts receive roughly the same funding), leaving high-poverty districts more vulnerable.

The primary federal response to the education budget crisis caused by the Great Recession was the 2009-10 State Fiscal Stabilization Fund (SFSF), which was part of the American Recovery and Reinvestment Act (often called the "stimulus package"). This federal assistance was successful insofar as it gave states' economies more time to recover, so that cumulative cuts were less severe. But two key aspects of the SFSF provide lessons going forward:

- The short duration of the aid (two years) was insufficient time for states' economies to recover, creating a fiscal "cliff," which necessitated drastic cuts being made all at once.
- Without federal guidance, and facing this fiscal cliff, many states simply cut state revenue to their districts in the same proportions as the depleted federal aid. This caused disproportionate harm to higher-poverty districts, which are more dependent on state revenue.

Recommendations for addressing the coronavirus recession's impact on school budgets

Our recommendations, which are greatly informed by experience in past recessions, particularly the Great Recession (and the federal assistance package), are divided into two general categories: short-term (federal assistance); and longer-term (states' responses).

Short-term recommendations (the federal response)

In March 2020, the federal government passed roughly $13 billion in K-12 education aid (part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act to help with the coronavirus crisis' fiscal impact. There is widespread agreement that additional federal K-12 education aid will be required. It is our position that this federal assistance must be distributed with a new approach. We recommend:

- **A large federal aid package.** Most basically, additional K-12 federal fiscal stabilization funds, over and above those provided by the CARES Act. These funds will need to be substantial.
- **Multiphase allocation of federal aid.** This new fund should be distributed in two parts or "phases," beginning with a substantial allocation in years one and two (Phase I) and followed by a three- to five-year phase down effort (Phase II). This approach may even include flexibility to increase amounts in Phase II if the extent of the fiscal damage exceeds projections. Multiphase allocation will avoid the "fiscal cliff" problem of the 2009 federal stimulus.
- **Equitable distribution of federal aid.** This federal assistance program should be distributed in a manner that is equalized for local capacity and targeted according to student needs.
- **Federal aid with "eligibility" requirements.** To be "eligible" to receive federal assistance, states must abide by certain requirements and constraints:
    - To the extent that states do impose cuts, they must be applied first (if not exclusively) to aid programs outside the equalized, needs-based formula. This will ensure a more equitable distribution of harm.
    - For any cuts applied to state aid programs, states should not be permitted to cut a greater amount of per-pupil revenue to higher-poverty districts than they do to lower-poverty districts.
    - States must not, during either Phase I or II, impose additional fiscal austerity constraints.

Longer-term recommendations (the state response)

Federal assistance will be crucial during the first few years of the coming recession, but this is also an opportunity to improve *state* school finance systems through this painful process. Education funding is primarily a state and local affair, and so truly sustainable solutions cannot take the form of federal aid with states continuing business as usual. Accordingly, our longer-term recommendations focus on what states should be doing once their economies begin to rebound from the current recession (although much of the planning can and should begin immediately). We must approach our next period of prosperity more wisely.

- **Increase or restore fiscal effort levels.** States should, through federal policy incentives if necessary, move to restore their fiscal effort levels to those that prevailed prior to the Great Recession. States with low effort levels, particularly those that also have smaller economies from which to draw revenue, should increase effort. In most states, restoring or increasing effort levels will require tax increases and/or broadening of tax bases.
- **Build up budget reserves.** If states have money in reserve, and the flexibility to spend those funds as needed, it can be an enormous help in avoiding school layoffs and program cuts. As with fiscal effort, building reserves requires revenue, which generally means increasing effort (states should *not* build up reserves by cutting services).
- **More progressive funding.** Funding formulas should allocate education revenue progressively, with higher-poverty districts receiving more funding than lower-poverty districts. More progressive funding will ensure that higher-poverty districts, which are hit harder during downturns, are better equipped to recover from the current recession (and, indeed, finish recovering from the last recession).
- **Balanced revenue "portfolios."** States should balance their state and local revenue configurations more strategically and less ideologically. Each of the three main sources of

state and local tax revenue (sales, income, property) entails trade-offs, but a balanced "portfolio" can serve to hedge against risk of massive budget shortfalls during bad economic times while shoring up revenue streams during good times.

We acknowledge that virtually every component of this plan will be politically controversial for state and federal lawmakers alike. It bears reiterating, however, that we are entering this current pandemic-fueled recession having never recovered from the Great Recession. We are on the verge of this happening again, perhaps even worse this time. We cannot avoid a budget crisis, but we can attenuate its negative effects and shorten its duration. The alternative is to once again suffer funding cuts that threaten the quality of public schooling and equal educational opportunity over a period of many years.

The severity of the current crisis should, as in the human immune system, act as a wake-up call to strengthen public school finance not only so as to recover, but also to make us strong enough to withstand future crises.

INTRODUCTION

The coronavirus pandemic may be a once-in-a-lifetime crisis. Its primary victims will obviously be the health and lives of people. As with any true crisis, though, the secondary impacts will also be serious—a cascade of tragedies unfolding simultaneously. And one of those collateral victims will be public school budgets.

Underlying this impending crisis are two blunt truths. The first is that the pandemic will cause a large recession. This recession will — indeed, has already started to[1] — erode state and local tax revenue, which in turn will inevitably result in cuts to school funding. The magnitude and duration of this fiscal crisis are still highly uncertain, but current signs, including huge numbers of jobless claims[2] and the shutdown of "nonessential" businesses in many states, suggest the downturn, and its impact on the state and local revenue that funds public schools, will be severe, at least in the short term. The Center on Budget and Policy Priorities estimates that state budget shortfalls in fiscal year 2021 will total $290 billion, substantially larger than in the worst year of the Great Recession.[3]

The second truth, put bluntly, is that money matters for schools. That is, equitable and adequate funding is a prerequisite condition for providing a high-quality elementary and secondary education system. In past decades, when school funding has increased, students have benefited from those increases.[4] Conversely, when school funding has been cut, students have suffered the consequences.[5]

The mechanisms by which those funding benefits are accrued or harms incurred are not particularly complicated. Schooling—public, private or charter—is a human resource-intensive process. It requires a sufficient number of high-quality teachers and other school staff to get the job done. And the quality of those entering the teaching profession, as well as whether they remain in the profession, depends substantially on the earnings teachers can expect. When more money is available, the money tends to be spent on increasing the number of staff, and compensating staff more competitively. And when money is not available, those are the same things to be cut. Moreover, when large cuts are imposed on state systems in times of economic downturn, those cuts tend to fall most harshly on local public school districts serving higher-poverty student populations.[6] The most vulnerable students often suffer the most.

Unfortunately, one need not look back too far in U.S. history to find a situation similar to that in which we now find ourselves. The so-called Great Recession, which we will characterize as beginning in late 2007 and having its greatest impact on public school spending from 2009 to 2011, devastated state and local budgets and, in turn, public school funding. Because state and local sources account for nearly 90 percent of all K-12 education revenue in the U.S., the devastation affected the vast majority of the school funding supply.

That a similar crisis occurred so recently is troubling insofar as it is imposing an additional—and very possibly more severe—period of fiscal hardship on school districts still digging out from the last one. But there is also a small silver lining here: The response to the Great Recession provides an opportunity to identify successful approaches and correct mistakes when addressing our current situation.

Regrettably, the school finance response to the fiscal crisis of the Great Recession offers as many (if not more) mistakes as it does successes. It channeled a bipartisan idea that American public schools should simply learn to do more with less—adapt to the "new normal,"[7] so to speak. The "new normal" was premised on the unfounded assertion that our schools might actually be better for it in the long run. The fiscal crisis, some thought, was an opportunity to compel states and districts to increase efficiency, and get more for less.

To be clear, efforts to maximize the return on investment of our public education dollars are laudable, and can be successful. And we acknowledge that there is disagreement in education policy circles about how money should be spent. These debates are necessary and should continue. Some policymakers, however, adopted the "new normal" as a rhetorical cover for their failure to reinvest in schools during and after the recovery.

Accordingly, in the aftermath of the recession, as economies rebounded, states' responses varied. Some did return to investing in their schools, whether by political upheaval of governors and legislatures, under court order, or both. Other states, in contrast, essentially doubled down, either by failing to make school budgets whole or, in some cases, actually continuing to cut taxes and education spending.

The consequences were troubling. By 2017, inflation-adjusted elementary and secondary education spending in 22 states had not fully rebounded to pre-recession levels (below, we present estimates adjusted for labor costs as well). More than five years of economic recovery had been partially squandered. In two states (Arizona and Florida), spending reductions over the decade (2007-17) exceeded 20 percent, and in five others, spending was between 10 and 20 percent less (Alabama, Georgia, North Carolina, Oklahoma and Nevada).[8]

The federal government did take significant short-term action to smooth the effects of the recession on state and school district budgets, passing the American Recovery and Reinvestment Act (ARRA), which included the State Fiscal Stabilization Fund.[9] The SFSF provided two years of federal aid (totaling $48.6 billion[10]) intended to offset revenue losses due to the recession, and shore up states' general school-aid formulas. But when that aid was gone (by 2011), many states imposed significant cuts to state education aid, and some also imposed additional fiscal austerity measures, including local and state tax limits constraining any possibility those gaps could be filled with other sources of revenue.[11]

This is a time of great economic uncertainty for public school systems across the nation (as well as, of course, a time of fear and uncertainty due to a global pandemic). We face an immediate economic recession of unknown length and severity, affecting schools and the students they serve for an unknown period of time, with school districts in many states less well positioned than they were for the last recession.

We are not, however, helpless against the coming storm. The lessons learned during the Great Recession—what went right as well as what went wrong—can help in constructing an infrastructure of support and damage mitigation within states and localities, and vital assistance at the intersection of federal policy initiatives and state school finance systems. There is a path forward.

In this report, after a brief primer on how state school finance systems work, we will discuss the past decade of school funding choices and where they leave us at this time. We will review what helped and what hurt during the Great Recession, including state responses, as well as the 2009 federal stimulus package. We conclude with a plan for our current situation, including: (1) short-term recommendations for an improved stimulus package this time around; and (2) longer-term recommendations for how we must approach schooling investment in the period of economic growth that will eventually follow.

SCHOOL FINANCE BASICS: A QUICK REVIEW

To understand what happened to school funding during and after the Great Recession (we will continue to use this common term to refer to the 2007-09 recession), and to employ this knowledge in crafting a response to the current crisis, we must very briefly explain how state school finance systems typically work, or at least how they *should* work.

In 2017, roughly one-fifth of state and local spending went toward elementary and secondary education (another 10 percent went toward higher education, which we will not be discussing in this report).[12] About half of local revenue (that from local sources) comes from property taxes, but property taxes are by far the largest single source (other sources include, for instance, local sales taxes and revenue from hospitals and airports). About two-thirds of state revenue (again, meaning revenue from its own sources) comes from income and/or sales taxes.[13]

State and local revenue provides approximately nine out of 10 K-12 education dollars, and sales, income and property taxes are the most important sources of this revenue.

In the vast majority of states, school funds are distributed via a statewide "formula." The details of these formulas are rather arcane and differ quite a bit from state to state, but they are designed, in theory, to accomplish two goals:

- Account for differences in the costs of achieving equal educational opportunity across schools, districts and the children they serve (e.g., some districts serve larger shares of disadvantaged students than others); and
- Account for differences in the ability of local public school districts to cover those costs (e.g., their ability to raise local revenue, mostly via property taxes).

Municipalities and school districts vary widely in terms of wealth—i.e., their capacity to raise their own revenues through property taxes (the second bullet, above). But they also differ a great deal in the student populations they serve (the first bullet). Often, though not exclusively, these two factors are linked. That is, districts having less local taxable wealth are also likely to have higher concentrations of child poverty in their schools. And child poverty is a dominant factor in determining the costs of providing children with equal opportunity to achieve common outcome goals.

In recent years, researchers, as well as several prominent organizations, have adopted a common understanding not only that money matters, but also that state school finance systems, in the interest of equal educational opportunity, should provide not merely the same, but substantially more per-pupil resources to districts serving greater shares of children in poverty.[14] Systems that do so are characterized as "progressive," whereas those that provide merely similar

resources to lower- and higher-poverty settings are considered "flat" funded, and those providing fewer resources in higher-poverty settings are "regressive."

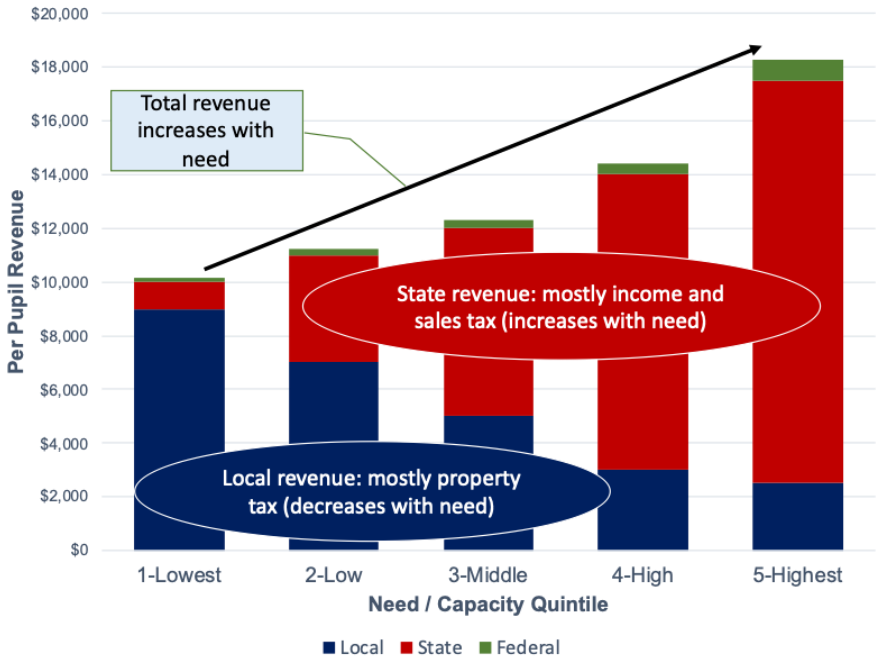
In keeping with the wide agreement regarding school finance and equal educational opportunity, a hypothetical progressive, "need-based" and "wealth-equalized" state school finance system might resemble the model in Figure 1. In this model, there are five different bars, ranging (left to right) from the lowest-need (i.e., lowest-poverty) districts to those with the highest need (i.e., highest-poverty) levels. The total length of each bar (measured on the vertical axis) represents per-pupil spending. Note how the bars slope upward from left to right, indicating that higher-need (i.e., higher-poverty) districts receive more total revenue than do lower-need districts—i.e., in our idealized model, total state and local funding is progressive.

The colors within each bar represent the source of funding: blue represents local tax revenue (with property taxes being the most important source); red represents state funding (mostly from state income and sales tax revenue); and the small sliver of green at the top represents federal funding. You may notice that the local share of the bar (in blue) is far larger in lower-poverty districts, whereas the red portion dominates in higher-poverty districts. This is because higher-poverty districts, in which property values are lower and residents are less able to afford high property tax rates, cannot raise as much local tax revenue (i.e., local tax revenue is regressive—wealthier districts receive more).

The hypothetical progressive formula in Figure 1 compensates for this disparity by allocating more *state* revenue to higher-poverty districts (i.e., state revenue is progressive), which need that revenue to meet the challenges of the student populations they serve, and to compensate for their lower local revenues.

FIGURE 1 **Hypothetical progressive school finance system**

Simulated per pupil revenue, by district poverty quintile and revenue source



This hypothetical model, however, is how state formulas are *supposed* to work. A number of political and economic realities compromise what state school finance systems actually look like in practice.

- In many states, total state aid (the red area) is simply insufficient to fully offset the differences in revenues raised locally, even if disparities in those local revenues are not particularly large. This leads to a funding distribution that is flat (the total revenue bars are roughly equal in length across poverty groups), or even regressive (the bars slope downward from left to right).
- In some cases, the lowest-poverty districts in a given state have so much additional local capacity that they are able to raise enormous amounts of local revenue (even while still levying lower local taxes than their higher-poverty counterpart districts). This too can result in flat or regressive funding distributions.
- Through a variety of political compromises in the adoption of state aid formulas, states often distribute significant sums of aid "outside the formula" to lower-poverty districts, aid that often exacerbates rather than mitigates disparities.[15]

These differences between how state funding formulas are supposed to work and how they actually work are why we see relatively few state school finance systems that achieve anything that looks like Figure 1, and why the distribution of state and local revenues in most states tends, at best, to be flat with respect to poverty and need across districts.[16] Figure 1 also shows how federal aid, which is targeted according to student need, makes total revenue more progressive (the size of green areas of the graph increases with need/poverty), but, again, federal aid constitutes only a small share of total K-12 revenue for U.S. public schools, and is often insufficient to compensate for state and locally generated discrepancies.

We will return to Figure 1 later, but the key points for now are that state revenue to schools (mostly sales and income taxes) is progressive in most states; local revenue (mostly property taxes) is regressive, and, for a variety of reasons — including deliberate policy choices — states vary widely in how well they configure these different sources to achieve overall progressivity of total education revenue.

THE (LAST) GREAT RECESSION AND PUBLIC SCHOOL RESOURCES

The Great Recession of 2007-09, and its aftermath, was a calamity for K-12 education funding in the U.S., and a persistent one at that. In this section, we will review what happened to school finance during and after the Great Recession, which will inform our understanding of the current crisis and how to address it. We rely mostly on data from the School Finance Indicators Database (SFID), a public collection of sophisticated finance measures that are specifically designed to be accessible to non-researchers (schoolfinancedata.org).

The primary advantage of this dataset is that the measures are adjusted for factors that affect the value of the education dollar. To reiterate, schooling is a human resource-intensive endeavor. The cost of providing schooling depends on a variety of factors, but the most important (besides

student poverty) is labor costs.[17] Put simply, districts spend most of their money on people (teachers, administrators, support staff, etc.).

As a result, simply comparing overall spending between two districts may be misleading. For example, a rural district in Mississippi may spend far less per pupil than New York City, but this is not a particularly useful comparison; it tells us next to nothing about whether spending is high or low in either location, even if both districts serve similar proportions of disadvantaged students. The cost of living is far higher in New York City, which means, among other things, that teachers must be paid more. Moreover, if labor costs rise more quickly in one district than in another, this is important for assessing trends. If, for instance, spending in a given district remains flat but labor costs increase, that district is actually receiving less value for its education dollar. We must therefore adjust, to the extent possible, for such differences between states and districts to make meaningful comparisons between them, and to examine trends over time.

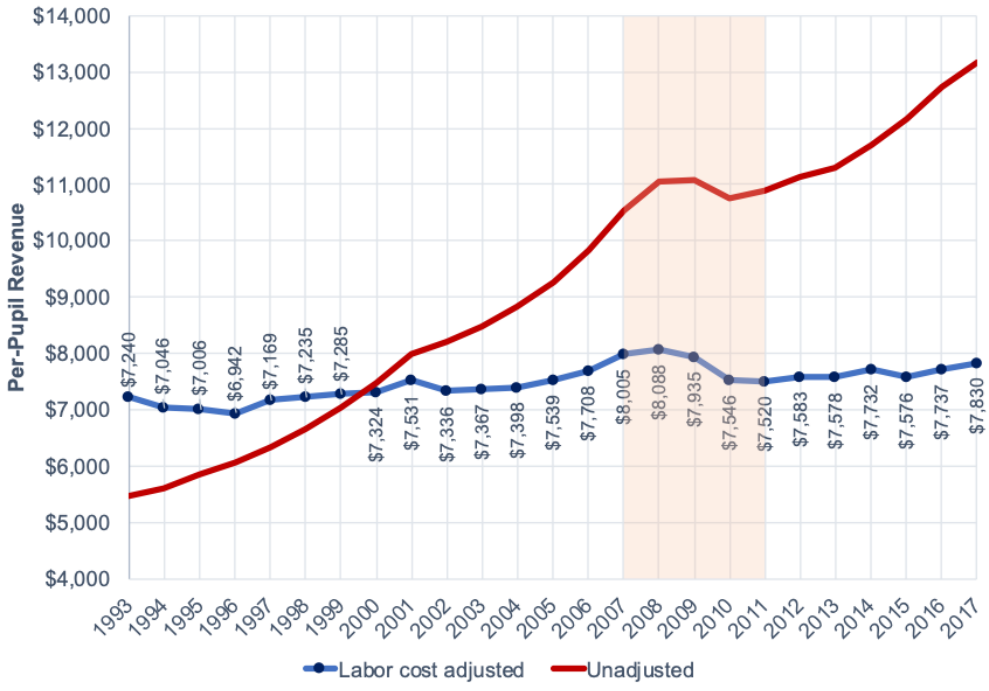
Effects on spending and revenue

Figure 2 presents the trend in state and local revenue per pupil over time, both without adjustments (the red line) and adjusted for labor costs (the blue line); we will, of course, focus on the adjusted figures. The shaded area of the plot (2007-11) is what, throughout this report, we will refer to as the "public school recession." Although the Great Recession, by the "official" definition, began in late 2007 and ended in mid-2009, the most "direct" impact on education funding extended into 2011 (the residual effects, of course, are still being felt). Note that the vertical y-axis does not begin at zero, and so changes may appear larger than they would with different axis scaling.

FIGURE 2

State and local education revenue over time

State and local per pupil K-12 education revenue, adjusted for labor costs, 1993-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text). Averages are weighted by enrollment.
Data source: *School Finance Indicators Database, District Indicators Database (schoolfinancedata.org)*

The adjusted trend exhibits a dip in state and local revenue starting in 2008-09, and bottoming out in 2011, about $500/per pupil lower than the pre-recession level. Over the next six years (2011-17), adjusted revenue did increase slowly, but ended up about $250/per pupil lower than it was in 2008. The economy improved, but adjusted school revenue, on average, did not recover fully.

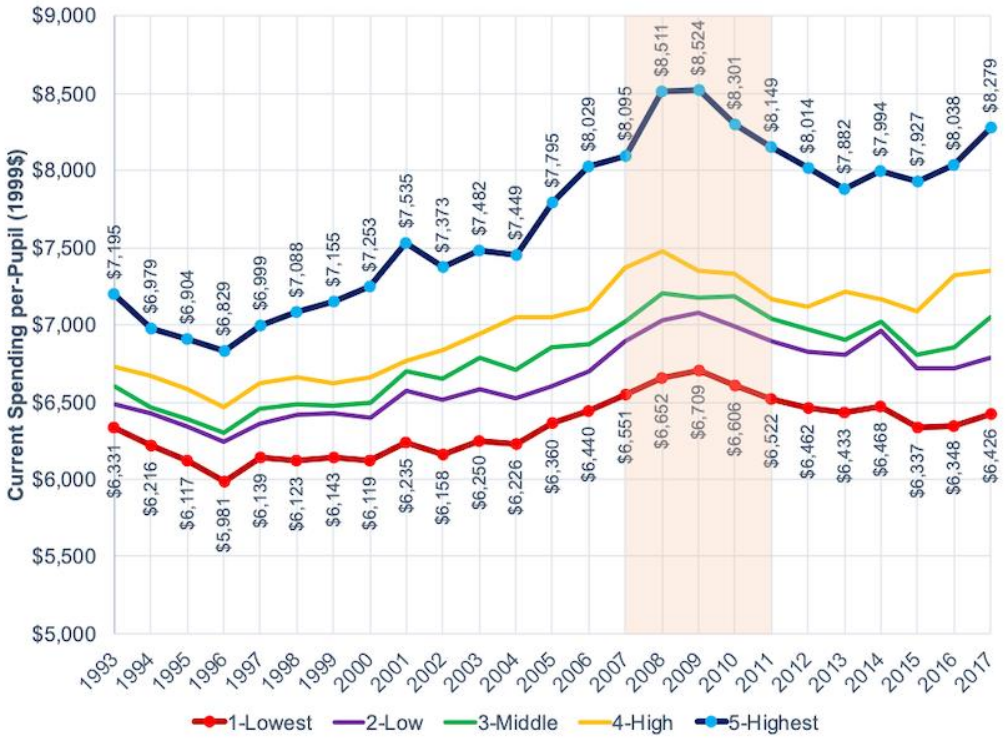
This damage was borne disproportionately by higher-poverty districts. In Figure 3, we present current spending per pupil (which includes spending of federal source funds) for districts by poverty quintile (the 20 percent lowest-poverty districts in red, and the 20 percent highest-poverty districts in blue).[18] This figure spans the same period as in Figure 2, again adjusted for labor costs. Once again, the vertical y-axis does not begin at zero.

Per-pupil spending generally increased in all five quintiles through the mid-1990s and early- to mid-2000s (excluding a period of decline following the post-9/11 recession), with particularly sharp increases for the highest-poverty quintile. These increases generally continued until 2008-09. This was in no small part because many states adopted significant school finance reforms,

FIGURE 3

Education spending by poverty over time

Current per-pupil K-12 education spending (1999 dollars), adjusted for labor costs, by district poverty quintile, 1993-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text). District poverty quintiles are defined state by state (with U.S. Census poverty data). Averages are weighted by enrollment.

Data source: *School Finance Indicators Database, District Indicators Database (schoolfinancedata.org)*

some under judicial pressure, to provide more equitable and adequate school funding. As a result, spending actually became more progressive, as you can see, for instance, in the widening gap between the blue line (the highest-poverty districts) and the red line (the lowest-poverty districts).

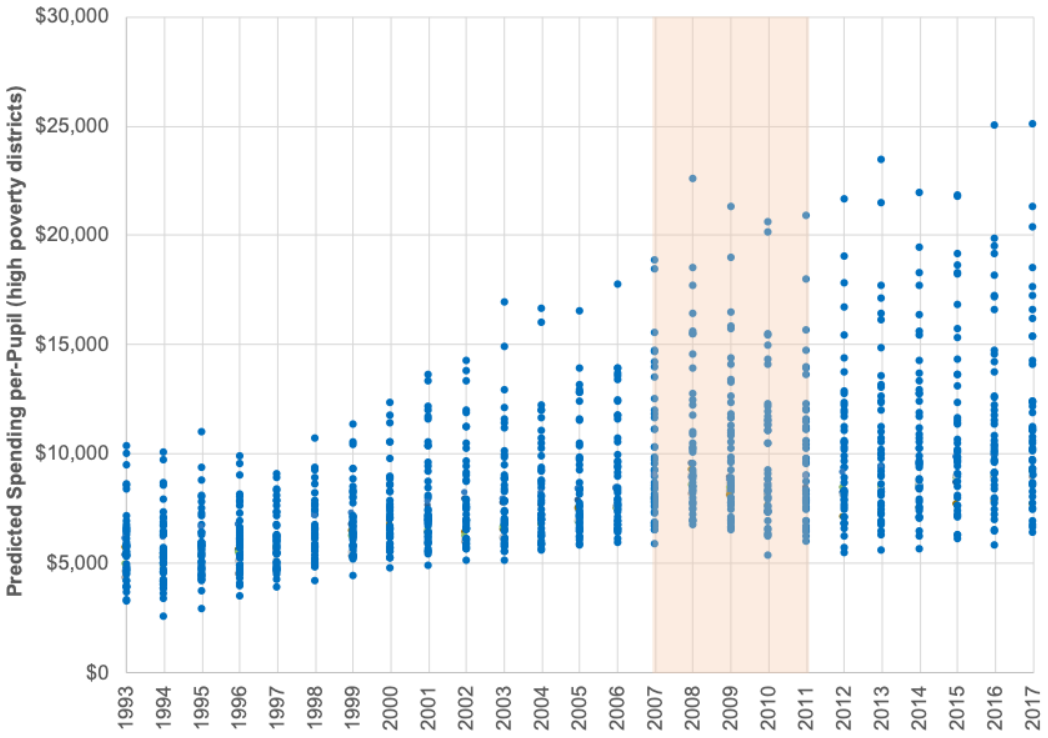
This all changed in 2008-09, when state and local budgets were hit by the Great Recession. Despite federal stimulus funds, districts in all five poverty groups suffered, but the steepest drops are clearly found for the highest-poverty quintile (the blue line). Spending went from roughly $8,500/per pupil in 2008-09 down to about $7,900 in 2013, a decrease of approximately 7 percent. During this same time period, the decrease in the lowest-poverty districts was around 4 percent.

The pain of the "public school recession" for school spending was rather universal, but it was particularly intense for the highest-poverty districts.

FIGURE 4

Spending in high-poverty districts over time by state

K-12 education spending per pupil in high (30 percent) poverty districts, adjusted for labor costs, population density and district size, 1993-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text). Each blue dot in the scatter plot represents an individual state. Estimates are predicted spending in each state at the 30 percent district poverty level (Census data), controlling for district size, population density and labor costs.

Data source: *School Finance Indicators Database, State Indicators Database (schoolfinancedata.org)*

As always, these national trends mask a great deal of state-by-state variation. Figure 4 presents spending in high-poverty districts between 1993 and 2017. These estimates are adjusted not only for labor costs, but also district size and population density, and they are predicted spending figures at the 30 percent U.S. Census poverty level (equivalent to roughly 80 percent eligibility for federal subsidized lunch, a common proxy for poverty).[19]

Each blue dot is a state, and so the graph looks rather messy, with dots superimposed over dots. But the key observation is in the spread of dots. Throughout the 1990s and early- to mid-2000s, there is certainly a lot of variation in spending, with dots spanning large ranges on the vertical y-axis, and a general upward trend in the mass of dots (with a brief downturn in the post-9/11 recession). After the Great Recession, however, the dispersion of dots becomes even wider, creating a sort of sideways funnel or tornado shape. In other words, after years of increases, the Great Recession hurt high-poverty districts in all states (you can see a general downward movement of the mass of dots during the shaded "public school recession" area), but there is also a divergence—a "spreading out" of the dots.

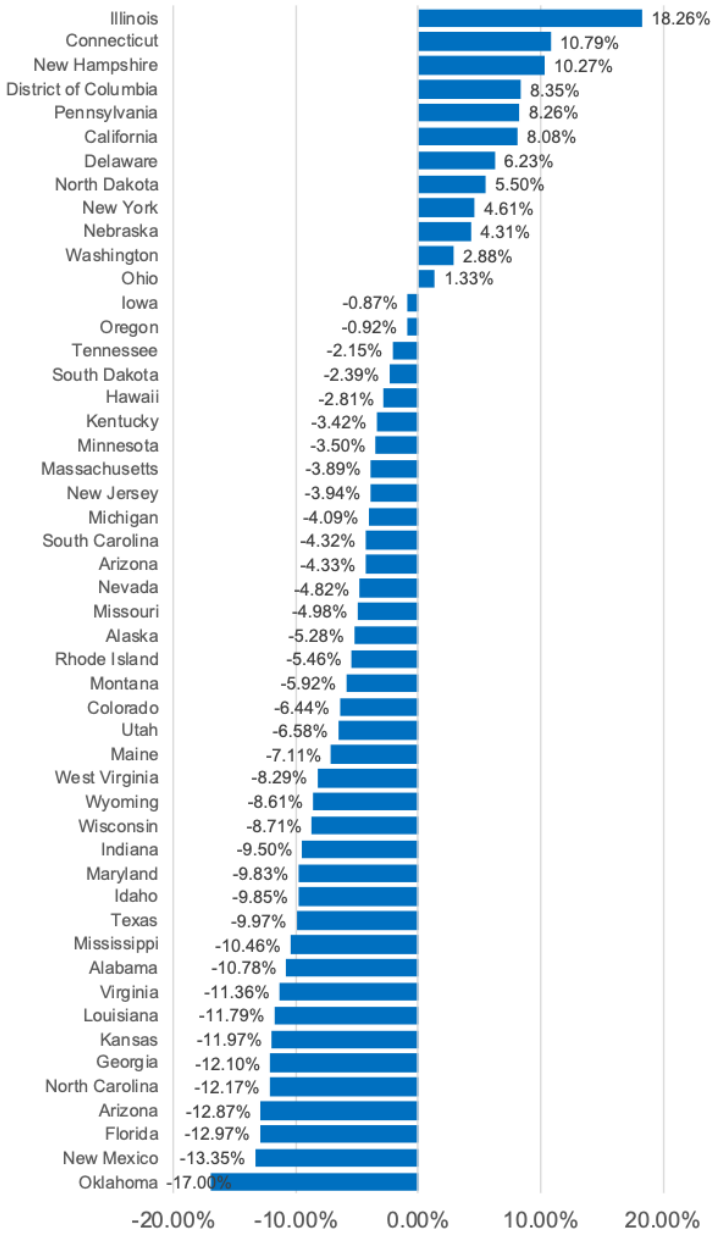
Some states, such as Connecticut, New York, Vermont and Wyoming (among the blue dots at the top of the sideways funnel), bounce back and resume climbing. Other states, in contrast, remained stagnant or continued to drop even during the recovery period, including Arizona, Idaho, Nevada and Oklahoma. In this sense, the Great Recession created two tracks for states: One leads to recovery for high-poverty districts, and the other does not.

This divergence is not evident solely in high-poverty districts. Figure 5 presents the net percent change in current spending per pupil across *all* districts (adjusted for labor costs), by state, between 2009 and 2017. Figure 5 shows spending decreases in the majority of states, with particularly large declines in several states, including Arizona, Florida, Georgia, New Mexico, North Carolina and Oklahoma. In contrast, only in 12 states do we find spending increases during this time period, though it's possible that these increases are concentrated in wealthier districts leveraging their local capacity to increase spending.[20]

FIGURE 5

Change in education spending by state, 2009-17

Net percentage change in current K-12 education spending, adjusted for labor costs, between 2009 and 2017, by state



Notes: State averages in each year are weighted by district-level enrollment. Vermont is excluded due to missing and erratic data in recent years.

Data source: *School Finance Indicators Database, District Indicators Database (schoolfinancedata.org)*

In summary, then, the Great Recession hit school budgets hard, but the impact was particularly harsh in higher-poverty districts. Moreover, while some states managed to recover from the damage, most did not, even a full decade after the recession began.

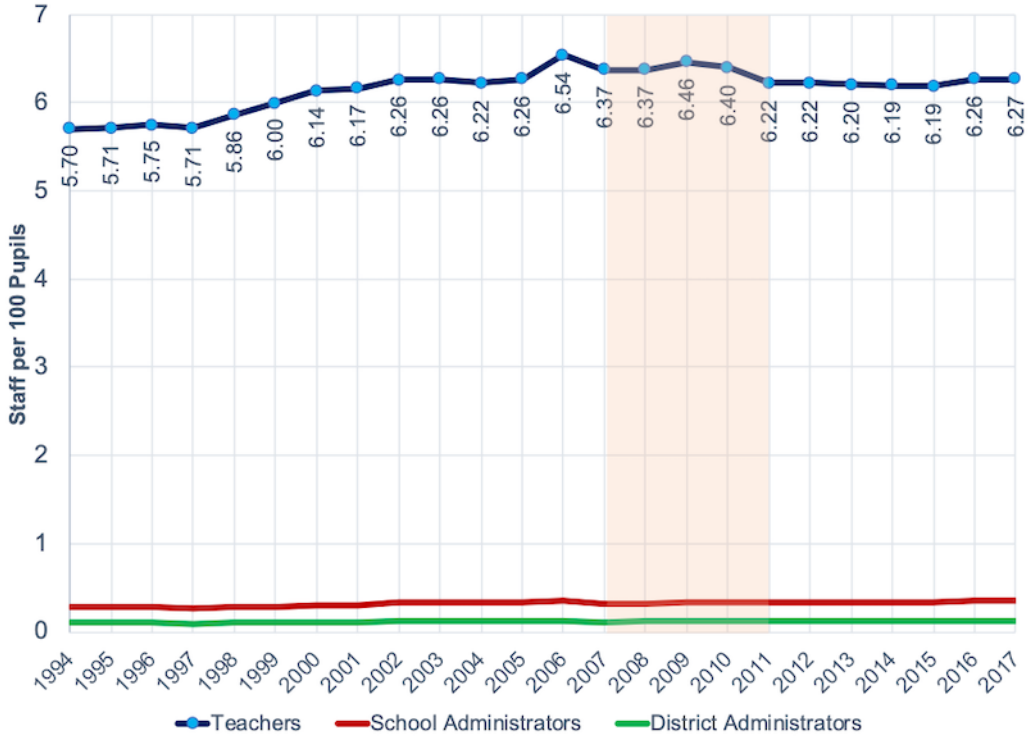
Effects on real school resources

Changes in revenue and spending can sometimes present a rather sanitized portrait of how finance trends actually affect schools and students. The reality, of course, is that significant decreases in revenue are not just numbers in a spreadsheet. They have tangible effects on schools' ability to educate students.

Because (one more time) schooling is a human resource-intensive endeavor, funding typically manifests itself most clearly in personnel changes. In the recessionary context, the most important of these is layoffs (and/or hiring freezes). Figure 6 presents the ratios of teachers per 100 pupils (the blue line); higher ratios mean more teachers per student. The ratio peaked just prior to the recession at about 6.5/100, but then dipped to roughly 6.2/100 during the "public school recession" (the shaded area). No doubt this decrease would have been more severe without federal assistance funds. The teacher ratio still had not recovered by 2017. School administrator staffing ratios (the red line) dropped slightly and fully recovered by 2016 (put simply, schools need principals).

FIGURE 6 **Staffing ratios over time**

Number of K-12 staff per 100 pupils, by staff type, 1994-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text). Averages in each year are weighted by district-level enrollment.

Data source: *School Finance Indicators Database, District Indicators Database (schoolfinancedata.org)*

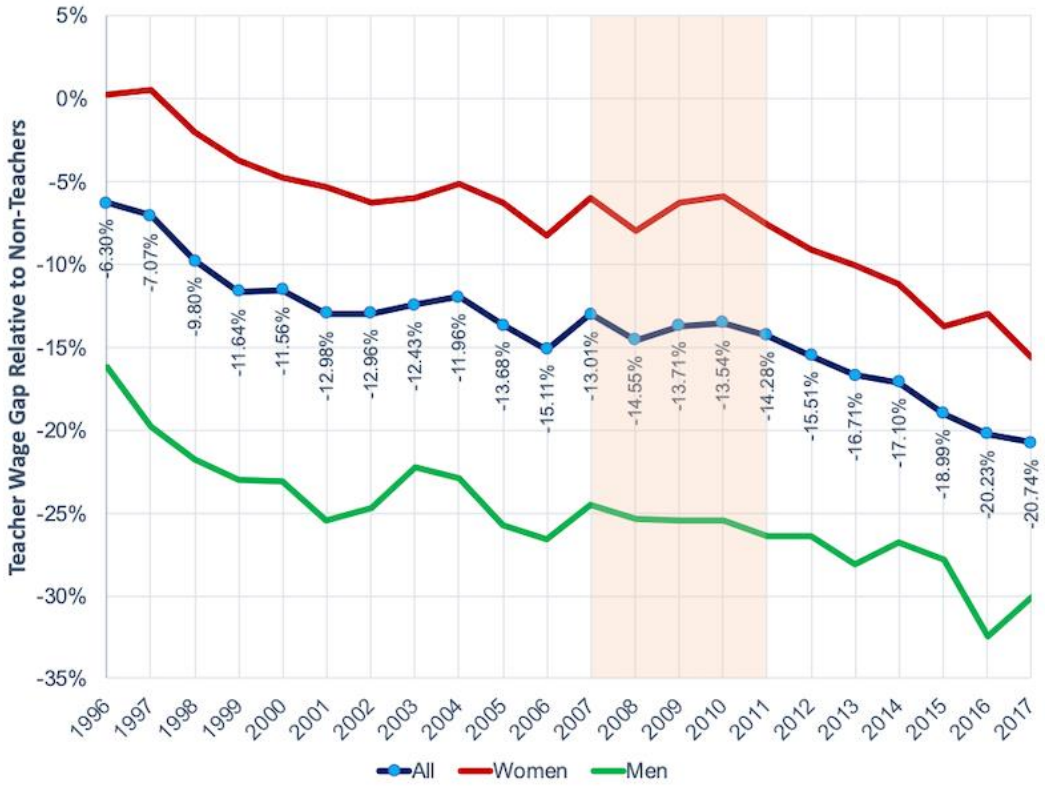
A 0.3 reduction in the teacher ratio may seem trivial, but it is equivalent to one fewer teacher in a small school of roughly 350 students (note, again, that these negative effects tend to be more pronounced in higher-poverty districts).

We might also take a quick look at teacher wage competitiveness, though it is a somewhat counterintuitive case. Figure 7 shows the relative competitiveness of teacher wages, compared to non-teacher wages, on a weekly wage basis, by gender, between 1996 and 2017. These data are from the Economic Policy Institute.[21] Teacher wage competitiveness—or the "teaching penalty"—matters for the quality of workforce that can be recruited into and retained in the field of teaching.

FIGURE 7

Teacher wage penalties over time

Percentage difference in weekly wages between teachers and comparable non-teacher earners, by gender, 1996-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text).

Data source: *Economic Policy Institute*

Figure 7 shows that teacher wages, relative to non-teacher wages, have, on average, lost significant ground since the 1990s. As staffing ratios were scaled up from the 1990s to mid-2000s, teacher wages were not (note that the much-discussed "teaching penalty" was, overall, actually quite modest in the mid-1990s).

But Figure 7 also illustrates the unique impact of recessions, including the Great Recession, on teacher wage competitiveness. That is, teacher wages tend not to fall further behind *during* recessions, and they may even gain ground (you can see this not only during the recovery following the Great Recession, but also during the post-9/11 recession). This is because, during recessions, teacher wages remain relatively flat, while the wages of non-teachers decline. It is, in

fact, during the economic good times, when non-teacher wages grow, that teachers tend to fall further behind.

From this perspective, the current recession is likely to stall—temporarily—the growth in the teaching penalty, and may even improve it slightly, as the wages of non-teachers suffer even more than those of teachers. If nothing is done, however, the "teaching penalty" will resume its prior trajectory during and after our eventual recovery. Addressing this problem could be one key benefit of taking steps, discussed below, to ease the ill effects of the coronavirus pandemic on education budgets and restructuring them for a better system going forward.

STATE POLICIES AND THE 'PUBLIC SCHOOL RECESSION'

Unlike the federal government, virtually all states are required by law to balance their budgets every year, meaning they cannot spend more than they take in (by borrowing money). The large declines in revenue stemming from the Great Recession of 2007-09 meant that cuts were pretty much a certainty. Even with help from the federal stimulus (discussed below), public schools would not be spared. Yet the severity of those cuts was not entirely outside the control of state legislators, and the pain could have been attenuated, particularly in the years following the "official" end of the Great Recession in 2009.

In this section, we discuss four factors: a permanent decline in fiscal effort; the steady erosion of state and local revenue; calibration of state and local revenue sources; and non-progressive school funding. All four represent factors that exacerbated the severity and/or duration of the Great Recession and its impact on education funding. Importantly, three of them entailed policy decisions that began years before the Great Recession. Avoiding and correcting these mistakes going forward will be crucial in determining the severity and duration of the coronavirus fiscal crisis.

1. Permanent decline in fiscal effort

Education funding is fundamentally about states' commitment to providing adequate and equitable resources for their public schools. One of the simpler but revealing ways to measure that commitment is to calculate how much each state devotes to its schools as a percentage of its "capacity" (put simply, the size of its economy). In other words, how much it spends as a percentage of how much it *might spend*. This measure is called "fiscal effort," or simply "effort."

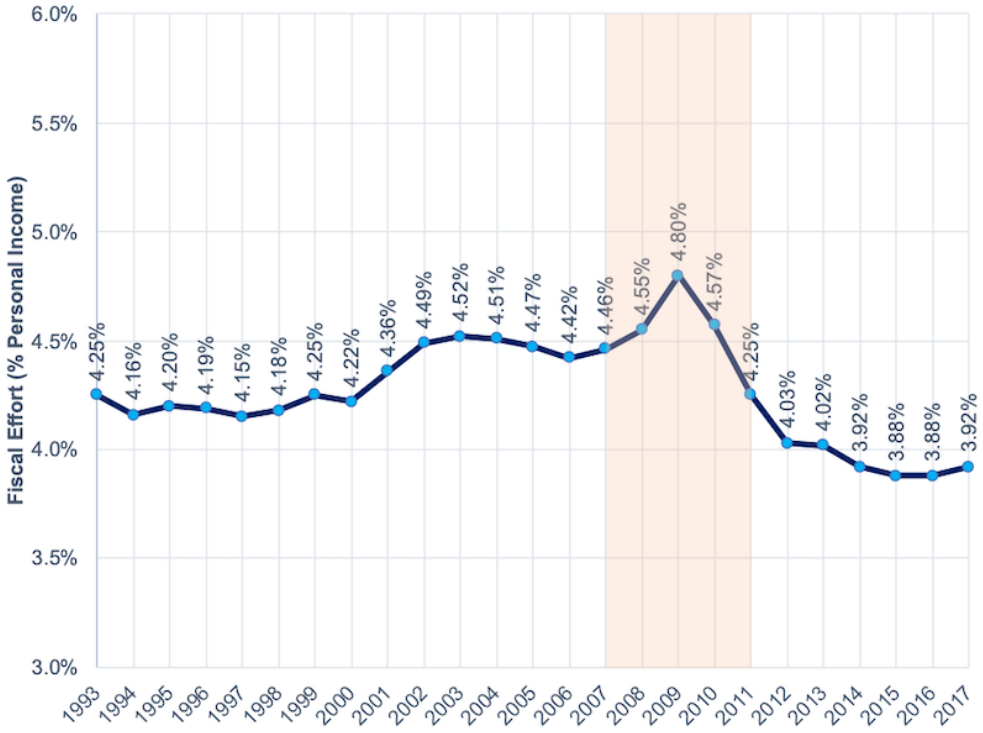
Effort measures a state's commitment to funding schools, but note that higher-capacity states (e.g., states with larger economies from which to draw revenue) might draw the same revenue as lower-capacity states with higher effort levels. The "size of the pie" matters.

Figure 8 shows average state and local effort of all U.S. states over time (in this case, economic capacity, the denominator, is defined as aggregate personal income, but the trend and conclusions are the same using alternative definitions, such as gross state product).[22] These are U.S. Census State and Local Government finance data, compiled by the Urban Institute for the Urban-Brookings Tax Policy Center.[23] Note that the vertical axis does not begin at zero, and so changes may appear larger than they would with different axis scaling.

FIGURE 8

Fiscal effort over time

Direct K-12 education expenditures as a percentage of personal income, 1993-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text).

Data source: *Tax Policy Center (Urban Institute and Brookings Institution)*

The effect of recessions on effort, much like that of recessions on teacher wage competitiveness, is somewhat counterintuitive. That is, recessions might actually increase effort levels, at least in the short term.

The reason for this is that recessions affect capacity (the denominator) before they affect spending (the numerator). For example, recessions very quickly cause unemployment (lower aggregate income) and contract the state economy (lower gross state product). These are the possible denominators of the effort calculation. But budget cuts might take a bit longer to come into effect (particularly if there is a federal stimulus, as there was in 2009). If, as a result, education spending (the numerator) remains roughly constant while capacity (the denominator) decreases, or if capacity decreases more quickly than does spending, effort will increase (since the denominator is lower and the numerator is stable or falls more slowly). You can see this in Figure 8, which shows a spike in effort between 2007 and 2009, going from 4.46 to 4.8 percent (note that effort also increased during the post-9/11 recession, even without a massive federal stimulus package). This, once again, is because capacity decreased, while spending had not yet started to decline (see Figure 3). States were spending more of their "economic pie" on education because the pie got smaller but schools got the same slice.

The situation changed drastically once the economy started to rebound (i.e., after the Great Recession officially ended but right in the middle of the "public school recession"). In 2011, after

federal stimulus funds had run out, many states did not reinvest in their schools (some of them even cut taxes and imposed austerity measures). In these states, total spending declined (the effort numerator decreased) or, at best, remained stable. At the same time, states' economies started to recover (the effort denominator increased). The pie got bigger, but schools were not necessarily getting a bigger slice of it.

As a result, effort dropped from a high of 4.8 percent in 2009 all the way down to roughly 3.9 percent in 2015, and then remained stable in the final couple of years for which we have data. In fact, between 2009 and 2017, effort declined at least nominally in all but two states.

This is important because, as Figure 8 shows, fiscal effort seems to have reached a new equilibrium of about 3.9 percent, and it is lower in 2017 than it was prior to the recession (around 4.5 percent—note that seemingly small changes in effort can translate into large dollar amounts). The failure to reinvest in public schools in the aftermath of the Great Recession, as reflected in the proportion of capacity deviated to education, was in no small part responsible for the fact that states' education spending has yet to recover to their pre-recession levels. It also means that states are less well-equipped than they otherwise would be to weather the coming storm of the coronavirus pandemic's fiscal crisis. And, to reiterate, this was to a significant extent a deliberate choice on the part of policymakers. Overall economies recovered, but the dividends paid to schools were inadequate for their own recovery.

2. Steady erosion of state and local revenue

Compounding the lack of effort is another, highly related factor: Many states have cut taxes and tolerated declining revenue over decades, during both good times and bad, and too many state legislatures have increasingly operated under the assumption that there's never a good time to raise taxes.

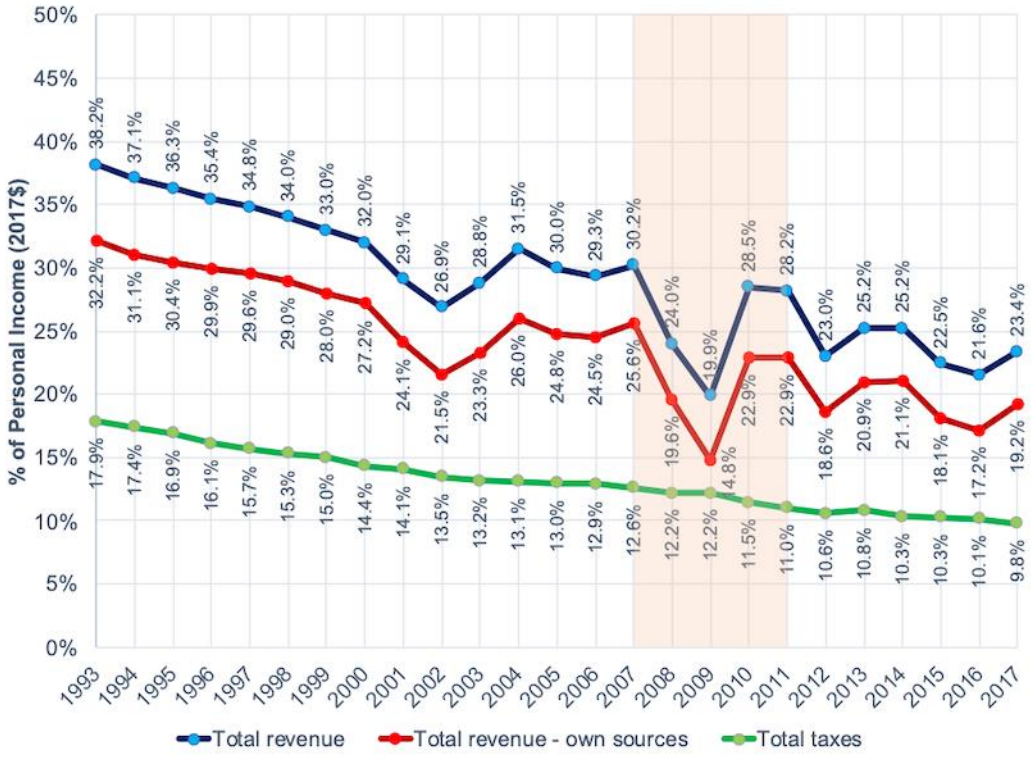
This is evident in Figure 9, which presents state and local taxes and revenue (in 2017 dollars) as a percentage of personal income, which roughly controls for changes in capacity to raise revenue, again between 1993 and 2017. These data also come from the Urban-Brookings Tax Policy Center.[24]

The green line in this figure (total taxes as a percentage of personal income) consists mostly of property, sales and income taxes. To reiterate, about two-thirds of states' own-source revenue (the red line) comes from taxes, while total revenue (the blue line) includes own-source as well as a number of other types of revenue, such as intergovernmental transfers (e.g., federal revenue).[25]

FIGURE 9

State and local revenue over time

State and local revenue as a percentage of personal income (2017 dollars), by selected sources, 1993-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text).

Data source: Tax Policy Center (Urban Institute and Brookings Institution)

Of particular interest here is how the downward trends of all three lines predate the past two recessions, as well as our current situation. With some (largely recession-caused) volatility, all three have been on the decline for the past 25 years.

Partially as a result of this steady erosion of revenue (as a percent of personal income), most states were ill-equipped to handle the Great Recession and to recover after it subsided. And the situation is still getting worse, leaving states vulnerable to the impending coronavirus fiscal crisis. Once again, in most states, this was not an accident or random confluence of events. It was —and still is—due in no small part to policymakers' refusal to raise sufficient revenue to fund public services, including education.

3. Calibration of state and local revenue sources

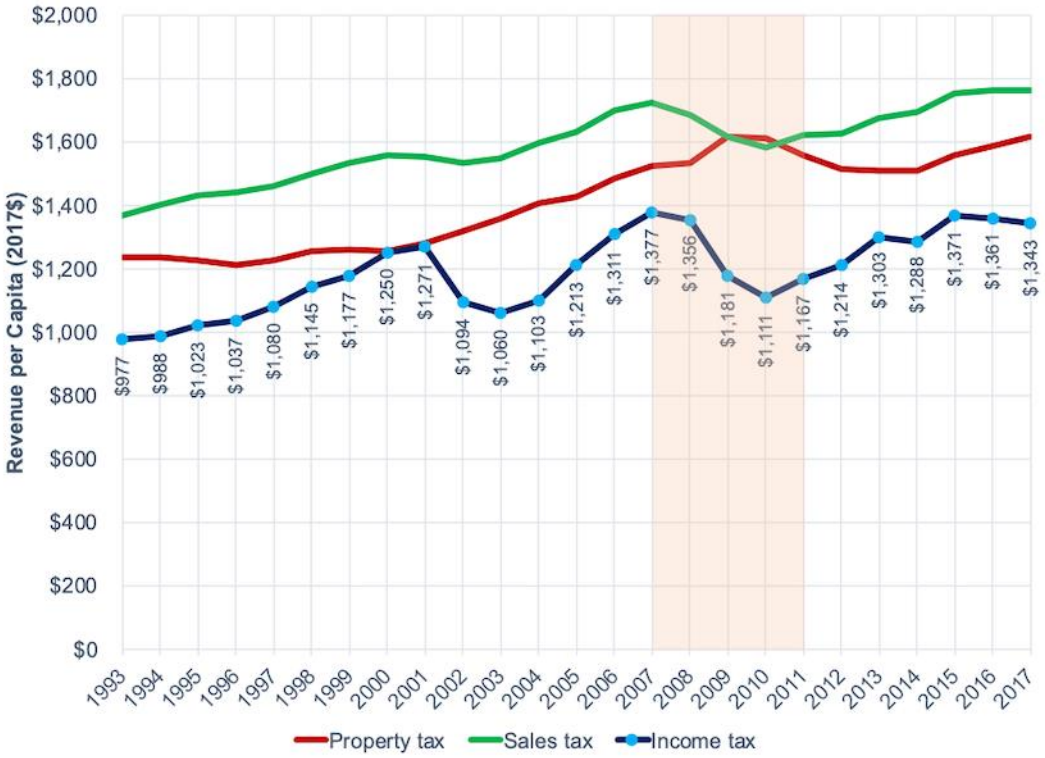
Thus far, we have viewed data on state and local revenue in aggregate terms. As mentioned above, however, state revenue (i.e., revenue from state sources) primarily comes from sales and income taxes, whereas the largest source of local revenue is from property taxes. Each of these three major types of taxes responds differently to economic upturns and downturns, and the Great Recession was no exception.

In Figure 10, we present trends in per capita state and local tax revenues over time (in 2017 dollars) by tax revenue source (these data are once again from the Urban-Brookings Tax Policy Center[26]). Figure 10 is critical for understanding the likely impact of any pending recession, with additional implications for how the federal government might approach a fiscal stabilization package.

FIGURE 10

Tax revenue over time by source

State and local tax revenue per capita (2017 dollars), by selected types of taxes, 1993-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text).

Data source: Tax Policy Center (Urban Institute and Brookings Institution)

The figure shows, first, that per capita state income tax revenue (the blue line) responds most directly to recessions, specifically the Great Recession of 2007-09, as well as the post-9/11 recession of the early 2000s. In both cases, it declined markedly and almost immediately, and subsequently recovered (although not fully in the case of the Great Recession, as of 2017). Sales tax revenue (the green line), on the other hand, also declined during both recessions, but the decrease was less pronounced than it was for income tax, and far steeper during the Great Recession compared with the post-9/11 recession.

Property tax (the red line), however, is a rather different story. Local property tax revenues continued to climb during the post-9/11 recession, with continued housing market expansion (which, a few years later, became the real estate bubble), but declined during the Great Recession, as the housing market collapsed.

This matters because states vary quite a bit in terms of how much they rely on these different taxes for revenue, and so the implications of trends also vary by state. Some states compensate for low (or, in some cases, nonexistent) income tax rates with higher sales taxes, or vice-versa, while other states maintain a balance. (Note that several of the states that have drastically cut income or sale tax rates, or eliminated them entirely, rely on revenue from natural resources to make up the difference, and this revenue can also be quite volatile.) The configuration of these sources carries serious implications for the impact of recessions on education funding.[27]

For instance, states such as Texas, which has no state income tax, but saw substantial real estate growth during the housing boom, faced much smaller school funding shortfalls during the post-9/11 recession than did states such as California or Massachusetts, which depended heavily on income taxes.[28] Sales and income taxes together fuel state general funds, which in turn support state aid to schools. Property taxes provide a counterbalancing mechanism for local districts to offset losses in state aid (even when property values decrease, property tax rates tend to rise, making revenue more stable[29]).

The Great Recession, by contrast, affected all three major sources of tax revenue. Returning to Figure 10, in addition to the declines in sales and income tax revenue (i.e., state revenue), there was an unprecedented drop in property tax revenues (due to the housing crash), which had served to buttress state and local budgets during previous recessions. But the impact was not immediate. In fact, property tax revenue started to decline just as sales and income tax revenues were rebounding (likely prolonging the recovery).

In short, then, the Great Recession's negative impact on state and local revenue, and thus on education budgets, was exacerbated by the fact that property tax revenue declined for the first time. Many states had systematically lowered their sales and income taxes for many years (or, indeed, eliminated them entirely). Policymakers were banking on stable property values to provide a steady source of income for public schools. When the housing bubble popped, their defenses were denuded.

4. Non-progressive school funding

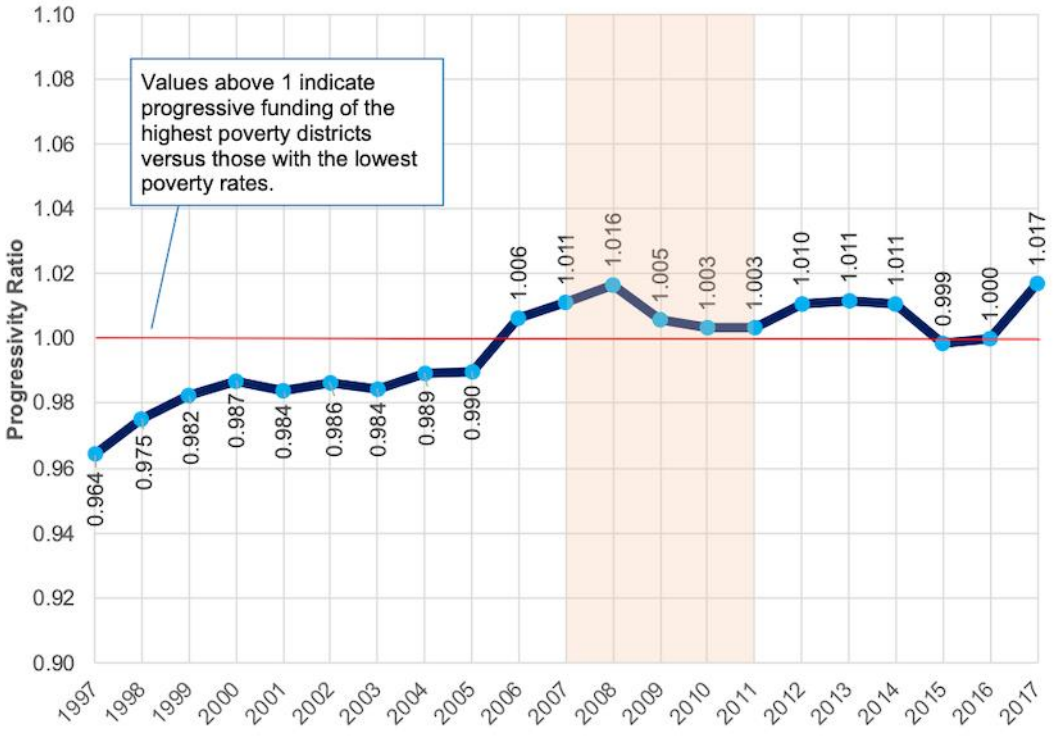
The fact that the impact of the Great Recession on education funding was more damaging in higher-poverty districts than it was in their more affluent counterparts (see Figure 3) was to some extent inevitable. Residents in wealthier districts are simply better-equipped to make up for shortfalls via local tax supplementation than residents in poorer neighborhoods.

But there was also a pre-existing problem here that made the disparate impact worse: Higher poverty districts weren't getting what they needed before, during and after the Great Recession. Figure 11 presents the trend in progressivity of state and local revenue between 1997 and 2017. To review, progressive states are those in which higher-poverty districts receive more funding than lower-poverty districts, based on the idea that the former require more resources to provide the same quality of education. Figure 11 compares the highest- and lowest-poverty districts in terms of state and local revenue while roughly controlling for labor market costs (specifically, revenues are centered around the labor market average). The figures for each year are, therefore, a rough approximation of U.S. average progressivity in education funding, with values above one indicating progressive funding and values below one indicating regressive funding (i.e., the most affluent districts receive more revenue than the least affluent districts).

FIGURE 11

Education funding progressivity over time

Ratio of average (labor market-centered) state and local revenue in highest-poverty districts to revenue in lowest-poverty districts, 1997-2017



Notes: Shaded area represents the "public school recession" 2007-11 (see text). Poverty quintiles are defined state by state (with U.S. Census data). Within each quintile, district revenue is centered around the mean revenue in that district's labor market, and quintile averages are weighted by enrollment. The estimates in this figure are the ratios of centered revenue in the highest-poverty quintile to centered revenue in the lowest-poverty quintile.

Data source: *School Finance Indicators Database, District Indicators Database (schoolfinancedata.org)*

The basic message of Figure 11 is that education funding in the U.S., on average, is neither progressive nor regressive. Over the 20 years presented in the graph, the difference in revenue between the highest- and lowest-poverty districts is no more than 2 to 4 percent (though notice how progressivity declined during the "public school recession"). In other words, districts tend to receive roughly the same amount of revenue regardless of the economic circumstances of the residents they serve.[30] (If we break this down state by state, there are a handful of truly progressive states and a handful of truly regressive states, with most states essentially allocating funds neither progressively nor regressively.[31])

This is important for our purposes here because, while the Great Recession was likely to hurt higher-poverty districts more than lower-poverty districts, these negative effects could have been less destructive if funding was progressive in the first place. Put simply, high-poverty districts would have been better-equipped to weather larger funding cuts if they were receiving disproportionately higher funding (which, incidentally, they need to serve their students). From this perspective, progressive funding is a sound approach not only educationally, but fiscally as well. And, with relatively few exceptions, states have failed to fund their schools fairly.

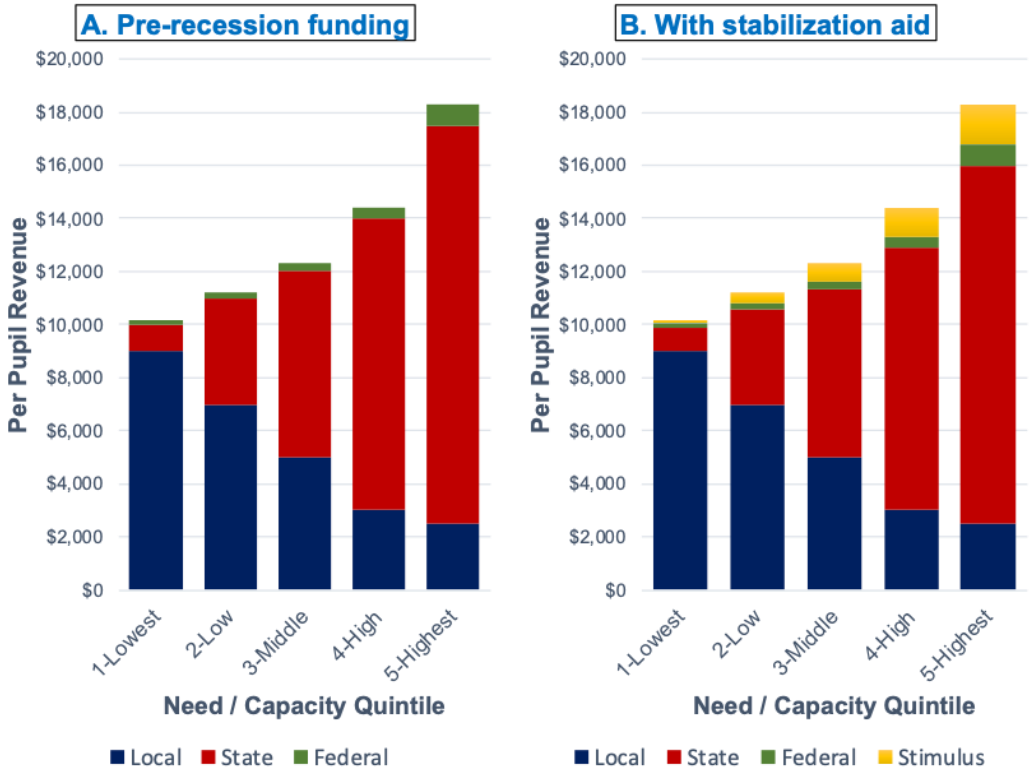
WHAT WE LEARNED FROM THE 2009 FEDERAL STIMULUS PACKAGE

As mentioned above, the 2009-10 State Fiscal Stabilization Fund (SFSF) was part of the American Recovery and Reinvestment Act (ARRA), which is sometimes referred to by its generic name, the "stimulus package." The SFSF was specifically designed to help states close their budget shortfalls during the first years of the Great Recession, and to delay and ease cuts to vital services, with education, perhaps, most notable among them. This delay gave states' economies time to recover, so that cumulative cuts were less severe.

ARRA and the SFSF were certainly successful in their short-run stabilization or "smoothing" of the Great Recession's fiscal impact on public-school districts. Figure 12 presents an example of how this worked. The left panel is the same type of hypothetical state revenue model, separated by district poverty quintile, presented in Figure 1. The right panel of Figure 12 provides a hypothetical application of stabilization aid, for a two-year period as under SFSF (fiscal year 2009 and fiscal year 2010). Suppose our hypothetical state saw a 10 percent reduction in state revenue, which is evident in the smaller red areas in the right panel versus the left. The purpose of the SFSF was to try to fill that gap.

FIGURE 12 **Illustration of federal education stabilization**

Simulation of a hypothetical state's per-pupil revenue, by source and district poverty quintile, before a recession, compared with its revenue profile after a 10 percent reduction in state revenue and the subsequent application of federal stimulus aid



Notes: Panel B represents a hypothetical situation in which state revenue declines by 10 percent in each poverty quintile, and is replaced by federal stimulus aid that restores pre-recession per-pupil revenue levels (Panel A).

ARRA required that SFSF funds for education be run through the state's primary aid formula—that is, the funds were to be distributed the same way as any other state revenue going to schools. The distribution of these funds is represented by the yellow portions in the right-hand panel of Figure 12. This approach makes sense on the surface. In our model, it serves to make districts whole, per their prior year aid.

The most significant problem is what happens in year three (and beyond), when the gap-filling aid is gone, but the revenue sources behind the red bars have not yet recovered, either because economic conditions have not recovered, and/or because states imposed tax cuts (or failed to take steps to increase revenue) as the conditions improved. Absent federal guidance or requirements, the blunt-force approach of many states was simply to cut school aid by the amount removed in federal stabilization funding. In other words, legislators decried the drying up of stabilization funding, and then cut education (and other types of) funding in roughly the same proportions in which the now-depleted federal aid was distributed.

This, of course, hurt all districts, but not equally. Because higher-poverty districts depend much more on state revenue than their more affluent counterparts (i.e., the larger red areas in the bars), this leads, in our hypothetical example, to per-pupil cuts in funding that are 15 times larger for higher-poverty districts than lower-poverty districts. States, including New York, Ohio, Pennsylvania and others, took this approach, causing a substantial post-stabilization drop-off in funding, one that was particularly harmful to the neediest districts in those states.[32] This is problematic because it imposes the largest cuts where needs are greatest and capacity to meet those needs is lowest. Conversely, because it imposes much smaller cuts where capacity is greatest, more affluent districts are able to make up more of the difference with increases to local property taxes.

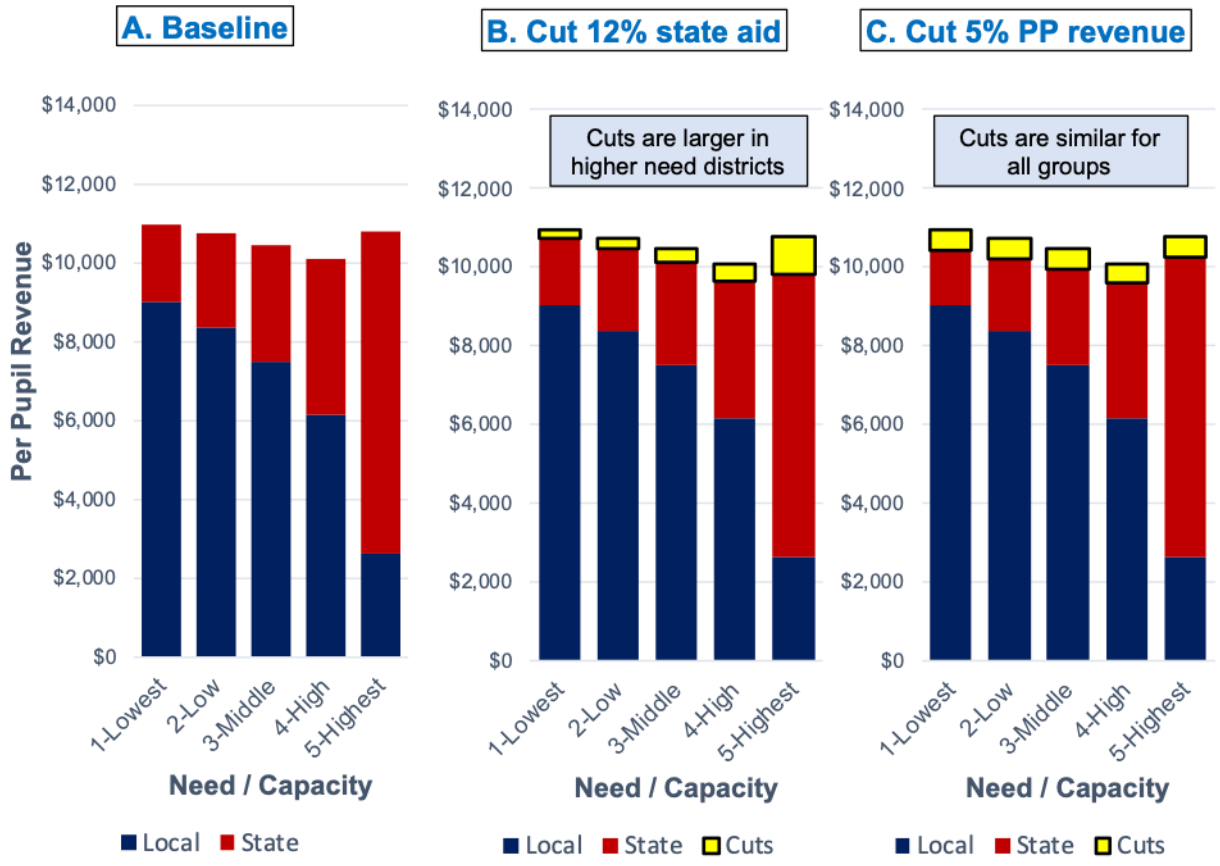
New Jersey was one of the states that took a different approach. In 2011— in contrast with its neighboring states of Pennsylvania and New York—New Jersey, facing the same "fiscal cliff," levied cuts to state aid as a share of *per-pupil budgets* instead of as a share of state aid.[33] Put simply, instead of cutting according to how much *state* revenue districts lost when the SFSF money ran out, New Jersey imposed a percentage cut on all districts' *total state and local revenue*, which meant poor and rich districts all saw the same cuts (as a percentage of total revenue). Even then, however, New Jersey's Supreme Court had to step in to order the restoration of aid cut from litigant districts in the *Abbott* case,[34] a landmark case that required the state to fully fund and maintain specific programs and services in those districts named in the (ongoing) litigation.[35]

Figure 13 illustrates how this alternative approach works, using 2017 revenue data from New Jersey. The left panel reproduces the hypothetical revenue model from Figure 12 (the pre-recession situation), but without the standard federal contribution (and, again, with New Jersey data).

FIGURE 13

Two approaches to cutting education revenue

Simulation of two approaches to cutting K-12 education funding using 2017 baseline data from New Jersey



Notes: Panel A represents the baseline (pre-recession) situation in New Jersey (not including federal funds). Panels B and C present simulations of two different approaches to cuts: an across-the-board 12 percent reduction in revenue; and a 5 percent reduction of each district's per-pupil revenue.

The middle and right-hand panels simulate state revenue decreases in the same total amount (smaller red portions of the bars), but with two different choices for how to apply these cuts: The state could cut either: (1) 12 percent of state revenue (Panel B); or (2) 5 percent of total state and local revenue (Panel C). If we cut as a percent of state aid (option 1, Panel B), low-poverty districts get a cut of $233 per pupil, whereas high-poverty districts get a cut of nearly $1,000 per pupil. Such cuts substantially erode progressiveness, and cause disproportionate harm to the most vulnerable districts.

By contrast, if we cut as a percent of district budgets (option 2, Panel C), we cut similar per-pupil amounts across districts by poverty quintile. This too is problematic because lower-poverty (often higher-capacity) districts have greater ability to replace these aid cuts with local tax increases to maintain programs and services. But this approach, coupled with the New Jersey Supreme Court's intervention to restore some of the funding that was cut from high-poverty districts, at least ensured that the pain was shared more equally.

THE PATH FORWARD

It is, as yet, difficult to predict what is coming in the next several months, much less anything over the longer term. States are in a holding pattern, trying to come up with their best estimates of the revenue impact of the unemployment spike and wage loss, losses to the values of investment portfolios, and the nearly complete shutdown of in-person retail. Several states have already made these estimates public, but they are highly tentative. New York, for example, recently announced its expectation to lose $15 billion in revenue (about 8 percent), but that estimate was double the projection from two weeks earlier.[36]

Although such predictions are rife with uncertainty, the magnitude of the current coronavirus recession may be significantly greater than the Great Recession, and the recovery from it subject to a different set of conditions. For one thing, the Great Recession was brought on in large part by the collapse of a housing and real estate bubble, which is fundamentally different from prior recessions, as well as (likely) the current recession. As such, this time around, we may not experience a similar lagged dip in housing and real estate values and the accompanying decline in property tax revenues (Figure 10), which are so crucial to public school finance. Property tax revenues may, as they usually do, provide an important counterbalance for local public school districts to stabilize their budgets. The pending recession may therefore look more like the early 2000s recession initiated by the shock of the 9/11 attacks, in terms of its effects on traditional tax revenue sources for public schools (i.e., it will mostly affect state tax revenue).

But such similarity will most likely be in form rather than extent. That is, the impact on state tax revenue may be—perhaps even will likely be—more severe than in any modern recession. We can anticipate massive declines in state income and sales tax revenue (at least in the short term). The aggregate damage to education budgets may therefore be unprecedented, even if property tax revenues remain relatively stable.

Moreover, by far the two largest categories of direct state and local spending are education (including higher education) and health (e.g., Medicaid, public hospitals).[37] States and localities will be extremely hesitant to cut health spending during a pandemic, and justifiably so. This may leave education budgets particularly vulnerable during this current recession.

That said, states and districts are not without recourse. In this section, we will lay out a plan consisting of strategic federal stabilization aid to mitigate the short-term harm, coupled with a set of state-level policies that can reduce the duration of the education budget crisis and put states and districts in a better position to weather future storms.

Our recommendations are informed by what happened to education budgets during previous modern recessions, particularly the "public school recession" of 2007-11, from which schools in many states have not fully recovered. Accordingly, before moving to these recommendations, we shall first quickly summarize the discussion in previous sections of the key observations and lessons from state and federal responses to the Great Recession, specifically those that offer insight into our current situation.

We'll start with the key observations/lessons from the federal response to the Great Recession, specifically those pertaining to the ARRA/SFSF discussed in the previous section:

- The short duration of the aid (two years) was insufficient time for states' economies to recover enough to restore their own revenue. As a result, states faced a fiscal "cliff," which necessitated drastic cuts occurring all at once.
- Facing this fiscal cliff, and without federal guidance, many states simply cut state revenue to their districts in the same proportions as the depleted federal aid, causing disproportionate harm to higher-poverty districts, which are more dependent on state revenue.

We will now review the key observations and lessons pertaining to state' own responses, which mostly shaped the medium- and longer-term impact of the Great Recession, including, most notably, its persistent negative impact on education funding:

- After stabilization funds ran out, and even as state economies rebounded and eventually boomed in the years after the Great Recession ended, most states never fully restored pre-recession levels of funding. In other words, there is absolutely no guarantee that states will make concerted efforts to restore education funding cuts. If anything, there is evidence that many will not.
- This failure to reinvest was to no small extent a result of deliberate policy choices, before and after the Great Recession. Fiscal effort in virtually every state was lower in 2017 than in 2009, and tax cuts and austerity in many states caused revenue to keep dropping even after the economy recovered (this included the fact that many state legislatures, seemingly recognizing the possibility that local districts would use property taxes to replace lost aid, imposed additional constraints, such as tax and expenditure limits, on property taxes, which might have offset much of the damage in some districts). In short, budget holes persisted in so many states in part because legislators chose not to close them.
- States' responses (e.g., the distribution of cuts), as well as pre-existing state finance structures that did not allocate education funds progressively, worsened the already disproportionate damage among higher-poverty districts, and rendered them less well-equipped to shoulder this burden. Everyone suffered, but those least able to bear the suffering were the very ones that felt it the most.

Recommendations

In March 2020, the federal government passed a roughly $2 trillion coronavirus aid package, known as the CARES Act. The legislation included roughly $13 billion for K-12 education (along with another $14 billion for higher education). This is certainly much-needed assistance for public schools, but it is significantly less than the $48.6 billion provided as a two-year K-12 stabilization fund in 2009. There is widespread agreement that additional federal K-12 education aid will be required. It is our position that this federal assistance will not only need to be substantial, but also that it must be distributed in a manner different from the ARRA/SFSF package.

Moreover, the response to this recession, and its impact on education funding, *cannot consist solely of a federal assistance package or packages*. Education is primarily funded by state and local revenue, and if the Great Recession taught us anything about school funding crises, it is that states cannot simply return to business as usual during and after recovery. Doing so will likely prolong the duration of the budget shortfalls, as well as leave states vulnerable going forward.

Accordingly, we offer a framework for both short-term and longer-term policy solutions to the impending budget crisis that will come as a result of the coronavirus pandemic. Our short-term recommendations consist largely of federal responses (i.e., a federal assistance package), whereas our longer-term recommendations focus more on state and local governments building their own responses to the current crisis, and, hopefully, improving their capacity to handle these situations in the future.

Short-term recommendations—the federal response

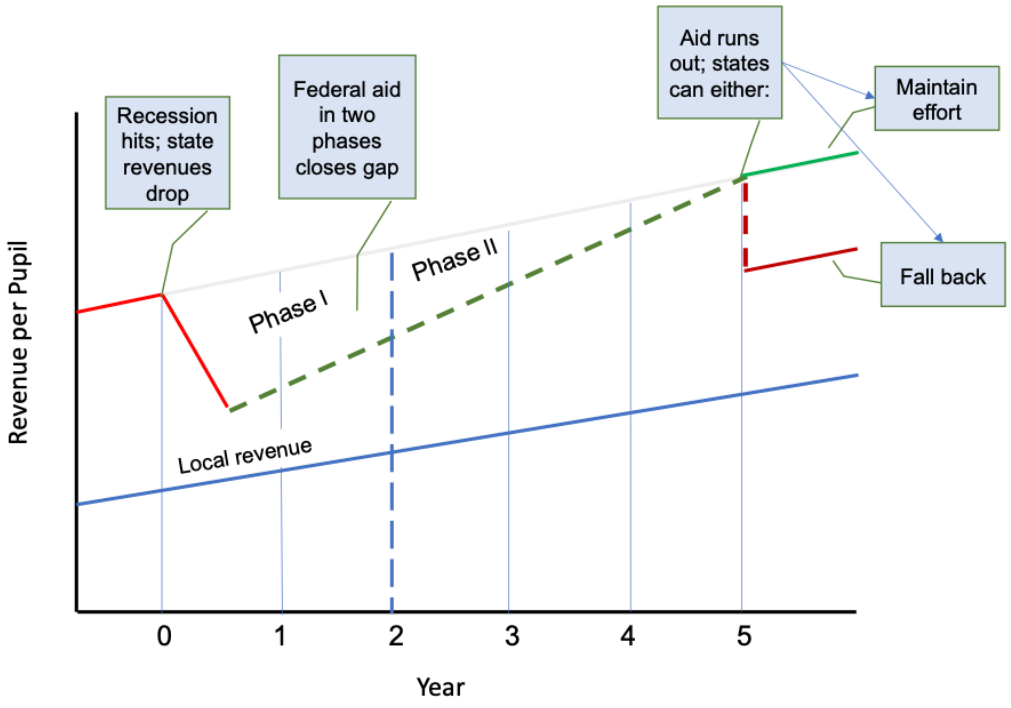
- **A large federal aid package.** Most basically, additional K-12 federal fiscal stabilization funds, over and above those provided by the CARES Act, will be required to smooth out revenue lost from state income and sales taxes. These funds will need to be substantial.
- **Multiphase allocation of federal aid.** To avoid the "cliff" problem of the two-year allocation of SFSF during the previous recession, this new fund should come in two parts or "phases," beginning with a substantial allocation in years one and two (Phase I) and followed by a three- to five-year phase-down effort (Phase II). This will give states more time for economic recovery and for crafting their own responses to the crisis. This approach may even include flexibility to increase amounts in Phase II if the extent of the fiscal damage exceeds projections. A stylized illustration of this multiphase package is presented in Figure 14 (in which Phase II lasts for three years).
- **Equitable distribution of federal aid**. This federal assistance program should, like the SFSF, be contingent on distributing funds through states' primary aid formulas, but with the additional stipulations that the primary aid formula is:
    - Equalized for local capacity (districts that can provide for themselves via local taxation receive less aid), and;
    - Targeted according to student needs (funds are specifically directed at districts serving large proportions of disadvantaged students).

  States with aid formulas that do not meet these criteria must adjust the distribution of federal funds to be in line with them.
- **Federal aid with "eligibility" requirements.** To be "eligible" to receive federal assistance, states must abide by several requirements and constraints:
    - To the extent that states do impose cuts to aid programs during either Phase I or II of stabilization, those cuts must be applied first (if not exclusively) to aid programs outside of the equalized, need-based formula. That is, general aid formulas (per the first requirement) should be made whole. Supplemental formulas *may be* subject to cuts, but such cuts should be applied only to aid formulas that are neither need-based nor equalized. This will ensure a more equitable distribution of harm.
    - For any cuts applied to state aid programs during either Phase I or II, states should not be permitted to cut a greater amount of per-pupil revenue to higher-poverty districts than they do to lower-poverty districts. This too will prevent the most vulnerable districts from incurring disproportionate harm.
    - States must not, during either Phase I or II, impose additional fiscal austerity constraints, including (but not limited to) caps on local property taxes or on growth in state taxes, revenues or budgets. In other words, if states are to receive funds, they must, at the very least, not exacerbate budgetary problems by enacting tax constraints or unnecessary austerity measures.

FIGURE 14

Illustration of proposed federal aid

Hypothetical model of state and local revenue with a two-phase, multiyear federal K-12 education stabilization package



Notes: Does not include standard federal contribution

Federal assistance will be crucial during the first few years of the coming recession, but this is also an opportunity to improve *state* school finance systems through this painful process—i.e., to carefully scrutinize the array of state aid programs that leave states and districts poorly prepared to weather major recessions and that continue to direct disproportionately scarce state resources to those local districts that need them the least.[38] Our longer-term recommendations focus on what states should be doing once their economies begin to rebound from the current recession (although much of the planning can and should begin immediately). We must approach our next period of prosperity more wisely.

Longer-term recommendations— the state response

- **Increase or restore fiscal effort levels.** States should, through federal policy incentives if necessary, move to restore their fiscal effort levels to those that prevailed prior to the Great Recession. Many states, however, will only be restoring very low effort levels. These states, possibly with federal incentives if needed, might be required to meet a uniform minimum fiscal effort level. This minimum effort, and timelines for meeting it, might vary by state capacity (since high-capacity states with lower effort levels can raise the same revenue as low-capacity states with higher effort levels), as well as by states' economic conditions. In most states, restoring or increasing effort levels will require tax increases

and/or broadening of tax bases (such as imposing state taxes on non-residential property and on services that currently are untaxed in most states). But this revenue will help states to recover from this recession, as well as to avoid the unnecessarily long period of harm we saw during the "public school recession." It will also put them in a better position to recover the next time.

- **Build up budget reserves.** This recommendation does not pertain exclusively to education, but it is a critical factor in states' ability to weather economic downturns without large cuts to their schools (and other vital public services). When states have money in reserve, and the flexibility to spend those funds as needed, this can be an enormous help in avoiding school layoffs and program cuts. As with fiscal effort, building reserves requires revenue, which generally means increasing taxes (states should *not* build up reserves by cutting services).
- **More progressive funding.** Funding formulas must allocate education revenue progressively, with higher-poverty districts receiving more funding than lower-poverty districts (via state sales and income taxes). Very few states are more than nominally progressive in their education funding, and many are downright regressive. Progressive funding will ensure that higher-poverty districts are better equipped to recover fully from the current recession (and, indeed, finish recovering from the last recession).
- **Balanced revenue "portfolios."** States, even those lucky enough to reap the rewards of revenue from natural resources (which, again, is also volatile and subject to economic conditions), should balance their state and local revenue configurations more strategically and less ideologically. Each of the three main sources of state and local tax revenue (sales, income, property) entails trade-offs. For example, income tax revenue is progressive (higher-income residents pay more as a share), but it is also more volatile and tends to decrease more sharply during recessions than do sales and property tax revenues. Conversely, sales and property taxes are both regressive, but are (typically, at least) more recession-proof. A balanced "portfolio" can serve to hedge against risk of massive budget shortfalls during bad economic times while shoring up revenue streams during good times.

One additional complicating factor bears mention here, and it is unique to the cause of the pending recession. That is, school systems and teachers may, down the line, be saddled with significantly higher health insurance premiums due to the pandemic, which may crowd out wage increases. Such a complication may require bigger thinking in public policy about the provision and costs of public employee health benefits. Notably, however, private sector employees will likely face similar increases in the costs of health insurance.

Overall, as reflected in our recommendations, our current crisis requires both immediate action and long-term planning and policymaking. Chess, not checkers.

The role of the federal government will be to stem the damage to schools over the next few years, but perhaps the even harder work will fall to states after the immediate crisis has abated. One feature shared by all of the state-focused longer-term recommendations listed above is that they are all potentially politically controversial. Raising taxes and redirecting state revenue to low-income districts, for example, require the kind of political courage and will that is, of late, very hard to find, even in so-called blue states. Moreover, of course, any federal aid package, particularly one with equity-focused stipulations, will be politically complicated.

It bears reiterating, however, that we are entering this current pandemic-fueled recession with a great many school budgets never having recovered from the Great Recession. We are on the verge of this happening again, perhaps even worse this time. We cannot avoid a budgetary crisis, but we can attenuate its negative effects. The alternative is a generational education disaster, with particular harm to students who are already behind. And, given the duration of the Great Recession's negative impact, as well as the signs of how bad this one may end up being, it is entirely possible that many of the children who will be affected have yet to be born.

The severity of the current crisis should, as in the human immune system, act as a wake-up call to strengthen public school finance not only so as to recover, but also to make us strong enough to withstand future crises.

ENDNOTES

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ECWI estimates are only available between 1997 and 2013, and are therefore imputed for 2014-2017. For details on the imputation process, see the SFID's District Indicators Codebook:
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[18] The next two figures will use spending instead of revenue because, while both are problematic, we find that there are more irregularities in the latter compared with the former, due to how finance data for charter schools are collected by the U.S. Census Bureau. This problem is far more salient when estimates are broken down by poverty quintile, since charter schools are overwhelmingly located in higher-poverty neighborhoods (Figure 2 presents national estimates, while Figure 5 presents statewide estimates not broken down by poverty). The extent of this problem also differs between states. For more details, see: Baker, B.D. 2014. Review of: "Charter Funding: Inequity Expands." Boulder, Colo.: National Education Policy Center.

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[20] Note that our results here are a bit more negative than the regularly updated figures from the Center on Budget and Policy Priorities (CBPP), which we discuss and cite in the introduction. In addition to looking at a different range of years, we also apply a more aggressive adjustment than does CBPP, and our estimates are also calculated differently: enrollment weighted averages of adjusted district-level spending.

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[25] Note that the green line, unlike the other two, does not drop precipitously during recessions because it is expressed as a percentage of income, which, like tax revenue (particularly income tax revenue), also drops during recessions (the numerator and denominator cancel each other out [though not all personal income is subject to state and local taxation]). Total revenue and total state own-source revenue (the blue and red lines), on the other hand, include non-tax sources of revenue, such as fees/charges (e.g., public hospital revenue), utilities and intergovernmental transfers that do not necessarily move in tandem with personal income, and are therefore more volatile when expressed as a percentage of personal income. For a breakdown of revenue by source, see: U.S. Census Bureau. 2020. Census of Governments (2017): Finance; State and Local Government Finance Tables. Washington, D.C.: U.S. Department of Commerce.

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[30] Note that, in Figure 11, funding is roughly flat, but Figure 3 portrays progressive funding (in some years, the highest-poverty districts spend as much as 20 to 30 percent more than the lowest-poverty districts). This is mostly because Figure 3 presents current spending by poverty quintile whereas Figure 11 is based on state and local *revenue* by poverty quintile (specifically that in the highest and lowest quintiles). Current spending includes expenditures of federal revenue, which is distributed progressively (higher-poverty districts receive more). State and local revenue, of course, excludes federal revenue. We use it here because this section is focused on state and local responses during recessions.

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